ANNUAL REPORT

OIL INDUSTRY AND TRADE 2015

POPiHN

Polska Organizacja Przemysłu i Handlu Naftowego

DEAR READERS,

We are pleased to once again present the 'Oil Industry and Trade' annual report elaborated by the experts from the Polish Organisation of Oil Industry and Trade (POPiHN), which reviews the situation in the liquid fuels sector and related areas in the previous year. Traditionally, our report presents key statistics on the liquid fuels sector in Poland, market analysis and the description of main problems of the industry, as well as selected issues in fuels and lubricating oils production and logistics. The fuel sector is of key importance to the Polish economy, ensuring the energy security of the country and providing employment for tens of thousands of people. Our sector generates about 20% of public revenues.

In 2015 our Organisation celebrated its 20th anniversary. In recognition of its contribution to the development of the oil and gas industry on 23 March 2015 POPiHN was awarded with the Badge of Honour for Merits to Oil and Gas Industry by the Minister of Economy.

The report you are now reading was compiled on the basis of data from POPiHN member companies as well as the information provided by the Ministry of Finance. This systematic data was analysed and interpreted accordingly against a background of market monitoring and observing the sector of independent entrepreneurs. It should be, however, noted that in 2015, similarly to 2013-2014, it was particularly difficult to assess the overall market due to the estimated data for that part of the market which extends beyond POPiHN members. In particular, tax frauds are to be blamed for the distorted vision.

The phenomenon of tax frauds in fuel trade continued to have intimidating proportions, while the criminals surprisingly rapidly adjusted to the changes introduced in legislation and operational activities performed by law enforcement authorities. This resulted in enormous losses for the state revenues, estimated by us at about 10 bn PLN, threatening the stability of companies which operated in accordance with the law. Measures undertaken to reduce this area of economic crime have not been very successful. The shadow economy remains the biggest problem of the fuel sector in Poland, therefore we welcome the government's plans to rapidly tighten up the system of controlling tax frauds.

While summarising 2015, one cannot fail to mention several positive changes that have been beneficial for filling stations' clients. It should be pointed out that fuel prices decreased as a result of low crude oil prices on world stock markets. For the first time in many years drivers could benefit from purchasing petrol and diesel at such an inexpensive price.

We recommend the 'Oil Industry and Trade 2015' report and wish you a pleasant reading.

Leszek Wieciech
Chairman & Director General

Piotr Pyrich
Chairman of the Board of Directors

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 of 2015:
Petrol . . . . . 0,735 Mg/m³
Diesel . . . . . 0,834 Mg/m³
Light fuel oil . . . . . 0,832 Mg/m³
LPG . . . . . 0,559 Mg/m³

Product densities used in mass to volume conversions in 2nd quarter of 2015:
Petrol . . . . . 0,736 Mg/m³
Diesel . . . . . 0,833 Mg/m³
Light fuel oil . . . . . 0,834 Mg/m³
LPG . . . . . 0,555 Mg/m³

Product densities used in mass to volume conversions in 3rd quarter of 2015:
Petrol . . . . . 0,746 Mg/m³
Diesel . . . . . 0,833 Mg/m³
Light fuel oil . . . . . 0,835 Mg/m³
LPG . . . . . 0,558 Mg/m³

Product densities used in mass to volume conversions in 4th quarter of 2015:
Petrol . . . . . 0,748 Mg/m³
Diesel . . . . . 0,831 Mg/m³
Light fuel oil . . . . . 0,832 Mg/m³
LPG . . . . . 0,558 Mg/m³

POLSKA ORGANIZACJA PRZEMYSŁU I HANDLU NAFTOWEGO

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MEMBERS:

- BP Europa SE
- Fuchs Oil Corporation (PL) Sp z o.o.
- Grupa LOTOS S.A.
- Lukoil Polska Sp. z o.o.
- OLPP Sp. z o.o.
- PERN „Przyjaźń" S.A.
- PKN ORLEN S.A.
- Shell Polska Sp. z o.o.
- Slovnaft Polska S.A.
- Statoil Fuel & Retail Polska Sp. z o.o.
- TanQuid Polska Sp. z o.o.
- TOTAL Polska Sp. z o.o.

POPiHN
Polska Organizacja Przemysłu i Handlu Naftowego

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

STRUCTURE OF THE ORGANIZATION:

GENERAL MEETING

BOARD OF DIRECTORS – supervisory body appointed by the General Meeting for a three-year term of office. Current term of office is May 2013-May 2016.

Piotr Pyrich	**BP Europe SE – Chairman of the Board of Directors**
Daniel Betke	**OLPP sp. z o.o.**
Piotr Dziwok	**Shell Polska Sp. z o.o. – Vice-Chairman of the Board of Directors**
Sławomir Jędrzejczyk	**PKN ORLEN S.A.**
Marcin Moskalewicz	**PERN 'Przyjaźń' S.A.**
Tomasz Rybczak	**Slovnaft Polska S.A.**
Maciej Szozda	**Grupa LOTOS SA**
Krzysztof Starzec	**Statoil Fuel & Retail Polska sp. z o.o.**

MANAGEMENT BOARD

CHAIRMAN-DIRECTOR GENERAL – appointed by the Board of Directors for a three-year term of office.

Leszek Wieciech **Chairman-Director General**

Current, second term of office is 1 January 2014-31 December 2016.

OFFICE

Krzysztof Romaniuk	**Director of Fuels Market Analysis**
Marcin Szponder	**Director for Market Regulation**
Joanna Lewandowska	**Office Manager**

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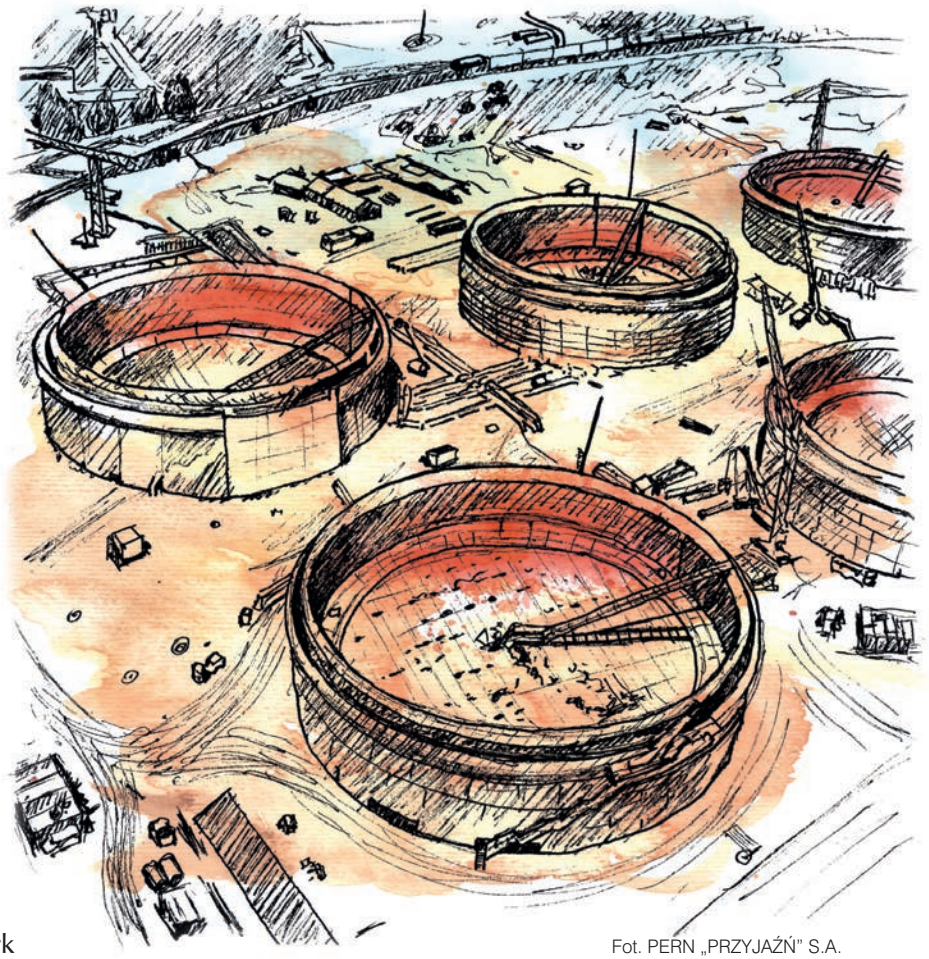


Fot. PERN „PRZYJAŹŃ" S.A.

MAIN PROBLEMS OF THE FUEL SECTOR IN POLAND

1. GREY ZONE

Crime in fuel trade remains the main problem of the industry. Since the end of 2011 there has been observed an increase in activity of entities offering fuel at the price below the level which is possible in the case of entrepreneurs meeting all legal and fiscal requirements (VAT, excise tax, fuel surcharge, mandatory reserves, National Biofuel Target).

In 2013 POPiHN assigned the advisory firm Ernst & Young to prepare a report analyzing the phenomenon and its scale, as well as proposing possible solutions. According to the EY data, the scale of VAT frauds on the diesel market in 2012 made up for at least 12.6% of the estimated total use of diesel, which equalled 2,057K m^3 of diesel whose value was approximately 11 bn PLN. Experts believe that in 2013 a further increase in the estimated VAT frauds in diesel trade took place, reaching the level of 18.6-24.2% of the market, whereas the total losses to the state, arising upon this fact, amounted to 4.3-5,8 bn PLN.

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).

In the industry's view, neither the changes to the law, nor operational activities of relevant administration authorities have so far brought the expected results. We estimate that due to the fuel-trade related crime around 10 bn PLN did not flow to the state's budget. Our calculations are based on the assumption of a 30% efficiency in detecting crimes of that kind by services subordinate to the Ministry of Finance and the Ministry of the Interior. Following the estimations of PwC in 2014 the VAT frauds in the Polish economy amounted to almost 50 bn PLN, over 20% of which were related to petrol trade.

Apart from generating losses for the state's budget, crime in petrol trade distorts competition and has an enormous, negative impact on the operation of reliable entrepreneurs who meet all the requirements (VAT, excise tax, fuel surcharge, stocks, National Biofuel Target). Some of them have already ceased operations in fuel wholesale trade, others are considering such a decision.

Non-registered fuel is displacing from the market the fuel produced by Polish refineries. In consequence, a forced increase in exports of the Polish fuel is taking place, and thus an even larger loss of the state's budgetary revenues from taxes due on goods sold domestically.

Even though the first half of 2015 saw a reverse of the recent negative trend in the registered fuel consumption, some entities involved in the criminal activity appear to remain significant beneficiaries of this phenomenon. That is indicated by the data on imports and intra-community supplies of diesel to Poland, showing a 30%-growth, with a visible 59%-growth in transactions handled by independent importers, while the POPiHN member companies imported 17% less diesel than the year before. It may indicate that at least a part of independent companies is involved in tax frauds.

OUR POSITION

In the industry's view, it is essential for the relevant administration authorities to take urgent measures, both operational and legislative, for reducing the criminal activity related to fuel trade. To achieve the assumed goal, there is a critical need to coordinate the operations of all competent offices, preferably including delegating adequate powers by the Prime Minister to one of the ministries. The key point of this cooperation should be creating the so-called fuel register, i.e. an electronic database containing information about the entities operating in the field of production, logistics and fuel trade. The register could work on three levels:

1. 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);

2. 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.);

3. 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.

Independent of operational activities, we are in favour of changes to the law, including:

1. VAT legislation – adopting new, comprehensive changes, taking account of the experiences of other countries (split-payment, central VAT register), as well as:

a. The elimination of security deposit as a scheme exempting from joint and several liability;

b. The implementation of detailed rules of taxpayers' audit into the tax authorities' scope of responsibility in order to eliminate the cases of registering bogus enterprises as entities subject to VAT;

c. The elimination of the possibility to account for VAT on a quarterly basis for small and newly set up enterprises;

d. The imposition of joint and several liability on startup companies which are beginning their operation.

2. Energy Law

a. Strengthening existing sanctions on natural and legal persons for pursuing business operations in the field of production and trade in liquid fuels without a licence;

b. The implementation of changes to the system of licences for trading in fuels abroad (OPZ) – imposing an obligation to hold an OPZ license on the first entity which closes the first domestic sale subject to VAT;

c. The imposition of the obligation to hold an OPZ licence on non-profit entities;

d. The implementation of the obligation to report the volume of imported fuel by companies – holders of the OPZ licence.

e. Automatic withdrawal of the OPZ licence in the case of not using it for 6 months.

3. Other provisions:

Fot. ORLEN

a. Making public the register of petrol stations which is run by the Trade Inspectorate;

b. Exclusion from the possibility to use virtual offices for the trade in sensitive goods.

2. RETAIL SALES TAX

The draft bill on retail sales tax, as opposed to previous assumptions, does not stipulate for making the sales of fuels exempt from the new regulation. The tax is supposed to apply to the sales of non-fuel products on petrol stations. A particularly severe instrument is to be a special, increased tax rate applied to the sales transactions made on Saturdays, Sundays and public holidays.

The proposed measures impose disproportionately heavy burdens on trade in fuels. The retail margins on fuel have been on their lowest level for years – in the last 5 years they stood at 2.6% on average for petrol and diesel. Taxes already account for more than 50% of the price of primary fuels. In the case of petrol they represent ca. 55% of the price (excise tax 33%, VAT 19%, fuel surcharge 3%) and in the case of diesel ca. 51% (excise tax 26%, VAT 19%, fuel surcharge 6%). The additional costs result from the obligation to meet the National Biofuels Target (introducing biofuels), mandatory reserves, as well as license fees, environmental taxes and surveillance fees. In this situation, the retail sales tax on fuels becomes in fact a tax on other taxes and commercial liabilities.

OUR POSITION

The introduction of the retail sales tax without taking account of the specifics of trade in fuels will cause an increase in fuel prices, a drop in competitiveness of entities operating in this field, while, on the other hand, it will strengthen those companies which operate within the grey zone. Dismantling the franchise system in fuel trade will open the opportunity for criminals to take over a part of petrol stations. Consequently, the budget revenues will be on balance lower than at present. Every new tax on fuel works as an encouragement for the development of illegal market.

Furthermore, the new regulations regarding the increased taxes on sales on Saturdays, Sundays and public holidays may lead some owners to close their stations on these days, which can result in fuel supply shortages in some parts of the country.

The implementation of the tax in its proposed form can be considered as an aid and discriminatory measure. It introduces a discrimination of entities operating under a franchise agreement, while at the same time it supports entities which generate small turnover and do not operate within retail chains. In this way, the taxpayers are punished for their investment and development activities. Moreover, in the case of petrol stations the contracts closed with the franchisors usually cover exclusively the fuel and, as a rule, do not apply to the shops. The imposition of tax on franchise chains may result in their liquidation.

We propose making the sales of fuels exempt from the proposed tax, the abandonment of taxation of entire franchise chains, as well as the abandonment of the increased tax on sales made on Saturdays, Sundays and public holidays.

3. RENEWABLE FUELS AND FUEL QUALITY

In 2014 there was an adoption of laws implementing the RED (directive 2009/28/EC) and the FQD (directive 2009/30/EC). The provisions adopted while amending the Act on Biofuels (the Act of 21 March 2014 on the Amendment on Biocomponents and Liquid 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) generally 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

Fot. OLPP

of implementing NBT by using modern biofuels, such as HVO (hydrogenated vegetable oil). In Poland the HVO production could be carried out with the use of co-hydrogenation technology with mineral resources in the existing installations in our refineries.

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 the National Biofuels Target. It is clear that maintained solutions protect the interests of FAME producers at the expense of the fuel industry and millions of drivers. Promoting FAME results in additional costs for fuel producers, logistics companies and filling station owners, who have to bear these expenditures in order to maintain sufficient diesel quality.

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. New challenges in this respect are related to the so-called ILUC directive (regarding land-use change related to the cultivation of biofuels), limiting the use of first generation biofuels at 7% by 2020 and requiring the Member States to promote the so-called advanced biofuels.

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 prevailing in the EU.

We propose the following solutions:

1. Determining the level of National Biofuels Target for the upcoming years within a viable extent by means of the so-called normative blending;

2. Immediate implementation of new generation biofuels as more environment-friendly and favouring vehicle exploitation in order to facilitate achieving NRT in the coming years;

3. Changes in the definitions of diesel and petrol;

4. Shifting from NBT and ensuring that a policy of implementing renewable fuels is based exclusively on NRT;

5. 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;

6. Shortening the transitional period as regards simultaneous accessibility of E5 and E10 petrol on the market;

7. Changing the control framework of diesel oxidation stability parameter;

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.

4. OILS AND 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 entrepreneurs 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.

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 the EMCS system will be maintained in the nearest future. 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, which gives a significant competitive and cost advantage to entities operating outside Poland. 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 (level playing field). 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. FUEL LOGISTICS

The current legislation on technical conditions of technical inspection to be met by equipment for filling and emptying transportation tanks includes numerous inaccuracies and regulations which are difficult to comply with by entrepreneurs dealing with storage and transportation of fuels. It mainly applies to the use of emergency release couplings, bottom filling of railway cisterns, air-tight tank emptying systems etc.

Another problem in that field are the restrictions for access to the terminals caused by the existing network of road connections – both due to the decisions of local authorities, aimed at restricting heavy vehicle traffic, and the road categories alone. The industry is also facing the issue of eliminating from the market the dishonest drivers who have been caught in the act of theft.

OUR POSITION

We propose setting up a working group by the Ministry of Infrastructure and Construction in order to draft an amendment to the Regulation of the Ministry of Transport, dated 20th September 2006, on technical conditions of technical inspection to be met by equipment for filling and emptying transportation tanks.

We propose a change to the regulations on sanctions imposed on dishonest drivers concerning the loss of driving license by returning to the regulations once included in the act on road transport (suspension or disqualification of drivers who have been finally convicted of fuel theft).

6. THEFT INCIDENTS AT FILLING STATIONS

Fuel and other goods theft incidents cause material losses to filling stations' owners as well as pose threat to the safety of both staff and customers. The total value of stolen fuel can be estimated at over 20 mln PLN annually, whereas the number of such incidents amounted to approximately 100 thousands.

In the experts' opinion, an increase in the number of such acts is to a considerable degree caused by changes to the

Fot. LOTOS

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 250 PLN to ¼ of the minimum salary, which makes approximately 420 PLN.

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 such practices. 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;

Furthermore, we propose:

1. The enhancement of instance supervision over the operations of basic Police units along with transferring the authority for conducting fuel theft cases from the basic unit level (local police stations) to the level of district or regional Police headquarters. That would also enable a better integration in prosecuting acts committed by the same perpetrators on the area larger than the one which is supervised by one police station, as well as acts committed to the detriment of various petrol companies.

2. The introduction of a single form for reporting theft in a retail point, to be used across the whole country, preferably in the form of an electronic questionnaire or a file in editable format, possible to send via email; adopting less formalized procedures, including the possibility to report events directly after the notification of theft by the retail point (including the petrol station) staff under a phone number different than 997 or 112, which would enable to shorten the timing of transmission of information.

Fot. ORLEN

7. 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 2015, they represented 55% of the 95-octane petrol price, 51% of the diesel price and 42% of the autogas price.

Every now and then proposals emerge to reduce the range of goods offered on filling stations, such as, for example, 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 surveillance 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 the 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 at 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, as well as it will create a more difficult access for customers to certain products, especially in the late night hours and on public holidays.

8. 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. In this context the views expressed by certain groups, trying to enforce the elimination of fossil fuels, primarily crude oil, from the EU energy mix, by introducing a substitute for petroleum-related engine fuels such as electric energy and biofuels, are worrying and give cause for concern. It is worth pointing out that current experience indicates that such attempts lead only to an increase in transport costs, without any positive impact on climate or natural environment (the case of biofuels). 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. It is also a classic example of so-called carbon leakage.

Fot. SHELL

OUR POSITION

We expect the administration to continue its dialogue with the sector representatives, including POPiHN and a European association FuelsEurope, 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. The cooperation should include areas such as the competitiveness of the refining industry, the EU's climate policy and fuel price formation.

9. PETROLEUM LAW

Legal provisions related to the fuel sector (production, infrastructure, logistics, wholesale and retail trade, taxes and other contributions) are set out in different acts and regulations, which are often reciprocally incoherent or contain contradictory definitions. Furthermore, there is a lack of one office that would comprehensively supervise the whole sector; this raises problems with reference to developing relevant policies both at national level and within the framework of the EU.

OUR POSITION

For years the oil sector has been calling that work is undertaken in the field of comprehensive regulations, i.e. creating the so-called Petroleum Law. One of the elements of such regulations should be the establishment of an office – a regulatory body dedicated to the fuel sector, exercising all-embracing supervision and control over production, logistics and trade within the fuel market.

PROCESSING OF CRUDE OIL

In 2015 Polish refineries processed 9.5% more crude oil than in the year 2014. The results were truly record-high and equalled 26.5 mln tonnes. Crude oil was relatively cheaper than in the previous year and, in addition, very good margins achieved from refining and petrochemical production enhanced processing at a record level. Such record volumes could be achieved due to design changes and numerous investments aiming at increasing the production. Besides, in 2015 there was an increase in domestic demand for refining products, especially for fuels, whereas the products not absorbed by domestic market were exported. In the second half of 2015 the amount of processed oil was 1 mln more than in the first half of the year, and the third quarter was the best in terms of oil processing, as the achieved volume amounted to slightly over 6.9 mln tonnes.

Processing of crude oil in PKN ORLEN amounted to 16 mln tonnes (10% more than in 2014), and in Grupa LOTOS almost 11 mln tonnes (almost 12% more than in 2014). The increase in the level of processing was mainly due to having to adjust to the demand from the market, as well as the desire for profit maximization while benefiting from good refining margins.

The east remained the dominant direction for oil supplies to Polish refineries, as in previous years, yet purchases from other sources were bigger than in the year before. The share of REBCO crude oil in supply decreased from 91% in 2014 to 88% in 2015. It 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, which continues to be the cheapest. Apart from REBCO, yet on a larger scale, the Arab countries were the source of supply (Saudi Arabia and Iraq), and the supplementary source was also crude oil from the North Sea deposits and domestic supplies (Petrobaltic, PGNiG). Crude oil other than REBCO in the structure of supplies of PKN ORLEN constituted 5%, whereas for Grupa LOTOS it was almost 24%.

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 2015 over 25 mln tonnes of REBCO crude oil were brought to Poland, out of which 23 mln were transported via the pipeline 'Przyjaźń', owned by Przedsiębiorstwo Eksploatacji Rurociągów Naftowych S.A., whereas the remaining part was brought in via the port facilities of Naftoport in Gdańsk.

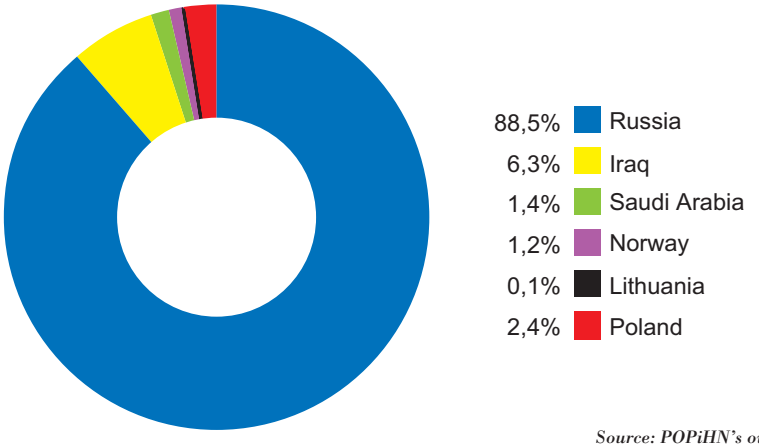
The volume of crude oil supplies from domestic deposits would be equivalent to 5 days of refinery production of our oil companies.

■ *Fig. 1* PROCESSING OF CRUDE OIL – DATA FOR 2014 AND 2015 in mln tonnes

Year	2014	2015	Reference 2014=100
OVERALL	24,2	26,5	109,5

Source: POPiHN's own data

■ *Fig. 2* SHARE OF CRUDE OIL SUPPLIES TO DOMESTIC REFINERIES IN 2015 [%]



Source: POPiHN's own data

Fot. OLPP

Fot. OLPP

PRODUCTION OF LIQUID FUELS

■ *Fig. 3* **COMPARISON OF LIQUID FUELS PRODUCTION IN 2015 AND 2014 [in thousand m³]**

Description	2014	2015	Reference 2014=100
Petrol	5 178	5 609	108
Diesel	12 796	14 367	112
LPG	643	612	95
JET fuel	1 423	1 345	95
Light fuel oil	703	543	77
Heavy fuel oil	3 378	3 068	91
OVERALL	**24 121**	**25 544**	**106**

Source: POPiHN's own data

Liquid fuel production in 2015 (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 25.5 mln m³, which means that around 6% more liquid fuel products entered the market than in the year 2014. The increase in total liquid fuel production in relation to the previous year equalled almost 1.5 mln m³.

Higher volumes of production were achieved due to significant increases in the production of diesel and petrol. More diesel was produced, at the same time reducing the production of the remaining medium distillates, i.e. light fuel oil and JET aviation fuel. An increase in petrol production contributed to limiting liquefied petroleum gas (LPG) production. While maximizing yields for two main fuel types, there was a reduction in the production of heavy fuel oil. The profile of the refining production in Poland was adjusted to the market demand; there was a growth in demand for main fuels and due to mild weather conditions there was a decrease in demand for heating oils. The refineries took advantage of good economic situation for fuels, observed both in the country and in Europe. Simultaneously, maximizing of processing and production of these fuel types was accompanied by an increased domestic demand, while products unable to be allocated in Poland were exported with good profits. In terms of volume there was a particularly significant surplus in diesel production; also this fuel type was the decisive one as regards such a substantial difference in refining production compared to the previous year. Had it not been for fuel supplies from the grey zone, it would have probably been possible to place even more fuels on the domestic market. In Poland the demand for light fuel oil, produced in Polish refineries, continues to shrink, even though the overall domestic demand requires increased imports. This is where we see the impact of not necessarily fully legal activities. A rebound in petrol market was reflected in an increasing domestic production and there are hopes that this upward trend will continue in the coming years. Significant amounts of domestic refinery production of petrol and diesel, aimed at the Polish market, were 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. An increase in fuel production in 2015 entailed an increase in the use of biofuels, which negatively influenced the economic results of the producers due to the fact that biofuels are significantly more expensive than traditional fuels. The situation was somewhat improved by temporary freezing of NBT thresholds and a possibility of applying adequate reduction factors while settling the fulfillment of goals; nevertheless, the price difference exceeding 30% had to lower relevant profits.

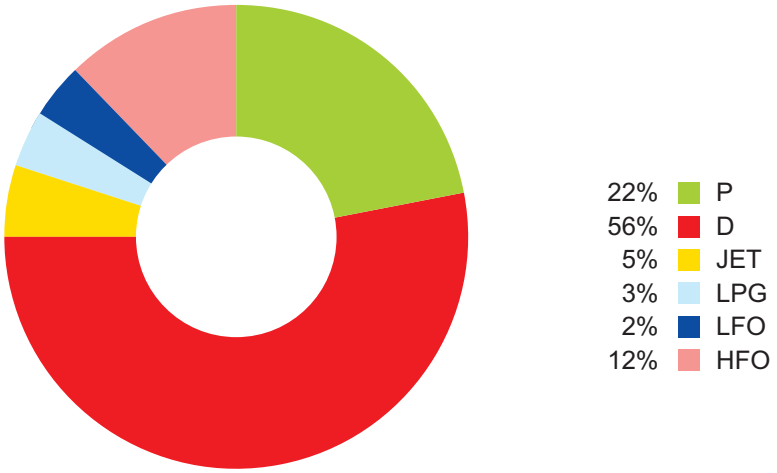
Production of diesel, which is the main product of national refineries, increased by 1.6 mln m³ (by 12%), which was a continuation of the previous year's trend with a significant intensification of its positive dynamics. A growth in the production of petrol is estimated at about 0.5 mln m³ (8%) and it is also a continuation of an upward trend from the previous years. However, in case of other liquid fuels there has been a decrease in production, whereas in terms of percentage it was the most visible in case of light fuel oil and in terms of volumes – for heavy fuel oil, i.e. 0.3 mln m³.

The structure of fuel production in 2015 is presented in Fig. 4.

In overall production there was a slight increase of petrol (by 1 percentage point) and diesel (by 3 percentage points) – namely the two fuel types that reflect the domestic demand. There was a 1 percentage point decline in the remaining liquid fuels share in production. Nevertheless, despite 1 percentage point decline, diesel remained a dominant product in domestic refineries.

As mentioned above, the production of liquid fuels also includes the process of mixing (blending) standard fuels with biofuels. In 2015 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 fulfil, 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 of B100 fuel because simply adding biofuels to standard fuels was not enough to fulfill the NBT. In order to facilitate the fulfilment of NBT its level was frozen (until 2017) and the interested parties were given the opportunity 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, not having amended the Act from 2014 on Biocomponents and Biofuels still results in the impossibility of using biofuels in higher proportion in standard fuels. Preliminary market information shows that POPiHN members achieved the imposed NBT. It is estimated that in 2015 around 313,000 m^3 of ethanol and around 755,000 m^3 of methyl esters were added to fuels. Sales of B100 fuel are estimated at about 325,000 m^3 (definite figures will be known until the end of March 2015). This means that volume sales of B100 in relation to 2014 grew by approximately 100,000 m^3, even though, which is worth noting, this type of fuel was almost unavailable at commonly accessible filling stations.

■ *Fig. 4* **BREAKDOWN OF LIQUID FUELS PRODUCTION IN 2015** [%]



Source: POPiHN's own data

Fot. SLOVNAFT

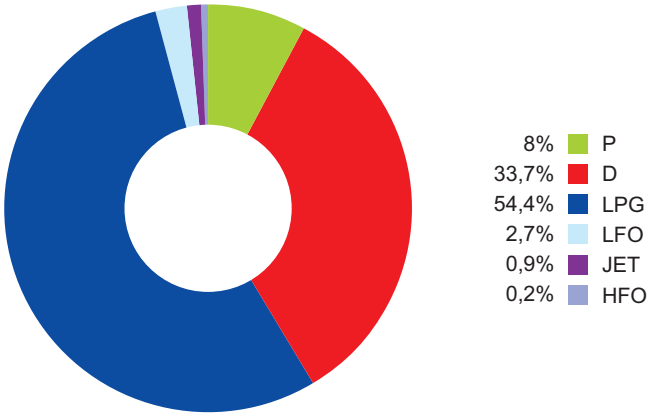
IMPORTS OF LIQUID FUELS (sum of actual imports and intra-Community acquisitions) (Fig. 7 and 8).

Current estimates show that officially registered imports of liquid fuels in 2015 amounted to almost 7 mln m^3, i.e. this volume was about 9% higher than in the previous year. It should be recalled that in 2014 the growth, when compared to 2013, equalled 6%, which means that this year's increase was 3 percentage points. The results are more favourable because of greater amounts of medium distillates brought into the country, mainly diesel. Volumes of imported petrol and heavy fuel oil were lower than in the previous year. The result for LPG was almost identical and this product's share in imports remained the biggest.

The increase in imports of medium distillates carried out by the so-called independent operators (companies other than POPiHN's members) was much higher than the increase in the imports of the biggest market operators. Besides, the growth rate of independent operators' imports significantly exceeded the results of market supply carried out by domestic and foreign companies that operate on the Polish market. The above implies that the criminals involved in VAT frauds adjusted to new legal requirements aimed at limiting tax frauds and partially limited themselves to VAT fraud crimes, at the same time fulfilling the obligation to pay excise tax. Using a third party mechanism or operations carried out by companies registered outside Poland that do not have Polish licences are good examples of new methods applied in the grey and black markets. Diesel continued to be the main type of fuel in case of which the frauds were performed. Nevertheless, it is worth noting that there was a significant increase in imports of light fuel oil, for which the growth in demand was definitely not influenced by the necessity of increased heating due to low temperatures as the weather was mild during the heating season. We can thus assume that there was an increase in the efficiency of control services, which enforced the law in a more coordinated manner. Increased imports of fuels is a continuation of trend which started in 2014 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. The above means that domestic market probably continues to be supported by a strong stream of fuel from outside the official circuit.

In 2015 the increase in the imports of diesel equalled 600,000 m^3, whereas light fuel oil increased by 100,000 m^3. However, there was a 16% decline in the imports of petrols. In terms of volume it was slightly over 100,000 m^3 and this difference was compensated by an increase in domestic production. The imports of LPG remained at a stable level, which was influenced by, among others, favourable petrol prices and keeping the so-called re-export at a level similar to the previous year. A decline in domestic

■ *Fig. 5* BREAKDOWN OF LIQUID FUELS IMPORTS IN 2015 [%]



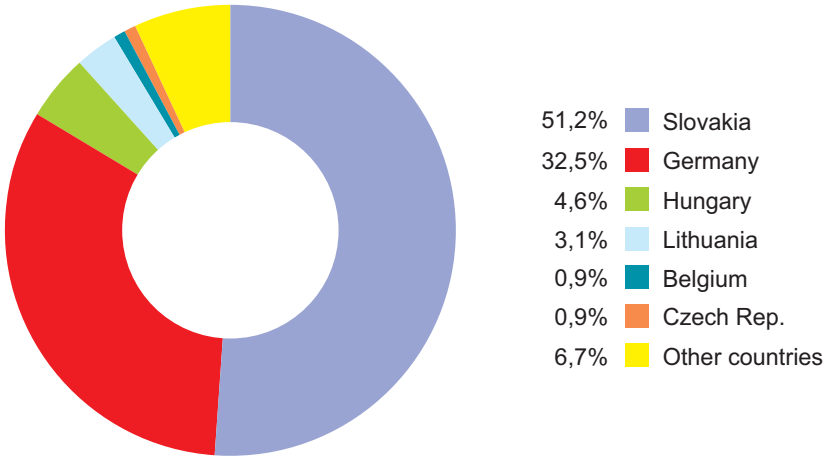
Source: POPiHN's own data

■ *Fig. 6* COMPARISON OF IMPORTS AND ACQUISITIONS OF LIQUID FUELS IN 2015 AND 2014

Description	2014 in thousand m^3	2015 in thousand m^3	Reference 2014=100
Petrols	643	538	84
Diesel	1 685	2 262	134
LPG	3 632	3 648	100
Light fuel oil	77	178	231
JET aviation fuel	39	63	162
Heavy fuel oil	87	16	18
Overall liquid fuels	**6 163**	**6 705**	**109**

Source: Ministry of Finance and POPiHN's own data

■ *Fig. 7* SOURCES OF PETROL IMPORTS [%]



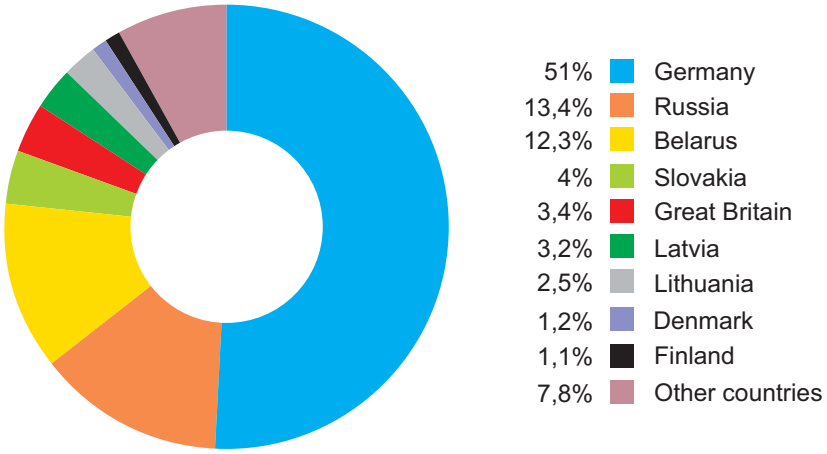
Source: Ministry of Finance and POPiHN's own data

production resulted in a 62% increase in JET aviation fuel imports. Low domestic demand, affected by mild weather conditions during heating seasons led to significant decrease in heavy fuel oils supply to the country.

Compared to 2014, officially recorded imports of liquid fuels increased by 542,000 m^3 and it was almost twice as much as what was observed in 2014 in relations to 2013.

As regards the supplies from abroad, in 2015 the imports of diesel significantly grew in importance (its share increased by 9 percentage points), whereas petrol and LPG lost in significance (their shares decreased by 5 and 7 percentage points, respectively). The share of light fuel oil increased by 2 percentage points.

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



Source: Ministry of Finance and POPiHN's own data

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 in the so-called supplementary imports. POPiHN members' imports decreased by 21%, while the independent operators' imports grew by 16%. LPG continued to constitute the biggest share in imports, yet it was an almost twofold growth in diesel imports which substantially increased import volumes of the independent sector. In the group of described fuels big oil companies imported around 1 mln m^3 and it was about 300,000 m^3 fuel less than in the previous year. Independent operators increased their purchases abroad by approximately 760,000 m^3 and brought into the country almost 5.4 mln m^3 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, Hungary, Lithuania, Belgium and the Czech Republic. Import from other countries was marginal. Imports from Slovakia and Germany grew in importance (by 9 and 4 percentage points, respectively).

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. This direction already took over more than 50% of purchases in the whole imports. Russia, Belarus, Slovakia, Great Britain and Latvia were important source countries for companies transporting diesel to Poland. From beyond our eastern border, i.e. from non-UE countries, around 22% of the product was imported, which is similar to the result obtained in 2014. Altogether, the east, including the EU countries, provided around 38% of the whole diesel imports; also in this case the results are identical with the ones for 2014. The east is pointed out as the main source of supplies to the informal economy, but observations prove that grey and black market fuel in large amounts also reaches Poland from Germany, yet as a rule it comes from Russian and Belarusian refineries.

Fot. LUKOIL

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

■ *Fig. 9* STRUCTURE OF EXPORTS AND SUPPLIES IN 2014 AND 2015 [in thousand m^3]

Description	2014	2015	Reference 2014=100
Petrol	913	1 036	113
Diesel	979	1 729	177
JET aviation fuel	686	603	88
LPG*	69	33	48
Heavy fuel oil	2 925	2 821	96
OVERALL	**5 572**	**6 222**	**112**

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

(Fig. 9 and 10) in 2015 amounted to over 6.2 mln m^3, which, compared to 2014, increased by 12%. Exactly the same percentage increase was achieved in 2014, yet there was an increase in the basis for calculating the growth rate and therefore more products were exported. This increase equalled 650,000 m^3, whereas in 2014 it was 590,000 m^3. Thus the trend was maintained and at the same time the growth rate did not slow down. However, the product structure of exported fuels did change. Until the previous year heavy fuel oil was predominant, whereas in 2015 its share was comparable to the share of motors fuels.

Increase in exports was forced due to the impossibility of allocating in the country the whole production of two main transport fuels: petrol and diesel. The official domestic market for petrols increased, yet the informal and illegal markets impeded locating the products from refineries. The largest increases in percentage and volumes of exports were recorded for diesel. Petrol exports grew as well. As regards the remaining liquid fuels, there was a decline in foreing deliveries. LPG exports decreased by almost 50%, as well as there was a significant decline in exports of JET aviation fuel, which used to be our flagship export product. Also less heavy fuel oil was exported due to decline of domestic production of this type of fuel. An almost double increase was recorded for diesel exports, which means that outside the country approximately 2 mln m^3 of this fuel type was allocated, which is 750,000 m^3 more that in the previous year. The increase in exports of petrol equalled 13% and thus, when compared with the previous year, in terms of volume 123,000 m^3 more was exported. Due to the European overproduction petrol has usually been a product difficult to allocate abroad. In 2015 the external markets increased the demand for this type of fuel, thus making the exports more profitable, especially given the fact that the margins on refining production grew as well. Heavy fuel oil remained the largest export product, yet its share in exports decreased from 51% in 2014 to 45% in 2015.

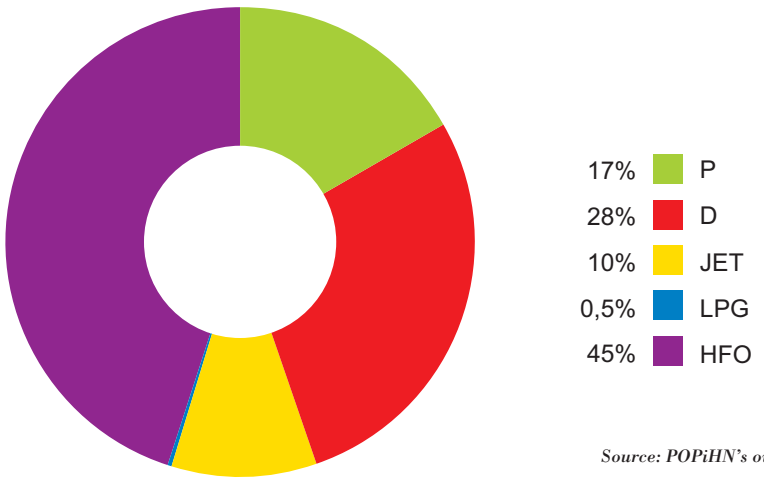
The export deliveries of JET aviation fuel shown in Fig. 9 are deliveries carried out directly by domestic producers to recipients outside Poland. However, a significant amount of this fuel production goes to domestic intermediaries, which provide airport deliveries to domestic and international carriers. The volume of these deliveries in 2015 amounted to 776,000 m^3, which was exactly the same as in the previous year, yet, due to lower domestic production and foreign shipments similar to the previous year's ones, approximately 50,000 m^3 came from imports.

In 2015 the so-called re-export of liquefied petroleum gas (LPG) was maintained. We have been facing this phenomenon for a few years and we can assume that, to a certain extent, the informal market takes advantage of this activity. It consists 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 reported as sent further across the Polish border. In 2014 this volume decreased to around 8% and amounted to about 279,000 m^3. In 2015 it was slightly more, i.e. 307,000 m^3.

The structure of total exports of liquid fuels from Poland shows an increase in diesel share (by as much as 10 percentage points) and petrol (by 1 percentage point). The shares of other fuels decreased, with the biggest decline recorded for heavy fuel oil (8 percentage points).

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

■ *Fig. 10* BREAKDOWN OF LIQUID FUELS EXPORTS IN 2015 [%]



Source: POPiHN's own data

Fot. TOTAL

DOMESTIC CONSUMPTION
of liquid fuels in 2015

Table 11 presents a preliminary comparison of official domestic consumption of liquid fuels in 2015 compared to that of 2014. 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-2016. Therefore the results presented for 2015 should be treated as estimates, yet very close to final data.

Economic growth observed in Poland and favourable fuel prices (from the point of view of customers) are the main reasons influencing a significant growth of liquid fuels market in relations to 2014. The sales volumes of all the fuels, excluding heavy fuel oil, were better, and what is the most satisfying is the increase in the official demand for diesel and, for the first time in 5 years, for petrol. Fuel market (petrol,

■ *Fig. 11* ESTIMATED DOMESTIC LIQUID FUEL CONSUMPTION IN 2015 IN COMPARISON TO THAT OF 2014.

Description		2014		2015		Reference
		thousand m^3	Share in consumption %	thousand m^3	Share in consumption %	2014=100
Petrols	**Consumption**	**4 841**		**5 048**		**104**
	of which total imports	643	13	538	11	84
Diesel	**Consumption**	**13 651**		**14 830**		**109**
	of which total imports	1 685	12	2 262	15	134
LPG	**Consumption**	**4 169**		**4 275**		**103**
	of which total imports	3 632	87	3 648	85	100
Total for 3 fuel types	**Consumption**	**22 661**		**24 153**		**107**
	of which total imports	5 960	26	6 448	27	108
JET fuel	**Consumption**	**761**		**787**		**103**
	of which total imports	39	5	63	8	162
Light fuel oil	**Consumption**	**843**		**879**		**104**
	of which total imports	77	9	178	20	231
Heavy fuel oil	**Consumption**	**534**		**193**		**36**
	of which total imports	87	16	16	8	18
OVERALL	**Consumption**	**24 799**		**26 012**		**105**
	of which total imports	6 163	25	6 705	26	109

Source: Ministry of Finance and POPiHN's own data

diesel and autogas) grew by 7% in relation to 2014, whereas the whole liquid fuel market grew by 5%. Once again the increases in the diesel market were the biggest, even though it continued to struggle with the supplies from outside the official circuit. The consumption was poor only in case of heavy fuel oil, the main reason for which was quite mild weather and substituting this energy carrier by gas fuels and biomass. A significant element that influenced an increase in the demand were the prices of fuels on the level observed by drivers in 2009. The increase in official demand for diesel can partially be accounted for by limiting the grey and black markets due to low prices, by increasing the scale of risk as compared to achieved profits. According to POPiHN's estimates, in 2015 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 significantly weaker, yet more intensive tax and customs office inspections in cooperation with the police have somewhat bothered these fraudsters. Unfortunately, the criminals rapidly adjust to the new legal requirements, circumventing the law quite effectively. In 2015 also LPG market resisted the slump. The market growth for this fuel type equalled almost 3%. This increase has been calculated on the basis of the assumption of the lack of re-export in large amounts. Re-export, according to inspection authorities, is very often fictitious and the goods stay within the country. If, however, we took re-export into account, then the domestic LPG market would be comparable to the previous year's one. To sum up, we can conclude than on the Polish liquid fuels market there has been an increase in official demand for petrol and medium distillates, among which diesel witnessed the biggest percentage increase. Domestic demand for liquid fuels was fully satisfied and there were no recorded instances of market disruptions. Significant quantities of fuels from Polish refineries that were not possible to allocate on the domestic market were exported.

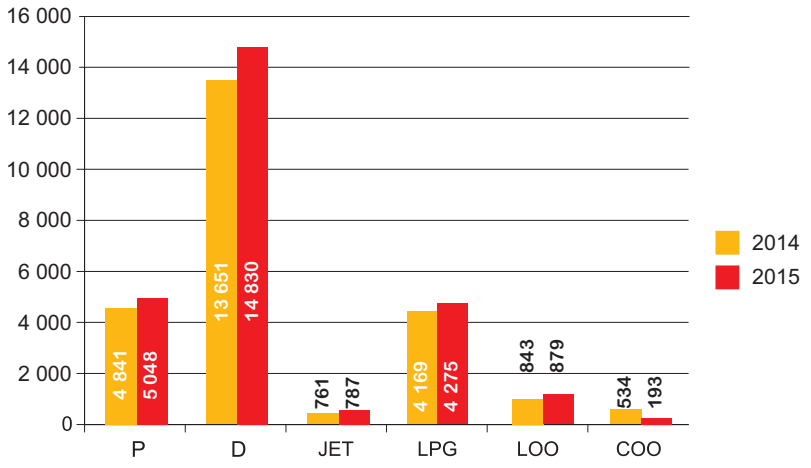
Apart from the existence of a significant grey and black diesel market, limiting infrastructure investment, slowing down the dieselisation of passenger vehicle fleet and the difficulties faced by Polish transport companies in Western European and Russian markets, the official consumption of fuels for diesel engines grew by 9% in relation to 2014. The share of official imports in the diesel market supplies reached the level of 15%, i.e. grew by 3 percentage points in relations to the previous year's. Simultaneously the official supplementary imports (of companies other than domestic and foreign ones operating on the Polish market) grew by 68%, which was probably significantly affected by control services' activities, which obliged several importers to register their foreign purchases. The growth of supplementary imports was much higher than the growth of market supplies carried out by POPiHN members (+5%), which leads us to the conclusion that parts of these products were introduced into the market without previous payment of VAT. Not paying VAT allows to ofer end-users a much more favourable price than in case of legally operating companies. This method continues to be used by dishonest traders.

We have already got used to the fact that the demand for petrol has been decreasing year after year. In 2015 there was an unexpected growth of 4% in relation to the previous year. This was the first situation of this kind since 2010. In case of petrol the level of retail prices and the size of vehicle fleet are main factors that determine the volume of purchases. Petrol is mainly bought by passenger car or small delivery truck drivers. In 2015 the price of EU95 petrol, but also the ones for premium petrol, were significantly lower than in 2014, which influenced an increase in purchases. One should bear in mind that there are drivers who spend the same amount of money per month to buy fuel. In 2015 for a similar amount of cash we could buy significantly more fuel. As a rule lower petrol prices discourage drivers from substituting this fuel type by autogas and such a situation was observed in 2015. The demand for autogas grew only insignificantly. Polish drivers used 5 mln m^3 of petrol, out of which slightly over 500,000 m^3 came from imports. It was approximately 11% of the total petrol market share, i.e. 2 percentage points less than in 2014.

The consumption of LPG (without taking re-export into account) in the described year was about 3% higher 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 did not clearly discourage from purchasing autogas. Estimated results for the whole year show an increase in LPG consumption by approximately 100,000 m^3. The volume or re-exported LPG (which could influence the total domestic consumption) increased by about 39,000 m^3. Having considerd both facts, i.e. an increase in consumption calculated according to POPiHN's methodology and an increase in re-export, we could assume that, ultimately, the domestic market remained the level from 2014. Similarly as in 2014, about 85% of the market was still supplied with fuel from abroad.

The Polish market for light fuel oil has been shrinking for years. In 2015, however, there was an increase of over 4% in demand on this market. There is a suspicion that some of this fuel was applied as transport fuel illegally introduced into the market in grey zone. Its part could substitute heavy fuel oil in heating installations. All in all, the domestic consumption of this fuel equalled approximately 40,000 m^3 more than in the previous year. At the same time 2015 was a third consecutive year in which the domestic demand for this product was estimated at a level below 1 mln m^3. This fuel is bought at the prices which largely depend on the trends on petroleum market and

■ *Fig. 12* **DOMESTIC CONSUMPTION OF LIQUID FUELS IN 2015 AND 2014**
[in thousand m^3]



Source: POPiHN's own study

in the last year they have been more attractive when compared to other energy carriers' prices. Most of the demand for this fuel (80%) was met by supplies from domestic production. In 2015 there was a twofold increase in official supplementary imports, which reached 180,000 m³.

There is a steadily increasing growth in domestic demand for JET aviation fuel. Also in 2015 its consumption increased by 3%, getting even closer to the level of 0.8 mln m³. The market growth, with limiting the domestic production, was satisfied by increasing the imports by 60%.

Heavy fuel oil consumption got significantly reduced again, this time by 64%. Heavy fuel oil 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 heat and asphalts is decreasing, and such was the situation in 2015.

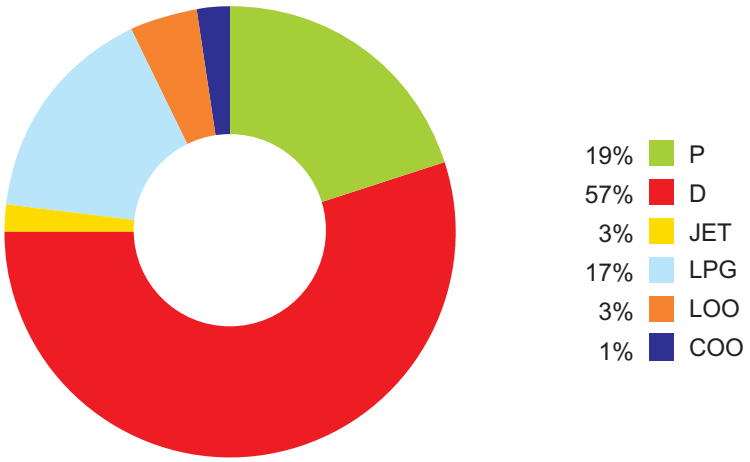
Total domestic consumption of 6 types of liquid fuels amounted to 26 mln m³ and was higher by 1.2 mln m³ than in 2014. An official market growth was estimated at 5%, while the imports grew by 9%, and its total market share was estimated at 26%. It means that 540,000 m³ more fuels were imported to Poland than in the previous year. Volumes of foreign fuel supplied to the Polish market were 1 percentage point higher than in 2014. Overall imports of liquid fuels amounted to 6.7 mln m³, which is 9% more than in the year before.

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

In relation to 2014, there has not been much change in the breakdown of consumption of liquid fuels. We should bear in mind an increase (by 2 percentage points) of the importance of diesel with a fall in market share of petrol and heavy fuel oil. The consumption of diesel continues to prevail and its share equals 55%.

Domestic market is the main source for liquid fuel 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.

■ *Fig. 13* STRUCTURE OF LIQUID FUELS CONSUMPTION IN 2015 [%]



Source: POPiHN's own data

■ *Fig. 14* BALANCE OF INTERNATIONAL TRADE IN LIQUID FUELS IN 2015 [in thousand m³]

1	Import + Purchases 2	Export +Supplies 3	Difference (2-3) 4
Petrol	538	1 036	(-498)
Diesel	2 262	1 729	533
LPG	3 648	33 *)	3 615
JET aviation fuel	63	603 *)	(-540)
Light fuel oil	178		178
Heavy fuel oil	16	2 821	(-2 805)
OVERALL	**6 705**	**6 222**	**483**

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

Nevertheless, in 2015 the share of independent companies in the total market grew significantly. It can be partially accounted for by activities with the use of the systems to avoid paying the total tax, and partially by the legal use of distribution channels previously obtained by illegal tax evasion.

In 2015 the dominance of fuel imports, understood in broad terms, over exports was over 500,000 m³ and grew by about 150,000 m³ in relation to 2014. Four years ago this difference was almost 4 mln m³ for the benefit of imports and it was gradually decreasing in each consecutive year. The trend reversal in 2015 was mainly influenced by an increase in supplementary diesel imports, carried out by independent importers. Bigger domestic production, in combination with bigger supplementary imports, forces the search for new markets for Polish fuels, and these are found mainly in Europe. Part of heavy distillates is also allocated beyond our continent.

It should be clearly stated that the informal and illegal market forces partial exports of Polish refining production. In 2015 domestic refineries took advante of favourable economic conditions and the possibility to work out beneficial margin and increased their production, yet it was not possible to allocate it in the country. Legally operating companies did not manage to regain a part of the domestic diesel fuel market occupied by the informal and illegal economies, thus the situation with an increased exports repeated for another year in a row. Polish refineries earned less on exported fuels, and at the same time the state fiscal authority, which does not collect taxes on exported goods, did not obtain the relevant revenues, which would be the case if it effectively eliminated illegally operating companies. International trading balance was shaped by diesel and LPG imports on one hand and heavy fuel oil, petrol and JET fuel exports on the other. In 2015 the fuels which Poland exports more of than it imports were joined by petrol. It should be pointed out that the volume of diesel exports rose, similarly to the previous year, and the increase this time equalled almost 100%.

RETAIL MARKET

Retail sales of fuels are carried out by a network of filling stations, which, according to the data gathered by POPiHN and referring to generally available sites which sell at least two types of fuel, at the end of 2015 comprised 6,601 outlets. This number of filling stations is bigger than at the end of 2014 by approximately 115 stations.

New investments carried out by oil companies, supermarkets and main independent operators have led to the increase of the number of places where we can fill up. Some filling stations that were closed in the end of the previous year owing to not having undergone the required modernizations (which would enable their further operations[1]) resumed their activity. 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, 22% of the market is owned by international companies, but the biggest number of filling stations are still the independent ones, which constitute approximately 42% of the market. Private operators, so far non-attached, in order to survive on the market, are often trying to find their place by switching to corporate logos of large oil companies or by joining common sales networks or purchasing groups managed by increasingly relevant networks of independent operators. Those who own better locations are trying to survive in business by themselves, yet there are also those who, unable to handle a difficult economic situation, resort to cooperating with suppliers operating in the informal and illegal markets.

In 2015 PKN ORLEN continued to be the market leader in filling stations. There was no change in the number two position, which, as in the past few years, continued to be occupied by BP. The second Polish oil company – Grupa LOTOS – is systematically developing its filling stations network, thus approaching closer and closer to the leading position. National oil companies continued to operate under four brands: ORLEN and BLISKA as well as LOTOS and OPTIMA. Notably, as a consequence of a different approach towards market capture, there are fewer and fewer stations with the logo of BLISKA and more with Lotos OPTIMA. Throughout the year domestic companies altogether maintained their percentage in the market share of filling stations, which is estimated at approximately 34%. The role of international companies on the Polish market increased slightly and currently their networks constitute 22% of the market, gradually increasing the number of stations operating under their logos. There is a new franchising operator on the market, namely TOTAL company, which, within a year, managed to open up a network consisting of 10 stations. Franchising agreement continues to be the main tool in attracting new stations to the network, but there are also outlets built from the scratch. Within the latter ones the oil companies are on the leading position, however, a couple of sites owned by hypermarkets and independent operators have been built as well.

■ *Fig. 15* NUMBER OF STATIONS OF RETAIL OPERATORS IN 2013-2015

Filling station network	31.12.2013	31.12.2014	31.12.2015
DOMESTIC COMPANIES	2 217	2 209	2 225
FOREIGN COMPANIES	1 423	1 406	1 447
INDEPENDENT CHAINS (operating under a common brand)	732	743	818
OTHER INDEPENDENT OPERATORS (approx.)	2 208	1 957	1 932
SHOPS	166	171	179
TOTAL (approx.)	**6 746**	**6 486**	**6 601**

Source: POPiHN own data

The value of retail market for fuel sales in Poland in 2015 was estimated at about 86 bn PLN, whereas its volume at over 21 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 45 bn PLN.

In 2015 there was an increase in the number of stations operating under domestic companies' brands. Such a change took place because of significant intensification of the scope of activity of Grupa LOTOS. The market leader slightly reduced its network, additionally continuing to rebrand some stations under the logo of BLISKA to the corporate logo of ORLEN. SHELL finalised rebranding of stations previously purchased from NESTE. Grupa LOTOS continued its high rate of expanding Lotos OPTIMA brand, increasing the number of such sites up to almost 200. Private networks of filling stations grew as well, and the biggest among them gathered over 100 outlets under one logo.

The network of stations operating along Polish motorways is developing slowly, yet systematically. In 2015 it grew by 7 MOPs (Eng. Motorway Service Areas or MSA), which made refueling along the A1 motorway and new fragment of A4 significantly easier. Further stations are in preparation for construction. More and more stations located on motorways and express ways are changing the geography of purchasing fuels by drivers travelling across Poland. The stations whose rentability has been limited due to relocating places where we can fill up vehicles circulating across the country are either disappearing or will soon disappear from the market. Nevertheless, 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 option has been chosen by such companies as Reflex, OPN24 or MOMO.

In 2015 PKN ORLEN decreased the size of its filling stations network by 19 outlets, ending the year with 1,749 refuelling outlets. This result was achieved through restructuring the network, as well as thanks to constructing new outlets and acquisitions consisting of franchising. The number of stations operating until recently under the BLISKA logo was reduced by closing down some of them and rebranding the other part to the PKN ORLEN corporate logo. At the end of the year 159 outlets were still operating in green colours, which means that in relation to the year 2014 their number decreased by 66. The company opened 4 new stations located on motorways and it continues to be the domestic leader also in this category of filling stations.

Grupa LOTOS expanded its network up to 476 sites, whereas 194 stations operate under the logo of Lotos OPTIMA, i.e. 25 more that in the previous year. The whole company network increased by 35 filling stations, out of which one was located on

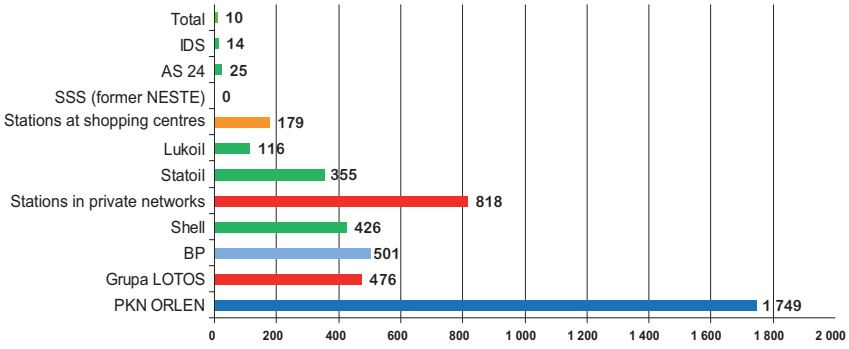
[1] *Regulation of the Minister of Economy, dated 21 November 2005, on technical conditions to be met by liquid fuel depots and stations, long-distance transmission pipelines which transport petroleum and petroleum products and their location*

the motorway. The policy of expanding the networks based on investing in economic class stations is being carried out in line with earlier announcements, aiming at improving the company's future market position. Currently the company is number three on the filling stations market and number two in terms of the number of owned stations located on motorways.

International oil companies operating on the Polish market also developed their networks. The vice-leader in the market – the company BP – surpassed 500 in terms of owned outlets, increasing the number of owned stations by 21. This number also comprised 2 new stations located on motorways. Shell Polska finalized the process of incorporating previously purchased self-service NESTE stations into its network. Currently 14 out of them operate in the self-service format, yet it is about to change soon as these stations are going to operate with a full service and a shop. As a result of integrating and restructuring operations Shell's network in Poland at the end of the year amounted to 426 outlets – i.e. 24 more that in the previous year. Statoil enlarged its network by 4 outlets and announced rebranding to Canadian owner's logo. The company closed the year with 355 filling stations. Lukoil owned the same number of stations as in the previous year and continues to own 116 outlets. In 2015, after a long break, TOTAL resumed its activities, constructing a new network based on franchising mechanism. The announcements regarding the number of stations the company would like to run were optimistic, yet within the year the firm managed to put its logo on 10 stations gained for cooperation from the segment of independent operators.

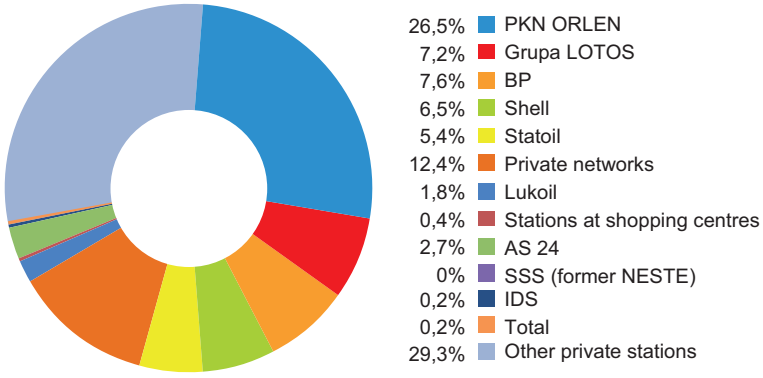
Private owners followed the example of market leaders and continued to expand their networks. Independent operators' networks grew to over 800 outlets. The most active ones were Huzar, Anwim with the Moya brand, Slovnaft Partner in cooperation with Hungarian MOL and the Pieprzyk group. POPiHN's estimates point out that the number of stations managed by this group of operators grew by 70 sites, thus constituting one of the fastest developing programmes on the domestic market. Together with the growth of the number of associated stations it is becoming more and more attractive for the remaining independent operators to participate in such undertakings. They are discovering that common purchasing policy or participating in loyalty programmes bring tangible benefits. The logos of some of these companies are already

■ *Fig. 16* FILLING STATIONS IN POLAND AT THE END OF 2015



Source: POPiHN's own data

■ *Fig. 17* BREAKDOWN OF FILLING STATIONS MARKET AT THE END OF 2015 [%]



Source: POPiHN's own data

present all over the country, while others are very visible on local markets. If we look at fuel stations market as a whole, this group is in the number two position in terms of the number of organised outlets which carry out retail fuel sales and is becoming more and more real competition for the so far market leaders.

The number of filling stations within shopping centers increased by further 8 outlets and at the end of 2015 their total number was 179. The increase was achieved thanks to launching new filling stations of the Intermarché network. The remaining networks did not carry out new investments, yet their announcements were promising. Intermarché is a leader in this segment of stations, and its advantage against Carrefour, second in terms of numbers, equals 15 sites and this is supposedly not the last word of the company. Due to high turnover volumes the role of stations located beside supermarkets within the overall retail fuel market increases on a larger scale than its share in fuel stations market. High sales volumes are performed with a minimum margin, which makes these stations attractive pricewise to the buyers.

After a significant decrease in the number of independent stations in 2014, as a consequence of the entry into force of new legal solutions regulating fuel stations equipment, in 2015 there was a slight increase in this segment of the market. Some stations 'frozen' in the end of 2014 underwent the necessary modernizations and staged a comeback, a couple of investments were also performed, and some operators said 'goodbye' to cooperation with bigger partners and continued their activities as 'no name' outlets. Those who started operating under the brands of bigger operators, most often were subject to the regulations of new franchising formulas. 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 1,930 stations operating as completely independent or grouped into small local networks comprising not more than 10 sites. Unfortunately, some of these sites, as well as the ones on which there is no information relating to their functioning, remain beyond any control by relevant authorities and is taken advantage of by the entities operating on the informal and illegal liquid fuel markets. According to POPiHN's assumptions expressed in the previous edition of the report, closing a part of the companies as of the end of 2014 did not adversely

affect the possibility of purchasing fuel. Despite complications regarding time and local issues the market quickly dealt with this lack, especially if we take into account the fact that part of 'frozen' stations rapidly resumed their normal or partially limited activities. Eliminating several unadjusted stations also had, unfortunately, little impact on limiting the sales of fuels coming from illegal trade, yet every step is good, even a tiny one, if it is undertaken in favour of the market operators doing legal business.

The total length of Polish motorways and express ways is growing every year. Their standards are also improving, for instance through launching new Motorway Service Areas, the majority of which is operated by the companies which equip those MSAs with filling stations. In 2015 the number of stations located on motorways increased by 7 outlets, out of which 4 were launched by PKN ORLEN, 2 by BP and 1 by Grupa LOTOS. Thus by the end of the year at motorists' disposal there were altogether 78 stations enabling filling up along motorways. Most of these sites are in charge of domestic companies. PKN ORLEN owns 35 such stations and Grupa LOTOS has 18. Besides BP owns 17 stations, and Shell owns 8. As new stations emerge on the market, drivers no longer have to exit a motorway in search of a place where they can refuel, which makes their journey more comfortable. An increasingly expanded motorway network allows drivers to shorten the time of travel, and increases travel safety, as well as it increases the profitability of fuel companies operating within MSAs.

Retail market of liquid fuels from the point of view of POPiHN members

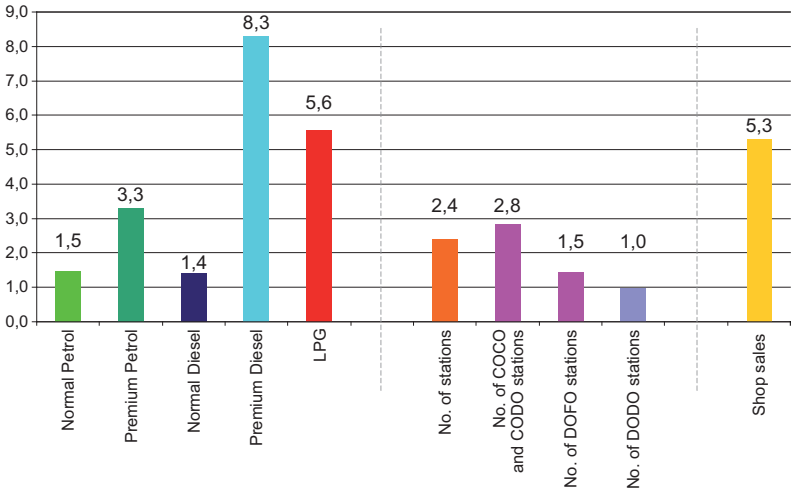
This section of the report, as in previous years, is devoted to the description of phenomena taking place on domestic market for retail sale of liquid fuels. The market analysis is carried out on the basis of reliable data obtained from POPiHN members thatrun approximately 3,600 filling stations in Poland. The estimates show (it is, however, difficult to estimate the real number of outlets selling fuel based on the given data) that the overall filling station market comprises approximately 6,600 generally accessible outlets selling at least two main fuel types. Our analysis is thus performed on the basis of data gathered from a sample comprising 55% of the market. Independent operators own about 41% of the fuel market in Poland, but it continues to be a big challenge to obtain their market data. The stations operating under the logo of POPiHN members perform around 72% of overall retail sales of fuels and 50% of diesel and thus the data obtained from these companies allow to present the trends and changes occurring on the market for retail sale of liquid fuels, non-fuel operations carried out at the stations, fast food outlets as well as basic vehicle maintenance. The standards and requirements set and implemented at those stations serve as a model to be followed by 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 Fig. 18. It is noticeable that there are no negative indicators in each of the analysed categories. There has been an increase in standard fuel sales, yet premium fuels have been bought even more eagerly, both petrol and diesel. There has been a noticeable rise in autogas sales, the consequence of which was probably a decrease in the growth of demand for regular petrol. A further fact is an increase in the number of stations operating within POPiHN members' brands, which grew in every ownership category. This time the biggest growth was recorded in COCO + CODO category, i.e. filling stations owned by fuel companies. The decline in the number of stations operating under DODO arrangements is also noticeable. 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. The process of taking over more and more 'white pumpers' by offering them franchising formulas leads to increasing market consolidation. It takes place within the networks of the biggest operators, i.e. domestic and international companies, but also within domestic networks of independent operators. It is a continuation of a trend from previous years. In 2015 stores located at filling stations recorded an increase in non-fuel sales. The increase was a consequence of raising the number of shops at filling stations, expansion of the product range and numerous promotional offers. Fast food outlets also prospered and there was a growing interest in simple maintenance services such as vehicle washing or cleaning car interiors.

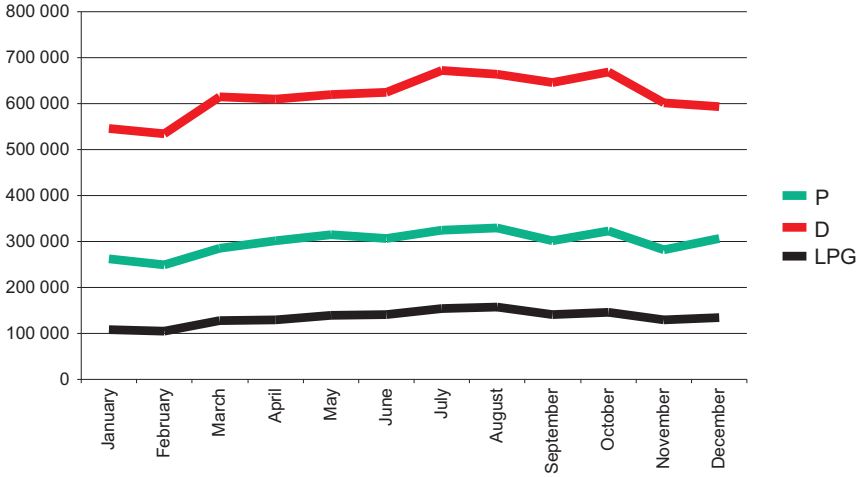
Premium fuels are sold almost exclusively by the stations owned by oil companies. 2015 was another year in which sales of this type of fuel grew, which confirms that premium fuel sales usually grow alongside falling fuel prices. Premium fuel sales in the whole fuel market operated by POPiHN members reached 11%, as in the previous year. In case of diesel the market share was 15% and it was 1 percentage point more than in the year before. An upward trend has been sustained since 2012. In the overall fuel market in Poland the share of premium type equaled around 8%, whereas for diesel it was about 7%. Drivers increasingly appreciate exploitation aspects, which relate to purchasing better quality fuels, and whenever the prices allow them to do so, they buy them in bigger amounts.

■ *Fig. 18* CHANGES IN RETAIL SALES OF FUELS, IN NUMBER OF FILLING STATIONS AND IN SALES AT STATION SHOPS IN 2015 COMPARED TO 2014 [%]



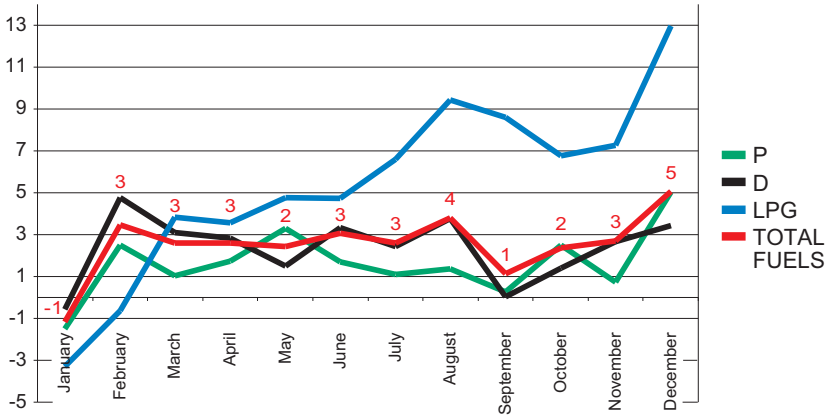
Source: POPiHN's own data

■ *Fig. 19* SALES OF MOTOR FUELS AT POPIHN MEMBERS' STATIONS IN 2015 [m³]



Source: POPiHN's own data

■ *Fig. 20* CHANGES IN RETAIL SALES AT FILLING STATIONS IN 2015 [month/month as %]



Source: POPiHN's own data

Retail sales of regular EU95 petrol were higher and it was a new market trend (as until now sales of this type of fuel were decreasing every year), and in view of what is being observed on the market for motor vehicles, it is a rather long-lasting trend. In case of regular diesel B7, the sales volumes were favourable. Altogether filling stations owned by POPiHN members recorded an almost 2% increase in demand for petrol and an almost 2.5% increase in demand for diesel. At the same time this trend was in line with the tendency for the whole fuel market in Poland. In case of petrol an upward trend was caused by favourable prices of this type of fuel, as well as a slowdown in dieselisation of passenger car fleets in Poland and stabilizing the number of cars with alternative autogas installations. As regards standard diesel, better sales disabled the activities within the informal and illegal markets, gradually providing the market with illegal products.

In 2015 POPiHN members expanded their networks mostly by building new own stations, later operating under the formula of COCO or CODO, yet gaining new independent stations (which were later to operate under franchising agreements) was also significant. The method consisting of taking over the outlets under franchising formulas continues to be the cheapest tool aimed at acquiring new outlets to the network. This method has been applied both by oil companies and the biggest networks of affiliated independent stations.

In 2015 stores located at POPiHN members' filling stations continued to record further increases in sales volumes. The increase in the value of sales was over 5% and, with prices at similar levels as in 2014, it was the result of increasing the number of stores, extending the product offer and further development of small refreshment points operating within the stores.

Fig. 19 presents monthly retail sales at POPiHN members' filling stations, showing a clear seasonal nature of fuel sales, which tends to repeat in consecutive years. Similar graphs can be elaborated for independent stations, but in case of such stations the falls in sales are usually more marked in periods of weaker sales carried out by oil companies, whereas the growths are smaller in periods when oil companies stations sell more fuels. 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 2015 filling stations owned by POPiHN members recorded an increase in retail sales of petrol, which was the result of the activity of stations operating under COCO and CODO arrangements, as well as the ones operating under the DOFO formula. Stations under DODO arrangements, whose number is getting smaller as the old cooperation agreements expire, reported worse results. Autogas continued to sell well at stations owned by oil companies and the ones operating under franchising formulas. Also in this case the stations operating under DODO arrangements observed worse results than in the previous year.

At stations mentioned above diesel sales showed better results than petrol. Similarly as in the case of petrol, growth (in relation to the previous year) was achieved at COCO and CODO stations, as well as the ones operating under franchising formulas. DODO type stations noted officially worse results. Diesel fuel sales are closely correlated with economic conditions, which in 2015 resulted in a 3.5% growth, what should have been reflected by the results at diesel dispensers. However, the informal and illegal markets effectively 'poached' a part of customers from legally operating stations. That, among other reasons, is why the stations under DODO formula recorded weak sales volumes, as, due to their location, they most often had to compete against cheap fuels from the grey or black market.

Alongside low margin levels, obtained from fuel sales only, customer retention was a principal objective of every filling station operator. In case of the stations owned by the biggest market operators good quality fuels are essential to be successful, whereas good quality fuels at favourable prices are even better tools. In 2015 those two elements were joined, what resulted in more fill-ups and, in addition, more drivers shopping at the stores belonging to the stations. This is of significant importance, as for another year in a row it was not possible to

achieve a sufficient margin on fuel sales, which would enable fuel stations to maintain themselves exclusively from fuel sales.

Changes in fuel sales at the stations owned by POPiHN member companies between individual months of 2015 are presented in the diagram in Fig. 20.

The most visible increase in sales volumes took place for LPG. The growth trend was observed practically all year long, while the end of the year resulted in very intensive sales, which was the effect of mild weather and favourable price relations. Growth rates above zero continued for petrol and diesel, yet the changes were not as intensive as the ones in case of autogas. What draws our attention is a significant increase in sales volumes of all types of fuel in the fourth quarter, when fuel prices were falling week after week.

For the year as a whole, the average growth rate of fuel sales at stations owned by POPiHN member companies was 2.6%, whereas diesel sales showed an increase of 2.4%, petrol - a growth of 1.7%, and autogas - an increase of 5.6%. Analysis of sales growth data of POPiHN members and results of total official fuel consumption in the country shows increases in sales at stations owned by independent companies. Better sales results were also recorded in the whole non-outlet segment (transport depots and companies, construction sector, railways, local governments), which is an area usually supplied with fuels from the informal market.

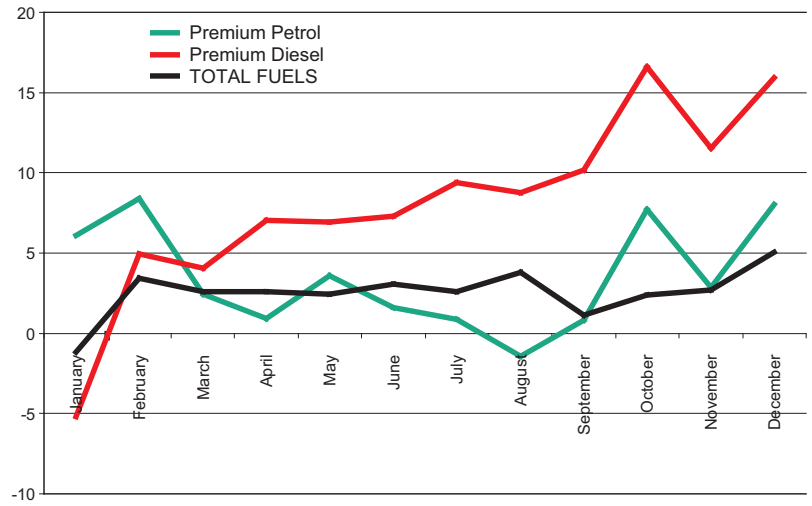
The growth rate of overall fuel sales was accompanied by increases in premium fuel sales. For the above-mentioned reasons the increase of premium petrol sales for the whole year was 3.3% and for premium diesel it was 8.3%. The percentage growths are lower than when we compare 2014 to 2013, yet the growth rates are calculated from a higher base, which means that significantly more premium fuels were sold than in the year 2014.

The upward trend in premium diesel sales grew month after month. Significant growths – especially in the II part of the year – were also recorded for premium petrol. With currently observed price levels it may be assumed with high probability that also in consecutive statistical periods there will be further sales records of enhanced fuels. Low price levels or further drops in prices can only strengthen this process. 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. Drivers already learnt that in order to maintain the engine in a proper condition they should use premium fuels at least from time to time. In such a way both vehicles and the environment will benefit. 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.

At the end of 2015 the overall number of filling stations in the country, localized by POPiHN, equalled 6,601, which was 2% more than in 2014. The number of filling stations owned by POPiHN member companies increased by 1% and equalled 3,625. At the same time the number of operating stations at the end of the year equaled 3,550, which was 2.4% more (Fig. 18) than in the end of 2014. The number of oil companies' own stations grew by 2.8%, the number of stations operating under franchising formulas grew by 1.5%, and the number of stations under DODO arrangements grew by 1%. In terms of volumes the number of oil companies' own stations grew insignificantly, but, mainly thanks to new outlets built along motorways and express ways, significant restructuring has been made in the ownership.

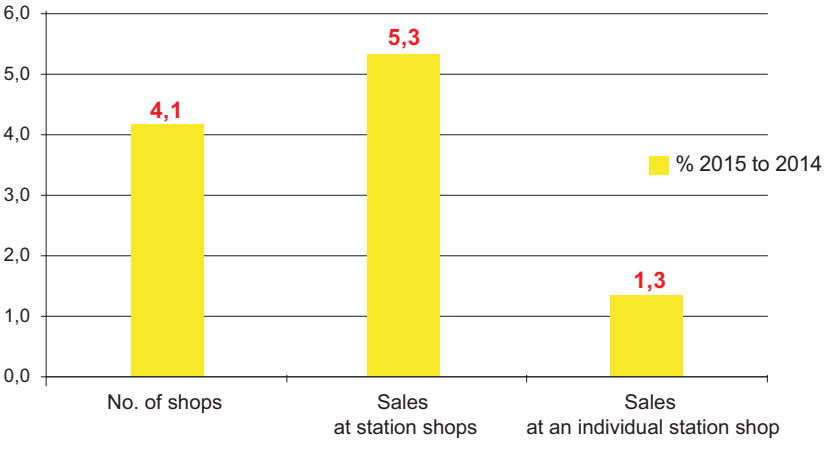
Alongside the development of networks and investments in new outlets and modernizing the existing ones we observed a growth in the number of stores located at filling stations. At the end of 2015 the total number of stores located at POPiHN members' stations was 2,616, out of which 2,553 stores were engaged in commercial activities. The growth in the number of stores was accompanied by increasing turnovers in those stores. In relation to 2014 the increase in turnover at stations operating only under the formula COCO + CODO (around 2,475 sites)

■ *Fig. 21* CHANGES IN PREMIUM FUEL SALES AT FILLING STATIONS IN 2015 [month/month as %]



Source: POPiHN's own data

■ *Fig. 22* MARKET OF SHOPS AT FILLING STATIONS OF POPIHN MEMBERS IN 2015 [%]



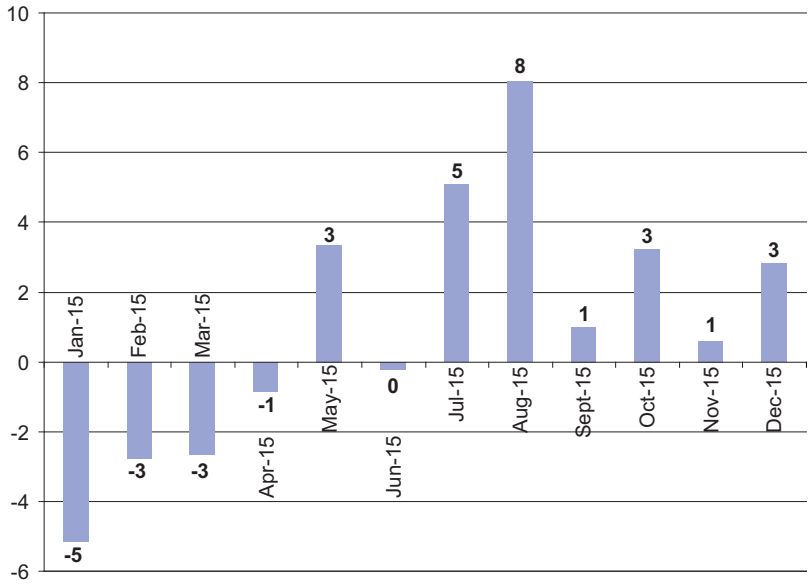
Source: POPiHN's own data

equaled 5.3% and reached the level of approximately 4 bn PLN. The turnover of a single shop grew by 1.3%.

Sales margins from direct fuel sales in 2015 remained at a level not sufficient to maintain the station, thus a station store was a significant element of the functioning of the station. It was in a station store where non-fuel goods were sold and where fast food outlets were opened on an increasingly larger scale. Stores located at filling stations continue to play the role of convenience stores and in a current situation they are an inevitable element for a station to continue its operations. Thanks to the sector's activities as well as the actions undertaken by other organizations gathering entities involved in trade until now it has been possible to neutralize the attempts of eliminating from station stores the sales of 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. Customer satisfaction surveys carried out at the stations belonging to oil companies lead to setting new standards as regards customer service or layout and equipment of stores, which are often introduced at the stations belonging to independent operators. The latest trends consist of adjusting the stations' standards and equipment to regional preferences and habits. Due to a significant number of public holidays in 2015 turnovers in stores at fuel stations increased, improving the operators' results, and at the same time such a form of selling essential goods enabled the customers to stock up at times when other commercial establishments were nor operating.

Graph in Fig. 23 shows sales in stores located at filling stations between individual months in comparison with the same months in 2014. The distribution of changes in volumes is quite varied, but we can notice convergence between greater sales volumes and months when fuel prices were subject to reductions. The second half of the year is a significantly better period for stores than the beginning of the year. Similarly as in previous years sales increased mainly in periods of public holiday travels, long weekends and summer holidays. 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 periods of low margin from fuel sales, the filling station's profit was generated, indispensable to maintain the site and its employees. Such a situation arose in the first half of 2015.

■ *Fig. 23* CHANGE IN VALUE OF SALES IN SHOPS OF POPIHN MEMBERS IN INDIVIDUAL MONTHS OF 2015 IN RELATION TO 2014 [%]

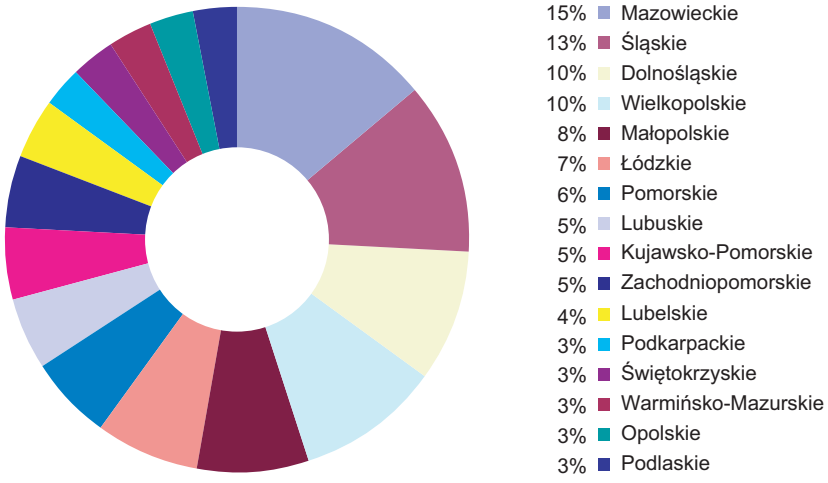


Source: POPiHN's own data

The results of the comparison of geographical distribution of fuel sales in Poland, based on data submitted by POPiHN members, show that in relation to 2014 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 (Fig. 24).

The graph shows total sales of fuels, diesel and autogas. Separate sales of each 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 in Poland. In relation to the previous year POPiHN members improved their position in retail sales data in Łódzkie and Podlaskie provinces. The greatest increases in fuel sales were recorded in Małopolskie and Mazowieckie provinces, whereas the increases in diesel were noted in Silesia and Malopolska. Autogas sales increased the most in Silesia. The ratio of sales in the biggest province (Mazowieckie) to the smallest one (Podlaskie), was, as in 2014, 6:1.

■ *Fig. 24* DISTRIBUTION OF RETAIL SALES OF FUELS BY POPIHN MEMBERS IN POLAND IN 2015 [%]



Source: POPiHN's own data

DEMAND FORECAST
for the Polish market up to 2025

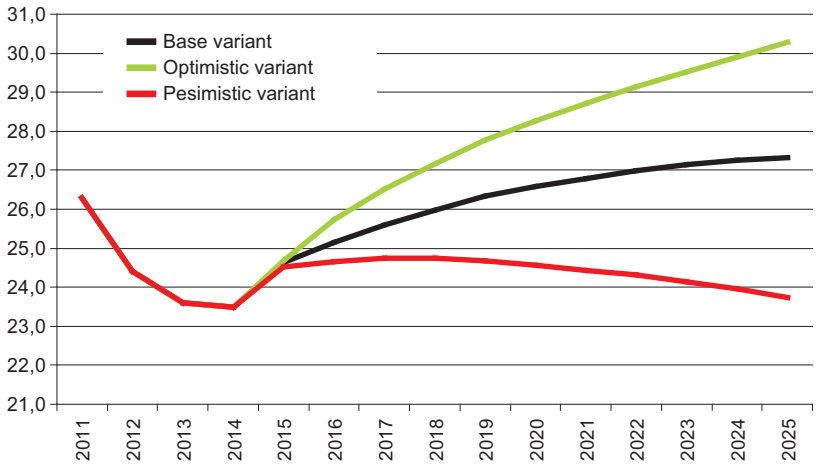
This year's liquid fuel demand, elaborated by POPiHN for the coming years, take into account the latest trends on the liquid fuels market observed both in Poland and around the world. The time frame of these scenarios extends until 2025, which increases the probability of reaching forecast result by insignificant shortening of the scenario and including estimated data from the end of 2015. In 2015, the Polish market followed to a significant extent the baseline scenario, presented in the previous Report. 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. Fortunately, despite little efficiency in fighting the informal market, the market was supported by low levels of traction fuel prices and sustainable development of Polish economy. The impact of shadow economy was observed mainly in the segment of 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 absence of a more significant shift of consumption towards an optimistic scenario. New scenarios have been elaborated 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 (the new government assumes substantial increases in tax revenues) on a domestic market and maintaining low prices of crude oil and finished products on international markets. New pool of European Union aid funds to be used in domestic economy, which will be available starting from mid-2016, has also been included. It is expected that there will be increases in domestic infrastructure investments, which will additionally boost domestic consumption.

The baseline scenario assumes that the Polish economy will continue to grow at a rate of 3-4% annually. The remaining variants are based on values below and above this level. Besides, it is estimated that the effectiveness of combating the shadow economy will improve by a few percent and that there will be favourable situation on raw commodity exchanges. The range of fluctuations in the USD-PLN exchange rate has been estimated as proportional to Brent crude oil prices in spot transactions.

The base variant assumes that currently observed decreasing oil prices can last for approximately half of the year and then there will be a slight rebound so that, in the end of 2016, the average prices of Brent crude oil will be approximately 45-55 USD/bbl. The prices should remain on such levels for approximately 2-3 years, and then there will be a systematic increase up to the level of approximately 70-90 USD/bbl annually.

■ *Fig. 25* **SCENARIO FOR LIQUID FUELS DEMAND IN 2015-2025**

[in mln m^3]



Source: POPiHN's own data

Fot. BP

Fot. ORLEN

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. 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 in 2016, and will effectively increase in the coming years. The growth effect should be achieved through a slightly slower increase in demand for diesel, yet a bigger increase in demand for petrol, which, after many years of stagnation, are back to favour among car buyers. Increasing the efficiency of petrol engines will result in a slightly lower 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 27.5 mln m^3, i.e. approximately 1.5 mln more than in the previous version of the scenario.

The optimistic scenario assumes, apart from the same assumptions as for the baseline variant, a reduction of VAT announced for 2017 and an efficient reduction of the shadow economy on the diesel market. In this scenario the domestic market demand for liquid fuels in 2025 is estimated at over 30 mln m^3.

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%, a significant decline in the Polish zloty's purchasing power or destabilisation of the international situation and substantial increases in the prices of crude oil. This scenario is a likely one in case of a failure while combating the grey zone. 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 this variant, the domestic market demand for liquid fuels in 2025 is estimated only at about 23.5 mln m^3, which is a slight increase in relation to the previous edition of the scenarios.

While observing the current market situation, we can assume that the baseline scenario seems to be the one most likely to unfold. Nonetheless, we need to remember that oil sector is extremely sensitive to even the smallest fluctuations in geopolitical or economic situation in any part of the world, and especially among the biggest consumers and oil producers. The effectiveness in fighting against the shadow economy in the coming years continues to be a big unknown for the Polish market. It is hoped that low fuel prices will automatically eliminate a significant part of the grey and black market. 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, in the Polish economy there is still space for substantial increases in the sales volumes of this type of fuel, which is the main one in economy. At the same time the interest in petrol is back, which should impact the increase of demand. The future of fuel market also raises numerous questions, such as the scope for using biofuels or other alternative fuels, including mainly electric energy; nevertheless, everything seems to be pointing out that within the perspective created by this scenario traditional fuels will continue to be the most important energy carrier used in transport.

MOTOR FUEL PRICES

According to the forecasts made by POPiHN, in 2015 the average yearly prices of petrol and diesel were lower than in 2014. Therefore drivers could, for the same amount of money, purchase more fuel for their cars, which was reflected in fuel consumption results. A litre of 95-octane petrol was 0.65 PLN cheaper on average per year and a litre of diesel was 0.74 PLN cheaper. This is more or less twice more than the reductions in 2014. The decrease in autogas price equalled 0.61 PLN/l.

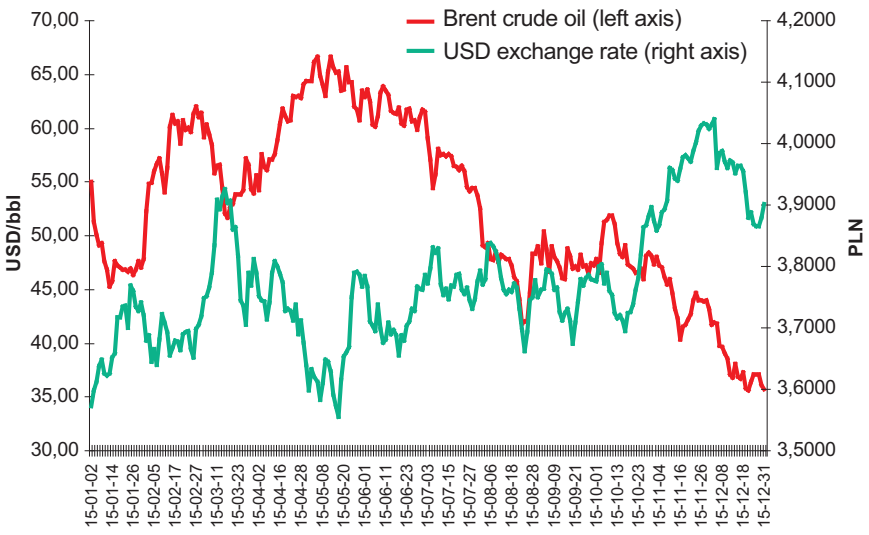
Like in 2014, the retail price of 95-octane petrol was exceeding the price of diesel for most of the year. The average annual price difference between the two types of fuel was 0.13 PLN, which means that it was 0.08 PLN more than the same difference in 2014. Indeed at the beginning of the year diesel prices slightly exceeded 95-octane petrol prices, yet a similar phenomenon did not happen again in the end of the year, as was the case in previous years. In the first half of the year we witnessed a slight yet stable increase in retail prices of fuels, whereas in the second half of the year there were decreases in prices. The price levels of both fuel types at the end of the year were identical with those recorded in the end of 2009. Relatively cheap fuels encouraged people to buy more and therefore, for the first time in 5 years, bigger sales of petrol were recorded that in the previous year. Low prices should also have influenced the diminishing of the scale of the grey and black market, encouraging drivers to buy good quality fuel at the stations operated by legally operating traders. The significant reductions of retail prices in the second half of the year allowed petrol retail operators to earn better margins and slightly recover from losses suffered in the previous months. Nevertheless, they did not manage to achieve better average annual margins than in the previous year and in order to keep the petrol stations afloat a support in form of non-fuel revenues was necessary.

Among the reasons for the reduction in fuel prices on the Polish petrol stations were volatile quotations on raw commodity markets. On domestic market the scale of reductions was diminished by the decline in the Polish zloty's (PLN) purchasing power against the USD. In 2015 crude prices reached the average annual level of 52.47 USD/bbl, which was 47% below the 2014 level. After peaking at around 67 USD/bbl in mid-May 2015, Brent crude oil price started its free fall and at the end of the year stood at 37 USD/bbl. There were a number of reasons accounting for such a plunge, yet the most important ones were the ambitions of some OPEC countries to maintain their market shares and thus prevent an accelerated development of shale oil extraction in the USA as well as in conventional deposits in the countries from outside the cartel. Such activities resulted in a constant real surplus of crude oil on international markets, and China's economic slowdown reinforced this situation. Even local conflicts in oil-bearing regions did not influence the downward trend, whereas the announcements of economic sanctions against Iran additionally put pressure on lowering the price of black gold. Price falls similar to those of oil were recorded for fuels traded on the international commodity stock exchanges. It can, however, be said that, like in 2014, crude oil influenced the trends on fuel markets. Increase in demand for transport fuels, which usually forced the increase in prices, this time, through driving down crude oil prices, did not lead to the increase in the prices of those fuels. The growing lack of capacity for fuels on the main markets trading in fuels also played its part in lowering the prices. In Poland a significant factor influencing its domestic fuel prices was the PLN-USD exchange rate. On average in 2015, the PLN weakened against the American currency by as much as 20% and had a restrictive effect on the falls of prices observed in the domestic market. Net wholesale prices, without changes in taxes, were shaped by the changes in stock market quotations of fuels and the changes in the PLN-USD exchange rate. 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 2015 considerably depleted these revenues, what will make a sound argument for intensifying actions aimed at eliminating the informal segment from the fuel market.

The fuel prices on the Polish market are shaped by producers and traders on the basis of the so-called import parity, the main components of which are commodity market prices of fuels and the PLN exchange rate against the US dollar. The reduction in the import parity, caused by significant price falls of fuels, led to reductions of wholesale and retail prices.

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

■ *Fig. 26* **PRICES FOR BRENT CRUDE AND THE USD EXCHANGE RATE IN 2015**



Source: e-petrol.pl, POPiHN

The big game of world powers producing crude oil to maintain their shares brought a reduction in fuel prices for drivers in most countries of the world.

Unfortunately for some crude oil producers, whose budgets were based on revenues from extracting raw commodities such as crude oil or natural gas, this rivalry resulted in major economic turbulences. Some powerful examples of economic problems on a large scale are Russia, additionally burdened with sanctions, or Venezuela, sinking in a crisis.

The shale gas revolution in the United States and repealing the law banning crude oil exports from the US together with launching the sales of large amounts of crude oil by Iran after the sanctions had been lifted led to the oversupply of crude oil on the international markets of around 1.5 mln bbl a day. In response most OPEC countries could only launch production reserves and increase the pool of crude oil supplied to the market. This time the argument of restricting production limits by OPEC would not be effective and thus it was not applied. The market was supposed to regulate the prices. Current situation, even if it temporarily results in further price falls of crude oil, will not last forever and probably in the second half of 2016 the prices will start to increase due to limiting the production in the least economical deposits. In addition, an economic impulse generated by, among others, low energy costs, will entail an increase in demand for raw material and thus its value will grow and we will witness a subsequent return of prices to an ascending path. This period of low prices will be used by the European refineries to generate bigger refining margins and improve their bud-gets after recent 'lean years', as one should expect an increased demand for fuels which is usually positively correlated with the economic growth and purchasing power of individual citizens.

On the basis of economic results presented by domestic refining companies we can see that they were fully able to take advantage of that period. In Poland such a situation turned out beneficial also for individual drivers, but the possibility of major decreases in retail prices was limited by the fiscal scale, which regulates fuel sales in Poland. We should bear in mind that taxes constitute over 50% of the price of fuel. Wholesale prices in domestic refineries decreased on a smaller scale as it would result from price falls of crude oil and they equalled a 12% decrease for petrol and 12% for diesel.

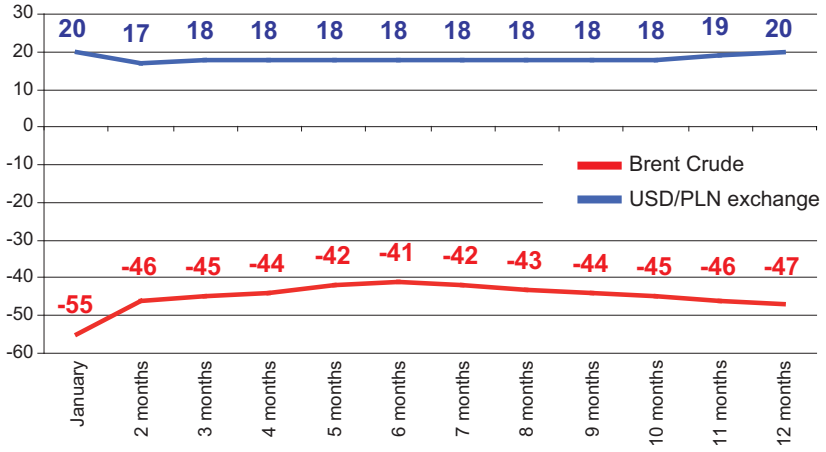
Factors affecting domestic wholesale and retail prices (prices of crude oil, prices of main fuels and the dollar exchange rate) were as follows in 2015 (Fig. 27).

■ *Fig. 27* COMPARISON OF ANNUAL AVERAGE PRICES FOR CRUDE OIL, LIQUID FUELS AND THE USD EXCHANGE RATE IN 2014 AND 2015

Description	2014		2015		Reference 2015 to 2014
	Value	Units	Value	Units	2014=100
1	2	3	4	5	6
Prices for Brent crude	98,93	USD/bbl	52,47	USD/bbl	53
Prices for Premium petrol 10 ppm S	919,3	USD/tone	574,1	USD/tone	62
Prices for diesel 10 ppm S	862,8	USD/tone	509,8	USD/tone	59
USD exchange rate	3,1537	PLN	3,7718	PLN	120

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

■ *Fig. 28* FLUCTUATIONS IN BRENT CRUDE PRICES AND IN THE EXCHANGE RATE OF THE USD IN 2015 COMPARED WITH 2014 AVERAGES [%]



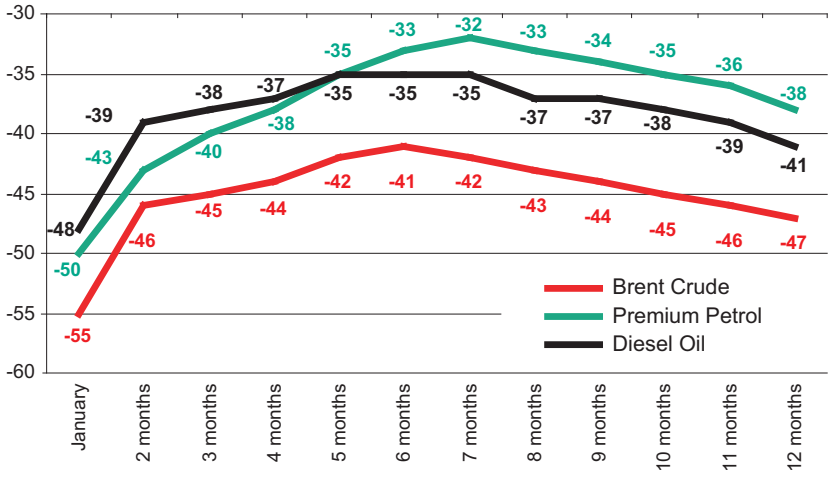
Source: POPiHN and epetrol.pl

The interdependence of crude oil prices and the USD exchange rate in the Polish market is shown in Fig. 28.

Comparison of trends for crude oil and 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

■ *Fig. 29* FLUCTUATIONS IN CRUDE OIL AND FUEL QUOTATIONS IN 2015 COMPARED WITH 2014 AVERAGES [%]



Source: POPiHN i epetrol.pl

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

Description	2014		2015		Reference 2015 to 2014
	Value	Units	Value	Units	2014=100
1	2	3	4	5	6
EU95 petrol gross (without VAT)	4 104	PLN/1000 L	3 609	PLN/1000 L	88
Excise	**1 565**	**PLN/1000 L**	**1 540**	**PLN/1000 L**	**98**
Fuel surcharge	**104**	**PLN/1000 L**	**129**	**PLN/1000 L**	**124**
EU95 petrol net	2 435	PLN/1000 L	1 940	PLN/1000 L	80

Source: PKN ORLEN SA, Grupa LOTOS SA, POPiHN

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

Description	2014		2015		Reference 2015 to 2014
	Value	Units	Value	Units	2014=100
1	2	3	4	5	6
Diesel with 0,001% S gross (without VAT)	4 056	PLN/1000 L	3 502	PLN/1000 L	86
Excise	**1 196**	**PLN/1000 L**	**1 171**	**PLN/1000 L**	**98**
Fuel surcharge	**263**	**PLN/1000 L**	**288**	**PLN/1000 L**	**110**
Diesel with 0,001% S net	2 597	PLN/1000 L	2 043	PLN/1000 L	79

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

0.59 PLN/l while in 2014 it was only 0.13 PLN/l.

A comparison of the retail prices of EU95 petrol, autogas and diesel in the years 2014-2015 is shown in the table (Fig. 32).

The key objective of filling station operators was to retain customers and earn an extra margin on non-fuel product sales, which allowed for keeping a retail fuel site afloat and operating. As mentioned above, the margins stayed at the levels similar to the previous year, or even slightly lower. Throughout the year they were diversely shaped and thus in the first half of the year petrol sales had better volumes, whereas in the second half – diesel. Low EU95 petrol prices 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 42% in 2015, while in 2014 it stood at 49%. It also was an impulse because of which petrol was purchased more willingly. The price trends of individual fuels on the domestic market are shown by the graphs in Fig. 33 and 34.

The permanent downtrend in fuel prices which started in 2012 continued in 2015, accelerating sharply in the second half of the year. Current international and geopolitical situation indicates that a similar trend will continue at least in the first half of 2016. The situation in previous years, even though the prices were falling, indicated that reaching a level lower than 4 PLN/l is very unlikely. Yet the changes in the way of shaping the market, undertaken by the countries producing crude oil led to a situation in which the 95-octane petrol and diesel prices at some fuel stations got closer to, and at some stations even crossed, the level of 4 PLN/l at the end of the year. The graph 35 shows the relations between

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

Description	2014		2015		Reference 2015 to 2014
	Value	Units	Value	Units	2014=100
1	2	3	4	5	6
Average retail price of EU95 petrol	**5,26**	**PLN/L**	**4,61**	**PLN/L**	**88**
Average retail price of diesel	**5,22**	**PLN/L**	**4,48**	**PLN/L**	**86**
Average retail price of autogas	**2,57**	**PLN/L**	**1,96**	**PLN/L**	**76**

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

was crude 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 2015 global prices decreased, but at the same time there was a decline in Polish zloty's purchasing power against the USD. Tax burdens remained at an unchanged level, but some rates were shifted. 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 in case of both Polish producers, directly related to the stock market quotations, did not reflect the level of price decreases, which was mainly caused by a decline in Polish zloty's purchasing power against the USD.

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

Similarly as in the case of petrols, the reductions in net domestic diesel fuel prices did not overlap with the degree of falls on international markets. The Polish market reflects rather precisely the developments on the international markets, yet the final results shall be adjusted to the exchange rate between our national currency and the USD dollar.

The price movements on the supply and producer markets transfer to the retail market. Such a situation also occurred in 2015, thus the adjustments of retail prices were almost identical with the adjustments of prices in domestic refineries. In 2014 the difference between average 95-octane petrol and diesel prices was 0.04 PLN/l in favour of diesel. In 2015 this difference grew: diesel was 0.13 PLN/l (on average in the year) cheaper than the 95-octane petrol. We can say that we have returned to a historic situation, in which diesel was much cheaper than 95-octane petrol. The largest recorded differential between retail prices of both fuel types equalled

quotations on the international commodity stock exchanges and retail prices of fuels in Poland.

The estimates 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 2015, 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. Without the non-fuel revenues filling stations would not be able to operate without incurring losses.

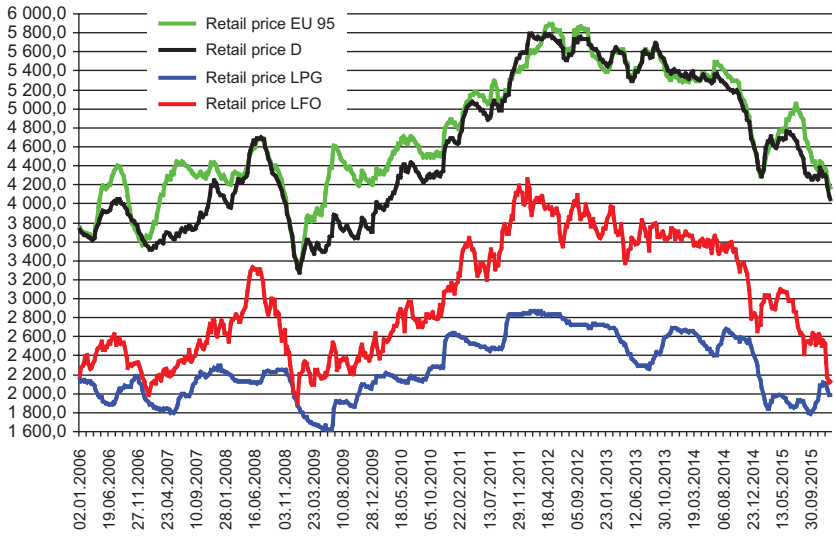
During the year various regions of the country, sometimes even within the same city, saw significant price differentials between the stations of particular operators. Prices were mainly affected by station location and its standard. Price differences, especially in the end of the year, were as much as 0.50 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 the level of demand and the scale of competition between different operators, as well as the comprehensiveness of offered services. The accessibility of fuel from a grey or black market in a given region also influenced price reductions.

Traditionally, there was a high seasonal price range between different regions of the country, as well as alongside main communication routes. Statistically, the most expensive provinces in the country are: Mazowieckie, Małopolska, Podkarpackie and Zachodniopomorskie. What is interesting, in the cities within those regions we could buy fuel at much higher prices than outside the city limits. During the summer and winter holidays prices are much more expensive along main transit routes and in the resorts. 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 2015.

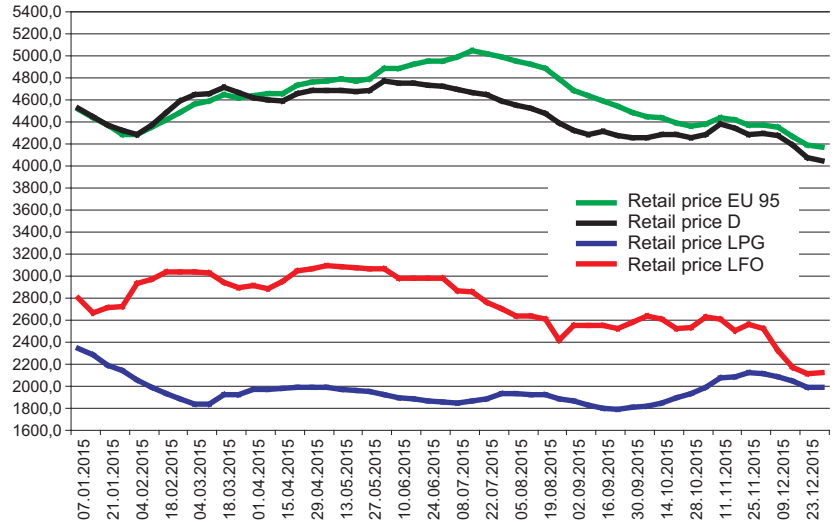
In 2015 a part of excise tax in the amount of 25 PLN was shifted to the fuel surcharge. It did not change the total amount of specific taxes to be paid, yet it only enabled the use of a bigger pool of financial resources from the road fund in order to mobilize additional aid

■ *Fig. 33* RETAIL PRICES OF EU95, DIESEL, LPG AND LFO IN 2006-2015 [PLN/1000 L]



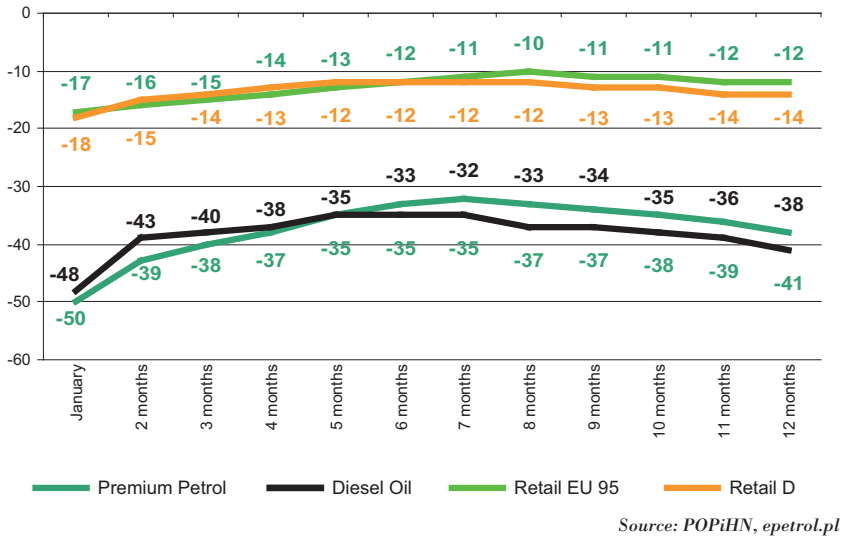
Source: POPiHN's own study based on data of e-petrol.pl, WNP

■ *Fig. 34* RETAIL PRICES OF EU95, DIESEL, LPG AND LFO IN 2015 [PLN / 1000 L]



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

■ *Fig. 35* CHANGES IN QUOTATIONS FOR FUELS AND IN RETAIL PRICES OF EU95 PETROL AND DIESEL IN POLAND IN 2015 COMPARED TO 2014 AVERAGE PRICES [%]



Source: POPiHN, epetrol.pl

funding from the UE funds. The VAT did not change either, remaining at the level of 23% of net price. The tax burdens included in fuel prices declined in relation to 2014, which was mainly 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 5% and 6% respectively, and in monetary terms by 121 PLN/1000 l for petrol and 137 PLN/1000 l for diesel, which was almost three times more than in 2014.

The lower retail prices of petrol and diesel fuels entailed a growth in the total taxation share in the end consumer price. That increase equalled 9% and 10%, respectively, for 95-octane petrol and diesel. The excise tax and the fuel surcharge are specific taxes not related to the net price and therefore their share in the price increases alongside the decrease in the 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 2015 taxes represented 55% of 95-octane petrol and 51% of diesel retail price. This was 5 percentage points more for EU95 petrol and 4 percentage points more for diesel than in 2014.

■ *Fig. 36* COMPARISON OF TAX BURDENS ON MOTOR FUELS IN 2014 AND 2015

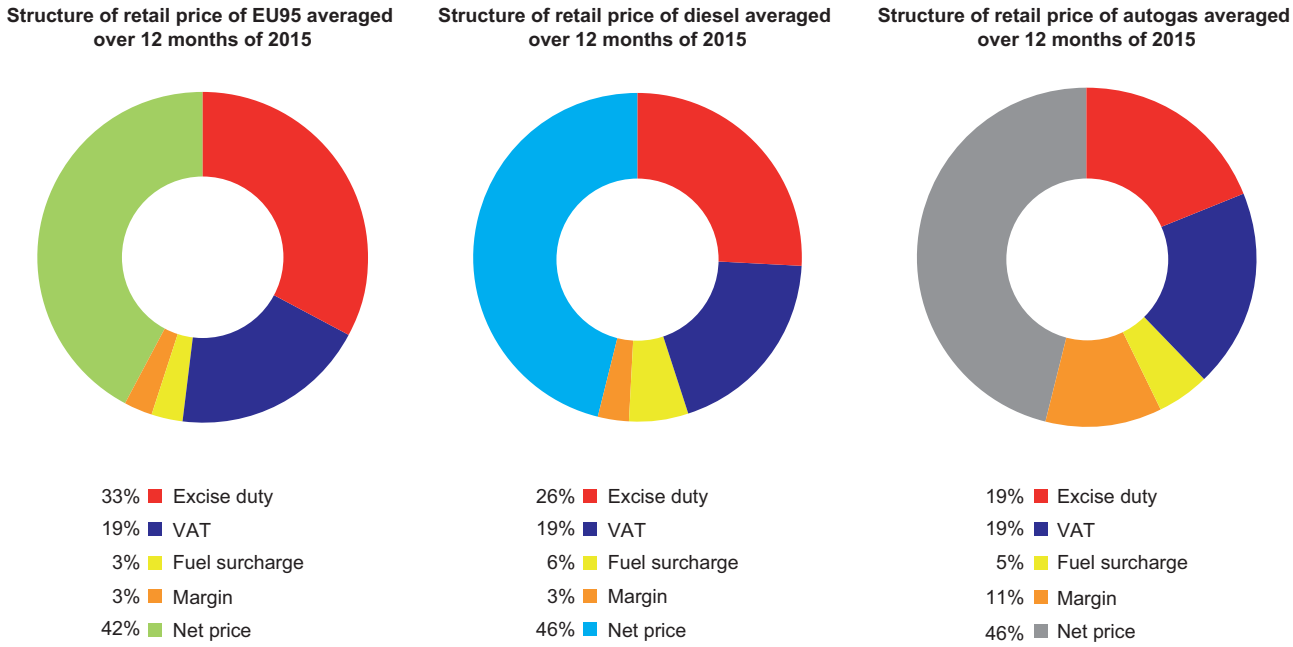
Description	2014		2015		Reference 2015 to 2014
	Value	Units	Value	Units	2014=100
1	2	3	4	5	6
Total taxes for EU95 (VAT+excise+fuel surcharge)	2 653	PLN/1000 L	2 532	PLN/1000 L	95
Total taxes for diesel (VAT+excise+fuel surcharge)	2 434	PLN/1000 L	2 297	PLN/1000 L	94
% share of taxes in retail price of EU95	50	%	55	%	109
% share of taxes in retail price of ON	47	%	51	%	110

Source: POPiHN's own data

The structure of annual average retail prices for EU95 petrol and diesel fuel is presented in the charts in Fig. 37.

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

■ *Fig. 37* STRUCTURE OF RETAIL PRICE OF MOTOR FUELS IN 2015



Source: POPiHN's own calculations

■ *Fig. 38* STRUCTURE OF RETAIL PRICE OF MOTOR FUELS IN 2014 AND 2015 [in PLN/L]

	Eurosuper 95 Petrol						Diesel						Autogas					
	Retail price	Excise tax	VAT	Fuel surcharge	Margin	Net price	Retail price	Excise tax	VAT	Fuel surcharge	Margin	Net price	Retail price	Excise tax	VAT	Fuel surcharge	Margin	Net price
Average 2014	5,26	1,57	0,98	0,10	0,18	2,43	5,22	1,20	0,98	0,26	0,19	2,60	2,57	0,39	0,48	0,08	0,24	1,38
12 months 2015	4,61	1,54	0,86	0,13	0,14	1,94	4,48	1,17	0,84	0,29	0,14	2,04	1,96	0,38	0,37	0,09	0,22	0,91
% change	-12,4	-1,6	-12,4	24,2	-21,8	-20,2	-14,2	-2,1	-14,2	9,7	-22,8	-21,5	-23,7	-3,8	-23,7	17,1	-9,9	-34,1

Source: POPiHN's own calculations

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 2015.

Similarly as in 2014, also during the whole of 2015 fuel prices in Poland (calculated in euro) were practically among the lowest in the European Union. Such was the case with both petrol and diesel. At the end of 2015 domestic retail prices of EU95 petrol were 19% lower and those for diesel 11% lower than the average prices for the whole European market. This is 2 percentage points more than in the previous year for EU95 petrol and 2 percentage points less for diesel.

In December 2015 domestic net prices (excluding taxes and converted into euro) of EU95 petrol and diesel were lower than the average European prices by 8% and 2% respectively. Net prices in all European Union countries are quite similar, and the differences in retail prices are mainly caused by taxes applicable in different countries and levels of margins.

At the end of 2015 for EU95 petrol the difference between the highest and the lowest net price observed in EU countries was EUR 203 (which is EUR 64 more than in the previous year), whereas the difference between the highest and the lowest retail price was EUR 461 per 1000 litres (which is EUR 28 less than in the previous year). Thus in 2015 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. It means that average margins on fuel sales were lowered. For diesel the difference between net prices equalled EUR 220 per 1000 litres, and the difference between retail prices was EUR 552 per 1000 litres. In case of fuel for Diesel engines the price differences among individual countries are slightly bigger.

Poland is one of the European countries with the highest applicable rate of VAT for fuels, but due to low net prices the actually paid VAT is in the middle of the European rates. At the end of December the difference between the amount of VAT paid on EU95 petrol, compared to the EU average, was (-13%), which is 3 percentage points more than in the previous year. In the case of diesel this ratio was 4% lower than the EU average, which is 2 percentage points less than in the previous year. The amounts of excise tax paid (after conversion into euro, including fuel surcharge) respectively for EU95 petrol and diesel were 29% and 22% lower than the European averages, so the situation from 2014 was preserved.

In December 2015 nowhere in Europe could EU95 petrol be bought cheaper than in Poland. Diesel was cheaper only in Latvia, Lithuania and Luxembourg. Therefore it was profitable to come to Poland from any EU country in order to refuel one's car and thus save at times significant amounts of euros. Stations located in the border areas, especially in the western and southern part of the country, as usual recorded good sales volumes and had slightly higher prices, and thus bigger margins. Traditionally fuels across Poland's eastern border, in non-EU member countries, were cheaper than in Poland, which in turn encouraged Polish drivers from those areas to fill up in these countries after crossing the eastern border. Due to significant price reductions in Poland and price increases in the neighboring countries the difference in fuel prices is decreasing, yet it is still attractive enough to organize a fuel escapade and drive to Ukraine, Belarus or the Kaliningrad Region.

We tend to complain about the taxes included in fuel prices as nobody likes overpaying for purchased goods. As we can see in the graphs picturing tax share in fuel prices in different European countries, the amounts paid by the Poles are not only not the highest, but it should be stressed that we belong to a group of countries from the lowest range of tax share in the price of petrol or diesel. The difference between the highest and lowest share was 22 percentage points. The difference between the share in Poland and the lowest share was 7 percentage points. It is worth mentioning that the lowest share is represented by Luxembourg, i.e. a country with the lowest VAT for fuels, often called 'Europe's filling station'.

A comparison of the total tax burdens on fuels in the EU countries at the end of 2015 is presented in Fig. 42 and 43.

The decreases in fuel prices observed in recent years in all European countries made the drivers glad. In Poland not only were the prices getting progressively lower, but they were, when converted into euro, significantly lower than in other European countries. It is a pity that Polish salaries are not paid in euros, but we can be happy about the fact that we continue to be the country that it pays off to visit and spend some euros to fill up the tank, with benefits to both the driver and the fuel retailer. Polish drivers who travelled towards Western or Southern Europe filled their tanks up to the top at the stations located at the borders, thus saving some euro. Those who drove towards the East, i.e. to non-EU countries, usually had the tanks filled only with the amount of fuel sufficient to reach the nearest Ukrainian, Belarussian or Russian filling station.

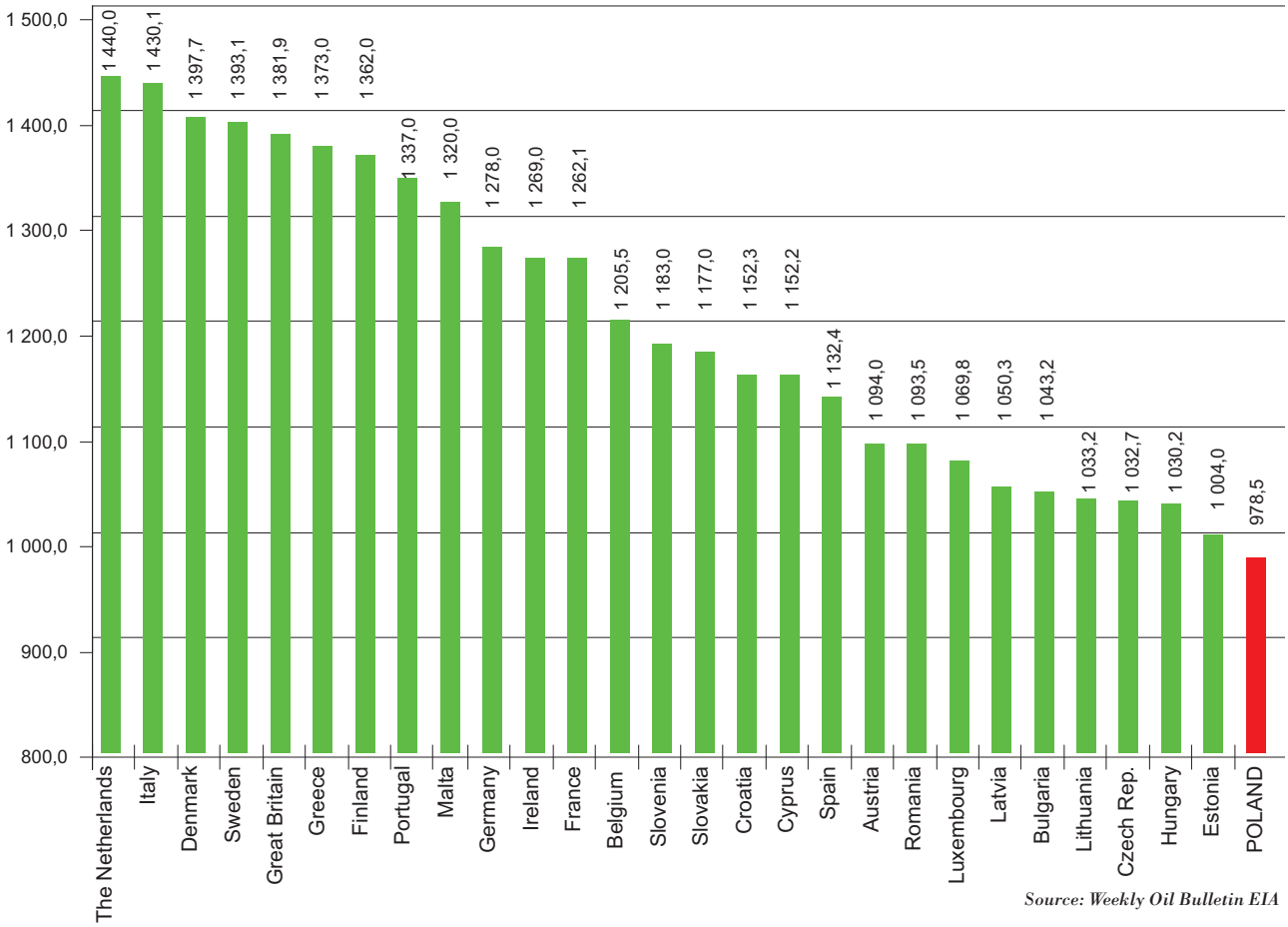
■ *Fig. 39* AVERAGE RETAIL PRICES AND TAXES IN EU MEMBER STATES AND IN POLAND AT THE END OF DECEMBER 2015 [in EUR/1000 l]

	Eurosuper 95 Petrol					Diesel (EN 590)					
1	2	3	4	5	6	7	8	9	10	11
	Sale price	**Price without taxes**	**Excise**	**Vat amount**		**Sale price**	**Price without taxes**	**Excise**	**Vat amount**	**VAT [%]**
POLAND	**978,5**	**400,9**	**391,7**	**185,9**	**POLAND**	**950,4**	**427,4**	**342,4**	**180,6**	**23**
European average	1 202,7	436,1	553,4	213,2	European average	1 064,8	435,2	440,8	188,8	
Price in Poland against average European price	**81%**	**92%**	**71%**	**87%**	**Price in Poland against average European price**	**89%**	**98%**	**78%**	**96%**	

1 EUR = 4,2615 PLN Source: Weekly Oil Bulletin EIA

■ *Fig. 40* EX POMPA OF EU95 PETROL IN UE MEMBER STATES AND IN POLAND AT THE END OF DECEMBER 2015

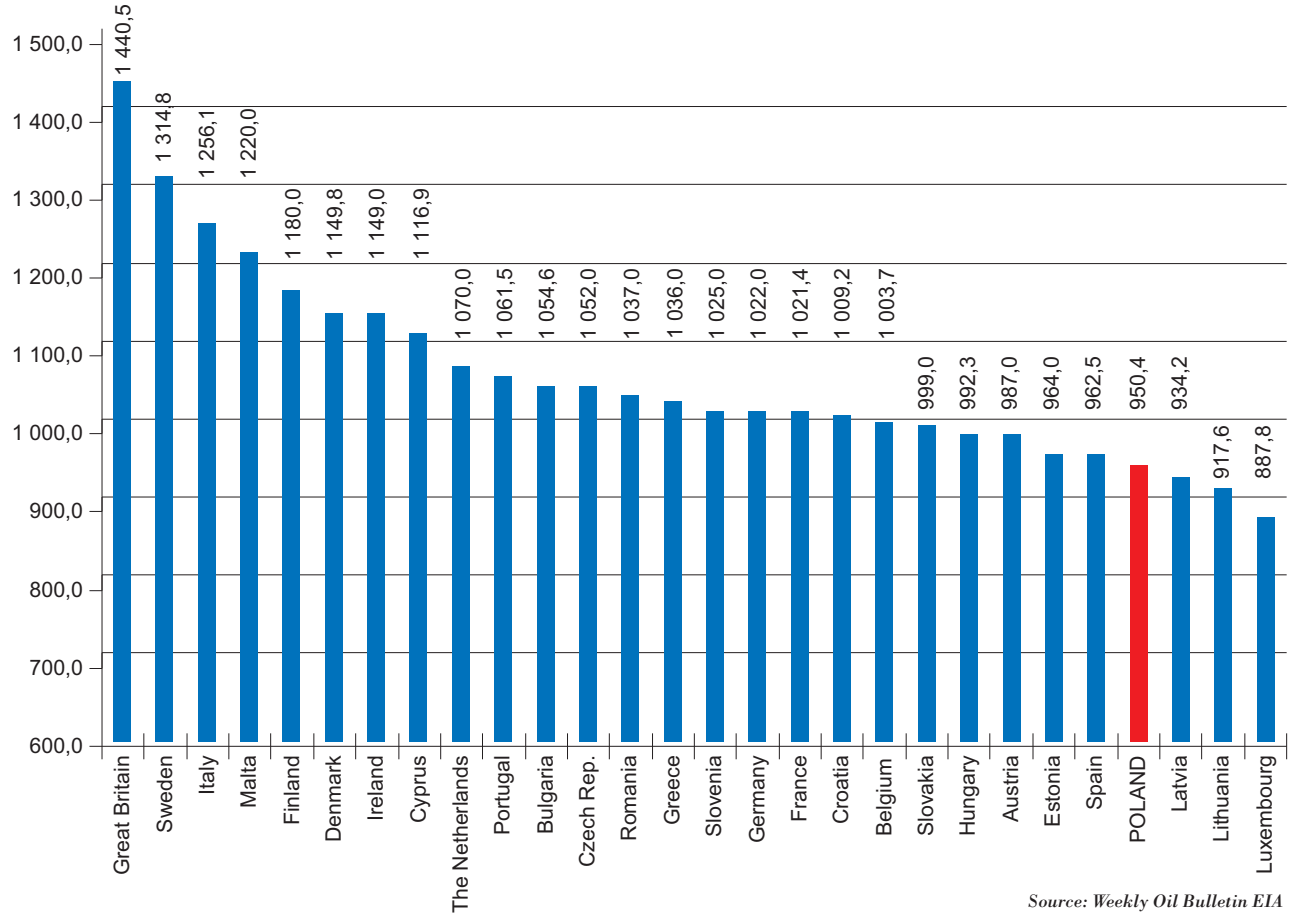
[Euro/1000 l]



Source: Weekly Oil Bulletin EIA

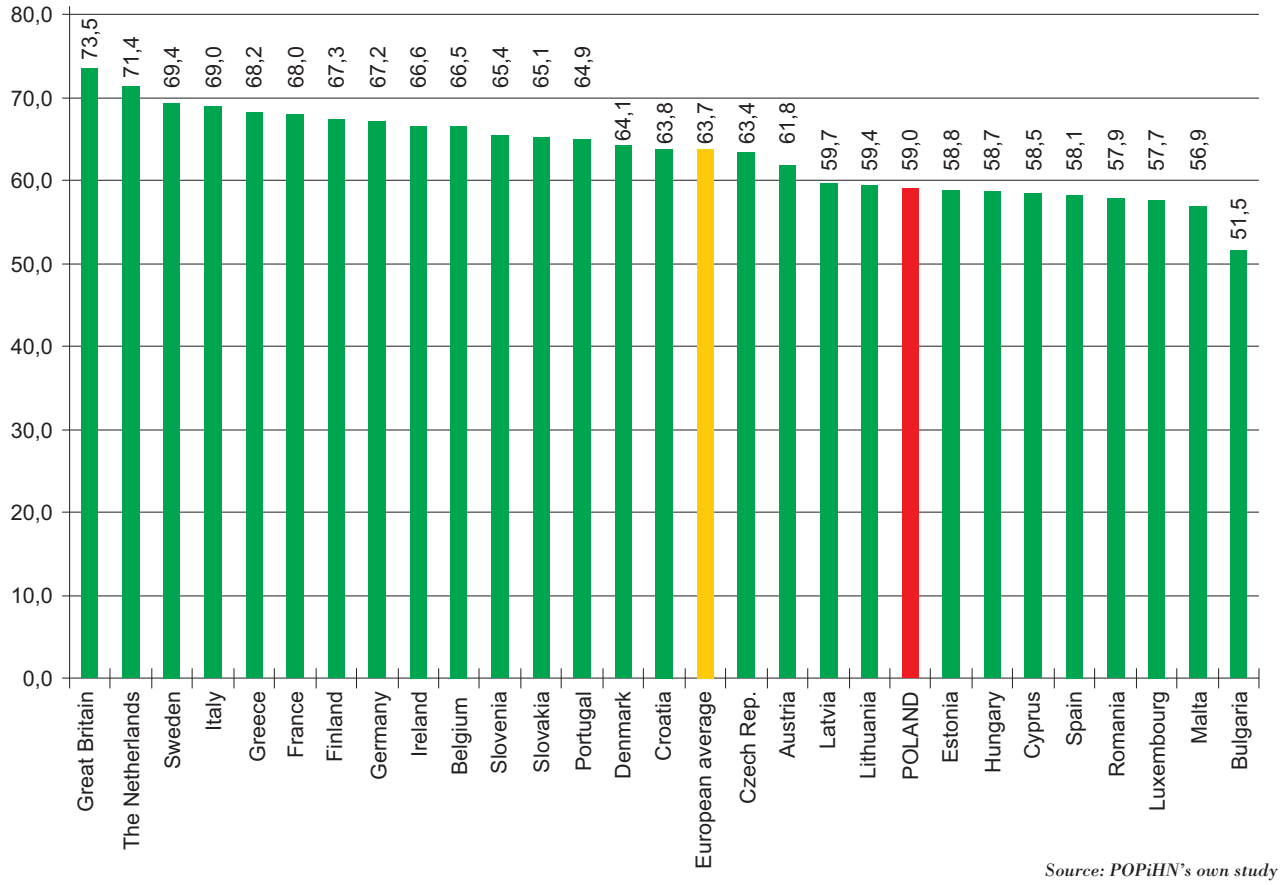
■ *Fig. 41* EX POMPA OF DIESEL IN UE MEMBER STATES AND IN POLAND AT THE END OF DECEMBER 2015

[Euro/1000 l]



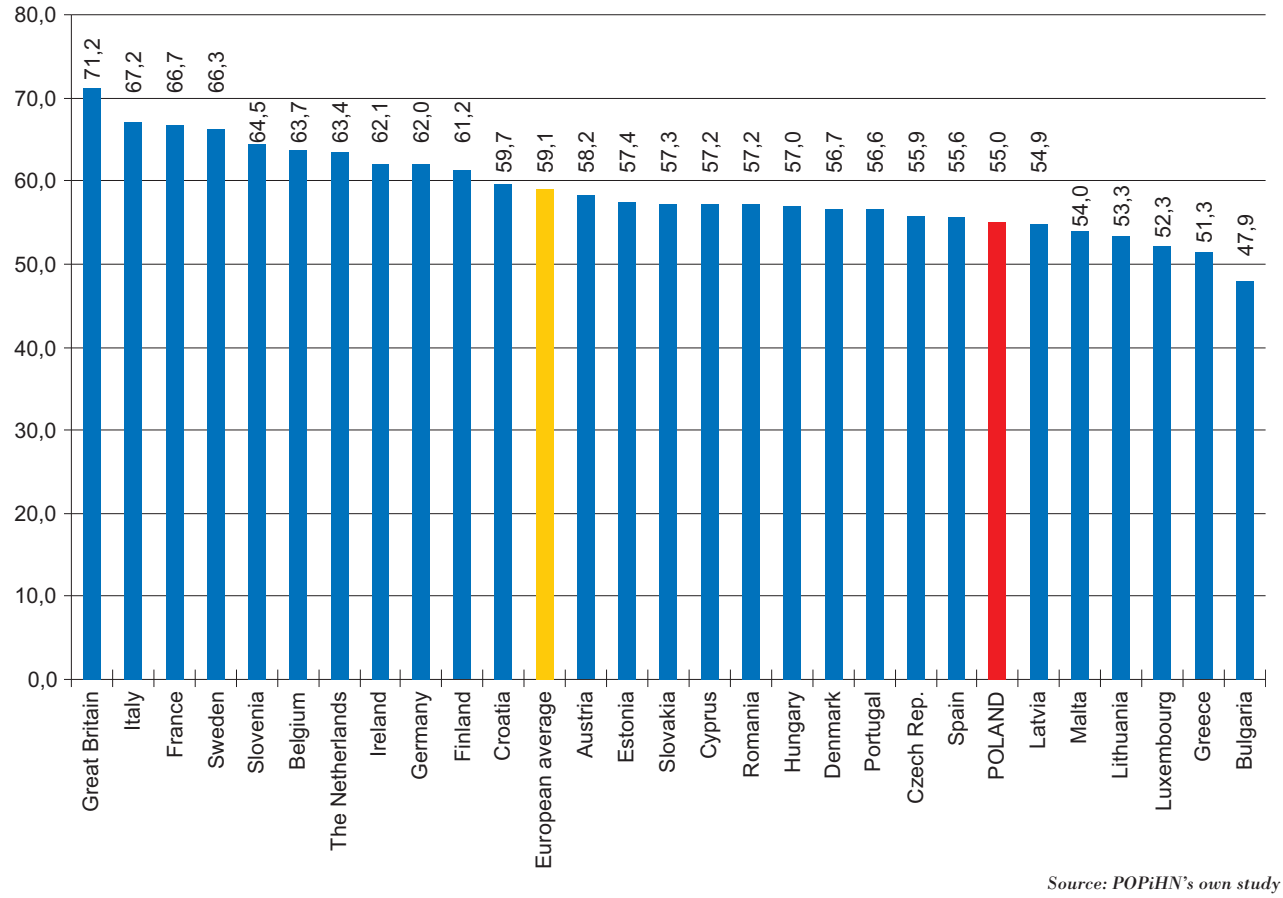
Source: Weekly Oil Bulletin EIA

■ *Fig. 42* SHARE OF TAXES IN RETAIL PRICE OF EU95 PETROL IN EUROPEAN COUNTRIES AT THE END OF DECEMBER 2015 (%)



Source: POPiHN's own study

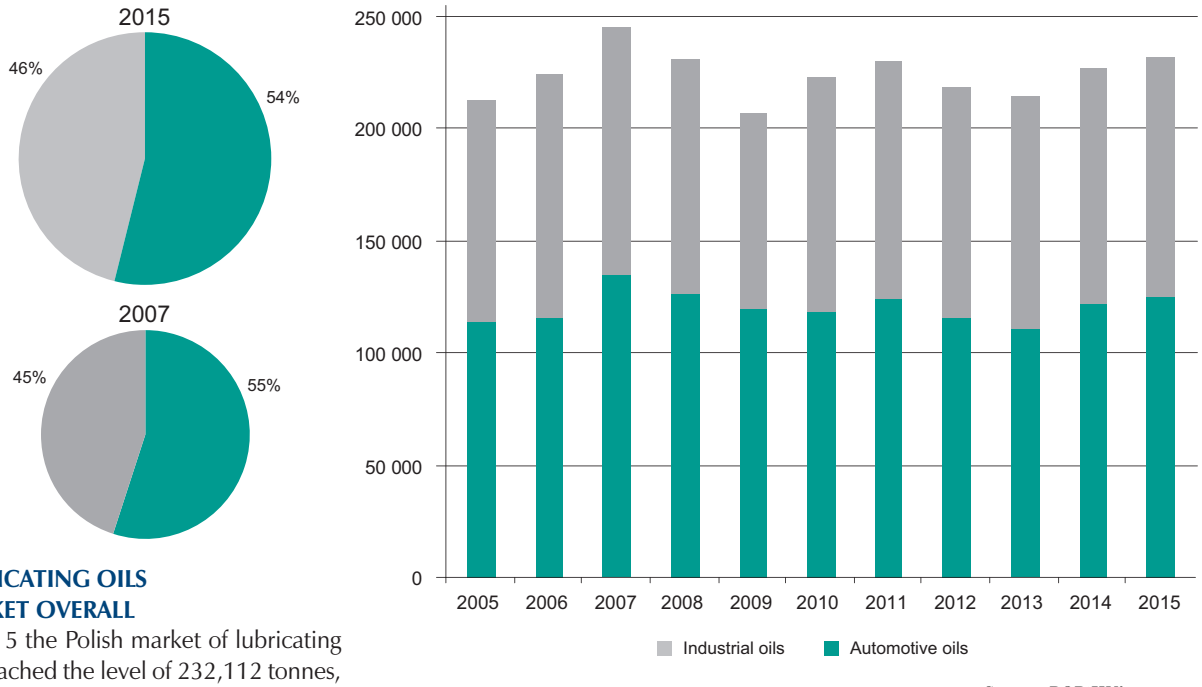
■ *Fig. 43* SHARE OF TAXES IN RETAIL PRICE OF DIESEL IN EUROPEAN COUNTRIES AT THE END OF DECEMBER 2015 (%)



Source: POPiHN's own study

LUBRICATING OILS MARKET

■ *Fig. 44* TOTAL MARKET FOR LUBRICATING OILS IN 2015 AND 2007



Source: POPiHN's own study

LUBRICATING OILS MARKET OVERALL

In 2015 the Polish market of lubricating oils reached the level of 232,112 tonnes, which is a 2.36% increase compared with the previous year. It was in line with the forecasts based on overall economic situation, assuming that GDP in Poland would grow by 3.6% and taking into consideration relatively small market fluctuations oscillating around the statistical error bounds of 3%.

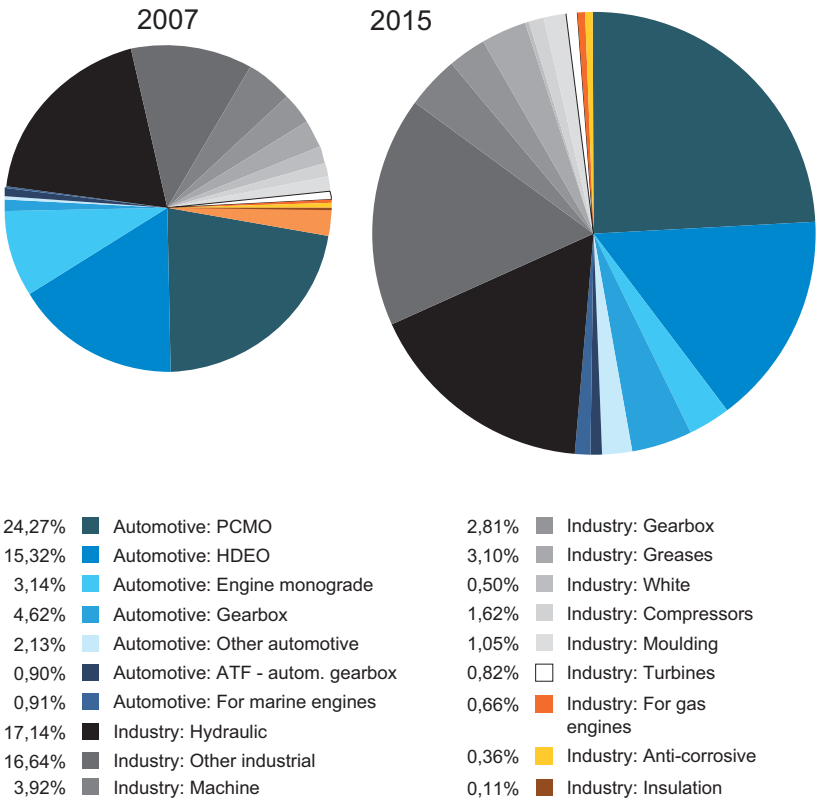
The market grew for the second consecutive year after a 5,5% increase in 2014. Simultaneously in terms of sales volumes of lubricating goods 2015 resulted to be the best since the pre-crisis 2007, when the biggest sales volumes were recorded (since POPiHN's monitoring activities were initiated), reaching the level of 245,280 tonnes[2].

The past eight years saw only minor shifts in the market structure. The market continues to be balanced in terms of the basic division into industrial and automotive segment, with a slight predominance of the automotive one.

Among major changes in the overall market structure we can notice a fall of approximately 4 percentage points in monograde oils share and of 3 percentage points in the share of hydraulic and automotive – gearbox oils. The oils from the segment 'other industrial', as well as passenger car motor oils are increasing in importance.

The structure all of the time consists of four dominating product groups:

■ *Fig. 45* COMPARISON OF THE STRUCTURE OF THE ENTIRE MARKET FOR LUBRICATING OILS IN 2015 AND 2007



Source: POPiHN's own study

[2] The volume is calculated, as in the remaining parts of the report, as a sum for automotive and industrial segments, therefore without taking into consideration the 'other not classified elsewhere'. More to be found in methodological remarks at the end of the chapter.

passenger car motor oils (24.27%), heavy-duty diesel oils (15.32%), industrial hydraulic oils (17.14%) and other industrial oils (16.64%).

ENGINE OILS FOR THE AUTOMOTIVE INDUSTRY

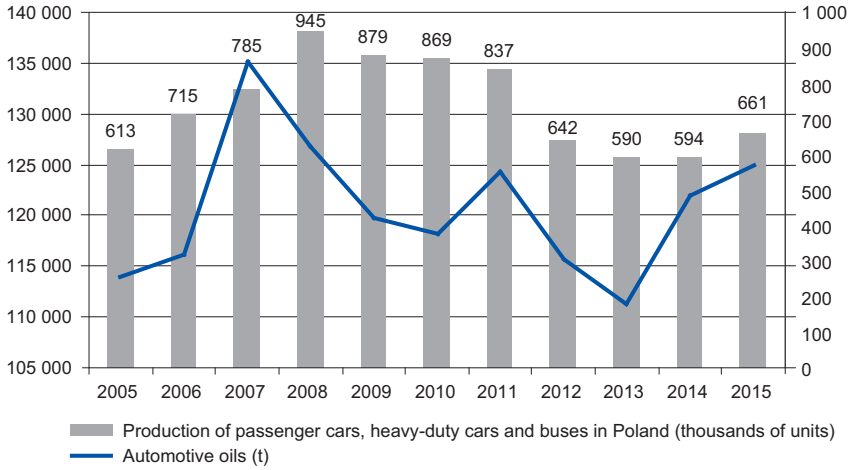
Engine oils for vehicles account for approximately 45% of all lubricating oils sold in Poland. At the same time engine oils account for approximately 80% of automotive segment.

In 2015 in Poland 104,953 tonnes of above mentioned products were sold, which means that this segment grew year to year by 2.9%. This was in line with the forecasts for the overall market fluctuations.

According to POPiHN's data obtained from the monitoring activities initiated in 2007 the segment of engine oils was in an apparent downtrend. For the past two years we have been observing quite a surprising reversal of this trend. There were many reasons pointing to the fact that the segment should continue to shrink, such as the informal market (private and parallel imports of oils from the countries in which there is no excise tax), growing share of synthetic oils which need to be changed less frequently and a strong decrease in the use of monograde oils[3].

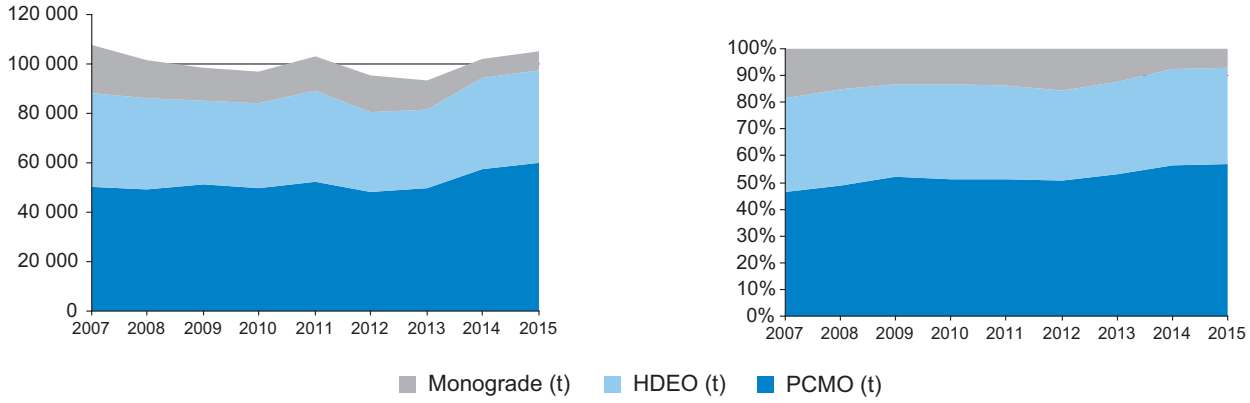
One of the reasons accounting for the aforementioned growth could be growing automobile production in Poland. According to the Samar Institute in 2015 there was an 11% growth in vehicle manufacturing in automotive plants operating in Poland. The trend reversal in the sales of engine oils in 2014 coincided with a similar change in the number of cars

■ *Fig. 46* AUTOMOTIVE ENGINE OILS AGAINST AUTOMOBILE PRODUCTION VOLUME IN POLAND (AGGREGATED PRODUCTION OF PASSENGER CARS, HEAVY-DUTY VEHICLES – INCLUDING GOODS VEHICLES-, ROAD TRACTORS AND BUSES).



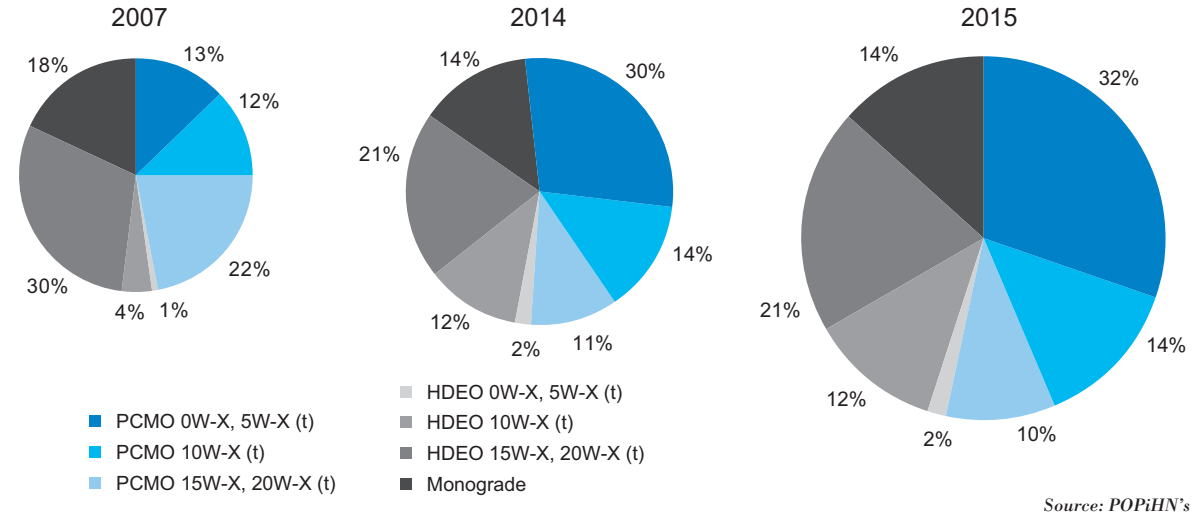
Source: GUS data, POPiHN's own study

■ *Fig. 47* CHANGES IN THE STRUCTURE OF THE AUTOMOTIVE ENGINE OILS SEGMENT AGAINST SALES IN ANNUAL TERMS



Source: POPiHN's own study

■ *Fig. 48* CHANGES IN THE AUTOMOTIVE ENGINE OILS SEGMENT AND COMPARISON OF STRUCTURES BETWEEN 2015, 2014 AND 2007



Source: POPiHN's own study

[3] *A further 3% fall in 2015*

produced in Poland. The above can also mean that there is a growing market share of oils for the so-called first filling of the engine[4].

Whatever the reason, the market performed much better than could have been expected, taking into consideration the macroeconomic conditions. Nevertheless, the correlation of these two elements continues to be strong.

PASSENGER CARS MOTOR OILS (PCMO)

This segment's result was last year's biggest surprise as the increase of 4.2% was bigger that the growth forecast for the whole market, i.e. 3%.

The growth in sales of synthetic oils for passenger cars observed in 2014 was so far the highest. Within a year the segment grew from 23,550 tonnes to over 31,300 tonnes. This volume has been continuously growing since monitoring activities were initiated, starting from 13,662 tonnes sold in 2007 up to 33,940 tonnes of sales volumes recorded in 2015.

Thus this group's share in the segment of passenger cars motor oils has so far reached 55%. Therefore more than half of motor oils for passenger cars sold in Poland are oils with 0W or 5W viscosity grade.

HEAVY-DUTY ENGINE OILS (HDEO)

A 2.3% increase recorded in this segment in 2015 was in line with the expectations.

37,536 tonnes of heavy-duty engine oils were sold in Poland, which means that the segment reached its pre-crisis levels. It is its third succesive year of growth, similarly to the increasing production of heavy-duty vehicles in Poland, which in 2015 reached the level of 120,000 pieces[5].

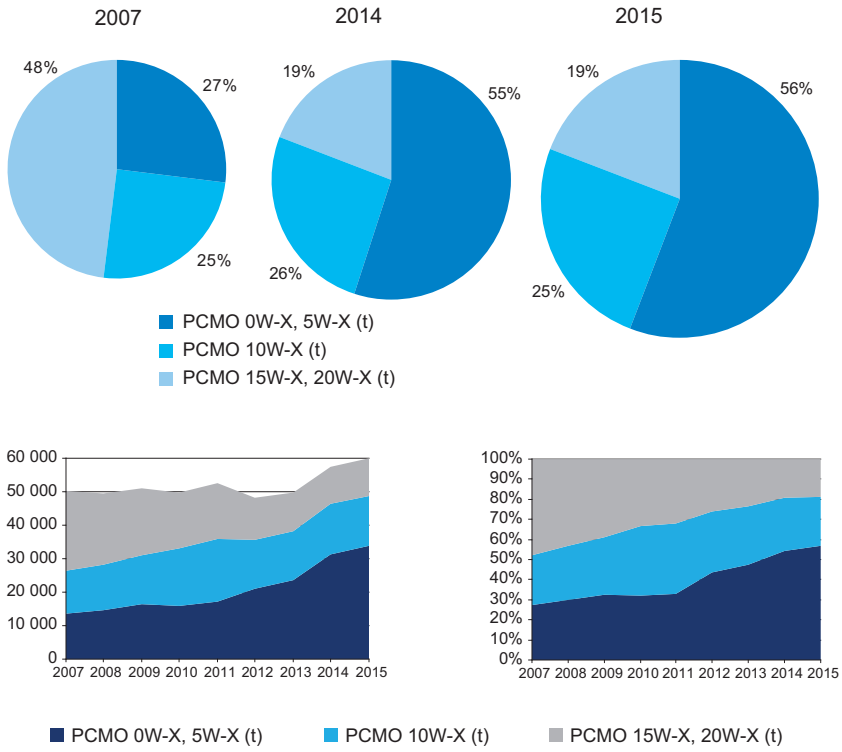
The share of mineral engine oils (15W, 20W) in heavy-duty vehicles segment, for the first time in history, fell below 60%.

The process of replacing mineral oils by semi-synthetic oils is more dynamic in passenger vehicles than in heavy-duty ones. Nonetheless, also in the latter case it is a visible and continuous trend.

OILS FOR INDUSTRY

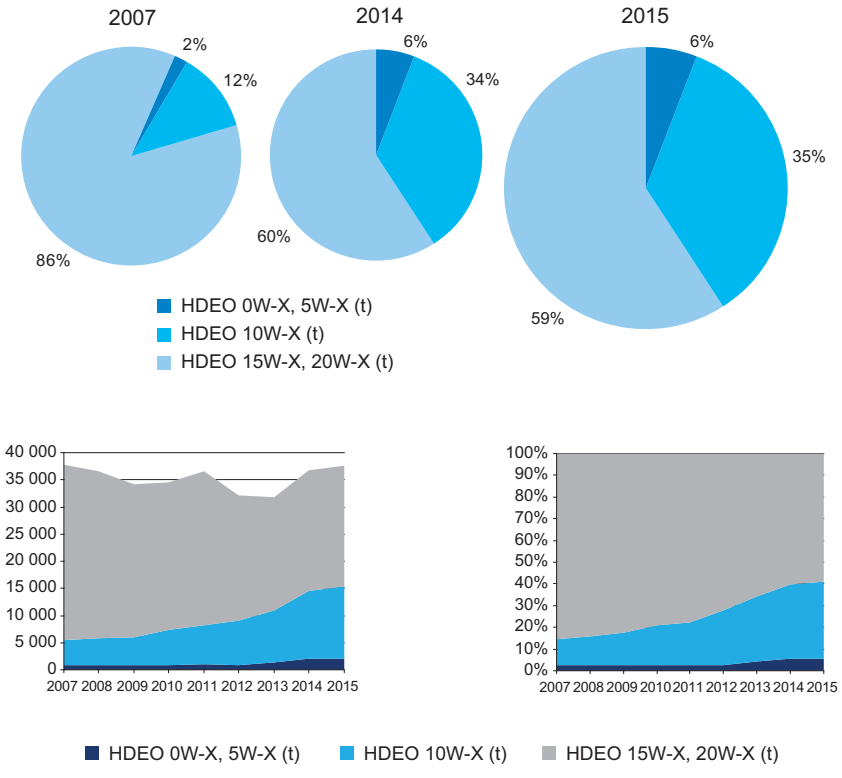
In 2015 the industrial oils segment reached a level of 107,109 tonnes, which is a 2.3% increase compared to the previous year, as well as it has been a third consecutive year of growth. Also in this segment the results are compatible with the predictions.

■ *Fig. 49* PASSENGER CARS MOTOR OILS WITH REFERENCE TO VISCOSITY CATEGORIES (EXCLUDING MONOGRADE OILS)



Source: POPiHN's own study

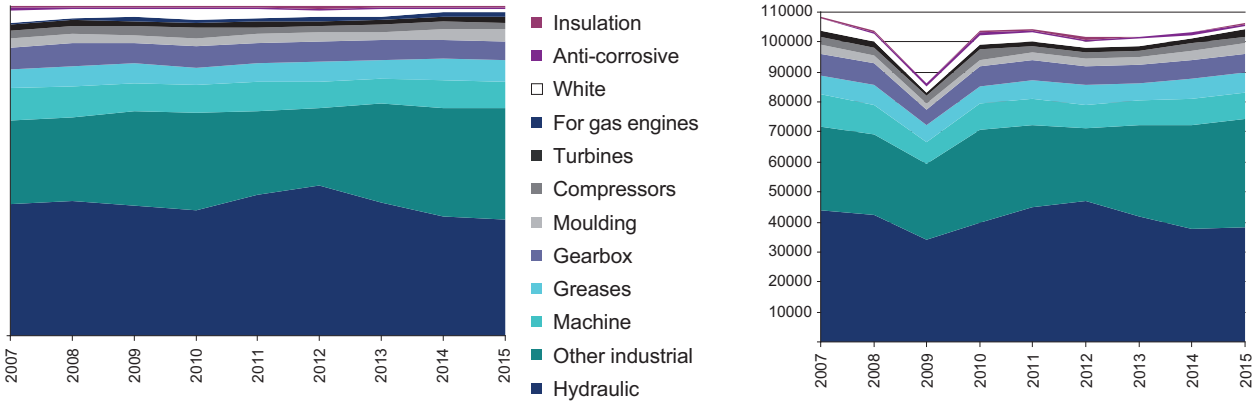
■ *Fig. 50* HEAVY-DUTY ENGINE OILS WITH REFERENCE TO VISCOSITY CATEGORIES (EXCLUDING MONOGRADE OILS)



Source: POPiHN's own study

[4] *Source: www.samar.pl* [5] *Data from GUS and PZPM, source: http://www.pzpm.org.pl*

■ *Fig. 51* CHANGES IN THE INDUSTRIAL OILS SEGMENT – EVOLUTION OF STRUCTURE



Source: POPiHN's own study

After two years of declines in consumption in the biggest group of products in this segment, namely hydraulic oils, the sales volumes in 2015 stabilized around the level of 37,972 tonnes.

As regards second largest group. i.e. 'other industrial oils'[6], their sales volumes have been growing dynamically and continually for 4 years, in 2015 reaching the level of almost 36,383 tonnes, with the growth dynamics of over 5%. Cummulative growth in that period amounted to approximately 34% and there are many indications that within a year or two this group can become the biggest one in the industrial segment.

In the last nine to ten years, with regard to the structure of industrial oil sales, there have been 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 35.31% share). However, this volume is gradually decreasing. The biggest decrease occured between 2013-2014, when the group referred to above shrank by 10% on average per year, which, in terms of volumes, amounted to a decline of over 9,000 tonnes.

In 2015 the share of 'other industrial' oil category once again experienced a growth of over 5 percentage points. This category comprises widely diverse products, difficult to classify under other categories[7]. Increasingly, these are highly specialised products designed for specific devices, as well as machine oils.

Currently, the share of this group in the whole industrial segment has reached 35% while in 2007 it was only its one-fourth part.

Both automotive and industrial segments do not reflect any considerable effects of even stronger market fluctuations upon their structures in a quarterly perspective. However, 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.

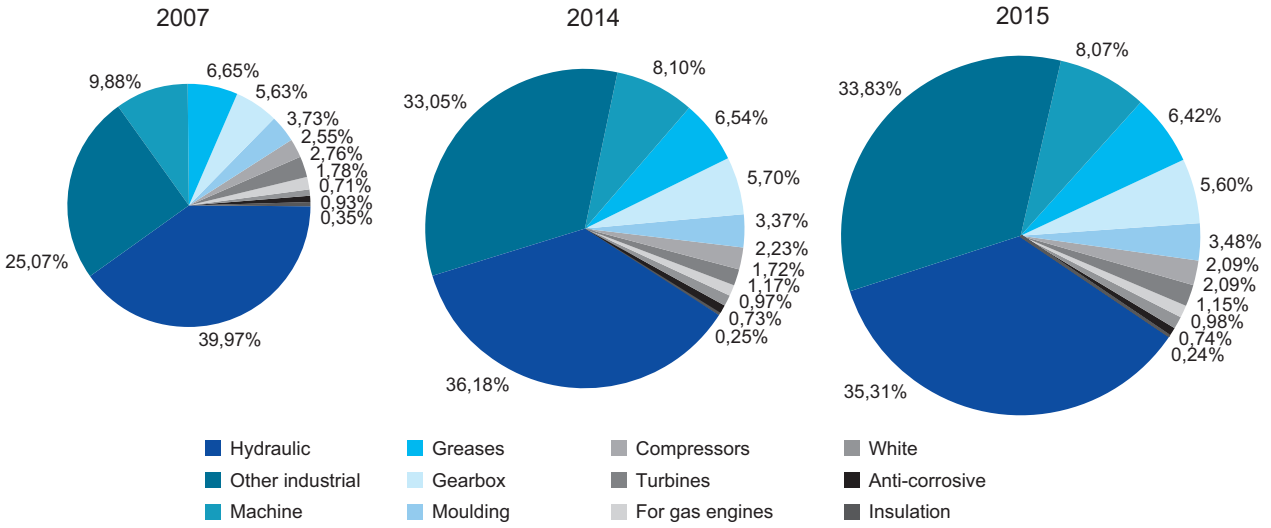
SHORT-TERM FORECAST FOR LUBRICATING OIL MARKET

According to the 2014 forecasts, with a GDP growth of 3.6% both main market segments were stable. The automotive sector increased by 2.54% and the industrial by 2.27%. The change for the whole market was therefore 2.36%.

Based on current observations and the available forecasts of economic growth in Poland, POPiHN upholds its prognosis for the years to come, which states that the overall market of lubricant oils, as well as its two main components: automotive and industrial, will remain around the currently observed levels. Possible deviations from these should be minor and oscillate within statistical error bounds.

Most forecasts about the economic developments in the coming years oscillate

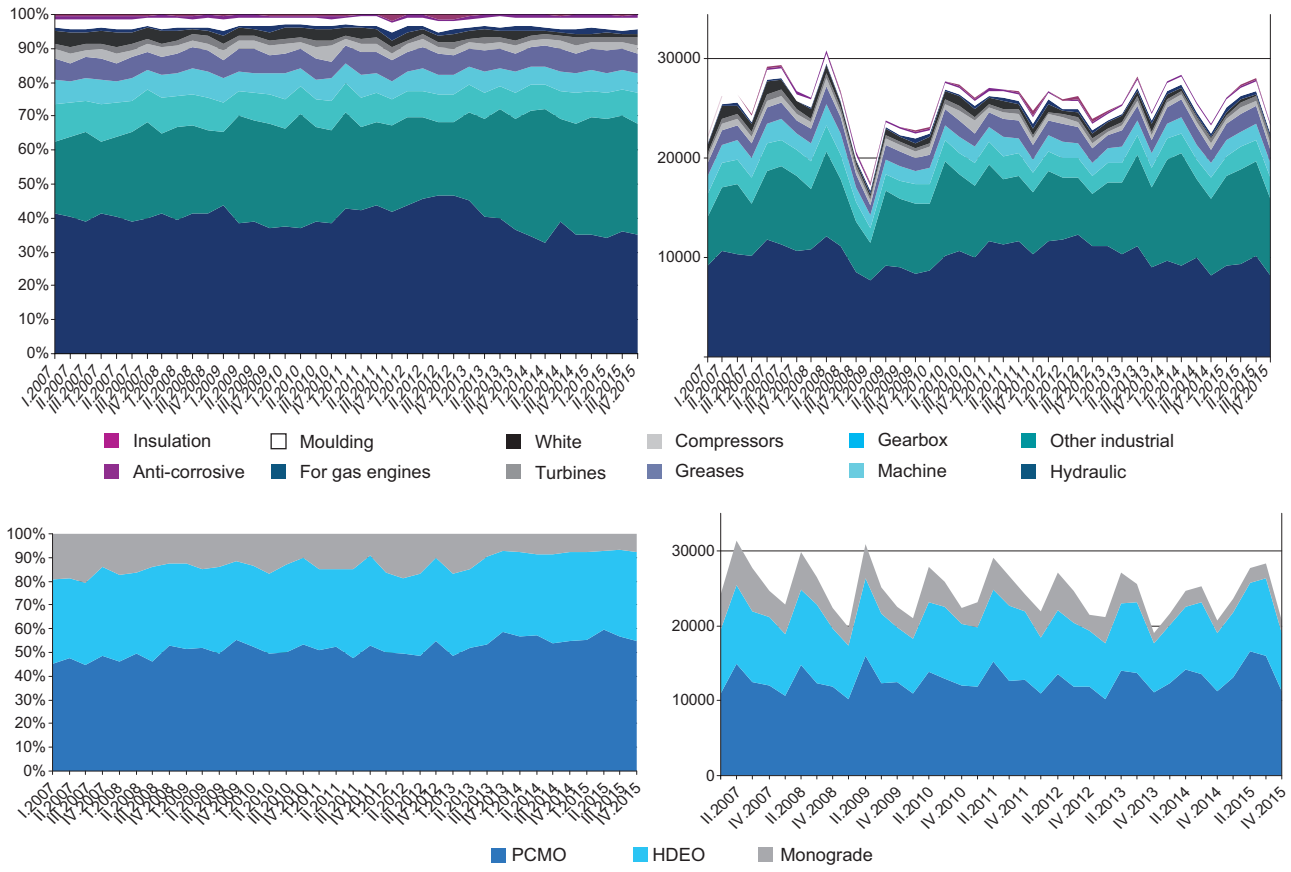
■ *Fig. 52* INDUSTRIAL SEGMENT IN 2015: STRUCTURE WITH REFERENCE TO APPLICATION



Source: POPiHN's own study

[6]More information regarding this group, and especially main product groups that are its components, can be found in methodological remarks at the end of this chapter. [7]More information regarding this group can be found in methodological remarks at the end of this chapter.

■ *Fig. 53* STRUCTURAL CHANGES IN THE INDUSTRIAL OILS SEGMENT IN TERMS OF QUARTERLY SALES



Source: POPiHN's own study

around the GDP growth level of 3.6% for 2016 and 2017, yet the past experience indicates that with time such forecasts are usually reviewed, which makes the prediction difficult. However, the forecast assumes that the economic situation in Poland will remain stable in the coming two years, which will be a consequence of the ongoing convergence between the Polish economy and the economy of the European Union. Thanks to this process, even though facing strong and potentially harmful stagnation in the Euro zone, Poland's economy is able to develop at the rate of approximately 3.5%, which in the case of the market for lubricating oils means a strong impulse towards further stabilization around the current levels. Thus, such a scenario can be assumed as a basis for the coming years.

In the case of the automotive sector, only the subgroup of engine oils for passenger cars is showing a faster growth of over 4%, which can relate to an increase in production of vehicles in Poland. On the other hand, we have to be aware of the informal market and the fact that, gradually, more and more of automobiles will require the use of synthetic oils.

As for the industrial segment, following the forecast 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.

MEDIUM-TERM MACROECONOMIC PROSPECTS

Looking further ahead, one should give particular attention to the condition of the Euro zone (and especially its biggest economy – Germany), with which Poland's economy is already strongly integrated, whereas the economic results of the Euroland and Poland significantly correlate. A significant proportion of the Polish exports makes a part of the German exports, which in turn, to a large extent, is placed on the Chinese market. It is therefore the uncertain condition of China along with the other so-called BRICS-countries (so-called 'third wave of crisis'?) affecting the German exports which can be the main factor shaping the macroeconomic environment in the years to come as well as generating its key changes. The second factor worth special attention in the coming year is the condition of the Euro zone banking sector. The crisis facilitated by the bankruptcy of the American bank led to a deterioration of the lubricant oils market in Poland by as much as 30%. The consequences of a similar event in Europe could be more serious and difficult to foresee.

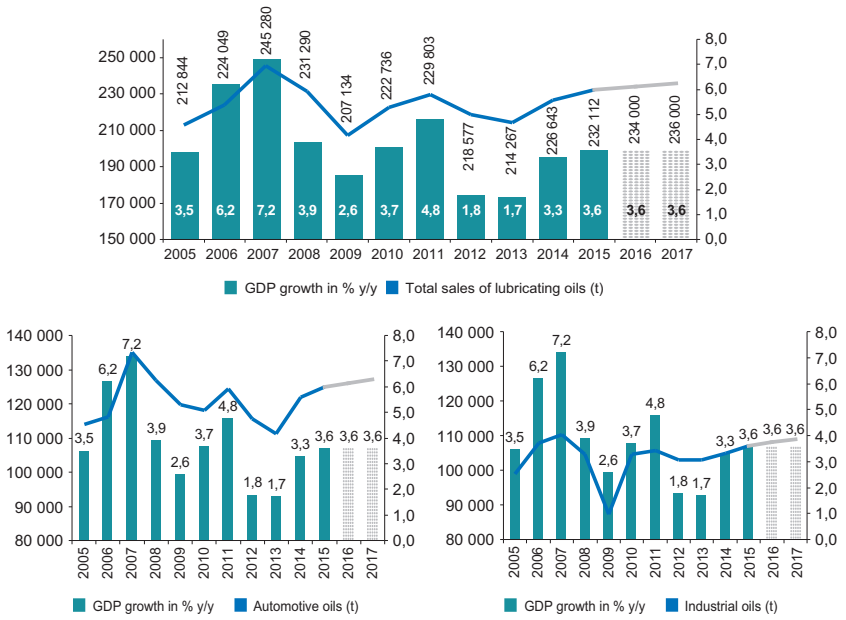
POPiHN maintains the forecast according to which in the scenario of a prolonged period of sluggishness within the Euro zone - which should currently be seen as the most likely to happen – even with major investments in infrastructure within the 2014-2020 EU perspective, exceeding a GDP growth rate of 4% in the coming years will be a considerable success for Poland. Only such level of growth could find reflection in a more visible improvement on the oil market. Yet the impulse to improve the market for lubricant oils may also come from inside, in the form of social programmes which can drive the trends in Poland in the years to come. Already in the previous editions of the report, POPiHN was indicating the ever growing importance of the demographic factor in the medium term. It results that in a situation where, even though indirectly, its impact may be reflected by the GDP level much faster and in the opposite direction than expected. However, one should also bear in mind the long-term costs, including the delay of the imminent economic downturn in time. Furthermore, should such schemes

be funded by raising taxes (e.g. VAT), without previously solving the problems which generate the grey zone on the oil and fuel market, they will result in increasing incentives for the grey zone and its further development.

It is the inefficiencies in combating the grey zone, of which POPiHN has talked for several years, that is both the key and – unfortunately – permanent factor shaping the domestic market. 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' or another uniform 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 neighboring 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 trans-border movements, both declared and effective.

The issue of the grey zone will therefore remain unsolved unless the European Commission takes measures to work out a coherent set of EU provisions, and as long as the authorities responsible for the customs and fiscal policy in individual Member States try to solve the problem while seeing only its parts related to their respective areas. There are indications that the chances for this will finally increase. Following several failed Polish-Lithuanian initiatives, Italy has currently applied for covering oils with the EMCS across the whole Europe. The presented arguments, which showed problems similar to those known in Poland and relating to the use of base oils as an admixture to diesel of mainly Slovenian origin, were so convincing that as at the date of this report none of the EU Member States expressed its objections. Such a situation has not occurred before. There are indications that the contents of the relevant decision may have been written already at the end of May 2016 during the meeting of the European Union Excise Committee, and then it will be voted by the Member States. **From the perspective of the lubricants and fuel industry, it is crucial that the possible decision to include lubricating oils under EMCS, be accompanied by the harmonization in the form of a single 'zero rate' or another efficient rate which is as close to it as possible. In this way, the losses to be borne by the lubricant oils industry as a consequence of the whole operation will be limited, and, furthermore, the factors encouraging the persistence of the grey zone, which prevails on both the lubricant oils market and the market of lubricant (base) oils combined with diesel, will be radically undermined.**

■ *Fig. 54* OVERALL OILS MARKET, AUTOMOTIVE AND INDUSTRIAL SEGMENTS IN TERMS OF POLISH GDP TOGETHER WITH FORECAST



Source: GUS data, POPiHN's own study

Fot. STATOIL

EXPLANATION OF TERMS

LUBRICATING OILS MARKET OVERALL In comparison to the previous years a change introduced in the report for 2015 consists in dividing 'overall market of lubricating oils' into only 2 segments: automotive and industrial. Unlike in previous years, the abovementioned amount will not include the third from the so-far presented categories, i.e. 'other not classified elsewhere' category. It results from the fact that a vital – and most probably strongly growing – part of products reported within this diversified group cannot be classified as 'lubricating oils' in the common understanding and/or technical meaning of this term. At the same time, in view of a significant growth of this group in recent years, its impact on the picture of the entire market would be too noticeable.

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, it 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 heavy-duty vehicles), even though they are used within those groups.

OTHER INDUSTRIAL OILS – Within this group we can mention its main components, namely machine oils (used mainly to grease loaded elements of working machinery and industrial devices such as bearings, guides, gears etc.) and oils for chainsaws.

OILS FOR TWO-STROKE ENGINES – In the POPiHN's methodology they are not classified as a separate category, but they are reported within two categories: 'other excluding gas engines' and 'monograde'.

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 2015, as it is aggregated after over 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 Przyjaźń 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 in Leuna and PCK in Schwedt. 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.

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 area of these two locations.

POMERANIAN SECTION

Crude oil flows over the Pomeranian Section to Grupa LOTOS. 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 235 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 tonnes 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).

■ *Fig. 55*

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.

■ *Fig. 56*

■ OIL TERMINAL IN GDAŃSK (JANUARY 2016)

Fot. PERN „PRZYJAŹŃ" S.A.

■ *Fig. 57*

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.

In the first phase of the investment crude oil tanks of 375,000 m³ of capacity were constructed, whereas the second phase of the project assumes constructing the tanks for petroleum and chemical products of 328,000 m³ of capacity.

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.

The Oil Terminal obtained the usage permit in December 2015 and its commercial operation will start in the first quarter of 2016.

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,

Fot. FUCHS OIL

including the ones related to the environment, and, most importantly, satisfying the growing requirements of our clients.

The Company owns a network of fuel depots, the total capacity of which is over 1.8 mln m^3. OLPP stores petrol, diesel, light fuel oil, biofuels and aviation fuel intended for supplying the current market as well as maintaining the intervention fuel stocks. Storage tanks can store 32,000 m^3.

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 meeting all the requirements 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.

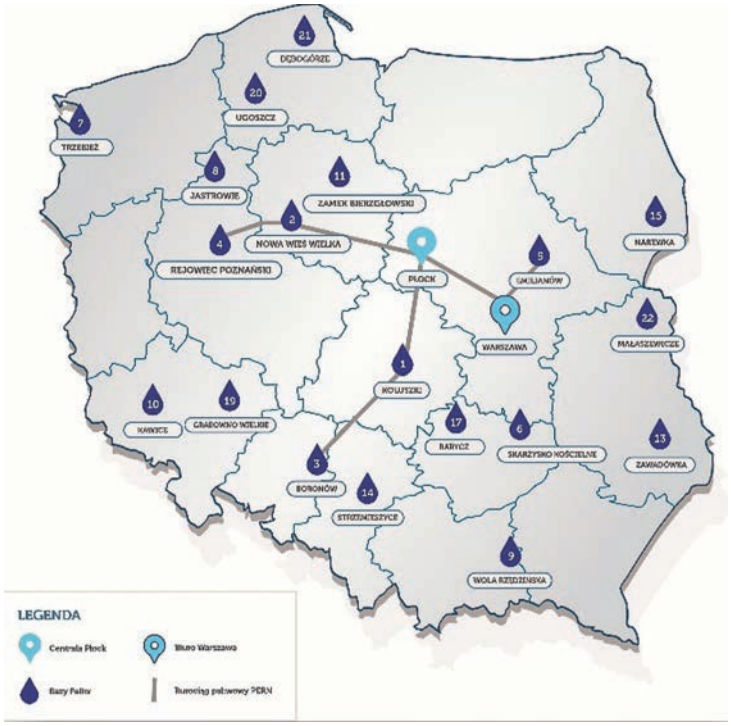
Most important investment projects accomplished in 2015:

- Launching a 'queueing' system for road tankers in the Fuel Depot in Rejowiec, optimising the depot's dispensing capacity as one of the elements of the target solution known as 'Intelligent Fuel Depots'.
- Modernisation of road tankers filling systems.
- Development of installations for adding bio-components to fuels.

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 intervention stocks, including the ones for the state's Agencja Rezerw Materiałowych (Material Reserves Agency). After two years (2013-2014) of a downward trend in utilisation of fuel depots' storage capacities, caused by declining demand for storage capacity, in 2015 the utilisation of capacity in OLPP increased.

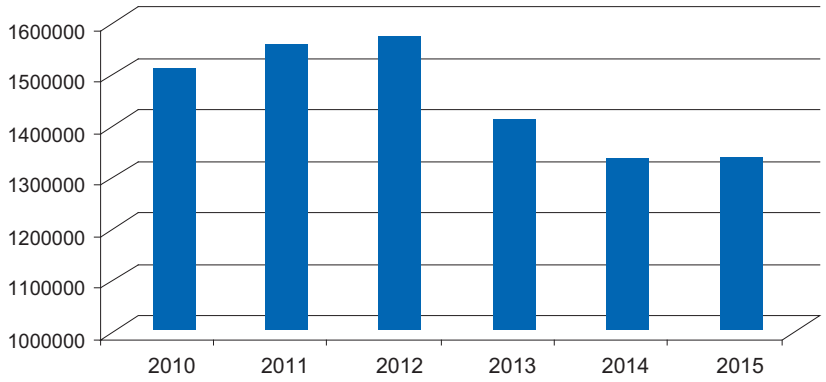
■ *Fig. 58* OLPP'S FUEL DEPOTS



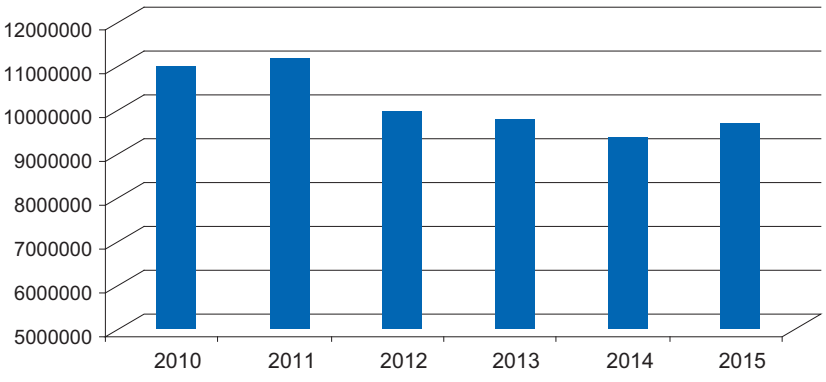
LOADING FROM OLPP'S FUEL DEPOTS

In 2015 the total volume of loadings in OLPP's Fuel Depots reached almost

■ *Fig. 59* UTILISATION OF CAPACITY IN OLPP'S FUEL DEPOTS (MONTHLY AVERAGE) [m^3]



■ *Fig. 60* LOADINGS IN OLPP'S FUEL DEPOTS [m^3]



10 mln m^3 and after a few years of decline in loadings in OLPP's Fuel Depots due to changes in economic conditions the unfavourable trend has been reversed.

BLENDING WITH BIOFUELS

The biofuels blending service has a key role for entrepreneurs and is aimed at businesses bound with an obligation to achieve the National Biofuels Target (NBT), i.e. a minimum % share of biofuels and other renewable fuels in the total amount of fuel introduced into the market.

OLPP creates conditions that allow to achieve the National Biofuels Target by offering the service of blending esters with diesel and bioethanol with petrol.

In 2015, in comparison with the previous year, terminals despatched more biofuels (which had been blended at OLPP's depots), which was the result of an overall increase in fuel loadings at OLPP's depots.

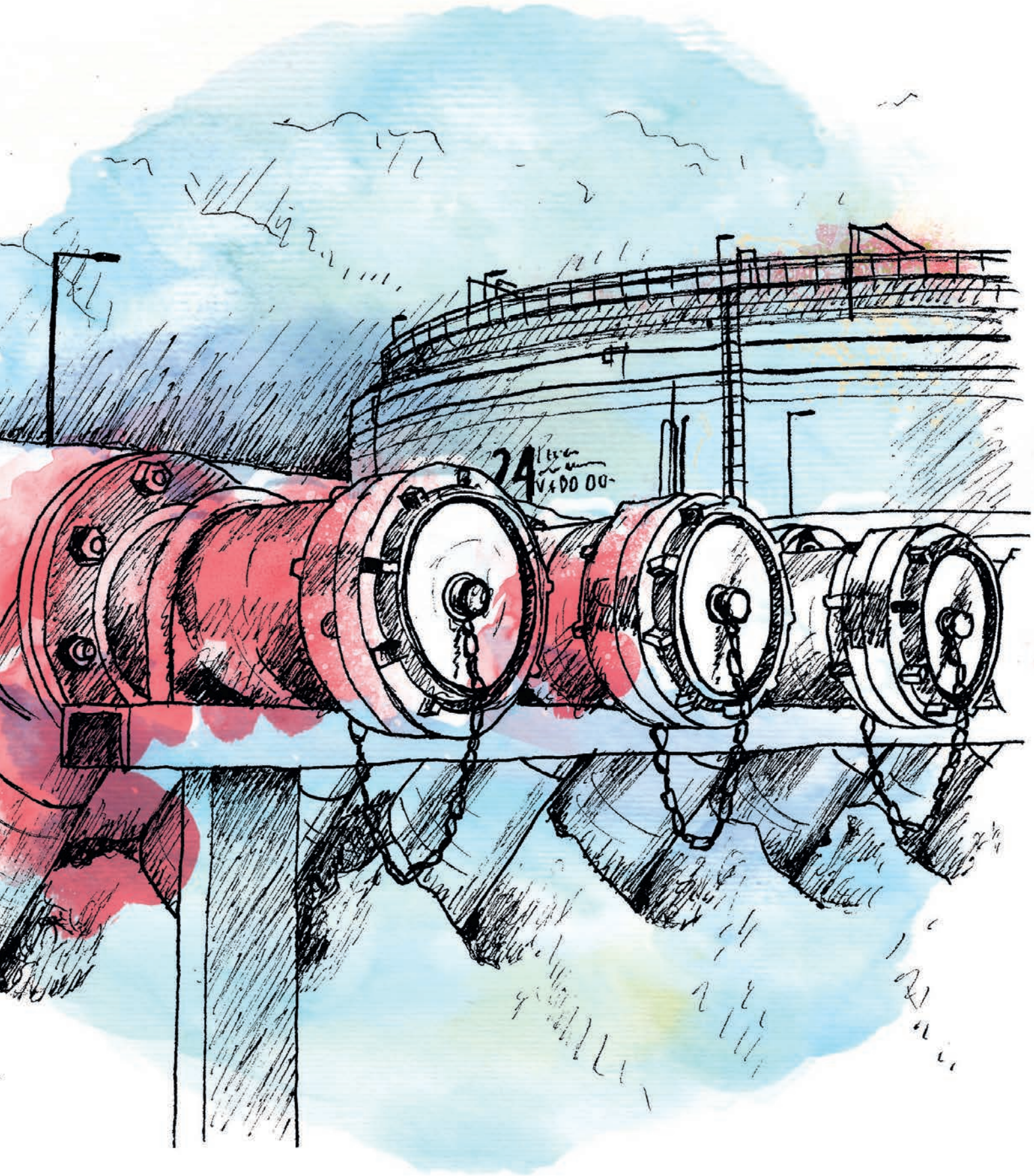
STOCK TICKET RESERVES

Stock ticket reserves service consists of creating and maintaining mandatory oil stocks on behalf of obliged entities. The clients using this service fulfil the obligation to maintain mandatory stocks without involving their own fuels (Art. 11 of Law of 16 February of 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, Dz. U. of 2014, item 1695).

The service is also aimed at LPG importers, who can maintain LPG stocks alternatively in unleaded petrol.

The service is expanding rapidly and its volume increased by as much as 8% in comparison with the previous year, whereas it is expected to reach a record level in 2016.

Fot. OLPP



Fot. PERN „PRZYJAŹŃ" S.A.

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Fot. BP, LOTOS, ORLEN, LUKOIL, OLPP, FUCHS OIL, PERN „PRZYJAŹŃ" S.A., SHELL, STATOIL, TOTAL, SLOVNAFT, TANQUID

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