RAPORT ROCZNY | ANNUAL REPORT Przemysł i handel naftowy 20 bp POPil UCHS S LOTOS **LUKOIL** © Copyright by Polska Organizacja Przemysłu i Handlu Naftowego, Warsaw 2015. [] All rights reserved. No part of the report may be reproduced OLPP or transmitted in any form through electronic or mechanical LOGISTYCZNY media, including photocopying and recording. All changes in the content of this report are forbidden. 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 1st quarter 2014: Petrol 0.733 Mg/m³ Diesel 0.833 Mg/m³ Light fuel oil0.834 Mg/m³ LPG 0.556 Mg/m³ Product densities used in mass to volume conversions in 2nd quarter 2014: Petrol 0.733 Mg/m³ $Diesel \ \ldots \ldots \ldots \ldots 0.834 \ Mg/m^3$ Light fuel oil 0.830 Mg/m³ LPG 0.557 Mg/m³ Product densities used in mass to volume conversions in 3rd quarter 2014: STATOIL Petrol 0.747 Mg/m³ Diesel 0.834 Mg/m³ Light fuel oil 0.831 Mg/m³ LPG 0.562 Mg/m³ **TanQuid** Product densities used in mass to volume conversions in 4th quarter 2014: Petrol 0.745 Mg/m³ Diesel 0.834 Mg/m³

 Diesel
 0.834 Mg/m³

 Light fuel oil
 0.831 Mg/m³

 LPG
 0.562 Mg/m³

POLSKA ORGANIZACJA PRZEMYSŁU I HANDLU NAFTOWEGO

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CONTENTS

- 54 Main problems of the fuel sector in Poland
- 60 Processing of crude oil
- 61 Production of liquid fuels
- 63 Imports of liquid fuels
- 65 Exports of liquid fuels
- 66 Domestic consumption of liquid fuels
- 69 Retail market
- 75 Demand forecast for liquid fuels up to 2025
- 77 Motor fuel prices
- 85 Lubricating oils market
- 92 The logistics of crude oil and liquid fuels
- 96 20 years of POPiHN





MAIN PROBLEMS OF THE FUEL SECTOR IN POLAND

1. GREY ZONE

The main problem of the sector consists in the fuel trade-related crime, which has been continuously increasing since 2011. According to the analyses of the consulting firm Ernst & Young, in 2013 an estimated increase in VAT evasion in diesel market amounted to the level of 18.6--24.2% of the market, whereas the total losses to the state amounted to 4.3--5.8 bn PLN. These estimates exclude the remaining fuels and other types of crime related to fuel sector. What is more, the analysis of the 2014 data shows that this problem still remains the key challenge for the government administration and entrepreneurs who operate in compliance with the law. The fuels from Polish refineries are crowded out by grey market fuels. Consequently, a growth in exports of the Polish fuel is being recorded, along with an ever-larger decrease in state revenues from the taxes due on goods sold domestically.

The most frequent practice adopted by criminals has been a VAT carousel fraud using the missing trader scheme. To a minor degree, the problem relates to fuels like petrol or LPG as well as the breach of regulations on excise tax, compulsory stocks, or achieving the National Biofuels Target (NBT). Also honest businesses fall victim to the system of fraudulent practices, as they lose market share not being able to withstand price competition from businesses which operate in violation of the law.

2014 has seen a considerable intensification of actions performed by law enforcement and tax authorities, which, to a major degree, results from signing on 30 January 2014 an agreement between the Minister of the Interior, the Minister of Finance and the General Prosecutor on cooperation in the fight against economic crime. There has been an increase in monitoring activities performed by tax control and Customs authorities in cooperation with the Police, Road Transport Inspectorate and other bodies. The new strategy has involved comprehensive controls carried out in bordering areas in June, September and December. They resulted in detecting tax frauds estimated at 450 mln PLN, initiating inspections in 181 enterprises, and impounding assets worth approximately 100 mln PLN. The information provided by the Ministry of Finance indicates that within three quarters of 2014, the Ministry's inspectors detected attempted tax frauds (VAT and excise duty) in fuel trade to the tune of almost 2 bn PLN. In November 2014 a 'warning letter' was issued, which highlighted the threats in trade in liquid fuels.

As part of the measures taken by the Ministry of Economy, a security deposit for entities licensed to trade in fuels abroad and produce liquid fuels, along with changes in the system of compulsory stocks that could help combat economic crime, have been successfully introduced (under the act of 30 May 2014 amending the act on stocks of crude oil, petroleum products and natural gas and the principles of proceeding in circumstances of a threat to the fuel security of the state and disruption on the petroleum market and other acts). Moreover, as a result of actions taken by the Office of Technical Inspection, the number of filling stations remaining in operation without modernising their tanks fell from around 15% to around 4%.

OUR POSITION

The sector's representatives believe that further changes to the law are necessary, as some of the solutions which have recently been introduced, e.g. joint and several liability, have a limited effect and are not sufficient to eliminate crime in fuel trade. We propose new legal measures to be considered regarding the tax on goods and services, using the experience of other countries (e.g. split-payment). An absolute exemption from joint and several liability should not apply even if the entity in question has paid the maximum amount of the security deposit whereas the legal protection should be proportional to the supplies to the given purchaser. Regulation is needed with regard to the liability of natural persons for unlicensed trading in fuels. We propose excluding the possibility of using virtual offices for trading in sensitive commodities as well as introducing special tendering procedures for the public procurement of fuel.

We propose creating a 'fuel platform' – a register of entrepreneurs op-



erating in the fuel sector, which would be an electronic database containing information about the entities operating in the field of production, logistics, and fuel trade, as well as about their compliance with all the related responsibilities. Currently, the registers and databases which are kept by diverse institutions (the Ministry of Finance, the Material Reserves Agency, the Office of Technical Inspection, the Energy Regulatory Office, the Trade Inspection Authority, the National Labour Inspectorate, building inspection authorities, etc.) are neither interrelated nor compatible. The very data provided by single supervisory institutions with regard to the number of filling stations are widely divergent. While working on the amendments to the act on the system of monitoring and control of fuel quality in 2014, **POPiHN** proposed the introduction of self-registration requirement for filling station-operating entities in a system which could be maintained within the Trade Inspection Authority. Unfortunately, our proposal did not receive acceptance.

The solution which we propose would serve control authorities as well as entrepreneurs and consumers. It could work on three levels:

• Providing access for law enforcement agencies subordinate to the Ministry of Finance and the Ministry of the Interior (sensitive data, e.g. regarding tax settlements);

• Providing access for other supervisory bodies (the Energy Regulatory Office, the Material Reserves Agency, the Office of Technical Inspection, the Trade Inspection Authority, building inspection authorities, the National Labour Inspectorate, the Fire Service, etc.);

• Providing open access for entrepreneurs and customers (publicly available data with regard to the site owner's license for trading in liquid fuels, the appliance approvals issued by the Office of Technical Inspection, etc.).

The current situation of data incompatibility and the lack of public availability of at least part of them contributes to further development of crime related to fuel trade.



2. COMPULSORY STOCKS

With the adoption of the act of 30 May 2014 amending the act on stocks of crude oil, petroleum products and natural gas and the principles of proceeding in circumstances of a threat to the fuel security of the state and disruption on the petroleum market and certain other acts, the works on the implementation of provisions of the directive 2009/119/EC of 14 September 2009 with regard to compulsory stocks into the national law have been completed. The entrepreneur's obligation to maintain CS was partially replaced with the obligation to pay a maintenance fee to be earmarked for keeping stocks within a public institution (the Material Reserves Agency). By the end of 2017 the requirement which has so far been imposed on entities obliged to keep stock is to decrease by 30% (from 76 to 53 days). Upon amending the administrative provisions, the issues relating to the specification of products subject to the requirement of obligatory stock were regulated and the form in which the stock may be maintained was specified. The provisions specifying the way of calculating and making deductions while charging the maintenance fee using the rate in force have been made. A Consultative Board for Intervention Stocks has been appointed; it serves as an advisory body that brings together the sector representatives and provides consultations in the process of implementing the new law. For many years the sector has called for a possibly quickest and fullest implementation of changes to the system of CS. These solutions are

a step in the right direction, yet, they do not fully meet the sector's expectations.

OUR POSITION

The sector expects commencing the work on a far-reaching change to the system of compulsory stocks, including the adoption of a unified (on the national and entity level) methodology of calculating the level of CS as a part of the comprehensive regulation of the fuel market in Poland, along with a further reform aimed at the implementation of a full agency system.

POPiHN also calls for taking action aimed at entering into bilateral agreements with the neighbouring countries; such agreements would enable reciprocal maintenance of CS abroad (foreign entities in Poland and Polish entities abroad). Currently, in the absence of bilateral agreements, the provisions of the act in force are virtually null and void. It is necessary to monitor the maintenance fee rate and adjust it to the market conditions. It is also necessary for the Ministry of **Economy and the Material Reserves** Agency to analyse the effects of adopted regulations.

Moreover, the Organisation believes that the law which regulates the system of intervention stocks of crude oil and fuels should be supplemented with provisions specifying the rules for operating the national system of fuel logistics (storage facilities, industrial pipelines, transshipment terminals) in the event of disturbance of the petroleum market, including these which would specify the rules for the release of intervention stocks by logistics entities as well as the cooperation of logistics entities with regard to the optimal use of relevant network of logistics infrastructure.

3. TAX REGULATIONS

For many years tax regulations have constituted one of the main problems of the oil industry. However, we have noted that the Ministry of Finance has become more open towards contacts with the sector representatives in terms of consultations regarding VAT provisions and technical regulations relating to excise duty. A number of amendments to the provisions are scheduled for adoption in 2015, which concern both VAT and CIT, as well as excise tax, and to a large extent are based on recommendations included in deregulation packages and also and elaborated by the Tax Board at the Minister of Finance.

Another problem is the large share of tax in the price of fuel, already exceeding the minimum level set by the EU rules. In 2015, the level of excise duty on petrol and diesel was above the EU minimum defined on the basis of the euro exchange rate of 1 October 2014. 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 0.21/litre, and diesel by PLN 0.10/litre.

OUR POSITION:

We hope that the greatest possible number of proposals from the sector will be taken into account in legislative works. We look forward to the continuation of the industry's constructive dialogue with the administration, which will enable to find solutions acceptable to both sides, without decreasing tax revenues.

In particular, we hope for changes to EMCS relating to a reference unit in e-AD for bioethanol, initiating the work on a regulation setting forth standards with regard to the limits of liquid fuel losses by analogy with coal products, introducing the facility of a conditional permit as well as a promise (a commitment of a tax authority to issue a decision after the subject in question has completed the necessary formalities). We expect a constructive dialogue with reference to the solutions which improve the quality of the tax law.

4. LUBRICANTS: INTRODUCING A UNIFORM 'ZERO' RATE OF EXCISE DUTY IN POLAND AND THROUGHOUT THE EU

For years, the oil industry has been pointing out that keeping excise duty on lubricating oils reduces the competitiveness of the sector, while prompting the development of the shadow economy in both retail and wholesale trade in lubricating oils. Excise tax interferes with the level playing field for domestic companies which trade in lubricants, increasing operating costs for legally operating enterpreneurs and leading to their lower competitiveness and higher prices of products. Moreover, if excise tax and all related additional costs are not present in other EU countries, then its application in Poland effectively gives rise to additional and unwarranted restrictions on businesses operating in the country, and on end-users of these products. It effectively constitutes an entrance barrier both for transboundary, cross-country operations of foreign entities and for potential newly-created local businesses and start-ups.

The suspension of the revision work on the EU Energy Taxation Directive (ETD) means that the status quo with regard to the single EU Member States' flexibility in the application of both EMCS system and excise tax will be maintained in the nearest future. What is even worse: there will be no equal treatment (level playing field) as a coordinated answer to parallel market in the forseeable future across the EU. We consider such situation as extremely disadvantageous for the Polish lubricating oil market: on the one hand, it will maintain the current discrimination of lubricating oil traders in Poland, as lubricating oils are not subject to excise duty in most EU countries On the other hand, despite those discriminatory burdens, the domestic market will remain unprotected against the influence of the underground economy, as even though (e.g.) EMCS has proved effective in controlling the trade in lubricating oils in Poland, once the products are moved abroad, whether in fact or only 'on paper', the control is lost.

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. At the same time, current control of the product would be maintained, as with a 'zero' rate the EMCS system would still be applicable in case of lubricating oils. The introduction of a 'zero' rate throughout the EU would lead to a further significant reduction of the grey market in lubricating oils and fuels not only in Poland but also in neighbouring countries. Therefore it would be an optimal solution, as it combines the fight against the shadow economy with a minimal interference in the market as well as a minimal burden on market operators.

All the developed solutions should also lead to the harmonisation and creation of equal rules for trading in lubricating oils in the entire EU (socalled level playing field rule). Only such a structural and coordinated approach can essentially eliminate the problem of the grey market. Any harmonisation and streamlining of tax system, both on the domestic and EU scale, is therefore a value in itself.

5. RENEWABLE FUELS

After many years of preparation, the acts implementing the RED (directive 2009/28/EC) and the FQD (directive 2009/30/EC) were adopted. The provisions adopted while amending the Act on Biofuels (the Act of 21 March 2014 on the

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Amendment on Biocomponents and Liguid Biofuels Act and Certain Other Acts) and the Act on Monitoring the Quality of Fuels (the Act of 11 July 2014 on the Amendment on Fuel Quality Monitoring and Control System and the Amendment on Biocomponents and Liquid Biofuels Act) maintained the existing solutions, which are unfavourable to the industry. In the debate over the new regulations the fuel industry pointed to the need of adopting those provisions which enable the most cost-effective implementation of the provisions of the directives, in particular flexibility in determining the National Biofuels Target (NBT) in relation to market conditions, the possibility of transferring NBT surpluses to a subsequent year and of trading them, and finally the possibility of implementing NBT by using modern biofuels, such as HVO (hydrogenated vegetable oil), including those manufactured using co-processing technology. Unfortunately, the proposals forwarded for consultation were rejected in the vast majority. What is worse, the adopted definitions of diesel and petrol (including the diesel definition, which is non-compliant with the EN590 norm) reduce the possibility of using modern biofuels. The above constitutes a barrier for new investments relating to the production of new generation biofuels and hinders the efforts at achieving NBT. It is clear that maintained solutions protect the interests of FAME producers at the expense of the fuel industry and millions of drivers.

The policy on biofuels, in particular with regards to the imposition of a very high level of NBT, translates directly into increasing the prices of liquid fuels in Poland. Continued promoting of first generation biofuels, also as an additive to standard fuels, will cause further increases in costs, and hence of retail prices of fuels and foods.

OUR POSITION

First generation biofuels are a major source of difficulties suffered by the fuel industry in relation to maintaining fuel quality parameters. We look forward to works on elaborating a new, comprehensive act (within the existing legislation or the Oil Law proposed by us), suited to market requirements, fuel industry proposals and trends that have clearly started to be observed in the EU.

We propose the following solutions: 1. Immediate implementation of new generation biofuels as more environment-friendly and favouring vehicle exploitation in order to facilitate achieving NRT in the coming years; 2. Changes in the definitions of diesel and petrol;

3. Shifting from NBT and ensuring that a policy of implementing renewable fuels is based exclusively on NRT; 4. Assuming that the existing solutions remain unchanged: introducing mechanisms which minimise costs relating to achieving NBT and NRT, such as a two-year reference period for NBT, trading in NBT surpluses, lowering penalties for not achieving NBT;

5. Shortening the transitional period as regards accessibility of E5 petrol on the market;

6. Using an appropriate test method of diesel oxidation stability parameter; 7. Improving the system of the refund of excise duty on agricultural fuels by implementing the rule restricting refunds just to fuel actually containing biocomponents.

In planning promotional programmes for renewable fuels, including biofuels, it is of key importance 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 biofuel production, which have been accepted by vehicle manufacturers. Implementation of advanced biofuels, including co-hydrogenation technology, is possible with the use of Polish agricultural raw materials.

6. SALES OF NON-FUEL GOODS AND SERVICES ON FILLING STATIONS

In the wake of significant margin fluctuations many filling stations are able to continue their operations thanks to the sale of non-fuel goods and services. One should bear in mind that the fuel price is largely influenced by taxes and other burdens; on average, in 2014, they represented 51% of the 95-octane petrol price, 47% of the diesel price and 37% of the autogas price.

Every now and then proposals emerge to reduce the range of goods offered on filling stations, i.e. prohibiting the sales of alcohol or basic OTC drugs. The authors of such ideas are driven by their personal opinions that cannot find any support in facts, or by their own, narrowly defined business interests.

The market research conducted in 2013 showed that just slightly over 3% of spirits are purchased by the clients on filling stations (a downtrend compared to 2012). For beer it is slightly below 4%, which is also less than in the comparable period of 2012. Moreover, it is the filling stations, which, due to the existing sur-

veillance systems, provide the best possible enforcement of regulations prohibiting the sale of alcohol to minors and drunk persons. The experience of countries which have imposed a full or partial prohibition on the sale of alcohol on filling stations (the Netherlands, Belgium) shows that there is no correlation between the availability of alcohol on filling stations and the number of drunk drivers.

The filling station is often the nearest and sometimes only point where one can purchase OTC drugs, including painkillers and cold medicine which help alleviate pain or the first cold symptoms. The drugs are stored in conditions which do not vary from the storage conditions in pharmacies.

OUR POSITION

We expect that the prices on the fuel market will be shaped exclusively by the economic factors, and the adopted regulations will not cause a further, baseless increase in prices. We are also convinced that the provisions related to the trade in alcohol should be aligned within all distribution channels, and the basic OTC drugs should also be available in non-pharmacy outlets.

We are against any actions which may cause a restriction to the range of goods and services offered on filling stations, e.g. by prohibiting the sales of alcohol or basic OTC drugs. The only measurable effect of imposing the proposed restrictions would be a further deterioration in the already difficult situation within the oil sector. Trading in goods other than fuels allows the filling stations to operate in their current number and size. Restricting the available number of goods and services will bring an increase in the sites' operational costs along with a rise in fuel prices or a growth in the number of people who are out of work.

7. ENERGY SECURITY WITHIN THE FUEL SECTOR AND REGULATION OF THE OIL SECTOR

The legal provisions related to the fuel sector are set out in a range of relevant acts (the Energy Law Act, the Act on Biofuels, the Act on the System of Monitoring and Control of Fuel Quality, the Act on Construction Law, etc.) and regulations, which are often reciprocally incoherent or even contain contradictory statements. Subsequent







amendments to the law led to the entire system of production, logistics and trade in liquid fuels becoming inconsistent, and none of the ministerial authorities has the overall supervision of that market. The regulations created by individual ministries often do not correlate, what makes the operations of the sector's businesses more difficult, raising the operational costs and the risk of breaking the law. Despite considerable improvement of the dialogue between the relevant authorities and the sector, the proposals submitted by the fuel sector and based on substantive reasons have repeatedly not been taken into consideration in the legislative process, often due to a lack of understanding of their impact on the issues which go beyond a single authority's area of competence. As a result, laws that are being adopted generate enormous costs and do not take into account the economic situation within the EU region, including the difficult situation of the refining industry. That entails a further growth in fuel prices and a deteriorating situation of business owners who operate in compliance with the prevailing law.

OUR POSITION

Efforts should be made to change the status quo by streamlining the legal system. The final solution, according to the sector's proposal, should be creating the Oil Law based on the example of the Energy Law, which would contain all the legal acts concerning the oil industry, including these related to the issues of licensing liquid fuel retailers, creating a universally accessible register of fuel retail operators and the related infrastructure in Poland, as well as a system to monitor the quality of fuels, biofuels, obligatory reserve, technical requirements and others.

Our proposals should be taken into consideration in the government's work plans (or in the 2015-2020 Implementation Plan on Poland's Energy Policy by 2050), which, among others, should set forth creating a regulatory body dedicated to the fuel sector, including a subsequent change within the system of supervision and control over the fuel market.

We repeat our proposal to call an inter-ministerial round table on fuels under the patronage of the Polish Prime Minister and with participation of representatives of the Lower Chamber of the Polish Parliament (the Sejm), the administration, the fuel sector, as well as experts. This would enable mutual expectations and requirements to be clearly defined and, consequently, lead to better lawmaking and improvements in the competitiveness of the Polish economy. We look forward to continuing the round table debate initiated by the Ministry of Economy in 2012.

8. ENERGY EFFICIENCY PERFORMANCE OF BUILDINGS

The legal provisions relating to the energy performance of buildings (Minister of Transport, Construction and Maritime Economy regulation of 5 July 2013, amending the regulation on technical requirements which should be fulfilled by buildings and location thereof, Minister of Infrastructure regulation of 6 November 2008, on methodology of calculating energy pattern of buildings which constitute separate technical and commercial units and issuing certificates thereof, Minister of Economy regulation of 10 August 2012, on specific range and method of conducting energy performance audit, creating energy performance audit checklist and calculating energy savings) imposed on the entities that make investments the necessity to implement in their investment projects a number of solutions related to maximizing the use of energy from renewable sources, which were newly defined by the legislator. The primary energy coefficient has become the critical parameter of an investment, and the adopted regulations do not take into account the specific issues of site construction and development, particularly in non-urban areas. Such approach results in an increase in the costs of investment, especially in areas without an easily accessible infrastructure, by 10 to 12%.

OUR POSITION

We propose drafting regulations which will contribute to the creation of a consistent chain of entities including both energy producers and consumers, encouraged in a similar way not only to consume, but also to produce energy from renewable



sources. If status quo is maintained, the requirement to implement the legal provisions in force which relate to the use of energy from renewable sources will focus on the investor alone.

9. THEFT INCIDENTS ON FILLING STATIONS

Recent months have seen a noticeable increase in the number of thefts in commercial points, including filling stations. In the experts' opinion, an increase in the number of such incidents is to a considerable degree caused by changes to the Article 19 of the Code of Administrative Offences introduced in 2013 and raising the theft value threshold above which such an act is classified as crime from the present 420 PLN to ¼ of the minimum salary, which makes approximately 420 PLN.

The increase in the number of theft incidents causes direct material losses to the site owners as well as poses threat to the safety of both staff and customers. According to the sector's own estimates, in 2014 there were over 100,000 fuel theft incidents involving filling the tank and driving away without paying. The total value of stolen fuel can be estimated at over 20 mln PLN annually.

Particularly worrying is the observed increasing boldness of thieves along with the professionalization of their community, which finds expression in creating ever larger and better organized criminal groups, specialized in drive-offs. The stolen fuel is often resold to other drivers at an underestimated price. The observations made in more economically developed countries, including the West European states, force us to prepare for a further dynamic growth in the scale of the problems described, which have been seen outside Poland for decades.

OUR POSITION

POPiHN expects a change to the existing law as well as an improvement to the effectiveness of actions of law enforcement authorities in reducing the number of such offences and crimes. In particular, among other retailer associations, we believe it is necessary to:

1. Enable the Police to collect and process data on offenders (creating a register of offences – introducing changes to the Paragraph 2a Art. 20 of the Act on the Police);

2. Change the legal qualification of a series of thefts by classifying it as a continuous act (Art. 11 of the Polish

Penal Code), as well as introduce changes to the definition of an 'audacious robbery' and enable the application of Art. 38 of the Code of Administrative Offences (recidivism); 3. Restore the original provision of the Art. 208 of the 1967 Polish Penal Code, which penalizes particularly audacious robberies irrespective of their subject's value and apply this qualification to theft incidents on petrol stations and in other retail points; 4. Introduce changes to the Act on Personal Data Protection allowing for maintaining databases and exchanging information between business owners on theft incidents.

10. EUROPEAN UNION REGULATIONS

The decision-making bodies of the European Union are currently debating the shape of energy-climate and transport policies in a long-term perspective. After years of imposing the European refining industry with unproportional burdens and thus deteriorating its competitiveness against non-EU opponents, in the European Commission voices have been raised, pointing out the necessity to change the existing policy. The adopted solutions will have direct impact on the future of the refining industry in Europe. They should take into account that in the medium term oil will remain the main source of energy for transport. Poorly thought-out legal regulations, which do not take into account the interests of not just the refining sector, but also related sectors of the economy, could lead to the collapse of the sector and the relocation of production outside the EU. This would have disastrous consequences for the entire EU economy, as well as its energy security.

OUR POSITION

We expect the administration to continue its dialogue with the sector representatives and take account of our voice in the position presented by the representatives of Poland on the EU forum. It is essential for Poland to be appropriately proactive on the 'Refining Roundtable' forum which started its work within the European Commission in May 2012.

11. ADMINISTRATIVE AUTHORITIES' DIALOGUE WITH THE SECTOR REPRESENTATIVES

POPiHN maintains close working relations with a number of offices, bureaus and agencies, and the Organisation's members are invited to consult Polish and EU legal acts, as well as they participate in the works of the Advisory Board on intervention stock, attached to the President of the Material Reserves Agency, the Trade Advisory Board and the Advisory Committee for system solutions in the energy sector, attached to the Ministry of Economy.

The dialogue between the administration and fuel industry representatives has resulted in the adoption of a series of advantageous solutions, such as:

1. On 21 August 2014 was published the text of the resolution of the Ministry of Infrastructure and Development of 5 August 2014, amending the resolution on the technical conditions of technical supervision to be met by the equipment for filling and emptying transportation tanks (so called resolution FE). The amended text contains most of the solutions proposed by the oil sector. Thus we have concluded a several-year long consultation process, which has been of crucial importance to the oil infrastructure sector, and therefore to all fuel consumers in Poland.

2. Following many years of merchants' efforts, it has been possible to introduce the statutory reduction of charges related to the acceptance of card payments. The amendment to the act on payment services of 28 November 2014 introduced a maximum 0.2% IF level for debit cards and 0.3% for credit cards, as well as new information obligations for paying agents. The adopted solutions, due to lower costs for accepting debit and credit card payments, will contribute to a further growth of the non-cash payment system, to the benefit of entrepreneurs, consumers, as well as the state (lower costs of cash, reducing the shadow economy).

3. From 1 January 2014 definitively entered into force environmental protection requirements at filling stations, determined in paragraph 177 of the Ordinance of the Minister of Economy of 21 November 2005 on technical conditions to be met by liquid fuel depots and stations, long-distance transmission pipelines which transport petroleum and petroleum products and their location. They imposed on the owners of sites which were built before 2005 the obligation to modernise tanks, equip the sites with systems for monitoring fuel leak to soil, surface water and groundwater, thus contributing to the improvement of environmental protection, as well as fair competition among filling stationrunning entrepreneurs.



PROCESSING OF CRUDE OIL

In 2014 Polish refineries processed 24.2 mln tonnes of crude oil, which was comparable to last year's results. The lack of increase in domestic demand for liquid fuels and low profitability of export production of most refined petroleum products are main reasons accounting for the lack of growth in crude oil processing. When comparing the data in individual quarters of the previous year, we can see that the best results were achieved in the third quarter, when 6.6 mln tonnes were processed, whereas in the second part of the year the amount of processed oil was 1.4 mln tonnes more than in the first half of the year.

Processing of crude oil in PKN ORLEN amounted to 14.6 mln tonnes (7% less than in 2013), and in Grupa LOTOS 9.5 mln tonnes (9% more than in 2013). The increase in the level of processing at the Gdańsk refinery was mainly due to the fact that in 2013 there was a planned standstill, but also maximizing the output of individual installations, resulting from a modernisation carried out during the refurbishment, influenced the increase in processing capacity. PKN ORLEN adjusted the level of crude oil processing to the demand from the market.

The east remained the dominant direction for oil supplies to Polish refineries, as in previous years, accounting for 91% of the total supply of crude oil. This is 2% less than in 2013. REBCO crude oil remained the main type of oil used in Polish refineries, and among its advantages over the competitors were long-term contracts, attractive price, technological conditions of refineries and the logistics of pipeline supplies. Apart from REBCO, yet on a much smaller scale, British, Norwegian and Iraqi crude oil was also processed. Grupa LOTOS in its facilities processed crude oil obtained from its proper deposits on the Baltic Sea, and southern refineries of PKN ORLEN handled some amount of domestic crude oil extracted by PGNiG.

The structure of crude oil supplies to domestic refineries is presented in Fig. 2. It shows the dominance of REBCO, observed in the past and probably for a long time in the future, even though in case of crisis Polish refineries can relatively quickly switch to processing other types of crude oil, imported by Port Północny in Gdańsk. In 2014 23 mln of REBCO crude oil were brought to Poland, out of which 20 mln were transported via the pipeline 'Przyjaźń', owned by Przedsiębiorstwo Eksploatacji Rurociągów Naftowych S.A. Around 4 mln tonnes were brought in via the port facilities of Naftoport on the Baltic Sea coast.

The volume of crude oil supplies from domestic deposits constituted approximately 4% of supplies to refineries, which is equivalent to 8 days of refinery production.

Fig. 1 PROCESSING OF CRUDE OIL - DATA FOR 2013 AND 2014 in mln tonnes

| Year | 2013 | 2014 | Reference 2013=100 |
|---------|------|------|--------------------|
| OVERALL | 24.3 | 24.2 | 99.5 |

Source: POPiHN's own data

■ Fig. 2 SHARE OF CRUDE OIL SUPPLIES TO DOMESTIC REFINERIES IN 2014 [%]



Source: POPiHN's own data







PRODUCTION OF LIQUID FUELS

■ Fig. 3 COMPARISON OF LIQUID FUELS PRODUCTION IN 2014 AND 2013 [in thousand m³]

| Description | 2013 | 2014 | Reference 2013=100 |
|----------------|--------|--------|--------------------|
| Petrol | 5,419 | 5,178 | 96 |
| Diesel | 13,110 | 12,796 | 98 |
| LPG | 627 | 643 | 103 |
| JET fuel | 1,079 | 1,423 | 132 |
| Light fuel oil | 957 | 703 | 73 |
| Heavy fuel oil | 3,151 | 3,378 | 107 |
| OVERALL | 24,343 | 24,121 | 99 |

Liquid fuel production in 2014 (Fig. 3) of petrol (P), diesel (D), liquefied petroleum gas LPG, JET aviation fuel, light fuel oil (LFO) and heavy fuel oil (HFO) amounted to 24.1 mln m³, which means that around 1% less liquid fuel products entered the market than in the year 2013. Total liquid fuel production was 222,000 m³ less than in the previous year.

An increase was recorded in case of liquefied petroleum gas LPG, JET aviation fuel and heavy fuel oil. Two latter products were then in a large majority sent to foreign markets. Production of petrol, diesel and light fuel oil, i.e. the products aimed at domestic market, decreased in comparison to last years' results. In terms of volume there was a particularly significant decline in diesel production, and even so part of this production was designated for export. This was, among others, the effect of the fuel supplies from the grey zone, carried out beyond official statistics channels. In Poland the demand for light fuel oil continues to shrink and the production follows this trend. Petrol market, declining year by year, was in Source: POPiHN's own data

2014 also reflected in decreasing domestic production. A vast majority of domestic refinery production of petrol and diesel, aimed at domestic market, was blended with biofuels, as the necessity to reach National Biofuels Target (NBT) forced such measures. Fuel blending with the use of biofuels, as well as other additives, in Poland is treated as production, therefore such an attitude slightly increases the production pool in relation to production only in refineries. Using biofuels in liquid fuels in 2014 was on a level similar to the previous year's, which was fostered by temporary freezing of NBT thresholds and a possibility of applying adequate reduction factors while settling the fulfillment of goals.

Production of diesel decreased by 314,000 m³ (by 2%), which was a reverse trend as compared with the previous year, even though, according to the official data, domestic production continued to increase and the dieselisation of vehicle fleets was progressing. A drop in the production of petrol is estimated at

4% and it is a continuation of the trend from the previous years. However, there was a slight increase in liquefied petroleum gas LPG production and more of it was directed at customers, thus slightly reducing its import. The decreased production of diesel and light fuel oil had the consequence of increasing the production of JET aviation fuel, whose larger amounts were directed both at the domestic market and for export. Production of heavy fuel oil grew significantly, a little forced by substantial reduction of demand for asphalt products.

The structure of fuel production in 2014 is presented in Fig. 4.

In overall production there was a slight decrease of petrol and diesel, namely the two fuel types that reflect the domestic demand. JET aviation fuel saw an increase in production, and also there was a slight increase in heavy fuel oil production. Nevertheless, despite 1 percentage point decline, diesel remained a dominant product.

As mentioned above, the production of liquid fuels also includes the process of mixing (blending) standard fuels with biofuels. In 2014 National Biofuels Target, and therefore a minimum level of biofuels introduced onto the market, which companies that produce fuels and import them are obliged to fulfill, was set at 7.1% according to caloric value, which in turn resulted in the need of adding alcohol and esters to the majority of petrol and diesel pools introduced onto the Polish market. Additionally it was also necessary to sell a sufficient amount



■ Fig. 4 BREAKDOWN OF LIQUID FUELS PRODUCTION IN 2014 [%]

of B100 fuel because simply adding biofuels to standard fuels was not enough to fulfill the NBT. In order to facilitate the fulfillment of NBT the state in 2013 froze its level (until 2017) and enabled to apply reduction factors on the level of 0.85 of NBT, on the condition of using biofuels originating from the EU and EFTA countries. Unfortunately, the amendments from 2014 to the Act on Biocomponents and Biofuels do not allow using biofuels in higher proportion in standard fuels in a realistic way. Although new generations of biofuels have been allowed, at the same time, through changing the definitions of fuels, their use on a larger scale has been limited. Preliminary market information shows that POPiHN members achieved the imposed NBT. It is estimated that in 2014 around 300,000 m³ of ethanol and around 720,000 m³ of esters were added to fuels. Sales of B100 fuel are estimated at about 200,000 m3 (definite figures will be known until the end of



March 2014). This means that volume sales of B100 in relation to 2013 grew by approximately 12,000 m³, even though, which is worth noting, this type of fuel

practically disappeared from easily accessible filling stations. It was not very popular among drivers and its sales at filling stations were strongly subsidised.

Source: POPiHN's own data





IMPORT OF LIQUID FUELS (sum of actual imports and intra-Community acquisitions) (Fig. 7 and 8).

Current estimates show that officially registered imports of liquid fuels in 2014 amounted to 6 mln m³, i.e. this volume was about 6% higher than in the previous year. Volumes of imported petrol, diesel and heavy fuel oil were higher than in 2013, whereas they were lower in case of other types of liquid fuels. The increase in imports of two main types of fuel was partially caused by the entry into force of new legal regulations aimed at reducing the grey market, and partially due to increased efficiency of control services, which enforced the law in a coordinated manner. Not without importance was also a high level of margins from legal fuel sales in the end of the year. Increased imports of main fuels is a reverse trend to the one observed in 2012 and 2013 and at the same time it is evidence confirming that effective and permanent controls of imported fuel result in a greater desire to legalise imports. Meanwhile we must bear in mind that some amount of diesel produced in Poland, despite good economic results, which usually correlate with increased demand for diesel, was not possible to allocate on the domestic market and therefore it had to be exported. Statistics show that the whole official diesel market in the country is not growing, which means that it probably continues to be supported by a strong stream of fuel from outside the official circuit.

In 2014 there was a slight increase in the imports of petrol. Although when expressed in percentage, it is around 8%, in terms of volume it is only about 46,000 m³. At the same time the imports of liquefied petroleum gas LPG decreased by 2%, which can be linked to both lower demand due to mild winter and a decreasing demand for autogas in view of deteriorating price relations between LPG and 95-octane petrol. In addition, there was a slight increase in domestic production of LPG and a decrease in so-called re-export, which also influenced the total amount of supplies of this fuel type. Foreign acquisitions of JET aviation fuel decreased the most, and the level of its domestic production was significantly increased. A decline in total imports of fuel oils arises out of increasing domestic production (HFO) and in low demand affected by mild weather conditions at the turn of the year (LFO, HFO). Besides competitive prices of energy



■ Fig. 6 COMPARISON OF IMPORTS AND INTRA-COMMUNITY ACQUISITIONS OF LIQUID FUELS IN 2014 AND 2013

| Description | 2013 'thousand m ³ | 2014 'thousand m ³ | Reference 2013=100 | |
|----------------------|-------------------------------|-------------------------------|--------------------|--|
| Petrol | 597 | 643 | 108 | |
| Diesel | 1 065 | 1 457 | 137 | |
| LPG | 3 691 | 3 630 | 98 | |
| Light fuel oil | 89 | 77 | 87 | |
| JET fuel | 68 | 39 | 57 | |
| Heavy fuel oil | 78 | 80 | 103 | |
| Liquid fuels overall | 5 588 | 5 926 | 106 | |

Source: Ministry of Finance and POPiHN's own data

■ Fig. 7 SOURCES OF PETROL IMPORTS [%]



Source: Ministry of Finance and POPiHN's own data

carriers other than light fuel oil influenced the continuation of downward trend in demand, and thus in both domestic production and imports of this fuel type.

Compared to 2013, officially recorded imports of liquid fuels increased by 338,000 m³ and it was similar to the decline from 2013, which was 340,000 m³ in comparison with 2012. Thus the im-



port volumes returned to the level set in 2012, yet their structure changed.

In 2014 the import of diesel significantly grew in importance (its share increased by 6 percentage points), whereas LPG lost in significance (its share decreased by 5 percentage points). The share of light fuel oil decreased by 1 percentage point.

■ Fig. 8 SOURCES OF DIESEL IMPORTS [%]

Official data show that in case of the market for 4 basic liquid fuels (petrol, diesel, LPG and light fuel oil) POPiHN members had lower imports than in the previous year, whereas independent operators brought in more fuel to the country. POPiHN members' imports decreased by 23%, while the independent operators' imports grew by 21%. For independent operators the imports of LPG is of significant importance, as it satisfies almost 90% of domestic demand and significantly increases the data for independent imports. Nevertheless, this time it was a double growth in diesel imports which significantly increased imports of the independent sector. In the group of described fuels big oil companies imported around 1.3 mln m³ and it was about 400,000 m³ fuel less than in the previous year. Independent operators increased their purchases abroad by approximately 770,000 m³ and brought into the country almost 4.5 mln m³ fuel from the described product group.

Sources of supplementary imports of petrol are shown in Fig. 7. The largest amounts of fuel for spark ignition engines were imported to Poland from Slovakia. The remaining source countries are: Germany, Lithuania, Hungary, the Czech



Source: Ministry of Finance and POPiHN's own data

Republic and the Netherlands. Import from other countries was marginal.

Official imports of diesel show a larger variety of source countries than in the case of petrol. Most of this fuel was brought in from Germany and Russia, and supplies from these two countries were also bigger than the year before. Besides the product was imported in significant amounts from Lithuania, Belarus and Slovakia. From beyond our eastern border, i.e. from non-UE countries, around 22% of the product was imported. This is around 4 percentage points more than in 2013. Altogether, the east, including the EU countries, provided around 38% of the whole diesel imports, which is about 2 percentage points more that in the year before. The east is pointed out as the main source of supplies to the informal economy, but observations prove that grey market fuel in large amounts also reaches Poland from Germany, yet as a rule it comes from Russian and Belarusian refineries.





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

■ Fig. 9 STRUCTURE OF EXPORTS AND SUPPLIES IN 2013 AND 2014. [in thousand m³]

| Description | 2013 | 2014 | Reference 2013=100 |
|-------------------|-------|-------|--------------------|
| Petrol | 1,180 | 913 | 77 |
| Diesel | 698 | 979 | 140 |
| JET aviation fuel | 466 | 686 | 147 |
| LPG* | 88 | 69 | 78 |
| Heavy fuel oil | 2,550 | 2,925 | 115 |
| OVERALL | 4,982 | 5,572 | 112 |

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

Export of liquid fuels (Fig. 9 and 10) in 2014 amounted to over 5.5 mln m³, which, compared to 2013, increased by 12%. It is another year in which we observe growing Polish exports of liquid fuels. In comparison with 2013, 590,000 m³ more fuel was sent abroad. This increase was lower by 100,000 m³ than when we $\frac{11}{22}$ compare the years 2013 and 2012, yet $\frac{1}{50}$ the trend was maintained.

Favourable balance of exports was maintained despite reducing the production of diesel, which is the most important fuel for the economy. It means that official fuel market was further reduced, which was significantly influenced by the grey economy. The largest percentage increase in exports was for JET aviation fuel, whose production in the country was developed and which has always been our flagship export product. The impossibility of allocating larger amounts in the country forced foreign shipments of diesel. The exports were 40% higher than in the previous year. In volume terms the biggest increase was recorded for heavy fuel oil and it amounted to 375,000 m³, which is 85,000 m³



more than in 2013. A decrease in exports was recorded for petrol. Petrol is a product difficult to allocate abroad, and in addition the lack of increase in demand on domestic market forces the reductions in production. Heavy fuel oil remained the largest export product and it constituted 51% of all foreign shipments.

The export deliveries of JET fuel shown in Fig. 9 are deliveries carried out directly by domesctic producers to recipients outside Poland. However, a significant amount of this fuel production goes to domestic intermediaries, which provide airport deliveries to domestic and international carriers. The volume of these deliveries in 2014 amounted to 780,000 m³ and was almost 140,000 m³



Source: POPiHN's own data

bigger that in 2013. It is clearly visible that these operators need more fuel year by year, which reflects the development of domestic aviation, but also shows how to efficiently win customers who, until quite recently, only refuelled aircrafts in Poland due to rather unfavourable prices.

A phenomenon which developed intensively in 2013 was the re-export of liquefied petroleum gas (LPG). That activity consisted in providing foreign recipients with LPG, which was previously imported or purchased within intra-Community acquisitions. In 2013 about 10% out of the LPG pool officially imported into the country was notified as sent further across the Polish border. In 2014 this volume decreased to around 8% and amounted to about 279,000 m³.

The structure of total exports of liquid fuels from Poland shows an increase in medium distillates share, namely diesel and JET aviation fuel. Diesel gained 4 percentage points, whereas JET aviation fuel gained 3 percentage points. There was also a slight increase (by 2 percentage points) in the role of heavy fuel oil. The increases took place at the expense of petrol, whose share declined by 8 percentage points.

The main destinations of exports and intra-Community supplies for petrol were Ukraine, the Netherlands and Sweden. Diesel was delivered mainly to the United Kingdom and Germany. Most of heavy fuel oil was supplied to the Netherlands and outside the EU, whereas the biggest recipient of JET fuel was Sweden.





DOMESTIC CONSUMPTION of liquid fuels in 2014

■ *Fig. 11* ESTIMATED DOMESTIC LIQUID FUEL CONSUMPTION IN 2014 IN COMPARISON TO THAT OF 2013.

| Description | | | 2013 | | 2014 | Reference |
|------------------------|----------------|---------------------------------------|---------------|-----------------------|---------------|-----------|
| - | | thousand | Share of | thousand | Share of | 2013=100 |
| | | m ³ | consumption % | m ³ | consumption % | I |
| Petrol | Consumption | 4,925 | | 4,841 | | 98 |
| | of which total | 597 | 12 | 643 | 13 | 108 |
| | imports | · · · · · · · · · · · · · · · · · · · | | · , | | l |
| Diesel | Consumption | 13,463 | | 13,423 | | 100 |
| | of which total | 1,065 | 8 | 1,457 | 11 | 137 |
| | imports | · · · · · · · · · · · · · · · · · · · | | ! | | l |
| LPG | Consumption | 4,223 | | 4,166 | , | 99 |
| | of which total | 3,691 | 87 | 3,630 | 87 | 98 |
| | imports | ! | | · , | | |
| Total for 3 fuel types | Consumption | 22,611 | | 22,430 | | 99 |
| | of which total | 5,353 | 24 | 5,730 | 26 | 106 |
| | imports | | | | | |
| JET fuel | Consumption | 676 | | 781 | ļ | 116 |
| | of which total | 68 | 10 | 39 | 5 | 57 |
| | imports | ' | | | | I |
| Light fuel oil | Consumption | 998 | | 843 | ļ | 84 |
| | of which total | 89 | 9 | 77 | 9 | 87 |
| | imports | ! | | ļ! | | I |
| Heavy fuel oil | Consumption | 642 | | 527 | ļ ļ | 82 |
| | of which total | 78 | 12 | 80 | 15 | 103 |
| | imports | · · | 1 | 1 | | 1 |
| OVERALL | Consumption | 24,927 | | 24,581 | | 99 |
| | of which total | 5,588 | 22 | 5,926 | 24 | 106 |
| | imports | | | | | |

Source: Ministry of Finance and POPiHN's own data



Table 11 presents a preliminary comparison of domestic consumption of liquid fuels in 2014 compared to that of 2013. Final data, taking into account final calculations elaborated by the Customs Service of the Ministry of Finance on imports and intra-Community supplies, will be available in mid-2015. Therefore the results presented for 2014 should be treated as estimates, yet very close to final data.

Despite economic growth observed in Poland liquid fuels market shrank in 2014 by a further 1%. Although demand for main fuel in Polish economy, i.e. diesel, remained unchanged, the sales volumes of the remaining fuels, excluding JET aviation fuel, resulted worse that in 2013. The consumption of fuel oils was particularly poor, the main reason for which was guite mild weather and thus substituting this energy carrier by gas fuels and biomass. Traditionally the demand for petrol declined, although the prices, in particular in the end of the year, were very attractive to the drivers, and on average throughout the year they were lower than in the preceding year. Lack of increase in demand for diesel, despite the growth of GDP in Poland, can only be accounted for by supplying the market with grey economy fuels. This fact has been confirmed by numerous controls, which in 2014 showed the scale of the phenomenon, bringing additional revenues to the state budget and estimating the losses at the level of several bn PLN. According to POPiHN's estimates, in 2014 the shadow economy in the diesel market was at a level comparable with the previous year's, when its scale was estimated at approximately 15-20% of the market. Little shows that this practice is getting weaker, yet more intensive tax and customs office inspections in cooperation with the police have somewhat bothered these 'enterpreneurs'. The only market which in 2013 effectively resisted the slump was that for LPG, however, in 2014 also in this case the results were worse than previously. This might have partially been due to reducing the socalled re-export by almost 1/4, as well as worsening the price relations with reference to 95-octane petrol, which is substituted by autogas in spark ignition engines. To sum up, we can conclude than on the Polish liquid fuels market there has been a decrease in official demand for petrol, light and heavy fuel oil and LPG. The demand for diesel remained unchanged and once again there was an increase on the domestic market for JET aviation fuel. Domestic demand for liquid fuels was fully satisfied and there were no

recorded instances of market disruptions.

The level of development of the economy is reflected in the demand for diesel. It is estimated that in developed economies a growth of demand for this fuel type usually equals half of achieved GDP. In Poland in 2014 GDP amounted to about 3.5% and thus the growth of demand for Diesel engines fuel should equal around 1.5%. However, this did not happen and only a result comparable to last year's was reached. The reasons accounting for the lack of growth are still a substantial grey economy on the market of this fuel type and difficulties of the transport sector, related to the situation

petrol, but also the ones for high-octane petrol, were significantly lower than in 2013, yet even so less petrol was purchased. While analysing the demand, one must note the progressing modernisation of Polish roads, as well as smaller fuel requirements of modern petrol engines and growing use of public means of transport in cities, but also outside of them. These elements altogether accounted for the fact that the demand for petrol in 2014 was 2% lower than in 2013. Another factor that impacts petrol consumption is the possibility of refuelling spark ignition engines with autogas. The demand for this fuel type decreased





Source: POPiHN's own study

across our eastern borders. Another reason has been limiting infrastructure investment and slowing down the dieselisation of vehicle fleets. In 2014 official imports in supplying the diesel market grew by 3 percentage points and reached the level of 11%. Simultaneously the official supplementary imports grew by 37%, which was to a large extent influenced by control services' activities, which encouraged several importers to register their foreign purchases. If we took into consideration the additional amount of fuel supplied by the grey market beyond official statistics, the result would confirm the above described demand regularity.

We have already got used to the fact that the demand for petrol has been decreasing year after year. Also in 2014 this trend was confirmed and petrol consumption was 2% lower than in 2013. The level of retail prices and the size of vehicle fleet are main factors that determine the volume of petrol purchases, as this fuel is mainly bought to meet private needs of Polish drivers. In 2014 the price of EU95 only insignificantly, which means that autogas continues to be very popular, affecting petrol purchases. Polish drivers used 0.6 mln m³ of petrol coming from abroad, which accounts for about 13% of the total market share.

As we already mentioned, the consumption of LPG in 2014 was about 1% lower than in the previous year. The price relation: autogas - EU95 petrol worsened slightly, but for most part of the year it remained at the level which favoured purchasing autogas. Estimated results for the whole year show a decrease in LPG consumption by around 1%. Also the volume or re-exported LPG decreased by about 100,000 m³, which could influence the total domestic consumption. According to POPiHN's methodology, demand for LPG dropped by about 60,000 m³, but simultaneous reduction of re-export by 25% could as a result cause total domestic market to decrease by 3%. Similarly as in 2013, about 87% of the market is still supplied with fuel from abroad.



■ Fig. 13 STRUCTURE OF LIQUID FUELS CONSUMPTION IN 2014 [%]

The Polish market for light fuel oil has been shrinking for years. In 2014 the decline was 16%, i.e. around 160,000 m³ fuel less was consumed in Poland. Thus 2014 was the second consecutive year in which domestic demand for this product was estimated at a level below 1 mln m³. This fuel is bought at the prices which largely depend on the trends on petroleum market and in recent years they have not been as attractive as other energy carriers' prices. Therefore there are no significant incentives to increase the demand. Most of the demand for this fuel (91%) was met by supplies from domestic production. In 2014 official supplementary imports declined by 13%, reaching only 80,000 m³.

There is a steadily increasing growth in domestic demand for JET aviation fuel. In a consecutive year of growth the consumption increased by 16%, approaching the level of 0.8 mln m³. We observe a growing number of operators supplying aircrafts with fuel at domestic airports and the increase in the number of flights on domestic and international routes, handled by national and international operators. The market growth was satisfied by domestic production and at the same time imports of this fuel fell.

Heavy fuel oil consumption got reduced, this time by 18%, while there was a slight increase of 3% in the imports of this fuel, in comparison with 2013 data. This fuel is produced in Polish refineries in quantities considerably exceeding domestic demand and therefore for years surpluses have been sold abroad in large volumes, in particular in the periods when the demand for asphalts is decreasing, and such was the situation in 2014.

Total domestic consumption of 6 types of liquid fuels amounted to 24.6 mln m³ and was lower by 0.4 mln m³ than in 2013. A drop in the market was estimated at 1%, but at the same time there was a growth in fuel imports to Poland in the volume of 340,000 m³. Main element influencing the increase in total imports of fuels was a growth in foreign purchases of motor fuels. Around 24% of the market was supplied with foreign fuel, which was 2 percentage points more than in 2013. Overall imports of liquid fuels amounted to slightly over 5.9 mln m³, which is 6% more than in the year before.

The structure of fuel consumption in Poland has been presented in Fig. 13.

In relation to 2013, there has not been much change in the breakdown of consumption of liquid fuels. We should bear in mind a slight increase of the importance of diesel and a fall in market share of



■ Fig. 14 BALANCE OF INTERNATIONAL TRADE IN LIQUID FUELS IN 2014 [in thousand m³]

| | Import + Purchases | Export + Supplies | Difference (2-3) | |
|-------------------|--------------------|-------------------|------------------|--|
| 1 | 2 | 3 | 4 | |
| Petrol | 643 | 913 | (-270) | |
| Diesel | 1,457 | 979 | 478 | |
| LPG | 3,630 | 69 *) | 3,561 | |
| JET aviation fuel | 39 | 686 *) | (-647) | |
| Light fuel oil | 77 | | 77 | |
| Heavy fuel oil | 80 | 2,925 | (-2,845) | |
| TOTAL | 5,926 | 5,572 | 354 | |

Source: Ministry of Finance and POPiHN's own data *) – trade of domestic producers

light fuel oil. The consumption of diesel is dominant and its share equals 55%.

Domestic market is the main source for supplies from Polish refineries, for which it is more profitable to allocate the product in the country than to export it. The profitability of domestic sales is determined by economic, trade and logistics factors. Surpluses of products unable to be sold in the country are sent abroad. International companies operating in Poland, as well as private companies, are also bringing their foreign purchases onto the domestic market, but their share in market supply is only supplementary.

In 2014 the dominance of fuel imports, understood in broad terms, over exports was over 350,000 m³ and fell by about 200,000 m³ in relation to 2013. Three years ago this difference was 4 mln m³ and it was gradually decreasing in each consecutive year. Low domestic demand forces seeking new markets, and these are found mainly in Europe, yet certain products (in particular heavy distillates) are allocated beyond our continent. The need for greater exports forces reducing the difference between what is imported to and exported from the country.

Such behaviour favours gaining part of the market by the shadow economy. In 2014 domestic production of liquid fuels slightly decreased, yet still on a domestic market in was not possible to allocate even this smaller production pool. In the last year's report we wrote that if in 2014 legally operating companies would not manage to recover a part of domestic diesel fuel market occupied by the grey economy, then the situation with an increased export would repeat, this time on a larger scale. And this is indeed what happened. This process is not conducive to strengthening the value of Polish refineries, which earn less on exported fuels, and at the same time the state collects less revenue as taxes are not levied on goods exported abroad, and the grey economy avoids paying taxes in the country. As a rule, international trading balance was shaped by diesel and LPG imports on one hand and heavy fuel oil and JET fuel exports on the other. In 2014 the fuels which Poland exports more of than it imports were joined by petrol and it should be noted that the volume of diesel exports rose, similarly to the previous year.



RETAIL MARKET

Retail sales of fuels are carried out by a network of filling stations, which, according to the data gathered by POPiHN, at the end of 2014 comprised 6,479 outlets. This number of filling stations is smaller than in 2013 by approximately 270 stations. Main reason accounting for the reduction in the number of places where we can refuel was the entry into force of the regulations¹ adjusting the equipment of filling stations to current environmental requirements. The process of implementing this legislation was ongoing since 1996, and its entry into force was postponed a number of times. This time there was no rescheduling of the deadline and all the operators who had not managed to adjust their tanks to the new requirements were supposed to either close down the stations or at least limit the distribution of fuels to modernised capacities. Due to the implementation of new regulations approximately 500 stations were predicted to disappear from the market, namely the oldest and the worst equipped ones. The estimates showed that the actual decline amounted to about 300 stations. The reduction of operating stations took place mostly in the group of independent sites; nevertheless, national companies also closed down about 80 outlets. These changes did not cause significant shifts as regards the market share of filling station networks. Stations owned by national companies constitute approximately 34% of the market, but the biggest number of stations are still the independent ones, which constitute approximately 42% of the market. The market share of independent stations is getting smaller year after year, but the rate of decline in the past few years has slightly slowed down. Private operators are often trying to find their place on the market by switching to corporate logos of large oil companies or by forming common sales networks or purchasing groups. The rest are trying to survive in business by themselves, but a difficult economic situation is very often an incentive to fill up in the informal market.

In 2014 PKN ORLEN continued to be the market leader in filling stations. There was no change in the number two position, which continued to be occupied by BP, and there was an improvement in the position of Grupa LOTOS, intensively developing its network. National oil companies operated under four brands: ORLEN and BLISKA as well as LOTOS and OPTIMA. Domestic

■ Fig. 15 NUMBER OF STATIONS OF RETAIL OPERATORS IN 2012-2014

| | 2012 | 2013 | 2014 |
|----------------------------------|------------|------------|------------|
| Filling station network | 31.12.2012 | 31.12.2013 | 31.12.2014 |
| DOMESTIC COMPANIES | 2,172 | 2,217 | 2,209 |
| FOREIGN COMPANIES | 1,424 | 1,423 | 1,399 |
| INDEPENDENT CHAINS | | | |
| (operating under a common brand) | 620 | 732 | 743 |
| OTHER INDEPENDENT | | | |
| OPERATORS (approx.) | 2,380 | 2,208 | 1,957 |
| SHOPS | 160 | 166 | 171 |
| TOTAL (approx.) | 6,756 | 6,746 | 6,479 |

companies increased the number of filling stations by 1 percentage point in comparison to 2013 and currently their market share constitutes 34%. The role of international companies on the Polish market increased slightly and currently their networks constitute 22% of the market, yet the total number of stations in charge of these companies decreased. The main reason accounting for that was selling by Shell a part of the stations that had been previously purchased from Neste after the latter company withdrew from the Polish market. Franchising agreement continues to be the main tool in acquiring new stations to the network, but there are also outlets built from the scratch. The number of petrol stations owned by hypermarkets increased by a couple of outlets. With a reduced number of petrol stations in the country the market share of this group of stations increased to 2.6%. The increase has not been very significant, yet we should remember that these stations sell large amounts of fuels.

The value of retail market for fuel sales in Poland in 2014 is estimated at about 94 bn PLN, whereas its volume at approximately 20 bn litres of fuels (petrol, diesel and autogas). State budget revenue from taxation (VAT, excise duty, fuel surcharge) from retail sales of fuels amounted to around 41 bn PLN.

In 2014 there was no major acquisition nor network sale on filling station market. An important issue was the sale of the 28 former NESTE outlets, carried out by Shell to the benefit of the company Reflex (the stations under the e-Mila logo) and rebranding many of the stations owned by Neste to the corporate logo of Shell. The number of Grupa LOTOS sites operating under the logo of OPTIMA continued to grow, whereas the number of stations under the logo of BLISKA continued to decline, and some of these stations received the ORLEN company logo.

Source: POPiHN's own data

The network of stations operating along Polish motorways is developing. In 2014 16 such stations were launched, thus providing an opportunity to fill up the car on fragments, which for a long time had scared us with the scenario of a car being stopped due to the lack of fuel. New stations are being built and in GDDKiA (eng. General Directorate for National Roads and Motorways) new tenders for further MOPs (eng. Motorway Service Areas or MSA) are being prepared. The growing number of stations located on motorways and express ways are changing the geography of purchasing fuels by Polish drivers, eliminating from the market the stations whose profitability has been reduced due to the new network of car traffic in the country. The stations from the economic segment, located mainly in smaller towns or on the outskirts of bigger cities, are growing in popularity. Decreasing fuel prices allow to generate a bigger retail margin, which encourages some independent operators to consider opening self-serviced stations. This path has been chosen by such companies as Reflex, OPN24 or MOMO. Some of the oil companies stations tested self-service option while filling up and paying at the dispenser at their company stations. Time will show if retail margins remain for a longer period of time on the levels allowing for profitable implementation of such undertakings.

The market leader in 2014, PKN ORLEN, decreased the size of its filling stations network by 10 outlets, ending the year with 1,768 refuelling outlets. This result was achieved through restructuring the network, as well as thanks to new investments and acquisitions. The number of stations operating under the BLISKA logo was reduced by closing down some of

¹Regulation of the Minister of Economy, dated 21 November 2005, on technical conditions to be met by liquid fuel depots and stations, long-distance transmission pipelines which transport petroleum and petroleum products and their location



■ Fig. 16 FILLING STATIONS IN POLAND AT THE END OF 2014



total number was 171. The increase was achieved mainly thanks to the Intermarché network, which launched 4 filling stations. One station was launched by Auchan. Thus Intermarché left other hypermarkets behind, and besides it announced opening up new outlets soon. Due to a high volume of turnover the role of stations located beside supermarkets within the overall retail fuel market increased together with growing number of stations. High sales volumes are performed thanks to low fuel prices, possible to achieve while selling practically without any margin, according to the

them and rebranding the other part to the PKN ORLEN corporate logo. The number of stations under the BLISKA logo amounted to 225 at the end of the year, which was 133 outlets less than in 2013. The company increased by 5 the number of stations operating on motorways and remains the leader also in this category of filling stations.

Grupa LOTOS expanded its network mainly through investing in economic stations, which operate under the logo of OPTIMA. The number of such stations increased by 18, and the total change in the company ownership shifted to +2 outlets. This was the result of continuing process of restructuring network and organizing agreements, which until recently had various formulas, including patronage agreements, which were completely eliminated. The company is planning a further network expansion in the coming years, and the economic brand OPTIMA continues to be the main direction of development. At the end of 2014 the company owned 441 filling stations. It also opened 3 new stations located on motorways.

International oil companies operating on the Polish market decreased by 24 the total number of their stations. The main reason accounting for this was selling a part of the stations in charge of Shell Self Service (SSS), the company which on behalf of Shell Polska managed the process of restructuring and rebranding of the stations of Neste bought in 2013. At the end of the year 21 filling stations continued to be operated by SSS. The rest out of 106 purchased stations were either incorporated into the Shell network or sold to independent operators. As a result of acquisitions and restructuring operations the Shell network in Poland had 402 outlets at the end of the year. Other foreign companies' stations were also either acquired through franchising agreements or built from the scratch. At the end of 2014 BP had 480 filling stations, which means that it enlarged its network by 19 outlets, including 6 located on motorways. Statoil decreased its



Source: POPiHN's own data



ownership by 3 stations and at the end of the year it had 351 refuelling outlets. There was no change in the number of stations owned by Lukoil, which continues to be 116 outlets.

In 2014 the networks of independent operators continued to expand. The most active ones were Huzar, Anwim with the Moya brand, Slovnaft Partner in cooperation with Slovak Slovnaft, and the Pieprzyk group. The number of stations managed by this group of operators grew by 11 sites and there are plans of further expansion. Together with the growth of the number of associated stations it is becoming more and more attractive for the independent operators to participate in such undertakings, for example in order to implement common purchasing policy or carry out loyalty programmes which boost profits. The logos of these associations are present throughout the whole country and they are becoming more and more recognizable, which creates real competition for the stations of domestic and international oil companies. If we look at fuel market as a whole, this group is in the number two position in terms of number of organised outlets which carry out retail fuel sales.

Supermarkets also increased their ownership. The number of filling stations within shopping centres increased by further 5 outlets and at the end of 2014 their



principle that the customer in the first place has to do the shopping at the supermarket, whereas a fuel station is just an incentive to visit a shopping centre. If someone has already arrived there, they will always buy something.

Transfers to domestic and international companies and closing the stations down as a consequence of the entry into force of new legal solutions were main elements which, in another year in a row, influenced the decrease in the number of stations owned by independent operators. The franchising formula was the most frequently used mechanism while changing brand. Due to the lack of reliable domestic filling stations database it is still difficult to clearly define how many independent stations actually operate in Poland. This segment of the market undergoes current transformations. Available information shows that at the end of 2014 there were about 1,950 stations operating as completely independent or grouped into small local networks comprising not more than 10 stations. The decision of the Ministry of Economy from the beginning of 2014 on introducing new technical requirements at the stations led to closures of the outlets which did not undergo adequate modernisations. Unfortunately, some of these sites, despite unfavourable results of appropriate inspections, use legal tricks and continue to function, being very often used by entities which operate within the grey market in the liquid fuel segment. Closing of approximately 300 stations will not have a negative influence on the availability of fuel supplies. Clearly, in smaller towns it may cause a problem, but if we take into consideration the level of market saturation in terms of stations as well as increased mileage possibilities, resulting from reduced fuel consumption in constantly newer Poles' cars, on the whole drivers will not be affected by this change. At the same time, eliminating the unadjusted filling stations should limit sales in the informal sector and contribute to increasing the profitability of the companies doing legal business.

The adjustment of Polish motorways to international standards is getting better every year. A factor which contributes to this improvement is construction of new and development of existing MSA, some of which are equipped with filling stations. In 2014 the number of stations located on motorways increased by 16 outlets, and, what is significant, they were launched mainly along the A2 and A1 motorways, which is where they were awaited the most. What is favourable, further sites are well advanced already and they should start operating in 2015. New tenders for MSA will be advertised, and their revised provisions should introduce certain incentives for investors and thus finally make the business of selling fuels on motorways more profitable. In 2014 at motorists' disposal there were altogether 71 stations located on motorways. Most of these outlets are in charge of PKN ORLEN (31 stations) and Grupa LOTOS (17 stations). Besides BP owns 15 stations, and Shell owns 8. As new stations appear on the market, drivers will no longer have to exit a motorway in search of a place where they can refuel. This will allow them to shorten the time of travel and increase the profitability of fuel companies on MSA.

Retail market from the point of view of POPiHN members

This section of the report, as in previous years, is devoted to the description of phenomena taking place on domestic market for retail sale of liquid fuels. The market analysis is carried out on the basis of reliable data obtained from POPiHN members that run approximately 3,600 filling stations in Poland. The overall filling station market comprises approximately 6,480 outlets, thus the market analysis is performed on the basis of data gathered from 56% of the market. Independent stations constitute about 42% of the fuel market in Poland and it continues to be a big challenge to obtain their market data. The stations operating under the logo of POPiHN members perform around 70% of overall retail sales of fuels in the country. Thus the actual data obtained from these companies allow to present the trends and changes occuring on the market for retail sale of liquid fuels as well as non-fuel operations carried out at the stations. It is thus fair to conclude that oil companies stations are the ones that set standards and requirements for the remaining fuel firms operating within the country.

The below analyses are based on the data from POPiHN members, yet the conclusions resulting from these outcomes can be applied to the whole fuel retail sales market in Poland.

The key trends in the retail sales market for fuels in POPiHN members' station networks are shown in Figure 18. It is immediately noticeable that there has been a significant increase in premium fuel sales, while the overall volume of liquid fuel sales remained virtually unaltered in comparison to the previous year. At the same time there has been a significant rise in autogas sales at the expense of standard petrols. A marked increase in autogas sales by the stations owned by oil companies is also

■ Fig. 18 CHANGES IN RETAIL SALES OF FUELS, IN NUMBER OF FILLING STATIONS AND IN SALES AT STATION SHOPS IN 2014 COMPARED TO 2013 [%]



Source: POPiHN's own data

a result of gaining a number of independent stations by these companies and signing franchise agreements with them. Further significant element is a decrease in the number of stations operating under DODO arrangements. This formula, as the patronage agreements expire, continues to be substituted by DOFO arrangements, in which the provisions of franchising agreements constitute the basis of economic activity. This is a clearly visible continuation of a trend from previous years. Such activities lead to reducing the number of stations operating independently. In 2014 also private companies that were developing their brands continued to use franchising agreements. Stores located at filling stations recorded an increase in non-fuel sales. Fast food outlets also prospered, both in terms of revenues and offer expansion.

Premium fuels are sold almost only by the stations owned by oil companies and such sales are estimated to be growing year by year, even though this type of fuel is 0.25 PLN more expensive than the standard one. It has been confirmed once more that premium fuel sales grow along with falling fuel prices. Premium fuel sales in the whole fuel market reached 11%. This is 1 percentage point more than in 2013. In case of diesel the market share was 14% and it was also 1 percentage point more than in the year before. An upward trend has been sustained since 2012. Drivers appreciate exploitation aspects, related to purchasing better quality fuels. Marketing aspects and seasonal bonus incentives have also played a role in increasing sales of this type of fuels.

Retail sales of standard fuels did not follow the sales trend of premium fuels and were even lower than the year before. In case of standard diesel there was only a slight growth in sales. Altogether filling stations owned by POPiHN members recorded 1% increase in demand for petrol





Source: POPiHN's own data



and 2% increase in demand for diesel. At the same time fuel consumption in the country reached negative levels, which shows that retail sales performed by independent stations were lower than in 2013. In case of petrol a continuous downward trend is caused by an ongoing dieselisation of passenger car fleets in Poland (although the scale of this phenomenon is getting smaller) and using spark ignition engines, which are getting better and require less fuel. Another element influencing the decrease in demand is using LPG systems on a large scale in the cars mentioned above. A further important aspect is progressive switching to public transport, which is encouraged by the EU, and also relatively high fuel prices, observed until recently, as well as a constant increase in parking fees in the cities. The lack of intensive growth in standard diesel

sales was mostly caused by purchasing it in the informal market.

The year 2014 brought a continuation of upward trend in the conclusion of franchising agreements with a simultaneous significant decrease in the number of patronage agreements. The method consisting of gaining new stations under franchising agreements continues to be the cheapest tool to acquire new outlets to the network. This method has been applied both by oil companies and the biggest networks of affiliated independent stations.

In 2014 stores located at POPiHN members' filling stations recorded good sales volumes. The increase in the value of sales was about 2% and was the result of extending the product offer and the offer of fast food outlets, operating within the stores.

Figure 19 presents monthly retail sales at POPiHN members' filling stations, show-



ing a clear seasonal nature of fuel sales. Similar graphs can be elaborated for independent stations, but their sales volumes would be slightly lower. In case of such stations the falls in sales are usually more marked in periods of weaker sales carried out by oil companies and smaller growths in periods when oil companies stations sell more fuels. Undoubtedly, the shape of the official sales curves was impacted, particularly in the case of diesel, by the activities in the grey economy, which allocated part of its sales on the market by cooperating with some independent stations, or even taking them over.

In 2014 filling stations owned by POPiHN members recorded a slight decrease in retail sales of petrol. An increase was observed at stations operating under COCO and CODO arrangements, that is oil companies' own stations, as well as the ones operating under DOFO arrangements. Stations under DODO arrangements noted a fall, which was mainly connected with the reduction of these stations operating within oil companies. Autogas sales developed well at stations owned by oil companies, regardless of their ownership formula, yet it is worth noting that the biggest increases were recorded at own stations.

Diesel sales at stations owned by the biggest operators on the market showed slightly better results than in the previous year. Similarly as in the case of petrol, growth was achieved at COCO and CODO, as well as DOFO types of stations. DODO type stations sold less diesel than in the year before. Diesel fuel sales are closely correlated with the condition of the economy, which in 2014 showed a 3% growth and this should have been reflected by the results at diesel dispensers. However, it did not happen, as the situation was affected by the activities of the grey market economy, which effectively 'poached' a part of customers. That is also why the stations under DODO formula recorded weak sales volumes, as they had to compete against cheap goods from the informal market.

Customer retention in a weaker market was a principal objective of every filling station operator. Good quality fuels are essential to be successful, whereas good quality fuels at favourable prices are even better tools. These elements attracted customers to stations owned by oil companies and allowed to execute non-fuel margins on sales at stores located at fuel stations. This is of significant importance, as for yet another year it was not possible to achieve a sufficient margin on fuel sales, which would enable fuel stations to be maintained exclusively from fuel sales.

72



Source: POPiHN's own data

Changes in fuel sales at the stations owned by POPiHN member companies between individual months of 2014 are presented in the diagram in Figure 20.

The graph with changes in fuel sales clearly demonstrates the impact of inspections carried out by customs and revenue services at eastern and western borders. Results as percentages from March, September and December, namely the months in which inspections were carried out, are significantly better than the results from the remaining months of the year. The attention is also drawn to a substantial increase in sales volumes of petrol and diesel in the last months of the year, when retail prices gradually decreased. Retail prices of autogas did not fall during that time, thus there was a reverse trend for this type of fuel.

For the year as a whole, the average growth rate of fuel sales at stations owned

by POPiHN member companies was around 2%, whereas diesel sales showed an increase of 2%, petrol a growth of 1%, and autogas an increase of 4%. Analysis of sales growth data of POPiHN members and results of total official fuel consumption in the country shows falls in sales at stations owned by independent companies, and in particular in the whole non-outlet segment (transport depots and companies, construction sector, railways, local governments). This is an area usually supplied with fuels from the informal market.

As mentioned above, the past year has been another one with an increase in premium fuel sales. The increase of premium petrol sales for the whole year was nearly 14%, which was a better result than the comparison of the year 2013 to 2012 by 9 percentage points. For premium diesel the growth was over 13%, which was 3 percentage points more than in 2013.

Everything seems to indicate that the upward trend in purchasing premium fuels will continue along the falls in fuel prices and/or increases in Poles' income. A significant element influencing our choices will also be the biofuels content in standard and premium fuels. As a rule, the latter contain less biofuels which favours exploitation, especially in vehicles used less frequently. Premium fuels guarantee maintaining the engine in a better condition and every driver should use them at least from time to time in order to improve the state of the engine. While using premium fuels, we should remember that it is most effective to refuel our vehicles within one dealer network. Due to mixing premium fuels from various networks we can sometimes achieve a counter-productive effect. Chemistry is uncompromising!

At the end of 2014 the overall number of filling stations in the country equalled 6,479, which was 4% less than in 2013. During that time the number of filling stations operating within POPiHN member companies' networks decreased by 0.1% (Fig. 18) and equalled 3.608. The number of oil companies' own stations remained steady, the number of stations under patronage agreements fell by almost 9% and, simultaneously, the number of stations operating under franchising formulas grew by 3.5%. Although in terms of volumes the number of oil companies' own stations did not grow, but, mainly thanks to new outlets built alongside motorways and express ways, significant restructuring has been made in the ownership. In case of DODO type stations, several operators changed the operating formula, whereas the other part withdrew from close cooperation with big oil companies. Franchising agreements remained the most effective tool of acquiring new stations to the network.

In the previous year there was a growth in the number of stores located at filling stations. These stores' turnovers grew as well. In case of all stores owned by POPiHN member firms, which grew in number by 2%, the turnovers grew by 1.8%. Due to such distribution of changes the turnover of each single store decreased by 0,1%. Annual turnovers from the operations of stores located at stations operating only uder the formula COCO+CODO (around 2,400 sites) is estimated at approximately 4 bn PLN.

Stores located at filling stations continue to play the role of convenience stores. On one hand a close proximity to the place of residence enables quick shopping, while on the other hand such





Source: POPiHN's own data



a store is a necessary addition that enables a fuel station to continue its business activity. For the time being, it has been possible to neutralise attempts to eliminate certain goods offered at stores located at stations, namely alcohol, tobacco and basic OTC drugs, i.e. goods thanks to which stations achieve revenues that allow them to continue operating at times when fuel sales margins are very low, and often even at zero levels. As mentioned above, stations owned by oil companies set standards as regards store equipment and layout, which are supported by customer surveys. These elements are also frequently met at stations owned by independent operators, who adjust the standards of their service to the habits of customers of the stations run by 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 (and fuel stations have been deemed as such) contributed to the increase of turnover at these sites.

Graph in Figure 23 shows sales in stores located at filling stations between individual months in comparison with the same months in 2013. The distribution of changes in volumes is quite varied, but with a downward trend towards the end of the year. Sales increased mainly in periods preceding public holiday travels, weekends and summer holidays. Fuel price is one of the elements affecting the revenues of stores located at filling stations. High prices can discourage drivers from visiting a particular filling station, thus preventing them from shopping in a station store. In Polish reality a store customer is very often more important than a customer at a fuel dispenser. It was specifically at the store where, in market conditions of the year 2014, the filling station's profit was generated, indispensable to maintain the site and its employees.

The results of the comparison of geographical distribution of fuel sales in Poland, based on data submitted by POPiHN members, show that in relations to 2013 there have not been any major changes. The province with the greatest demand for traction fuels is still Mazowieckie, whereas the smallest can be observed in the Podlaskie province, where shopping for fuel beyond the eastern border intensively supplements much of the market. Sales in four provinces still account for almost half of all retail sales of fuel in Poland.

The graph shows total sales of fuels, diesel and autogas. Separate sales of each

■ Fig. 23 CHANGE IN VALUE OF SALES IN SHOPS OF POPIHN MEMBERS IN INDIVIDUAL MONTHS OF 2014 IN RELATION TO 2013 [%]



Source: POPiHN's own data

of these fuel types present minor discrepancies from the presented graph, however, they are so small that the general scheme is assumed to fully display the sales trends. POPiHN members recorded the greatest decreases in fuel sales in Lubuskie, Świętokrzyskie and Zachodniopomorskie provinces, while noting increases in the provinces of Łódzkie and Kujawsko-pomorskie. Diesel sales increased the most in Lubuskie, whereas the biggest fall was recorded in Lubelskie. Autogas sold well, and its biggest growth was noted in Łódzkie and Lubelskie provinces. The ratio of sales in the biggest province (Mazowieckie) to the smallest (Podlaskie) is 6:1.

■ Fig. 24 DISTRIBUTION OF RETAIL SALES OF MOTOR FUELS BY POPIHN MEMBERS IN POLAND IN 2014 [%]



Source: POPiHN's own data



DEMAND FORECAST for the Polish market up to 2025

As in previous years, POPiHN has elaborated scenarios for liquid fuel demand for the coming years, taking into account the latest trends on the liquid fuels market. The time frame of these scenarios extends until 2025. In 2014, the performance of the liquid fuels market, unfortunately, followed the pessimistic scenario for fuel consumption drawn up in the previous year. It was predicted that if we fail to effectively eliminate the grey economy, with which we have to deal mainly on the diesel market, then instead of the baseline scenario we would follow the pessimistic one. And this was indeed what happened. The impact of shadow economy was observed mainly in limiting legal sales to the customers outside of the filling station segment, which, considering the fact that the demand for diesel constitutes about half the domestic demand for fuels, had a significant influence on the shift of consumption towards a pessimistic scenario. New scenarios have been developed with the participation of POPiHN members, taking into account current developments in the domestic and international oil markets, with special emphasis put on the increase of efficiency in combating the shadow economy (new legislation + improved efficiency of control services) on a domestic market and an intensive price reduction on international markets. Availability of a new pool of European Union aid funds, used in domestic economy, has also been included. These funds should trigger an increase in domestic infrastructure invest-



■ Fig. 25 SCENARIO FOR LIQUID FUELS DEMAND IN 2014-2025

ments, understood broadly, and an increase of domestic consumption. Account was also taken of the systematic modernisation and development of the road network, as well as lower fuel demand in the engines of constantly newer cars circulating on Polish roads.

The baseline scenario assumes that the Polish economy will continue to grow at a rate of 3-4% annually. The two other variants are based on values below and above this level. Besides, effective fight against the shadow economy and the situation on raw commodity exchanges will have a significant impact on the consumption level in the future. As all transactions on the oil market are made in U.S. dollars, fluctuations in the USD-PLN exchange rate have also been taken into account.

The base variant assumes that currently observed decreasing oil prices can last for approximately 2-3 years. Thus the prices for this period have been estimated on average at the level of 50-80 USD/bbl annually. The baseline scenario assumes a stable situation in the international commodities market, with a slight overproduction of oil for refinery production, which will guarantee an expected price level. For the coming years fluctuations in crude oil prices have been assumed at the level of +/- 10%. On a domestic market there are plans to intensify activities aimed at reducing the shadow economy through





consequently enforcing the new law and in a natural way, i.e. maintaining relatively low fuel prices that reduce the profitability of this risky business. Such assumptions allow us to expect that the domestic demand for liquid fuels will grow, starting from 2015, and will consequently increase in the coming years. The growth effect should be achieved through an increase in demand for diesel and a minimum decrease in demand for petrol. Price relations referring to petrol should result in a stability or slight drop in demand for autogas. Downward demand trend for light fuel oil shall continue, yet due to the prices it will be on a shallower level than expected. In this variant, the domestic market demand for liquid fuels in 2025 is estimated at approximately 26 mln m³.

The optimistic scenario assumes, apart from the assumptions for the baseline variant, the reduction of VAT announced for 2017 and an efficient reduction of the shadow economy on the diesel market. It also assumes an effective use (from 2015 onwards) of the EU funds from the 2014-2020 financial perspective. Economic development shall trigger an increase in the incomes of citizens and an increase in Poles' mobility. In this scenario the domestic market demand for liquid fuels in 2025 is estimated at approximately 29 mln m³.

The pessimistic scenario assumes a lower - than it has been assumed for the baseline scenario - prospect for growth of the Polish economy, i.e. 1-2%. Another factor that could lead to a decrease in registered demand is a low effectiveness of activities aimed at eliminating grey zone from the market for liquid fuels. When constructing this scenario, possible events of disturbances on raw commodity markets were assumed, which would relate to an increase in crude oil prices, combined with a simultaneous decline in the Polish zloty's purchasing power. The factor which can negatively affect the demand level is the growing number of fiscal regulations that result in price increases referring not only to liquid fuels. In the present situation an economic stagnation and unemployment growth, which are rather unlikely but still possible in the coming years, could cause a fall in the demand for fuels from domestic refineries, and their substitution with parallel products from the grey market. In this variant, the domestic market demand for liquid fuels in 2025 is estimated only at about 22 mln m³.

Taking into account the current market situation, the baseline scenario seems to be the one most likely to unfold on the Polish market. The biggest unknown is the extent of the grey zone in the coming years. It is hoped that low fuel prices will automatically eliminate a significant part of the shadow economy from the market, whereas the rest should be dealt with by adequate law enforcement authorities. The dynamics of growth in the consumption of liquid fuels, mainly diesel, will most likely not reach the level recorded in the years 2009-2011, however, the Polish economy does not use as much fuel as the economies of developed European countries. Consequently, the opportunities for a steady market development are still big. The future also raises numerous questions, such as the scope for using biofuels or other alternative fuels; nevertheless, it seems that the foreseeable future of two or three decades will not bring any decline in the demand for neither crude oil nor any of its products.





MOTOR FUEL PRICES

The year 2014 was kind to drivers refuelling their cars. According to the forecasts made by POPiHN, in 2014 the average yearly prices of petrol and diesel were lower than in 2013. Fuelling the car with autogas was slightly more expensive. A litre of 95-octane petrol was 0.23 PLN cheaper on average per year and a litre of diesel was 0.29 PLN cheaper. The increase in autogas retail price equalled 0.06 PLN/l.

Unlike in 2013, the retail price of 95-octane petrol was exceeding the price of diesel for most of the year, which led to a situation in which one had to pay for this type of fuel 5 gr/l more than for a litre of diesel. However, the phenomenon of diesel prices exceeding the 95-octane petrol prices repeated itself in the initial and final periods of the year. The prices of both fuel types were falling since the beginning of the year, yet the downward trend was particularly strong in the second half of the year. The price levels of both fuel types at the end of December were identical with those recorded in October 2010. Theoretically, such price levels should result in bigger sales, however it was only the case of petrol and solely in the last two months of the year when a slight increase in sales was recorded, as compared with the results of the final months of 2013. While the weak sales of petrol can be explained with lower fuel consumption of contemporary car engines and replacing petrol with autogas, in the case of diesel the deciding factor behind its flat sales was the existing informal market for this type of fuel. The significant reductions of retail prices at the end of the year allowed the petrol retail operators to earn better margins as compared with those of previous months. In this way they managed to achieve slightly better average annual margins on petrol and diesel and slightly worse on autogas, as compared with the previous year. However, 'slightly better' did not mean that they were high enough to keep the petrol stations afloat with fuel sales alone. A strong support in form of non-fuel revenues was necessary.

The reasons for the reduction in fuel prices on the Polish petrol stations were volatile quotations on raw commodity markets combined with maintaining PLN (the Polish zloty's) purchasing power. In 2014 crude prices reached the average annual level of 98.93 USD/bbl, which was 9% below the 2013 level. After peak-

ing at 115 USD/bbl in June 2014, Brent crude oil price started its free fall and at the end of the year stood at 55 USD/bbl. It was a completely different picture of the market than that of the stable 2013; in result, crude prices at the end of the year were comparable with those recorded at the beginning of 2009. The main reason for such a plunge was the ambition of some OPEC countries to prevent an accelerated development of shale oil extraction in the USA as well as in other parts of the globe in the future. Another significant issue consists in reduced amounts of funds flowing from the US Federal Reserve with the aim of boosting the American economy. What was happening on the market was based mostly upon the real trade in oil and not upon trading in 'depositary receipts' which do not have much in common with the real commodity. Yet it turned out that there is a slight real surplus of crude oil on the market, what in combination with a weakened development of the Asian economies and

be said that in 2014 it was crude oil which drove down the prices of fuels. In Poland, a significant factor influencing its domestic fuel prices was the PLN-USD exchange rate. On average in 2014, the PLN was remaining on the level identical with that of 2013, so one can state that this lack of fluctuations had a restrictive effect on both the increases of prices in the first half of the year and their falls in the second. As a result, net wholesale prices were shaped almost exclusively by the changes in stock market quotations of fuels. The price reductions turned out beneficial for individual drivers and transport companies, but at the same time the state's budget recorded declining VAT revenues. The petroleum sector traditionally accounts for around 50 bn PLN of fiscal revenues. The price fall in the second half of the year considerably depleted these revenues, what will make a sound argument for intensifying actions aimed at eliminating the informal segment of the fuel market.

■ Fig. 26 SPOT PRICES FOR BRENT CRUDE AND THE USD EXCHANGE RATE IN 2014



Source: e-petrol.pl, POPiHN

the extinguishing of most conflicts in oilbearing regions, was bound to result in a price fall, partly forced by a lack of willingness to decrease the output limits in the case of some of the cartel's member countries, mainly Saudi Arabia. Price falls similar to those of oil were recorded for fuels traded on the international commodity stock exchanges. It can, however, The decrease in fuel prices on the Polish market was a consequence of the reduction of the so-called import parity, the main components of which are commodity market prices of tank-ready fuels and the PLN exchange rate against the U.S. dollar. The import parity is also the basis used by Polish producers to set liquid fuel prices.



Brent crude oil prices, which determine process for the European market, are shown in Figure 26.

The big game of world power politics brought a reduction in fuel prices for drivers in most countries of the world. 'Most' means that there were also countries whose budgets were based on highly quoted prices of raw commodities such as crude oil and natural gas. In the case of these countries a significant fall in oil prices leads to economic problems on a large scale. The hardest hit for the price falls was Russia, burdened with sanctions, but also Venezuela, which had been weak and deep in a crisis, or economically isolated Iran. A turning point came with a mass launch of shale oil mining operations in the United States, causing reductions in refined commodity imports as well as a considerable decrease in the costs of energy for the American economy. The American Superpower became in 2014 the biggest oil producer, coming ahead of Russia and Saudi Arabia, and started to export oil surpluses to the international markets. As yet, exports are still limited, however the plans envisage their considerable increase, which will be of major significance for the international trade in black gold. Most OPEC countries, not wanting to lose their outlet markets and contrary to the past situation of decreasing the output limits in the face of declining prices, picked up the gauntlet and decided not to change them. Since that moment oil prices started to plunge and today no one knows where they may stop; possibly at the point where the extraction through shale drilling rigs is no more profitable. Yet today it is estimated that this point may be at around 30 USD/bbl, so there is still plenty of room for price reductions. If the actions aimed at destroying competitors are maintained and no new military and economic events in oil-bearing regions take place, we will possibly have to deal with low prices of the refined commodity for about two more years. Later, an economic impulse generated by, among others, low energy costs, would entail a subsequent return of prices to an ascending path. Such a picture of the nearest future is an essential piece of information for the European economies which are still struggling with poor rates of economic development. It is also a positive signal for the European refineries, which will be able to raise the profitability of their operations, as one should expect an increased demand for fuels which is usually positively correlated with the economic growth and purchasing power of individual citizens.

■ Fig. 27 COMPARISON OF ANNUAL AVERAGE SPOT PRICES FOR CRUDE OIL, LIQUID FUELS AND THE USD EXCHANGE RATE IN 2013 AND 2014

| Description | 2013 | | 2 | 014 | Reference 2014 to2013 |
|-------------------------|--------|-----------|-------------|-----------|--------------------------|
| | Value | Units | Value Units | | 2013=100 |
| 1 | 2 | 3 | 4 | 5 | 6 |
| Prices for | | | | | |
| Brent crude | 108.73 | USD/bbl | 98.93 | USD/bbl | 91 |
| Prices for | | | | | |
| Premium petrol 10 ppm S | 993.1 | USD/tonne | 919.3 | USD/tonne | 93 |
| Prices for | | | | | |
| diesel 10 ppm S | 946.4 | USD/tonne | 862.8 | USD/tonne | 91 |
| | | | | | |
| USD exchange rate | 3.1611 | PLN | 3.1537 | PLN | 100 |
| | | | | | |

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

■ Fig. 28 FLUCTUATIONS IN BRENT CRUDE SPOT PRICES AND IN THE EXCHANGE RATE OF THE USD IN 2014 COMPARED WITH 2013 AVERAGES [%]



Source: e-petrol.pl, POPiHN

In Poland the change in the global situation turned out beneficial also for individual drivers and Polish transportation companies. Fortunately, the reduction in quoted prices was not accompanied by an annual average weakening of PLN-USD exchange rate. That caused the so-called import parity to decrease and thus prices in Polish refineries to fall within a scale comparable to that of reductions in fuel

■ Fig. 29 FLUCTUATIONS IN CRUDE OIL AND FUEL SPOT PRICES AND IN 2014 COMPARED WITH 2013 AVERAGES [%]



Source: e-petrol.pl, POPiHN



■ *Fig. 30* COMPARISON OF ANNUAL AVERAGE WHOLESALE PRICES OF FUELS AT DOMESTIC FUEL PRODUCERS

| Description | 2013 | | 2 | 014 | Reference |
|-------------------|-------|------------|-------|------------|--------------|
| | | | | | 2014 to 2013 |
| | Value | Units | Value | Units | 2013=100 |
| 1 | 2 | 3 | 4 | 5 | 6 |
| EU95 petrol gross | | | | | |
| (without VAT) | 4,301 | PLN/1000 I | 4,104 | PLN/1000 I | 95 |
| Excise | 1,565 | PLN/1000 | 1,565 | PLN/1000 | 100 |
| Fuel surcharge | 103 | PLN/1000 I | 104 | PLN/1000 I | 101 |
| EU95 petrol net | 2,634 | PLN/1000 | 2,435 | PLN/1000 | 92 |

Source: PKN ORLEN SA, Grupa LOTOS S.A., POPiHN

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

| Description | 2013 | | 2 | 2014 | Reference |
|----------------------------|-------|------------|-------|------------|--------------|
| | | | | | 2014 to 2013 |
| | Value | Units | Value | Units | 2013=100 |
| 1 | 2 | 3 | 4 | 5 | 6 |
| Diesel with 0.001% S gross | | | | | |
| (without VAT) | 4,303 | PLN/1000 I | 4,056 | PLN/1000 I | 94 |
| Excise | 1,196 | PLN/1000 | 1,196 | PLN/1000 | 100 |
| Fuel surcharge | 260 | PLN/1000 | 263 | PLN/1000 | 101 |
| Diesel with 0.001% S net | 3,844 | PLN/1000 l | 2,597 | PLN/1000 I | 91 |

Source: POPiHN's own study based on data of PKN ORLEN SA and Grupa LOTOS S.A.

prices on commodity stock exchanges. In domestic refineries engine petrol decreased in price by 8% and diesel by 9%.

Factors affecting domestic wholesale and retail prices (prices of crude oil, prices of main motor fuels and the dollar exchange rate) were as follows in 2014 (Fig. 27).

The interdependence of crude oil prices and the USD exchange rate in the Polish market is shown in Fig. 28. The graph accurately presents the compensating element of the dollar exchange rate against Brent crude oil prices.

Comparison of trends for crude oil and motor fuels is presented in Fig. 29.

The downward trend was visible since the beginning of the year, yet it truly accelerated in its second half. Obviously it was oil which was dragging down the prices of fuels.

The situation observed on the international markets was transferred to the Polish market as a result of changes in the so-called import parity, which was influenced by changes in global prices of fuels, PLN-USD exchange rate and the tax burdens that prevail on the domestic market. In 2014 the first of these factors experienced a reduction and the second was stable in average yearly terms. The main tax burdens, i.e. the VAT rate and the excise tax remained identical with the previous year's levels. A minor change of 1% concerned the fuel surcharge, but the influence of this factor on the fuel price level is of little or no significance.

Changes in annual ex-refinery prices for Polish oil companies are shown in tables 30 and 31.

The average net prices of 95-octane petrol, which in the case both Polish producers are directly related to the stock market quotations, reflected the level of price decreases or even slightly outstripped it.

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

The reductions in net domestic diesel fuel prices overlap with the degree of falls on international markets. The tables above show that the Polish market reflects rather precisely the developments on the international markets, thus indicating that on such a specific and open international market there is no possibility of advancing any particular interests of individual providers.

In 2013 the difference between average 95-octane petrol and diesel prices was 0.01 PLN/l in favour of diesel. In 2014 diesel was 0.04 PLN/l (on average in the year) cheaper than the 95-octane petrol whereas several years before petrol was 0.30 PLN/l more expensive. In 2014 the prices of both fuel types diverged slightly. The largest recorded differential between retail prices of both fuel types equalled 0.13 PLN/l while in 2013 it was only 0.08 PLN/l. So again, as it used to happen in the past, driving on diesel paid off better.

A comparison of the retail prices of EU95 petrol, autogas and diesel in the years 2013-2014 is shown in the table (Fig. 32).

Table 32 shows that retail prices of leading motor fuels declined in a similar proportion to that of the fall of ex-refinery prices. The slight differential is a consequence of a minimum improvement in the average margin, which was a result

| Description | 2013 | | 201 | 14 | Reference |
|--------------------------------|-------|-------|-------|-------|--------------|
| | | | | 1 | 2014 to 2013 |
| | Value | Units | Value | Units | 2013=100 |
| 1 | 2 | 3 | 4 | 5 | 6 |
| Average retail price | | | | | |
| of EU95 petrol | 5.49 | PLN/I | 5.26 | PLN/I | 96 |
| Average retail price of diesel | 5.50 | PLN/I | 5.22 | PLN/I | 95 |
| Average retail price | | | | | |
| of autogas | 2.51 | PLN/I | 2.57 | PLN/I | 102 |

■ Fig. 32 COMPARISON OF MOTOR FUELS' RETAIL PRICES

Source: POPiHN's own study based on data of e-petrol.pl, WNP

of price relations, mainly in the second half of 2014. On the one hand, petrol station retailers used the reductions in wholesale prices to make up for the lost profits in the first half of the year, on the other hand they had to withstand a decreased demand and black market price offers. The key objective was to retain customers and earn an extra margin on nonfuel product sales, which allowed for keeping a retail fuel site afloat and operating. As mentioned above, the margins improved significantly in the second half of the year and particularly at its end, thus a full compensation for the poor results in the first half of the year did not work out. That is why the average annual margin recorded only a moderate increase in comparison with the previous year. The fuel whose average annual price



recorded an increase was autogas. The rise was 0.06 PLN/l, which slightly changed the relations that are significant for drivers who are to choose between petrol and autogas and whose vehicles are equipped with a dual fuel supply system. The autogas to 95-octane petrol price ratio was almost 49% in 2014, while in 2013 it stood at 46%.

The price trends of individual fuels on the domestic market are shown by the graphs in Fig. 33 and 34.

The permanent downtrend in motor fuel prices which started in 2012 continued in 2014, accelerating sharply since October. All the signs are that such a trend will continue in the first half of 2015. The situation in previous years, even though the prices were falling, indicated that reaching a level lower than 5 PLN is unlikely to happen. Yet the international market corrections and the fairly strong PLN led to the 95-octane petrol and diesel prices at some fuel stations getting closer to the level of 4 PLN/l at the end of the year. The graph 35 shows the relations between quotations on the international commodity stock exchanges and retail prices of motor fuels in Poland.

The estimations of fuel retail operators show that a sales margin essential for keeping a filling station profitable and in operation should equal at least 0.25--0.35 PLN/l, depending on the site location. In 2014, similarly to the year before, few retail sites managed to reach that level despite favourable market conditions at the end of the year. The losses incurred in the previous months were too dramatic. The non-fuel revenues were being used to support the businesses' operating profitability.

During the year, and especially towards its end, various parts of the country, sometimes even within the same city, saw significant price differentials between the stations of particular operators. Prices were mainly affected by station location and standard. Price differences were as much as 0.30 PLN per litre, and in the case of stations located on motorways, where refuelling is the most expensive in all European countries, it was even more. The factors determining the level of retail prices in various parts of the country remained unchanged. They were mainly the level of demand and the scale of competition between different operators, as well as the comprehensiveness of offered services. Not without importance was also the accessibility of fuel from a black market in a given region.

There is a high seasonal price range between different regions of the country,





Source: POPiHN's own study based on data of e-petrol.pl, WNP

■ Fig. 34 RETAIL PRICES OF EU95, DIESEL, LPG AND LFO IN 2014 [PLN/1000 L]



 $Source: {\it POPiHN's own study based on data of e-petrol.pl, WNP and ARE}$





Source: e-petrol.pl, POPiHN



as well as alongside main communication routes. Statistically, the most expensive provinces in the country are: Mazowieckie, Małopolskie, Podkarpackie and Zachodniopomorskie. During the summer and winter holidays prices are much more expensive along main transit routes and in the resorts. EU fuel tourists contribute to maintaining higher prices at the stations close to the borders with EU countries.

The factor which determines the domestic prices is the percentage of taxes included in the retail price. Figure 36 presents average tax burdens for motor fuels in 2014.

The main tax components (i.e.VAT and excise tax) related to liquid fuels did not change in 2014. Only the fuel surcharge rose by 1%. The tax burdens included in fuel prices declined compared with 2013, which was caused by a decrease in net fuel prices along with the 23% VAT, which was generated from that lower amount and thus also lower. Ultimately, for both 95-octane petrol and diesel the total proportion of taxes included in the retail prices of these two types of fuel fell by 2%, and in monetary terms by 41 PLN/1000 I for petrol and 50 PLN/1000 I for diesel. The decrease in tax burdens was 3 PLN/1000 | larger than in 2013 for 95-octane fuel and 23 PLN/1000 | larger for diesel.

The lower retail prices of petrol and diesel fuels entailed a growth in the total taxation share in the end consumer price. For both types of fuel that increase equalled 3%. The excise tax and the fuel surcharge are specific taxes not related to the net price. VAT is calculated as a percentage of the net price, excise tax and fuel surcharge included, so it is partly a tax on other tax burdens. On average, in 2014 taxes represented 50% of petrol and 47% of diesel retail price.

The structure of annual average retail prices for EU95 petrol and diesel fuel, when comparing average 2014 prices to those of 2013, is presented in the charts in Fig. 37.

In terms of value, the price structure is the following.

The table below (Fig. 39) shows the comparison of prices of motor fuels in the European Union with domestic prices at the end of December 2014.

During the whole of 2014, fuel prices in Poland (calculated in euro) were among the lowest in the European Union. At the end of December 2014 domestic retail prices of EU95 petrol were 17% lower and those for diesel 13% lower than the average European prices. This is

■ *Fig.* 36 COMPARISON OF TAX BURDENS ON MOTOR FUELS IN 2013 AND 2014

| Description | 2 | 013 | 2 | 014 | Reference 2014 to 2013 | | |
|-----------------------------|-------|------------|-------|----------|------------------------|--|--|
| | Value | Units | Value | Units | 2013=100 | | |
| 1 | 2 | 3 | 4 | 5 | 6 | | |
| Total taxes for EU95 | | | | | | | |
| (VAT+excise+fuel surcharge) | 2,694 | PLN/1000 | 2,653 | PLN/1000 | 98 | | |
| Total taxes for diesel | | | | | | | |
| (VAT+excise+fuel surcharge) | 2,484 | PLN/1000 I | 2,434 | PLN/1000 | 98 | | |
| | | | | | | | |
| % share of taxes | | | | | | | |
| in retail price of EU95 | 49 | % | 50 | % | 103 | | |
| % share of taxes | | | | | | | |
| in retail price of ON | 45 | % | 47 | % | 103 | | |

Source: POPiHN's own data

Fig. 37 STRUCTURE OF RETAIL PRICE OF MOTOR FUELS IN 2013 AND 2014 Structure of retail price of EU95 average in 2013 Structure of retail price of EU95 averaged over 12 month









Structure of retail price of diesel averaged over 12 months of 2014



Structure of retail price of autogas averaged over 12 months of 2014



Source: POPiHN's own calculations



6 percentage points less than in the previous year for both types of fuel.

In December 2014 domestic net prices (excluding taxes and converted into euro) of EU95 petrol and diesel were lower than the average European prices

petrol, compared to the EU average, was -10%, which is 6 percentage points less than in the previous year. In the case of diesel this ratio was 6% lower than the EU average, which is 7 percentage points less than in the previous year. The amounts

motor fuels. In all EU countries this level is close to 50%, but it should be noted that the situation in Poland does not look bad. In many countries taxes constitute a much bigger share of the price. A comparison of the total tax burdens on

■ Fig. 38 STRUCTURE OF RETAIL PRICE OF MOTOR FUELS IN 2013 AND 2014 (IN PLN/L)

| Eurosuper 95 petrol | | | | | Diesel (EN 590) | | | | | Autogas | | | | | | | | |
|---------------------|--------|--------|------|-----------|-----------------|-------|--------|--------|------|-----------|--------|-------|--------|--------|------|-----------|--------|-------|
| | Retail | Excise | VAT | Fuel | Margin | Net | Retail | Excise | VAT | Fuel | Margin | Net | Retail | Excise | VAT | Fuel | Margin | Net |
| | price | | | surcharge | | price | price | | | surcharge | | price | price | | | surcharge | | price |
| 2013 | | | | | | | | | | | | | | | | | | |
| average | 5.49 | 1.57 | 1.04 | 0.10 | 0.15 | 2.63 | 5.50 | 1.20 | 1.05 | 0.26 | 0.15 | 2.85 | 2.51 | 0.39 | 0.48 | 0.08 | 0.25 | 1.32 |
| 2014 | | | | | | | | | | | | | | | | | | |
| average | 5.26 | 1.57 | 1.00 | 0.10 | 0.16 | 2.43 | 5.21 | 1.20 | 0.99 | 0.26 | 1.16 | 2.60 | 2.57 | 0.39 | 0.49 | 0.08 | 0.24 | 1.38 |
| % change | -4.2 | 0.0 | -4.2 | 1.0 | 8.5 | -7.6 | -5.3 | 0.0 | -5.3 | 1.0 | 8.4 | -8.8 | 2.4 | 0.0 | 2.4 | 1.0 | -4.9 | 4,5 |

Source: POPiHN's own calculations

by 8% and 10% respectively. Net prices in all European Union 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 2014 the difference between the highest and the lowest net price was EUR 139 (which is EUR 13 more than in the previous year), whereas the difference between the highest and lowest retail price was EUR 489 per 1000 litres (which is EUR 20 less than in the previous year). Thus in 2014 there was a slight increase in the net price spread, but at the same time the difference between the highest and the lowest retail prices was flattened. Thus the average margins on fuel sales were also lowered.

Poland is one of the countries with the highest applicable rate of VAT for fuels, but due to low net prices the actually paid VAT is not among the highest. At the end of December the difference between the amount of VAT paid on EU95 of excise tax paid (after conversion into euro, including fuel surcharge) respectively for EU95 petrol and diesel were 29% and 21% lower than the European averages, so the situation from 2013 was preserved.

In December 2014 nowhere in Europe could EU95 petrol be bought cheaper than in Poland. Diesel was cheaper only in Luxembourg. Therefore it was profitable to engage in the socalled fuel tourism to Polish stations located in the border areas. Traditionally fuels across Poland's eastern border, in non-EU member countries, were cheaper than in Poland, which in turn encouraged Polish drivers to fill up in these countries. However, it is worth noting that the difference in prices between Polish and Belorussian stations slightly decreased due to price increases introduced by top-down administrative decisions.

As every year, we present the amounts of taxes paid within the retail prices of motor fuels in the EU countries at the end of 2014 is presented in Fig. 42 and 43.

The decreases in motor fuel prices which took place in the second half of the year in all European countries made the drivers glad. In Poland not only were the prices lower, but they were, when expressed in euro, the lowest among all European countries. In this way we remained the country that it pays off to visit and fill up the tank. The drivers who travelled in the western or southern directions were also filling their tanks up. Those who drove to the East, i.e. to non-EU countries, had the tanks filled only with the amount of fuel sufficient to reach the nearest Ukrainian, Belarussian, or Russian filling station.

■ Fig. 39 AVERAGE RETAIL PRICES AND TAXES IN EU MEMBER STATES AND IN POLAND AT THE END OF DECEMBER 2014 [EUR/1000 L]

| | | Eurosupe | ol | Diesel (EN 590) | | | | | | | |
|-----------------|---------|---------------|--------|-----------------|-----------------|---------|---------------|--------|--------|---------|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| | Sale | Price | Excise | VAT | | Sale | Price | Excise | VAT | VAT [%] | |
| | price | without taxes | | amount | | price | without taxes | | amount | | |
| POLAND | 1,076.9 | 480,7 | 391.6 | 204.6 | POLAND | 1,076.9 | 530.1 | 342.2 | 204.6 | 23 | |
| European | | | | | European | | | | | | |
| average | 1,300.0 | 522.5 | 548.9 | 228.6 | average | 1,239.0 | 586.6 | 434.6 | 217.8 | | |
| Price in Poland | | | | | Price in Poland | | | | | | |
| against average | | | | | against average | | | | | | |
| European price | 83% | 92% | 71% | 90% | European price | 87% | 90% | 79% | 94% | 15 | |

1 EUR = 4,2623 PLN Source: Weekly Oil Bulletin EIA





■ Fig. 40 RETAIL PRICES OF EU95 PETROL IN UE MEMBER STATES AT THE END OF DECEMBER 2014 [EUR/1000 L]

Source: Weekly Oil Bulletin EIA





POPil



Source: POPiHN's own study

■ Fig. 43 SHARE OF TAXES IN RETAIL PRICE OF DIESEL IN EUROPEAN COUNTRIES AT THE END OF DECEMBER 2014 (%)



Source: POPiHN's own study

■ Fig. 42 SHARE OF TAXES IN RETAIL PRICE OF EU95 PETROL IN EUROPEAN COUNTRIES AT THE END OF DECEMBER 2014 (%)

2 Clat POPIHN Poleka Drgenizacje Przemysłu i Handlu Nałtowego

LUBRICATING OILS MARKET

LUBRICATING OILS MARKET OVERALL

In 2014 the Polish market of lubricating oils reached approximately 236,600 tonnes, which is a slight increase of almost 3% in comparison with the previous year. It also means that after two years of shrinking demand the unfavourable trend was broken. However, it is hard to talk about a substantial improvement if the market, seen as a whole, still remains more or less between the 2007 peak and the bottom experienced in 2009. After a period of strong fluctuations, after 2010 the market has remarkably stabilized around the level of 230,000 tonnes.

Compared with the so-far record 2007, the market remains 6% below that level, which is still one of the best results in Europe (none of whose countries succeeded in making up for the losses incurred due to the crisis). The fact that the Polish market stands out positively against the extremely adverse situation in the

■ Fig. 44 TOTAL MARKET FOR LUBRICATING OILS IN 2014



Source: POPiHN's own study

■ Fig. 45 COMPARISON OF THE STRUCTURE OF THE ENTIRE MARKET FOR LUBRICATING OILS IN 2014 AND 2007



entire Europe has been noticed and highlighted during the presentation of the sector data which took place on the annual UEIL Congress in October 2014 in Madrid. That supports the statement that Poland is still catching up with the markets of more advanced European states, yet, during crises this distance is being shortened with no less intensity.

According to the experts from Fuchs Petrolub, the average market reduction rate between 2007 and 2013 equalled around 20%. A fall of such proportion was recorded in France. It was above Italy (a reduction of 25%), and the even-worse performing Spanish market, which recorded a fall of 35% that equals 188,000 tonnes $(!)^2$ in the comparable period. Germany has recorded a fall of 5%, which is the lowest in the group, thus placing it, alongside Poland, among these European oil markets which proved the most resistant to the crisis. Given the opportunity, it is also worth noting that the situation in the oil sector in these countries reflects fairly well the differentiated degree to which their economies have been affected by the crisis.

Also, it is worth mentioning that Poland stands out positively against the countries of its own region. On average, since 2007, the consumption of lubricating oils has decreased in the Central and East European

² Statistics provided by the Repsol company, published in the Lubes 'n Greases Europe-Middle East-Africa magazine, edition February 2015



countries by 15%. Apart from Poland, only the Czech Republic and Ukraine came above that average. In both Russia and Hungary the fall equalled 20%, 10% in the Czech Republic and 15% in Ukraine³.

The past seven years saw only minor shifts in the market structure which looks fully established and structurally stable. The only apparent trend is the growth of the 'other not classified elsewhere' category. Most probably it is related to the increasing specialization within the segment, as this group included all non-typical products which were difficult to classify under any other category. The market is also balanced in terms of the basic division between industrial and automotive segment. From this perspective, there is a stable and fairly equal division with a narrow advantage of the automotive segment.

ENGINE OILS FOR THE AUTOMOTIVE INDUSTRY

Within the automotive segment, a special place is occupied by engine oils for vehicles, which account for approximately 80% of this segment.

The segment of engine oils has been in an apparent downtrend since 2007, which is when the monitoring activities were initiated.

Only in 2011 an isolated rebound was observed, which was rather the exception proving the rule and a result of a generally favourable economic situation: the 2011 GDP growth stood at 4.8%, which was the strongest result of the country's





Source: POPiHN's own study

economy since 2007. However, it should be stressed that, to a large extent, the observed shrinking of the market derives from a plunge in the use of single season (monograde) oils. It is their replacement with more modern oils (mainly synthetic or semi-synthetic) which significantly translates into the reduction of global use of oils in this segment.

Following these processes, the engine oil segment contracted between 2007 and 2014 from 107,000 to 90,000 tonnes, i.e. by almost 1/5 (18%).

At the same time the sales of monograde oils dropped almost 2.5 times (from over 19,000 in 2007 to 7,000 in 2014), the sales of oils for passenger vehicles remained stable (slightly over 50,000 tonnes), and the decrease in the sales of engine oils for heavy-duty vehicles was 17% (from 32,249 tonnes to 37,776 tonnes in 2014). On average, in the last seven years, the market for engine oils was shrinking by over 2% annually.

By comparison, in Spain, the automotive segment shrank by 37%, i.e. ca. 77,000 tonnes, in the same period⁴.

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.

■ Fig. 47 CHANGES IN THE AUTOMOTIVE ENGINE OILS SEGMENT AND COMPARISON OF STRUCTURES BETWEEN 2014, 2013 AND 2007



³ Apu Gosalia, Economic Crises take on roller coaster ride, article published in the Lubes 'n Greases Europe-Middle East-Africa magazine, edition February 2015 ⁴ Statistics provided by the Repsol company, published in the Lubes 'n Greases Europe-Middle East-Africa magazine, edition February 2015 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.

PASSENGER CARS MOTOR OILS (PCMO)

The Polish drivers are consequently retiring from the use of mineral oils. Even though a year before every fourth passenger vehicle engine in Poland was still being lubricated with high viscosity oil of 15W or 20W, in 2014 this share dropped to as little as 21%, whereas the proportion of synthetic oils grew again and it is only one percentage point away from reaching a 50% market share. On the other hand, the 30-per cent share of medium viscosity oils remained unchanged last year.

Therefore, since 2007, the market share of synthetic oils of lowest viscosity increased almost by half, recording an average annual growth of over 3 percentage points.

Generally, the sales within the whole segment of engine oils for passenger vehicles show an exceptionally stable performance. In 2014, they amounted to 51,154 tonnes compared with 49,147 tonnes sold in 2013 and 50,275 tonnes sold in 2007.

HEAVY-DUTY ENGINE OILS (HDEO)

In 2014, already a third of heavy-duty engines were being filled with other than mineral oil. Only in 2007 this was only a quarter. The retreat of from mineral oils to semi-synthetic products in the HDEO segment is not, admittedly, as dynamic as in the case of passenger vehicles, but it is also quite a significant market trend. In 2014 the share of mineral oils – most popular in this segment – declined by further 3 percentage points, from 67% to 64%.

Sales volumes in the whole goods vehicle segment equalled 32,249 tonnes, compared with 36,558 tonnes in the previous year and 37,776 tonnes in 2007. **OILS FOR INDUSTRY**

In 2014, the industrial oils segment reached a level of 106,593 tonnes, which represents an increase of 3.43% in comparison with the previous year.

As compared with the preceding year, the sales of oils for gas engines as well as compressor oils were 10% higher.

■ Fig. 48 PASSENGER CARS MOTOR OILS WITH REFERENCE TO VISCOSITY CATEGORIES (EXCLUDING MONOGRADE OILS)



Source: POPiHN's own study

■ Fig. 49 HEAVY-DUTY ENGINE OILS WITH REFERENCE TO VISCOSITY CATEGORIES (EXCLUDING MONOGRADE OILS)



■ Fig. 50 CHANGES IN THE INDUSTRIAL OILS SEGMENT - EVOLUTION OF STRUCTURE



Source: POPiHN's own study


■ Fig. 51 INDUSTRIAL SEGMENT IN 2014: STRUCTURE WITH REFERENCE TO APPLICATION



The largest fall of 30% was recorded in the sales of white and insulating oils (the latter fell by ca. 23%). Yet, they constitute one of the narrowest product groups within this segment, so these changes did not significantly translate into its total results.

The developments within the segment that took place in the last nine to ten years show its considerable stability both in terms of the volume of sales (in tonnes) and the market structure. Despite another growth in consumption which was recorded in 2014, the market reached a long-term stability around the levels which are lower (currently by 3%) than these achieved in the record 2007 year.

The stability of the Polish industrial oil segment proves particularly impressive when compared with the data from the Spanish market, which, since 2007, has seen a contraction of this segment to the tune of 44%, i.e. 95,000 tonnes. There,

the largest decline was recorded in the sales of greases, which was as deep as 40% and equal with 7,000 tonnes⁵.

In the last nine to ten years, with regard to the structure of industrial oil sales, there were no remarkable and steady changes comparable with those which took place in the case of engine oils in the automotive sector.

The Polish industry still predominantly uses hydraulic oils (a 35.66% share).

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



 5 Statistics provided by the Repsol company, published in the Lubes 'n Greases Europe-Middle East-Africa magazine, edition February 2015



The other half of the segment are very varied products with multiple applications. Increasingly, these are highly specialised products, designed even for specific devices.

In 2014 the share of 'other industrial' oil category experienced a remarkable growth of 5%. This category comprises widely diverse products, difficult to classify under other categories.

Currently, the share of this group in the whole industrial segment has reached 35% while still in 2007 it was only 1/4. Consequently, the 'other industrial' category has equalled hydraulic oils in terms of the volume of sales.

Both automotive and industrial segment do not reflect any considerable effect of the current macroeconomic turbulences upon their structure in a quarterly perspective, either. Yet, there are visible seasonal trends in consumption within the automotive segment, caused mainly by typical after-winter service in repair garages, which often includes a periodic change of oil.

SUMMARY

The monitoring and analyses of the market that have been done for the past ten years lead to a conclusion stating that the oil market is influenced by three main groups of factors:

• Macroeconomic situation (including its perception by oil purchasers), expressed in particular by following measures:

- Poland's GDP
- GDP of the Euro zone

• Industry-related factors, which can be divided into:

 legal factors (in particular, provisions of environmental and tax law),

 technology-related factors (to a large degree forced by environmental and tax regulations)

• Grey market zone, which, to a large degree, is forced by inconsistent or incoherent provisions of the tax law and currently prevails mainly in two forms: – In trade in base oils, i.e. using base oils as a substitute or admixture to engine oil – In trade of finished lubricants, which have been purchased abroad and brought to Poland without paying the excise duty tax.

The evolution of the Polish lubricating oil market strongly reflects the overall economic condition expressed by the dynamics of the Gross Domestic Product. When analyzing the market with regard to this indicator, one cannot ignore the last year's change in the methodology of its calculation: its value was increased by the incomes earned

from the grey market activity and prostitution, which led to its increment by 0.4-0.6%. These changes have already been accounted for in the documents of the Central Statistical Office of Poland (or GUS) and thereby the POPiHN statistics have been adequately updated, which is also reflected in the charts included in this year's report. Also, due to that, the GDP indicator values presented in the report diverge significantly from these presented in the previous years.

In the last nine years there were two severe economic downturns. In retrospect, it becomes clear that the market, and the industrial segment in particular, reacted entirely differently to each of them. In 2009 a deep, yet short-term collapse in demand took place. On the other hand, the second crisis of 2012-2013 turned out longer and more profound for the economy, yet, it led only to a minor downswing on the market for lubricating oils, which means that during the second period of economic bust the market already proved much more resistant.

The year 2009 can be seen as a turning point, as within the macroeconomic environment certain phenomena were revealed (including the fundamental debt crisis unfolding in the Eurozone), from whose consequences the economy has suffered until today. In 2007 the oil market reached a medium-term peak, which was disrupted as of mid-2008, followed by a deep collapse in the 1st guarter of 2009, from which the market has been recovering until present. The notable market stabilization of the past few years is taking place around a level which is remarkably lower than the one achieved in 2007.

Yet, the macroeconomic effect is visible in both industrial and automotive segments, as both peak and minimum values of the GDP indicator correspond precisely to the lubricating oil sales performance figures. Even so, the development patterns within the automotive and industrial segment are markedly different, which reflects specific background conditions for these segments.

There are many indications which show that the macroeconomic factors have a much larger effect on the industrial segment than they have on its automotive counterpart, which, additionally, is experiencing a technological revolution of its kind (substituting mineral engine oils, particularly monogrades, with synthetic oils) along with the existence of a large grey zone.

As for the automotive segment, one should point at the aforementioned extension of interval periods between oil replacements, resulting in lower demand. The other significant factor that contributes to a gradual reduction of that market is the grey zone with its consequences, which particularly affect high quality engine oils of renowned brands that can be purchased in the neighbouring states without paying the excise duty.

The two factors mentioned above seem to be influential enough to compensate for a strong impulse for growth, resulting from a surge in the number of vehicles, which occurred in Poland in the recent years.

Apart from macroeconomic conditions, the developments within the industrial segment in the period covered by this report were substantially due to psychological reasons, such as the concerns of the business community and its nervous reaction to the events on the financial markets on the turn of 2009, even though they did not directly relate to the oil market. The further developments show that these fears were exaggerated, which has been proven by the immediate recovery of this segment.

Apparently, there was also a change in the perception of threats presented by the global economy, as the second downturn of 2012-2013, which finally





proved deeper and longer than the previous one, turned out much more benign to the industrial sector than the one experienced before.

The evolution of the entire market for lubricating oils is the ultimate result of changes within the two aforementioned segments, as well as changes which are taking place in a much smaller, but in the recent years ever more significant segment of 'other, not classified elsewhere' products.

SHORT-TERM FORECAST FOR LUBRICATING OIL MARKET

Based on current observations and publicly available prognoses for the economic growth in Poland, we forecast that the entire market for lubricating oils as well as its two key component segments: automotive and industrial, will present a stable performance, remaining around their currently observed levels. The deviations from these should be minor and oscillate within statistical error bounds. For the automotive segment a further minor decline is possible, mainly due to the grey zone and the fact that, gradually, an ever larger part of the automotive fleet will require the use of synthetic oils. That fall should be brought to an end by lower fuel prices that would translate into an increased tendency to use cars, which should also result in more frequent oil replacements.

As for the **industrial segment**, following the forecasted annual GDP growth of 3.6%, it should show a stable performance, possibly with a slight upward trend. Until present, the GDP growth rate of 3-3.5% was the point of balance, which separated rises from falls and where sales remained stable. Also, in recent years the entire segment has shown a strong tendency to remain stable.

Most forecasts about the developments in the coming years oscillate around the GDP growth level of 3.6% for 2015 and 2016, yet, the past experience indicates that with time such forecasts are usually reviewed, which makes the prediction difficult.

However, for the present moment, it is assumed that the economic situation in Poland will remain stable in the coming two years, which will be a consequence of the ongoing convergence of the Polish economy towards the economy of the European Union. Thanks to this process, even though facing strong and potentially harmful stagnation in the Euro zone, Poland' economy is able to develop at the rate of 3.5%, which in the case of the market for lubricating oils means a strong

■ Fig. 53 OVERALL OILS MARKET, AUTOMOTIVE AND INDUSTRIAL SEGMENTS IN TERMS OF POLISH GDP TOGETHER WITH FORECAST



Source: POPiHN's own study, GUS data

impulse towards further stabilization around the current levels. Thus, such a scenario can be assumed as a basis for the coming years.

MEDIUM-TERM MACROECONOMIC PROSPECTS

Looking further ahead, one should give particular attention to the condition of the Euro zone, with which Poland's economy is already strongly integrated, as the economic results of the Euroland and Poland significantly correlate.

The prospects for the Euro zone are far from excellent. That implies a possible analogy to the Japanese scenario, which has brought a several decades of the ongoing stagnation, despite pursuing the policy of low interest rates and printing additional amounts of money, both of which is currently taking place in the European Union as well. In the scenario of the prolonged period of sluggishness within the Euro zone – which should currently be seen as the most likely to happen - even with major investments in infrastructure within the 2014-2020 EU perspective, in the coming years a GDP growth rate in excess of 4% will remain for Poland a considerable success. Only such level of growth could find reflection in a more visible improvement on the oil market.

Among threats specific to the domestic market, one should point at the continuously increasing grey zone, which since a few years remains the issue that POPiHN recurrently raises at all possible occasions. The main proposals presented by the sector include levelling out the tax burdens upon oils between Poland and the neighbouring countries by introducing a single "zero rate" for all lubricants in both Poland and the entire European Union. The key advantage of such a solution is the elimination of factors encouraging tax evasion by private and parallel import from the neighbouring countries while keeping control over the product via the Excise Movement and Control System (or EMCS). The system works well within the borders of Poland while it proves completely useless for transborder movements, both declared and effective.

Thus, the issue of the grey zone will remain unsolved as long as the European Commission does not assume its role and responsibility for developing uniform regulations within the EU (level playing field), and the authorities responsible for customs duty and tax policies in the single states try to solve the problem while looking at a partial picture which they can see from they own backyards.

The last year's failure of the attempt to align the rules for trading in oils, which happened in Brussels, indicates that currently the extremely pessimistic scenario is playing out especially for Poland but also some other countries. It foresees further exacerbation of the problems in the coming years, combined with a continued increase in burdens imposed on these business owners who run their operations in compliance with the law, which, in consequence, will bring a further deterioration of their competitiveness.



EXPLANATION OF TERMS

PASSENGER CAR MOTOR OILS (PCMO) – 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.

HEAVY DUTY ENGINE OILS (HDEO) – 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 the ones 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 (ATF) 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 than 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 15W and 20W oil groups). 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 moulding oils) 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, 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 purpose 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 purpose 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 2012 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 companies covered by monitoring. The Organisation's view is that this estimate reflects the current market share of companies 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 volume 'outside POPiHN'.

DOUBLE REPORTING The methodology used for data collection and processing eliminates the problem of the so-called 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 volume sales among 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 2014, 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 analyses of historical data and current market trends.

IMPORTS AND EXPORTS For the purpose of this report, in relation to lubricating oils, the above terms include both the Intra-Community Acquisition of Goods in the case of 'imports', and the Intra-Community Supply of Goods in the case of 'exports'.



THE LOGISTICS MARKET FOR CRUDE OIL AND LIQUID FUELS Feedstock supply pipeline network

The PERN 'Przyjaźń' S.A. crude oil pipeline network consists of three sections: Eastern, Western and Pomeranian. The Eastern Section of the Przyjazń pipeline links the Depot in Adamowo, near the border with Belarus, with the Crude Oil Depot in Miszewko Strzałkowskie near Płock. The Eastern Section transports oil through the Miszewko Strzałkowskie 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 Strzałkowskie depot with a depot in Gdańsk. Russian crude flows along this route to a Gdańsk refinery, which belongs to Grupa LOTOS and for export via NAFTOPORT. The Pomeranian Section is reversible, allowing pumping in both directions.

EASTERN SECTION

The Eastern Section of the 'Przyjaźń' pipeline links the Adamowo Depot with the one in Miszewko Strzałkowskie using two conduits; route length: 233 km;

nominal capacity: 42 million tonnes of crude oil per year.

The eastern part of the pipeline network owned by PERN 'Przyjaźń' S.A. 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 Przyjaźń main feeder from 42 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 Korytnica and Strachówka 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 Korytnica and Strachówka 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 'Przyjaźń' 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 its nominal capacity is 27 million tonnes of crude oil per year.

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

The Western Section links the 'Przyjaźń' pipeline network with PGNiG's storage depots located in the towns of Wierzbno and Dębno. The company transports Polish crude extracted in the Dębno area.

POMERANIAN SECTION

Crude oil flows over the Pomeranian Section to Grupa LOTOS 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 'Przyjaźń' 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 Gdańsk Depot through a single pipe, with the route length of 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 'Przyjaźń' S.A. has a network of product pipelines for transporting petroleum products (petrol, diesel and fuel oil) in three directions:





Płock – Nowa Wieś Wielka – Rejowiec

Length: approx. 207.1 km, nominal capacity: 2.1 million tonnes and 1.4 million tonnes of fuel per year (respectively, Płock – Nowa Wielka Wieś and Nowa Wielka Wieś - Rejowiec).

Płock – Mościska – Emilianów

Length: approx.147.7 km, nominal capacity: 1 million tonness of fuel per year.

Płock – Koluszki – Boronów

Length: approx. 261.5 km, nominal capacity: 3.8 million tonnes and 1.0 million tonnes of fuel per year (respectively, Płock – Koluszki and Koluszki – Boronów).

CRUDE OIL STORAGE TANKS

Crude oil storage tanks are an integral part of the PERN 'Przyjaźń' S.A. pipeline network. The company has three crude oil storage depots:

Adamowo Depot (15 storage tanks of approx. 770,000 m³ total capacity); Miszewko Strzalkowskie Depot (29 storage tanks of approx. 1,464,000 m³ total capacity);

Gdańsk Depot (18 storage tanks of approx. 900,000 m³ 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 m³. The 100,000 m³ capacity tanks are the largest of their kind in Poland.

OIL TERMINAL

In the Gdańsk Port, PERN 'Przyjaźń' S.A. is constructing the Oil Terminal for loading and storing crude oil as well as petroleum and chemical products.

The Oil Terminal will have an important role in the energy security of Poland and the region and it has been included on the list of EU Projects of Common Interest (PCI).

The Terminal's excellent location is an additional value of the investment: the neighbouring presence of NAFTOPORT, the possibility of constructing a loading pier, the proximity of transmission infrastructure.

The planned target storage capacity of the Oil Terminal is 703,000 m³.

The first phase of the investment assumes constructing of crude oil tanks of 375,000 m³ of capacity, whereas in the second phase of the project there shall be built the tanks for petroleum and chemical products of 328,000 m³ of capacity.



Fig. 56



The new Terminal will be linked with: • loading facilities of NAFTOPORT,

- network of crude oil pipelines,
- road and railway infrastructure.

The Terminal's location by the sea and its connection to pipeline, port, railway and road infrastructure will enable:

· short- and long-term storage of

feedstock and other products in designated tanks,

• loading and onward transportation,

• loading the feedstock via the Terminal's tanks from smaller tankers onto bigger vessels.

Date of completion of the first phase of the investment: 2015.



■ Fig. 57 OLPP'S FUEL DEPOTS

LIQUID FUELS STORAGE LOGISTICS

Operator Logistyczny Paliw Płynnych (OLPP, eng. Liquid Fuels Logistics Operator), being a leader in fuel logistics sector in Poland, has modern infrastructure which meets all legal requirements for fuel depots, including the ones related to the environment.

The Company owns a network of fuel depots, the total capacity of which is about 1,8 mln m³. OLPP stores petrol, diesel, light fuel oil, biofuels and aviation fuel. Storage tanks are of varying capacity and the largest of them can store 32,000 m³.

Fuel depots are located throughout Poland. The five largest depots, namely the ones in: Koluszki, Nowa Wieś Wielka, Boronów, Rejowiec, and Emilianów, are connected by long-distance fuel pipelines with the refinery in Płock. The depots located at the eastern border of the country have terminals for handling fuel, gas and other petroleum products. The Fuel Depot in Dębogórze allows diesel to be exported and imported by sea through the Port of Gdynia.

Besides, the Company owns accredited petroleum product laboratories, which, apart from comprehensive supervision of the quality of fuel held and stored in OLPP's depots, also provide services to third parties. OLPP's laboratories use the most modern equipment and standards, which ensure the best possible tools for conducting quality controls of fuels in the course of trade.

OLPP is constantly looking for new solutions in order to meet customers' expectations. With a view to maintaining customer trust and market confidence, the Company has implemented, maintains and improves the Integrated Management System, compliant with the standards PN-EN ISO 9001, PN-EN ISO 14001:2005 and PN-N 18001:2004.

MOST IMPORTANT INVESTMENT PROJECTS IN 2014:

• Extension of installations for additive dosing in the Fuel Depots in Koluszki, Nowa Wieś Wielka, Boronów, Rejowiec Poznański, Emilianów, Kawice, and Dębogórze.

• Modernisation and development of IT infrastructure.

• Implementation of dynamic measurement of fuel capacity in industrial pipelines.

• Reconstruction and modernisation of technical



and technological infrastructure of fuel depots.

CAPACITY UTILISATION

OLPP has about a 50% share of liquid fuels storage market. Apart from providing services to fuel market operators, the Company plays an important role in the country's energy security. OLPP's tanks hold stocks for the state's Material Reserves Agency. In the years 2008--2012, there was an upward trend in utilisation of fuel depots' storage capacities. Since 2013 the demand for storage capacity has been declining due to reduced fuel consumption in Poland and the entry into force of the amended Act of 16 February 2007 on stocks of crude oil, petroleum products and natural gas, the principles of proceeding in circumstances of a threat to the fuel security of the State and disruption on the petroleum market.

LOADING FROM OLPP'S FUEL DEPOTS ONTO ROAD TANKERS

In the years 2012-2014 due to changes in economic conditions on the fuel market, there was a gradual decrease in the number of loadings onto road tankers.

■ Fig. 58 UTILISATION OF CAPACITY IN OLPP'S FUEL DEPOTS (MONTHLY AVERAGE) [m³]





■ Fig. 59 ROAD TANKER LOADINGS IN OLPP'S FUEL DEPOTS [m³]



■ Fig. 60 BLENDING OF BIOFUELS IN OLPP'S FUEL DEPOTS [m³]



■ Fig. 61 STOCK TICKET RESERVES (MONTHLY AVERAGE) [m³]



BLENDING WITH BIOFUELS

The biofuels blending service has a key role in creating conditions for businesses to achieve the National Biofuels Target (NBT). OLPP, trying as much as possible to meet customers' expectations, has extended this service to blending bioethanol with petrol.

In 2014, in comparison with the previous year, terminals despatched less biofuels (which had been blended at OLPP's depots): the total volume equalled over 2.6 mln m³, whereas in 2013 it was over 3 mln m³).

STOCK TICKET RESERVES

In 2014, due to a decrease in market consumption of liquid fuels and the entry into force of the amended Act of 16 February 2007 on stocks of crude oil, petroleum products and natural gas, the principles of proceeding in circumstances of a threat to the fuel security of the State and disruption on the petroleum market, the demand for storage capacities for compulsory stocks, resulting directly from the volume of fuels coming onto the domestic market, was reduced in comparison with the previous year.







Polska Organizacja Przemysłu i Handlu Naftowego (abbrev. POPiHN, eng. Polish Organization of Oil Industry and Trade) was founded in 1995, pursuant to the act on employer organizations, as an association of the companies operating in the fuel sector. The following 12 companies took part in a founding meeting: Agip, Amoco, Aral, BP, Ciech, Conoco, Du Pont, Esso, PERN 'Przyjaźń' SA, Shell, Statoil and Texaco. Initially POPiHN was perceived as representing foreign companies, although among the founding members there were PERN 'Przyjaźń' SA and CIECH SA.

It is worth recalling that the 20-year long period that has elapsed since that moment constitutes a unique era in the development of the Polish economy: at the time when POPiHN was established, the market economy in Poland was still in its infant stage. Back then, a filling station was frequently associated with the word 'cepeen', which was a popular synonym for all filling station sites, not only these operating under the umbrella of the state-owned Centrala Produktów Naftowych (or CPN), with a bunch of cars queuing in front of it. Also, the memory of petrol ration coupons was still alive and the quality of the available fuel was far from desired. Simultaneously, complex privatization processes started to be implemented, including the engagement of foreign capital in ever-larger investments.

Achieving organisational goals in such a complicated and often unfavourable business environment required the competency to take effective action with a view to developing sound relationships between foreign enterprises, private Polish firms and entities controlled by the State Treasury. It was necessary to create the rules for dialogue between business community representatives and the organs of the state government authority. The key challenge to be addressed by our organization was to form a transparent and competitive fuel market, providing opportunities for the rise and development of independent enterprises, and ensuring free consumer choice, to the benefit of the entire Polish economy as well as each and every customer.





In the past two decades we contributed to the enforcement of a number of changes to the benefit of the sector in its broad sense as well as the consumers of petroleum products. The most vital among these include:

✓ The elimination of import permits for liquid fuels. Few remember that more than a decade ago, irrespective of the license requirement, in case of fuel imports special permits were needed, which were effectively preventing any opportunity for free competition or any room for fuel price reduction.

✓ The launch of self-service refuelling, including the latest self-service LPG refuelling, on filling stations. It entailed the elimination of mandatory training as well as protective clothing for those who operate fuel dispensers while filling the tank.

✓ The change of requirements with regard to the technical conditions of technical supervision to be met by the equipment for filling and emptying transportation tanks. To a large degree, it has facilitated fuel logistics operations.

✓ Building a network of filling stations at Motorway Service Areas alongside motorways and express ways, despite considerably unfavourable initial tendering conditions.

✓ The statutory reduction of charges related to the acceptance of card payments from the highest to one of the lowest levels in the European Union (0.2% for debit cards and 0.3% for credit cards). The adopted solutions will contribute to a further growth of the noncash payment system, to the benefit of entrepreneurs, consumers, as well as the state. They will also increase the security of filling station employees, following the 'the less cash, the less opportunity to make a thief' rule.

✓ The introduction of requirements with regard to the environmental protection at filling stations, and thereby imposing on the owners of sites which were built before 2005, the obligation to modernize tanks, equip the sites with systems for monitoring fuel leak to soil, surface water and groundwater, thus contributing to the improvement of environmental protection as well as fair competition among filling station-running entrepreneurs.



 Making filling station storage tanks exempt from the metrological control regime.

✓ Creating legal provisions regulating the quality of fuels produced with the use of biofuels to the extent adequate to relevant European standards.

 Ensuring the adoption of legal changes with a view towards reducing the extent of the main scourge of the fuel market, i.e. the illegal trade in fuels within the grey market.

✓ Making the Polish fuel suppliers exempt from the requirement to hold physical stocks of fuels, which should lead to a growth in the value of enterprises and favour more profitable investments made out of earned profits. For ensuring these and other successes, it was indispensable to keep a regular and substantive contact with the representatives of the Polish government administration and both Chambers of the Polish Parliament (i.e. the Sejm and the Senat). Hereby we express our acknowledgements to all those who were involved in it.

For the past decade the Organization's experts have prepared reports and analyses with regard to the liquid fuel and lubricating oil markets in Poland, which serve as the main source of information about the sector for analysts, entrepreneurs, and the media. It has been possible thanks to the development of a comprehensive system for analysis and statistics. The sector environment has already got used to our annual conferences, where, apart from getting familiar with the latest figures





related to the sector's performance, there is an opportunity to participate in debates on the most relevant issues of the sector.

We have supported awareness-raising campaigns targeted at drivers by means of such initiatives as 'Fill the tank without risk' or 'Save more than fuel'. As we truly understand the necessity to fulfil the public mandate of our sector, we supported actions aimed at reducing the incidents of drunk driving, including our support for the campaign titled 'I never drive after drinking'. We are involved in the activities of the Partnership for Road Safety Association and we are a partner of the 'Friendly automotive world' programme, which has been launched by the Polish Automotive Industry Association (PZPM).

Over the years there have been changes in both the Organisation's membership and its goals. Currently, the Polish Organisation of Oil Industry and Trade is the key representative of enterprises operating in Poland in the area of production and distribution of liquid fuels, fuelrelated infrastructure and production and distribution of lubricating oils in the dialogue between the representatives of legislative and administrative authorities, the media, non-governmental organizations and scientific research centres in Poland.

Currently, the Organisation consists of twelve enterprises: BP, Fuchs, Grupa Lotos S.A., Lukoil, OLPP, PERN 'Przyjaźń', PKN ORLEN, Shell, Slovnaft, Statoil, TANQUID and Total. These companies together make up for 100% of refined production, 81% of wholesale trade in liquid fuels, 60% of retail trade in fuels, 100% of pipeline transport of crude oil and petroleum products, 95% of storage capacity for petroleum products in Poland, as well as a significantly major part of lubricating oil supplies. The sector operators account for circa 50 bn PLN in taxes paid to the state budget (VAT, excise duty, fuel surcharge), which represent around 20% of total fiscal revenues. They play a critical role in ensuring the energy security of our state.

To promote and ensure the creation of the EU law which is favourable for the Polish economy, we engage in lobbying activities and campaigns on the EU forum, mainly as the representative of the Polish fuel sector in FuelsEurope and the representative of the oil sector in the Union of the European Lubricants Industry (UEIL).



FOR THE PAST DECADE THE ORGANIZATION'S EXPERTS HAVE PREPARED REPORTS AND ANALYSES WITH REGARD TO THE LIQUID FUEL MARKET

Although there are still numerous challenges ahead of us, we cannot ignore the fact that we are experiencing entirely new market realities. Even an impartial observer will notice that Polish filling stations currently represent the top world class level and the fuel that they offer meets the highly demanding European standards. Yet, not everyone realizes that the Polish refineries are among the world leaders in terms of the advancement of technological standards, complexity of crude processing and environmental protection. Also, the Polish pipelines and fuel storage depots, gradually extended and modernized, ensure the undisturbed logistics of the fuel sector.

The POPiHN's goal remains to ensure a fully competitive and customer-friendly market along with secure and sustainable growth of enterprises operating in the field of production and distribution of liquid fuels and oils. Working towards this goal, POPiHN will continue the dialogue with all stakeholders, sharing its knowledge and experience of the refining industry.







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