

# The LOTOS Group value chain

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In 2011–2015, the LOTOS Group focused on its core activities, i.e. hydrocarbon exploration and production, crude oil processing and trading in naphtha products, striving to improve its commercial efficiency, combined with optimised refinery processes and logistics. The strategy performed was aimed at extending the value chain and increasing margins of the products sold.

## Crude oil and natural gas exploration and production

### Strategic areas for the LOTOS Group's upstream segment

#### Baltic Sea, Polish Economic Zone

All exploration, exploration and appraisal, and production licences in the Polish zone of the Baltic Sea are held by LOTOS Petrobaltic (or companies in which it holds equity interests). As at December 31st 2015, the upstream segment operated on the basis of:

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#### **Six oil and gas exploration and/or appraisal licences**

covering the following areas in the Polish Economic Zone of the Baltic Sea: Gotland, Łeba, Rozewie (proceedings are pending to convert the Łeba and Rozewie licences into combined exploration, appraisal and production licences), Gaz Południe (the licence expired in June 2016), Słupsk W and Słupsk E. The total area of the company's licences as at December 31st 2015 was over 6.2 thousand sq. km under exploration and appraisal licences.

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**for hydrocarbon production in the Baltic Sea, namely:**

- Production licence for the B-3 field, valid until 2026 and covering extraction of crude oil and associated natural gas in an area located around 73 km north off Cape Rozewie. Production from the field started in 1992.
- Production licence for the B-8 field (held by an SPV, B8 Sp. z o.o. BALTIC S.K.A.), valid until 2031 and covering extraction of crude oil and associated natural gas in an area located approximately 70 km north of Jastarnia. The field is undergoing development and initial production of hydrocarbons has commenced.
- B4 and B6 production licences, valid until 2032 and covering extraction of natural gas north of Łeba. The licences are held by Baltic Gas Sp. z o.o. i Wspólnicy Sp. k., a joint venture established by LOTOS Petrobaltic S.A. and CalEnergy Resources Poland Sp. z o.o. Under a cooperation agreement between LOTOS Petrobaltic S.A. and CalEnergy Resources Poland Sp. z o.o., preparations are underway to develop the fields. The total area of the production licences as at December 31, 2015 was 147.84 km<sup>2</sup>.

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In 2015, in the Baltic Sea, LOTOS Petrobaltic conducted production from the B3 field and launched initial production in the B8 field. Total output of crude oil from the Baltic Sea fields reached 162.4 thousand tonnes, while output of the associated natural gas was reported at 18.3 mcm.

[Information on the licences currently held](#)

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**Poland – onshore operations**

In 2012, LOTOS Petrobaltic launched onshore operations in Poland in partnership with PGNiG S.A. In 2013, the companies signed an agreement for joint operations within the Kamień Pomorski licence area, in the north west of Poland, and in 2014 – an agreement for joint operations within the Górowo Iławeckie licence area in the north east of Poland. Exploration and appraisal work is under way in both licence areas.

**Onshore operations in Lithuania**

AB LOTOS Geonafta, a company operating in Lithuania as part of the LOTOS Group's exploration and production segment, is the leader of crude oil production from onshore deposits in the country. In aggregate, as at the end of 2015 AB LOTOS Geonafta Group companies conducted hydrocarbon production from 14 fields. The AB LOTOS Geonafta Group produced 63.4 thousand tonnes of crude oil in 2015.

**Norwegian Continental Shelf**

LOTOS Exploration & Production Norge AS of Stavanger, Norway, is the subsidiary responsible for the development of operations on the Norwegian Continental Shelf. As at December 31st 2015, following the acquisition of the Sleipner production assets, LOTOS Norge held interests in 27 licences for oil exploration and production on the Norwegian Continental Shelf. In 2015, production from the Norwegian Continental Shelf amounted to 89.1 thousand tonnes of crude and 288.9 mcm of gas (316.5 thousand tonnes of crude and 981.3 mcm of gas inclusive of the annual output from the Sleipner assets as of the effective date of the acquisition: January 1st 2015).

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## Refining operations

Grupa LOTOS' refinery in Gdańsk, with a rated annual capacity of 10.5m tonnes of crude, is one of the newest and most advanced refineries in Europe in terms of applied technologies and environmental protection.

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### Strengths of Grupa LOTOS' refinery:

- High distillate rate: a large share of fuels in the product mix and focus on light and medium distillates, which enables the Company to successfully adjust its output to the domestic demand structure and exports opportunities.
  - Location: the refinery is located on the coast of the Baltic Sea, which is a strategic advantage given the proximity of and the direct pipeline connection with the handling infrastructure of Port Północny (a part of the Gdańsk Seaport located on the Gdańsk Bay), and gives the Company a major competitive edge in the region in terms of logistics (access to feedstock and product sales channels).
  - Unique combination of supply channels, guaranteeing simultaneous access to feedstock supplies by road (from Russia) and via PERN Przyjaźń S.A.'s pipeline network, as well as by sea, from numerous countries and the LOTOS Group's own fields.
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**With access to two supply channels, we are able to use different supply sources and respond flexibly to changes in petroleum product and crude oil prices, and can effectively diversify the types of crude processed at the refinery.**

## Sales and logistics

In 2015, the commercial activity of the LOTOS Group was carried out in the LOTOS Group and its subsidiaries, i.e. LOTOS Paliwa, LOTOS Oil, LOTOS Asphalt, LOTOS-Air BP Polska. The LOTOS Group sold in Poland (to foreign companies) and abroad, exporting by sea and land, while its subsidiaries produced and sold to particular sectors, i.e. fuel, oil and asphalt ones.

The LOTOS Group sells fuels on the Polish retail market solely by the agency of LOTOS Paliwa. On the wholesale market, the LOTOS Group sells both by the agency of the LOTOS Group, supplying to international companies and key customers (tenders for the Material Reserves Agency and the Military Property Agency), and by the agency of LOTOS Paliwa, in transactions contracted with wholesalers and independent operators.

In 2015, in the sector of production and sale, the LOTOS Group sold 10,924 thousand tonnes of products which is 8.1% more than in the analogous period in the previous year. The increased production and sale volumes of the LOTOS Group resulted from advantageous refinery margins remaining for the majority of 2015.

The highest increase in sale volumes was recorded for naphtha (+77.8%) and bunker fuel (+69.7%) though those products are not of key importance due to their relatively insignificant total production and sale volume in a year. The highest decrease in sale volumes was recorded in the sale of aviation fuel (-19.6%) which results from the changed development direction, i.e. departure from the wholesale market and focusing on more profitable retail channels.

Moreover, in 2015 the LOTOS Group sold crude oil (243 thousand tonnes) within the tender to the Material Reserves Agency.

The highest increase in sale volumes, just like in previous years, was recorded for diesel oil. Its sale volume was 4,853 thousand tonnes in 2015, reaching 44.1% share in total sale volume. The second largest item in the quantitative sale structure of the LOTOS Group was gasolines, with the share of 14.1%. In 2015, the gasoline sale volume reached 1,547 thousand tonnes which is 1.6% increase year-to-year. The last item for which the share in the total sale mass of the LOTOS Group reached more than 10% was heavy fuel oil, with the share in sale volume reaching 13.4%. The sale volumes for this group of products was 1,477 thousand tonnes in 2015, increasing 4.1% year-to-year.

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**Fuels:** The LOTOS Group sells fuels (unleaded gasoline, diesel oil and light fuel oil) in Poland and on foreign markets. LOTOS Paliwa operates solely on the domestic market, and its main customers include Polish fuel companies and the chain of LOTOS service stations.

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**Other petroleum products:** Sales of other petroleum products are managed by Grupa LOTOS, its subsidiaries and jointly-controlled entities. **LOTOS Oil** sells lubricating oils in Poland and abroad, chiefly through distributors and authorized customer service points. **LOTOS Asphalt** offers road bitumens to customers in Poland and abroad, mainly construction companies. LOTOS-Air BP Polska's offers aviation fuel in Poland only; the product is purchased by airlines (the 'into plane' segment) and wholesale market operators.

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More information on the LOTOS Group's [largest customers](#) and its effective logistics solutions

## Other business

The LOTOS Group performs also support activities auxiliary to the core operations. Key subsidiaries in this area include LOTOS Serwis, RCEkoenergia, Energobaltic, LOTOS Terminale, LOTOS Infrastruktura, LOTOS Lab, LOTOS Straż and Miliana Shipholding Group companies.

LOTOS Straż organizes and conducts rescue operations on the premises of the Grupa LOTOS refinery in order to protect human life and health as well as property, and to remove the consequences of fires, technical and transport disasters, chemical plant failures, ecological incidents and natural disasters.

As part of supervision of the Grupa LOTOS refinery's operational protection, LOTOS Straż performs inspections of the operational protection facilities and equipment with respect to:

- maintaining the roads and access roads passable and properly marked,
- water supply,

- operation of stationary and semi-stationary extinguishing and sprinkling systems,
- fire alarm system.

Services provided by LOTOS Lab consist in making tests and analyses of petroleum products, water, wastewater and work environment. LOTOS Lab is an eco-friendly company that fully respects and applies in practice the rules of occupational health and safety, and uses advanced and specialist instrumentation and control systems. Its laboratory is available on a 24/7 basis. Tests are performed within 24 hours from sample delivery. The company's customer base includes international inspection firms, state authorities, car servicing garages and individuals. In 2004, the company was awarded certificate No. AB 474 issued by the Polish Centre for Accreditation. The company also has certificates for 120 test methods.

LOTOS Ochrona provides people and property protection services to Grupa LOTOS and its subsidiaries, ensuring that appropriate security standards are met on the premises and remaining in constant contact with local police stations.

All security personnel are qualified physical security professionals and are licensed to use weapons.

Other auxiliary services provided by companies of the LOTOS Group include:

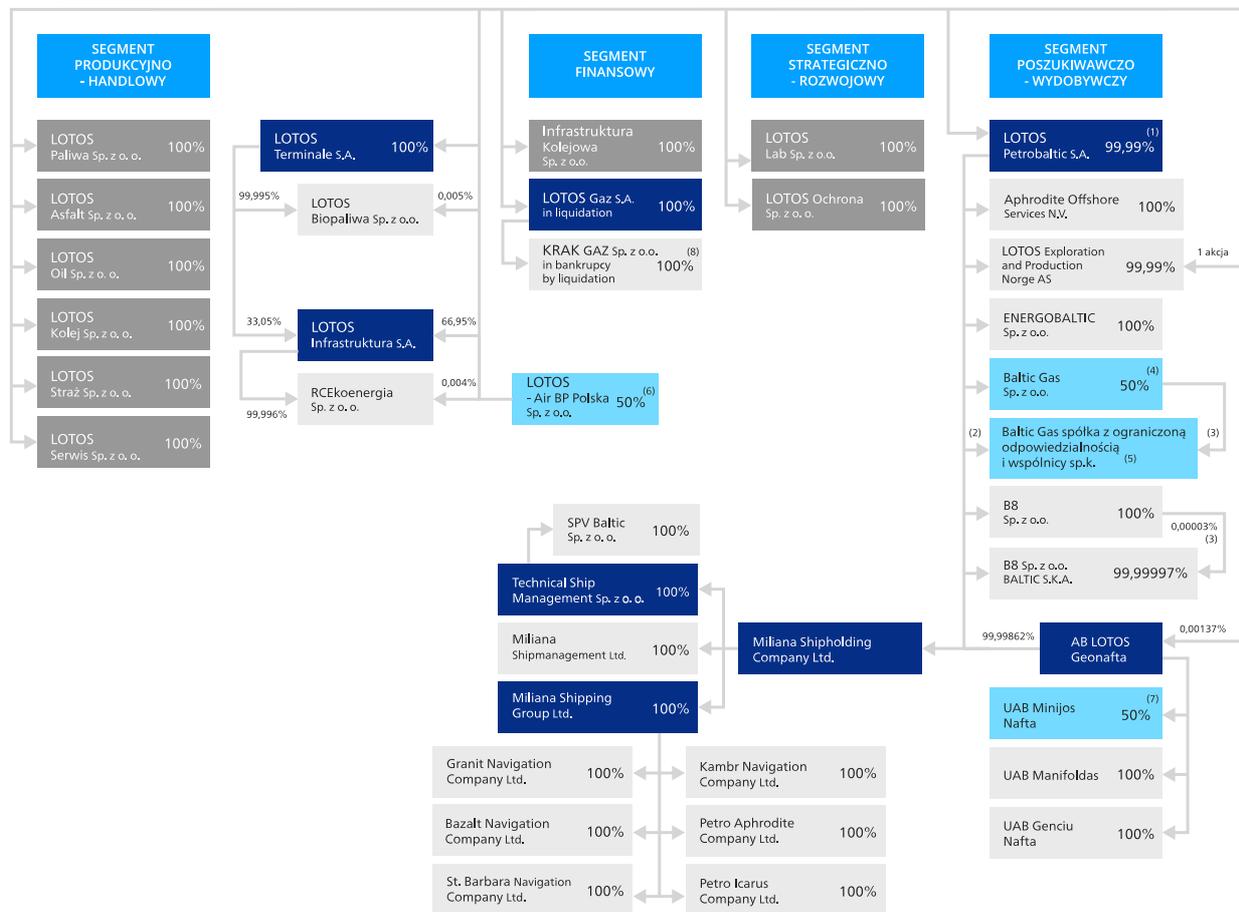
- Maintenance of mechanical and electric operations and controlling devices, overhaul and repair services,
- Manufacture and distribution of electricity, heat, liquid gas (LPG) and natural gas condensate,
- Storage and distribution of fuels,
- Renting and operating of own or leased real estate,
- Sea logistics services which consist in receipt and storage of crude oil in the production areas, transport of crude from the field to the port, and rescue assistance services for offshore rigs.

## Structure of the LOTOS Group

As at December 31st 2015, the LOTOS Group comprised Grupa LOTOS (the Parent), and 34 production and service companies, including:

- 13 direct subsidiaries of Grupa LOTOS,
- 21 indirect subsidiaries of Grupa LOTOS.

# The LOTOS Group's organisational chart as at December 31st 2015



(1) State Treasury – 0.01%

(2) Limited partner

(3) General partner

(4) CalEnergy Resources Poland Sp. z o.o. - 50%

(5) CalEnergy Resources Poland Sp. z o.o. - Limited partner

(6) BP Europa SE – 50%

(7) Odin Energi A/S – 50%

(8) Entity controlled by a bankruptcy administrator; a non-Group company

Entities classified as joint ventures accounted for using the equity method, which are non-Group companies

Additionally, Group LOTOS S.A. holds 8.97% shares in P.P.P. NAFTOPORT Sp. z o.o. (a company of the PERN Przyjaźń Group of Płock)

[More information on key companies of the LOTOS Group](#)