13. Property, plant and equipment

PLN '000	Dec 31 2014	Dec 31 2013 (restated)	Jan 1 2013 (restated)
Property, plant and equipment related to exploration for, development and production of crude oil and natural gas resources			
Property, plant and equipment related to exploration for and evaluation of crude oil and natural gas resources	44,769	182,681	134,677
Property, plant and equipment related to development of crude oil and natural gas resources	522,350	681,596	713,178
Property, plant and equipment related to production of crude oil and natural gas resources	600,390	879,500	351,610
Total	**1,167,509**	**1,743,777**	**1,199,465**
Refinery and other property, plant and equipment			
Land	475,666	456,390	428,922
Buildings, structures	3,151,731	3,241,992	3,304,305
Plant and equipment	3,851,578	4,000,393	4,090,413
Vehicles, other	569,425	309,646	341,284
Property, plant and equipment under construction	269,745	256,875	280,211
Total	**8,318,145**	**8,265,296**	**8,445,135**
Total	**9,485,654**	**10,009,073**	**9,644,600**

13.1 Property, plant and equipment related to exploration for, evaluation, development and production of crude oil and natural gas resources

		Property, plant and equipment related to exploration for and evaluation of crude oil and natural gas resources			Property, plant and equipment related to development of crude oil and natural gas resources			Property, plant and equipment related to production of crude oil and natural gas				
PLN '000	**Note**	**Poland**	**Lithuania**	**Total**	**Poland**	**Norway**	**Total**	**Poland**	**Norway**	**Lithuania**	**Total**	**Total**
Gross carrying amount Jan 1 2014 (restated)		**224,532**	**617**	**225,149**	**196,741**	**1,572,207**	**1,768,948**	**527,959**	**563,107**	**112,881**	**1,203,947**	**3,198,044**
Purchase		*70,756*	*10,061*	*80,817*	*209,388*	*349*	*209,737*	*5,751*	*6,385*	*14,902*	*27,038*	*317,592*
Exchange differences on translating foreign operations		*-*	*7*	*7*	*-*	*(71,001)*	*(71,001)*	*-*	*(27,286)*	*3,473*	*(23,813)*	*(94,807)*
Recognition of assets related to future costs of decommissioning of crude oil and natural gas production facilities	*13.1.4*	*-*	*-*	*-*	*642*	*-*	*642*	*-*	*-*	*1,074*	*1,074*	*1,716*
Estimated cost related to decommissioning of oil and gas extraction facilities	*13.1.4*	*-*	*-*	*-*	*-*	*27,743*	*27,743*	*(36,396)*	*33,455*	*(844)*	*(3,785)*	*23,958*
Reclassification of oil and gas exploration and evaluation assets to production assets (1)		*(176,425) (2)*	*(10,685) (3)*	*(187,110)*	*176,425 (2)*	*-*	*176,425*	*-*	*-*	*10,685 (3)*	*10,685*	*-*
Expenditure written off due to project discontinuation		*(33,097) (4)*	*-*	*(33,097)*	*-*	*-*	*-*	*-*	*-*	*(5,772) (5)*	*(5,772)*	*(38,869)*

Sale	-	-	-	-	*(2,504)*	*(2,504)*	-	-	*(75)*	*(75)*	*(2,579)*
Other	*6,164*	-	*6,164*	*(5,150)*	*8,291*	*3,141*	*(195)*	*7,190*	*(219)*	*6,776*	*16,081*
Gross carrying amount Dec 31 2014	**91,930**	**-**	**91,930**	**578,046**	**1,535,085**	**2,113,131**	**497,119**	**582,851**	**136,105**	**1,216,075**	**3,421,136**
Accumulated depreciation Jan 1 2014 (restated)	**-**	**-**	**-**	**52,007**	**-**	**52,007**	**284,532**	**-**	**33,532**	**318,064**	**370,071**
Depreciation	-	-	-	*3,579*	-	*3,579*	*28,505*	*210,962*	*16,208*	*255,675*	*259,254*
Exchange differences on translating foreign operations	-	-	-	-	-	-	-	*(11,221)*	*1,210*	*(10,011)*	*(10,011)*
Sale	-	-	-	-	-	-	-	-	*(75)*	*(75)*	*(75)*
Other	-	-	-	*110*	-	*110*	*(684)*	-	*(2)*	*(686)*	*(576)*
Accumulated depreciation Dec 31 2014	**-**	**-**	**-**	**55,696**	**-**	**55,696**	**312,353**	**199,741**	**50,873**	**562,967**	**618,663**
Impairment losses Jan 1 2014 (restated)	**42,468**	**-**	**42,468**	**-**	**1,035,345**	**1,035,345**	**-**	**-**	**6,383**	**6,383**	**1,084,196**
Recognised	*31,853*	-	*31,853*	-	*578,447*	*578,447*	-	*45,854*	*2,708*	*48,562*	*658,862*
Exchange differences on translating foreign operations	-	-	-	-	*(76,203)*	*(76,203)*	-	*(2,439)*	*224*	*(2,215)*	*(78,418)*
Used/Reversed	*(27,160)*	-	**(27,160)**	-	*(2,504)*	*(2,504)*	-	-	*(12)*	*(12)*	*(29,676)*
Impairment losses Dec 31 2014	**47,161**	**-**	**47,161**	**-**	**1,535,085**	**1,535,085**	**-**	**43,415**	**9,303**	**52,718**	**1,634,964**
Net carrying amount Dec 31 2014	**44,769**	**-**	**44,769**	**522,350**	**-**	**522,350**	**184,766**	**339,695**	**75,929**	**600,390**	**1,167,509**

(1) Exploration and evaluation assets relating to mineral resources with demonstrable technical feasibility and commercial viability of extraction.

(2) B-8 field.

(3) Ablinga field and a well in Zvaginai formation.

(4) Decommissioning of the B-28 well and exploration and evaluation assets related to the Sambia W field.

(5) Decommissioning of a well in Zvaginai formation.

		Property, plant and equipment related to exploration for and evaluation of crude oil and natural gas resources			Property, plant and equipment related to development of crude oil and natural gas resources			Property, plant and equipment related to production of crude oil and natural gas				
PLN '000	**Note**	**Poland**	**Lithuania**	**Total**	**Poland**	**Norway**	**Total**	**Poland**	**Norway**	**Lithuania**	**Total**	**Total**
Gross carrying amount Jan 1 2013 (restated)		**198,975**	**-**	**198,975**	**171,141**	**1,768,634**	**1,939,775**	**530,870**	**-**	**86,589**	**617,459**	**2,756,209**
Purchase		*75,838*	*627*	*76,465*	*26,956*	*11,530*	*38,486*	*13,408*	*6,804*	*25,000*	*45,212*	*160,163*
Acquisition of Heimdal assets (1)		-	-	-	-	-	-	-	*336,769*	-	*336,769*	*336,769*
Exchange differences on translating foreign operations		-	*(10)*	*(10)*	-	*(190,679)*	*(190,679)*	-	*(46,175)*	*865*	*(45,310)*	*(235,999)*
Estimated cost related to decommissioning of oil and gas extraction facilities	*13.1.4*	-	-	-	*(1,356)*	*11,995*	*10,639*	*(48)*	*265,709*	*717*	*266,378*	*277,017*
Contribution of B-4 and B-6 field development assets to Baltic Gas Sp. z o.o. i wspólnicy sp.k. (2)		*(48,287)*	-	*(48,287)*	-	-	-	-	-	-	-	*(48,287)*
Reclassification to non-current assets (or disposal groups) held for sale (3)		-	-	-	-	*(29,273)*	*(29,273)*	-	-	-	-	*(29,273)*
Sale		-	-	-	-	-	-	*(214)*	-	-	*(214)*	*(214)*
Decommissioning		-	-	-	-	-	-	*(19)*	-	*(27)*	*(46)*	*(46)*
Other		*(1,994)*	-	*(1,994)*	-	-	-	*(16,038)*	-	*(263)*	*(16,301)*	*(18,295)*
Gross carrying amount Dec 31 2013 (restated)		**224,532**	**617**	**225,149**	**196,741**	**1,572,207**	**1,768,948**	**527,959**	**563,107**	**112,881**	**1,203,947**	**3,198,044**
Accumulated depreciation Jan 1 2013 (restated)		**-**	**-**	**-**	**47,323**	**-**	**47,323**	**241,677**	**-**	**17,880**	**259,557**	**306,880**
Depreciation		-	-	-	*4,684*	-	*4,684*	*43,009*	-	*15,774*	*58,783*	*63,467*
Exchange differences on translating foreign operations		-	-	-	-	-	-	-	-	*(15)*	*(15)*	*(15)*
Sale		-	-	-	-	-	-	*(139)*	-	-	*(139)*	*(139)*
Decommissioning		-	-	-	-	-	-	*(15)*	-	-	*(15)*	*(15)*
Other		-	-	-	-	-	-	-	-	*(107)*	*(107)*	*(107)*
Accumulated depreciation Dec 31 2013 (restated)		**-**	**-**	**-**	**52,007**	**-**	**52,007**	**284,532**	**-**	**33,532**	**318,064**	**370,071**

Impairment losses Jan 1 2013 (restated)	**64,298**	**-**	**64,298**	**-**	**1,179,274**	**1,179,274**	**-**	**-**	**6,292**	**6,292**	**1,249,864**
Recognised	*26,842*	*-*	*26,842*	*-*	*1,794*	*1,794*	*-*	*-*	*-*	*-*	*28,636*
Exchange differences on translating foreign operations	*-*	*-*	*-*	*-*	*(125,868)*	*(125,868)*	*-*	*-*	*91*	*91*	*(125,777)*
Used / Reversed	*(48,672)*	*-*	*(48,672)*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*(48,672)*
Reclassification to non-current assets (or disposal groups) held for sale (3)	*-*	*-*	*-*	*-*	*(19,855)*	*(19,855)*	*-*	*-*	*-*	*-*	*(19,855)*
Impairment losses Dec 31 2013 (restated)	**42,468**	**-**	**42,468**	**-**	**1,035,345**	**1,035,345**	**-**	**-**	**6,383**	**6,383**	**1,084,196**
Net carrying amount Dec 31 2013 (restated)	**182,064**	**617**	**182,681**	**144,734**	**536,862**	**681,596**	**243,427**	**563,107**	**72,966**	**879,500**	**1,743,777**

(1) Acquisition of the Heimdal area assets in Norway (see Note 13 to the consolidated financial statements for 2013).

(2) Joint venture operated jointly with CalEnergy Resources Poland Sp. z o.o., related to development of the B-4 and B-6 gas fields (see Note 2 to the consolidated financial statements for 2013).

(3) YME field assets.

13.1.1 Property, plant and equipment related to exploration for and evaluation of crude oil and natural gas resources

The Group's expenditure on property, plant and equipment related to exploration for and evaluation of mineral resources amounted to PLN 80,817 thousand in 2014 (2013: PLN 76,465 thousand). Cash flows associated with that expenditure amounted to PLN 74,822 thousand (2013: PLN 75,318 thousand), whereas the amount of outstanding investment commitments was PLN 8,110 thousand as at December 31st 2014 (December 31st 2013: PLN 2,115 thousand).

Property, plant and equipment are carried as exploration and evaluation property, plant and equipment until the technical feasibility and commercial viability of extracting the discovered mineral resources are demonstrated.

Poland

As at December 31st 2014, property, plant and equipment related to exploration for and evaluation of crude oil and natural gas resources included mostly expenditure incurred on the B-21, B-23, B-27 and B-28 fields in the Baltic Sea.

The Group also holds interests in a joint venture operated in the form of a special purpose vehicle under the name of Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp. k. ("Baltic Gas", see Note 2 to the consolidated financial statements for 2013). The venture is operated by the Group jointly with CalEnergy Resources Poland Sp. z o.o. as part of further activities related to the B-4 and B-6 gas condensate formations in the Baltic Sea.

In 2014, expenditure incurred by the Group on the B-21, B-27 and B-28 fields reached PLN 70,756 thousand. The expenditure made in 2013, of PLN 75,838 thousand, related mainly to the B-8 and B-28 fields.

Given a very low volume of potential recoverable reserves, in 2014 the Group decided to recognise an impairment loss of PLN 29,914 thousand on the expenditure incurred in 2014 on the B-27 well (see Note 9.4) and an impairment loss of PLN 1,939 thousand on the expenditure incurred on the B-28 well and formation. The total amount of impairment losses was PLN 31,853 thousand (see Note 9.4).

The Group also decided to plug and abandon the well in the B-28 field. It used previously recognised impairment losses of PLN 27,160 thousand to write off the discontinued projects, and thus the write-off did not affect the Group's consolidated net profit or loss for 2014.

Moreover, as the Group decided to discontinue further investments in the Sambia W block and its mining usage rights to the block expired, as at December 31st 2014 the Group wrote off its expenditure on hydrocarbon exploration and evaluation in the area of PLN 5,937 thousand (see Note 9.4).

Given that no commercial hydrocarbon flows were recorded on the B-28 field, in 2013 LOTOS Petrobaltic S.A. decided to recognise a PLN 26,842 thousand impairment loss on the expenditure incurred in relation to the formation and well (see Note 9.3).

Following a decision made in 2013 to continue operations in the B-4 and B-6 fields, in the first half of 2013 LOTOS Petrobaltic S.A. reversed a PLN 48,273 thousand impairment loss on assets related to the fields (see Note 9.3), and contributed these assets to special purpose vehicle Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp. k, its joint venture with CalEnergy Resources Poland Sp. z o.o., set up for the purpose of further development of the B-4 and B-6 fields (see Note 2 to the consolidated financial statements for 2013). Impairment losses were recognised for the full amount of expenditure on gas exploration conducted on the B-4 and B-6 fields, incurred in previous years by LOTOS Petrobaltic S.A.

Lithuania

In 2014, the Group incurred expenditure on property, plant and equipment related to exploration for and evaluation of crude oil and natural gas resources in Lithuania in the amount of PLN 10,061 thousand (in 2013: PLN 637 thousand). The expenditure in 2014 related chiefly to the Ablinga field and the well in the Zvaginai formation.

13.1.2 Property, plant and equipment related to development of crude oil and natural gas resources

Poland

B-8 field

The Group's crude oil and natural gas development assets include expenditure incurred on the B-8 field, which is located in the Baltic Sea, about 70 km north of Jastarnia (in the vicinity of the B-3 field).

Given that the Group made a decision that development of the B-8 field would be conducted on a project finance basis, in December 2013 a separate special purpose vehicle named B8 Spółka z ograniczoną odpowiedzialnością BALTIC spółka komandytowo-akcyjna ("SPV B-8") was established within the Group. In 2014, LOTOS Petrobaltic S.A. contributed to SPV B-8 mining usage rights, the right to use geological data, and the property, plant and equipment related to the project, including the Petrobaltic drilling platform. B-8 SPV will carry out further work related to development of the field, including preparation of subsea installations and other tasks necessary to make the site ready for production. In August 2014, SPV B-8, Polskie Inwestycje Rozwojowe S.A., Bank Gospodarstwa Krajowego and Bank Pekao S.A. entered into agreements on financing of the B-8 project through a note issue programme (see Note 2 to the consolidated financial statements for 2013 and Note 27 to the interim condensed consolidated financial statements for the three and nine months ended September 30th 2014). As at December 31st 2014, the financing had not yet been made available (see Note 27.3).

In 2014, the Group's expenditure on development of the B-8 field amounted to PLN 209,388 thousand, and related mainly to the drilling of production wells and water injectors, as well as conversion of the Petrobaltic platform. The expenditure incurred in 2013 was spent on conversion of the platform and construction of the pipeline infrastructure, and amounted to PLN 26,956 thousand.

Norway

YME field

The Group holds a 20% interest in two licences covering the YME field, which is situated 120 km to the south-west off the Norwegian coast (Egersund), in the southern part of the North Sea. The Group has not yet commenced production from the YME field due to technical defects in the mobile operating and production unit (MOPU).

As at December 31st 2014, property, plant and equipment associated with development of the YME field included expenditure of PLN 1,551m (NOK 3,275m) incurred by LOTOS Exploration and Production Norge AS ("LOTOS E&P Norge AS"), a LOTOS Petrobaltic Group company, on acquisition of interests in production licences and on development of the field.

In the first half of 2014 and in previous periods due to significant delays in the implementation of the project, cost overruns, and defects of the MOPU that had been intended to be used to produce hydrocarbons from the YME field, the Group tested the YME assets for impairment, which resulted in impairment losses being recognised on those assets. More details on the impairment tests performed in the previous years and the resulting impairment losses recognised on the YME assets are included in the Group's financial statements for 2013 (see Note 13) and 2012 (see Note 13).

As discussed in Note 35.1 of these financial statements, in March 2013 Talisman Energy Norge AS, the YME field operator ("Talisman", "Operator") and Single Buoy Moorings Inc. ("SBM"), supplier of the MOPU which was to be used to conduct production from the YME field, announced that an agreement had been reached to remove the defective MOPU (evacuated in mid-July 2012) from the YME field and to terminate all existing contracts and agreements between the parties in connection with the project.

As the decision-making process concerning the choice of the YME field development concept protracts (the decision was originally expected at the end of Q1 2014) and no development scenario has been selected by the YME consortium partners, the Group decided to re-analyse the development prospects for its YME assets and, consequently, recognise further impairment loss reducing the carrying amount of its YME assets to zero. The analysis accounted for the following facts:

- continued uncertainty and risks resulting from the protracted process of selecting Plans for Development and Operation of the YME field, originally expected to be completed by the end of Q1 2014,
- lack of decision as to the YME field development scenario,
- absence of an approved version of the budget for further YME field development,
- delay of the estimated production launch at the YME field.

Considering the above circumstances, on June 30th 2014 an impairment loss was recognised in relation to all capital expenditure on the YME project. This means that impairment losses presented in these consolidated financial statements, taking into account the effect of currency exchange, are PLN 1,551m (NOK 3,275m). Impairment losses on the expenditure associated with the YME project include impairment recognised in respect of the decommissioning asset increase after the Operator provided an updated estimate of the cost of decommissioning of the YME field production infrastructure, which resulted in a concurrent increase in decommissioning asset charged to other expenses in the consolidated statement of comprehensive income of PLN 28m (NOK 55m). Accordingly, operating loss on the impairment of the YME field assets, including the remeasurement of the estimated provision for future decommissioning costs, recognised in the statement of comprehensive income for 2014 was PLN 578m (NOK 1,157m), whereas the effect on net profit (after accounting for the deferred tax effect) was PLN 196m (NOK 392m).

The impairment loss on the YME project disclosed in these consolidated financial statements has no effect on the future ability to develop other LOTOS E&P Norge AS assets related to other production and exploration licences.

Given the nature of the Joint Operating Agreement between the YME project partners and the guarantees issued by LOTOS Petrobaltic S.A. for the benefit of the Norwegian government with respect to LOTOS E&P Norge AS's exploration and production activities on the Norwegian Continental Shelf, the impairment loss does not preclude further capital expenditure on the YME field or the necessity to revalue the expected decommissioning costs, in particular once the YME field development concept is selected or decision is made to abandon the field and the Norwegian government approves a revised Plan for Development and Operation or abandonment decision.

As at December 31st 2014, there was no unanimous decision of the YME consortium members as to further steps to be taken in relation to the field. Pursuant to a decision of a majority of the consortium members, a plan of complete decommissioning of the YME field infrastructure is currently being developed, which will then serve as the basis for further decisions regarding the YME project. It has been preliminarily assumed that the YME decommissioning process will be completed by 2019.

In the opinion of LOTOS E&P Norge AS, the amount of the provision for decommissioning of the infrastructure associated with the YME field (see

Note 30.1) reflects the necessary commitment by LOTOS E&P Norge AS if the scenario of earlier complete decommissioning materialises by 2019. This is a consequence of the phase (currently under way) of preparation of the YME field infrastructure decommissioning plan, adopted by the consortium with the votes of the majority of its members and reflected in the project budget to be approved for 2015, taking into account a reduction in the decommissioning cost estimate for 2016-2019 in connection with a drop in the market cost of such services in Norway following the decline in market prices of hydrocarbons. At the same time, LOTOS E&P Norge AS has been involved in a number of steps to abandon the early decommissioning scenario and redevelop the field using a production platform operating in a different field.

Furthermore, work related to removal of the defective MOPU from the YME field, for which the partners obtained financing under an agreement with SBM, is still under way. The scheduled removal date of the MOPU remains unchanged (July 2015), while the amount of expected costs of the operation (most of which have been already contracted) has been properly reflected in these financial statements by updating relevant provisions in accordance with the best current knowledge of the Company's Management Board as at the date of these statements (see Note 30.1).

Taking into account the recognised impairment losses on the YME expenditure and the incurred tax losses that may be carried forward, in the consolidated statement of financial position as at December 31st 2014 the Group recognised a deferred tax asset. The total amount of the tax asset related to the Group's operations in Norway was PLN 1,307m (NOK 2,759m) as at December 31st 2014. Given that under the Norwegian tax legislation tax losses can be carried forward indefinitely, and that on December 30th 2013 the Group acquired interests in the Heimdal assets, including interests in producing fields from which the Group derives revenue, the Management Board believes that the deferred tax asset recognised as at December 31st 2014 is fully realisable at the amount disclosed in these consolidated financial statements. The effect of impairment losses recognised in 2014 on the YME field assets has been presented in Note 10.3.1.

13.1.3 Property, plant and equipment related to production of crude oil and natural gas resources

Poland

Offshore oil and gas production facility in the B-3 field

Property, plant and equipment related to crude oil and natural gas production in Poland comprises the assets of the offshore production facility in the B-3 field, located in the Baltic Sea area, approximately 70 km north off Cape Rozewie.

LOTOS Petrobaltic S.A.'s production infrastructure in the B-3 field includes the Baltic Beta production platform, the PG-1 unmanned riser platform, as well as subsea installations of the B3-6 and B3-9 nodes. This infrastructure supports the operation of more than ten production and injection wells, as well as separator facilities.

Crude oil produced from the field (Rozewie crude) is transported via subsea pipelines to a tanker or carrier vessel and sold entirely to the Company. Natural gas extracted together with crude oil is transported via a pipeline to an onshore CHP plant in Władysławowo operated by Energobaltic Sp. z o.o. (a company of the LOTOS Petrobaltic Group).

In 2014, capital expenditure on the offshore oil production facility in the B-3 field amounted to PLN 5,751 thousand and was incurred mainly on classification surveys of the PG-1 and Baltic Beta platforms. Capital expenditure on property, plant and equipment related to crude oil and natural gas production incurred by the Group in 2013, totalling PLN 13,408 thousand, related mainly to a classification survey of the Baltic Beta platform. In addition, in 2013 the Group made an adjustment to capital expenditure incurred on the work to unearth the legs of the Baltic Beta platform of PLN 16,038 thousand considering the pending dispute with the contractor, AGR Subsea Ltd ("AGR", see Note 35.1), and reversal of the related liability recognised in the previous reporting periods, as the risk of unfavourable resolution of the dispute in court is negligible.

Norway

Heimdal offshore gas and condensate production facility

Skirne/Byggve, Atla and Vale fields

The upstream operations in Norway are carried out by LOTOS Production and Exploration Norge (LOTOS E&P Norge AS, a company of the LOTOS Petrobaltic Group) on the Norwegian Continental Shelf.

The Group's key production assets located in the area include interests in gas-condensate fields: Skirne/Byggve (30%), Alta (20%) and Vale (25.75%), acquired together with an interest (5%) in the Heimdal gas and condensate processing and export hub as part of a portfolio comprising a total of 14 licences in the central part of the North Sea (see Note 13 to the consolidated financial statements for 2013).

The entire volume of gas and condensate produced by the Group from these fields is sold to external customers via a pipeline network delivering the products to various off take points in the UK and continental Europe.

The production infrastructure of the Heimdal offshore facility comprises the Heimdal production platform with ancillary infrastructure (the Heimdal gas and condensate processing and export hub) and subsea production wells.

As at December 31st 2014, the Group tested the assets for impairment and determined their recoverable amount as their value in use measured using the discounted future cash flows method.

Key assumptions underlying computation of the recoverable amount of the tested property, plant and equipment:

- the cash flow projection period was assumed to equal the asset's planned life,
- the discount rate was assumed to equal the weighted average cost of capital, and was calculated at 7.5% after taxation with the 78% marginal tax rate (applicable in Norway),
- production and sales volumes, capital expenditure, operating expenses and field decommissioning costs were assumed as projected by the field operators,

The following price assumptions were adopted for the purposes of the estimates:

- for crude oil in USD/bbl (per barrel):

- 2015–2018 – prices in line with the price assumptions for the available market scenarios,
- 2019 and beyond – prices remaining stable in the long term on par with the 2018 level, adjusted for inflation.

- for natural gas in p/th (pence/thermal units):

- 2015–2020 – prices in line with the price assumptions for the available market scenarios, and in 2021 and beyond – prices remaining stable in the long term on par with the 2020 level, adjusted for inflation;

Due to significant market volatility, in particular with respect to oil and gas prices, the adopted assumptions might be subject to justifiable changes, and such changes may in the future cause a change of the carrying amounts of assets held by LOTOS E&P Norge. To determine the effect of key factors on the test results, the Group carried out an analysis of sensitivity to a -15%/+15% change of oil and gas price, -15%/+15% change in production volumes, and -15%/+15% change in the USD/NOK exchange rate.

Following the impairment tests, an impairment loss was recognised on the property, plant and equipment related to hydrocarbon production (Heimdal, Vale, Skirne, Atla) in a total amount of PLN 45,854 thousand (NOK 91,690 thousand); see Note 9.4.

Following the impairment tests, an impairment loss of PLN 13,823 thousand (NOK 27,640 thousand) was also recognised on the Heimdal portfolio's intangible assets related to exploration for and evaluation of hydrocarbon resources in the Rind field; see Note 15.1.1 and Note 9.4.

Lithuania

Onshore oil production facilities

The upstream operations in Lithuania are carried out by the AB LOTOS Geonafta Group, which comprises AB LOTOS Geonafta, UAB Genciu Nafta and UAB Manifoldas. The Group also holds interests in UAB Minijos Nafta, a joint venture.

Property, plant and equipment related to Lithuanian production operations include onshore production facilities of the AB LOTOS Geonafta Group companies, which comprise surface and underground infrastructure such as production wells, pumps, pipelines, crude oil and formation water tanks and a gas separation system. The production wells are fitted with surface and downhole pumps. Oil from the production facility is fed to a pipeline system connected to a storage centre, from where it is shipped by land to a marine terminal in Liepāja (Latvia). The oil is then transported to Gdańsk on a tanker ship and sold to the Company.

In 2014, the Group's capital expenditure on property, plant and equipment related to Lithuanian production infrastructure was PLN 14,902 thousand (LTL 12,282 thousand), compared with PLN 25,000 thousand (LTL 20,499 thousand) in 2013.

Based on the results of an impairment test of the Lithuanian onshore production facilities performed as at December 31st 2014, the Group recognised an impairment loss of PLN 2,708 thousand (LTL 2,232 thousand) on production infrastructure associated with the Ablinga field (see Note 9.4.) The method and assumptions used to determine the recoverable amounts of the assets were consistent with those applied to determine the recoverable amounts of the Lithuanian production licences, tested as at December 31st 2014 (see Note 15.1.2.).

In addition, in 2014 the Group wrote off expenditure on property, plant and equipment related to the Zvaginai well of PLN 5,772 thousand (LTL 4,757 thousand) (see Note 9.4.).

13.1.4 Assets related to future costs of decommissioning of crude oil and natural gas production facilities

PLN '000	Dec 31 2014	Dec 31 2013 (restated)	Jan 1 2013 (restated)
Assets related to development of crude oil and natural gas resources	24,573	132,125	134,134
Assets related to production of crude oil and natural gas resources	178,162	288,746	53,571
Total	**202,735**	**420,871**	**187,705**

As part of its production assets related to production and development of oil and gas resources, the Group discloses decommissioning assets for future costs of decommissioning of oil and gas production facilities depreciated with the units-of-production method. These assets are recognised along with the recognition and remeasurement of provisions for decommissioning of oil and gas extraction facilities.

		Assets related to development of crude oil and natural gas resources			Assets related to production of crude oil and natural gas resources				
PLN '000	Note	Poland	Norway	Total	Poland	Norway	Lithuania	Total	Total
Gross carrying amount Jan 1 2014 (restated)		**27,929**	**108,194**	**136,123**	**108,954**	**245,671**	**2,224**	**356,849**	**492,972**
Recognised	*13.1; 30.1*	*642*	*-*	*642*	*-*	*-*	*1,074*	*1,074*	*1,716*
Estimated cost related to decommissioning of oil and gas extraction facilities	*13.1; 30.1*	*-*	*27,743*	*27,743*	*(36,396)*	*33,455*	*(844)*	*(3,785)*	*23,958*
Exchange differences on translating foreign operations		*-*	*(6,238)*	*(6,238)*	*-*	*(12,592)*	*62*	*(12,530)*	*(18,768)*
Other		*-*	*-*	*-*	*-*	*-*	*(218)*	*(218)*	*(218)*
Gross carrying amount Dec 31 2014		**28,571**	**129,699**	**158,270**	**72,558**	**266,534**	**2,298**	**341,390**	**499,660**
Accumulated amortisation/depreciation Jan 1 2014 (restated)		**3,998**	**-**	**3,998**	**67,378**	**-**	**725**	**68,103**	**72,101**
Amortisation and depreciation		*-*	*-*	*-*	*4,839*	*95,129*	*194*	*100,162*	*100,162*
Exchange differences on translating foreign operations		*-*	*-*	*-*	*-*	*(5,060)*	*23*	*(5,037)*	*(5,037)*
Accumulated amortisation/depreciation Dec 31 2014		**3,998**	**-**	**3,998**	**72,217**	**90,069**	**942**	**163,228**	**167,226**
Impairment losses									

	Note								
Jan 1 2014		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Recognised		*-*	*136,985*	*136,985*	*-*	*-*	*-*	*-*	*136,985*
Exchange differences on translating foreign operations		*-*	*(7,286)*	*(7,286)*	*-*	*-*	*-*	*-*	*(7,286)*
Used/Reversed		*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Impairment losses Dec 31 2014		**-**	**129,699**	**129,699**	**-**	**-**	**-**	**-**	**129,699**
Net carrying amount Dec 31 2014		**24,573**	**-**	**24,573**	**341**	**176,465**	**1,356**	**178,162**	**202,735**

		Assets related to development of crude oil and natural gas resources			Assets related to production of crude oil and natural gas resources				
PLN '000	**Note**	**Poland**	**Norway**	**Total**	**Poland**	**Norway**	**Lithuania**	**Total**	**Total**
Gross carrying amount Jan 1 2013 (restated)		**29,285**	**108,847**	**138,132**	**109,002**	**-**	**1,789**	**110,791**	**248,923**
Acquisition of Heimdal assets	*13.1; 30.1*	*-*	*-*	*-*	*-*	*265,709*	*-*	*265,709*	*265,709*
Estimated cost related to decommissioning of oil and gas extraction facilities	*13.1; 30.1*	*(1,356)*	*11,995*	*10,639*	*(48)*	*-*	*717*	*669*	*11,308*
Exchange differences on translating foreign operations		*-*	*(12,648)*	*(12,648)*	*-*	*(20,038)*	*20*	*(20,018)*	*(32,666)*
Other		*-*	*-*	*-*	*-*	*-*	*(302)*	*(302)*	*(302)*
Gross carrying amount Dec 31 2013 (restated)		**27,929**	**108,194**	**136,123**	**108,954**	**245,671**	**2,224**	**356,849**	**492,972**
Accumulated amortisation/depreciation Jan 1 2013 (restated)		*3,998*	*-*	*3,998*	*56,491*	*-*	*729*	*57,220*	*61,218*
Amortisation and depreciation		*-*	*-*	*-*	*10,887*	*-*		*10,887*	*10,887*
Exchange differences on translating foreign operations		*-*	*-*	*-*	*-*	*-*	*27*	*27*	*27*
Other		*-*	*-*	*-*	*-*	*-*	*(31)*	*(31)*	*(31)*
Accumulated amortisation/depreciation Dec 31 2013 (restated)		**3,998**	**-**	**3,998**	**67,378**	**-**	**725**	**68,103**	**72,101**
Impairment losses Jan 1 2013		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Recognised		*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Used/Reversed		*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Impairment losses Dec 31 2013		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Net carrying amount Dec 31 2013		**23,931**	**108,194**	**132,125**	**41,576**	**245,671**	**1,499**	**288,746**	**420,871**

13.2 Refinery and other property, plant and equipment

PLN '000	**Land**	**Buildings, structures**	**Plant and equipment**	**Vehicles, other**	**Property, plant and equipment under construction**	**Total**
Gross carrying amount Jan 1 2014 (restated)	**472,934**	**4,392,014**	**5,532,666**	**699,067**	**279,532**	**11,376,213**
Purchase	*-*	*47*	*1,202*	*20,029*	*600,442*	*621,720*
Transfer from property, plant and equipment under construction	*23,039*	*107,813*	*101,346*	*323,335*	*(577,323)*	*(21,790)*
Borrowing costs	*-*	*-*	*-*	*-*	*2,803*	*2,803*
Exchange differences on translating foreign operations	*-*	*50*	*1,131*	*21,010*	*(255)*	*21,936*
Estimated cost of decommissioning, land reclamation and clean-up (1)	*-*	*(762)*	*-*	*-*	*-*	*(762)*
Reclassification to non-current assets (or disposal group) held for sale (2)	*(764)*	*(6,771)*	*(6,010)*	*(27,639)*	*-*	*(41,184)*
Sale	*(1,881)*	*(1,362)*	*(12,890)*	*(2,279)*	*(4,050)*	*(22,462)*
Decommissioning	*-*	*(1,782)*	*(11,985)*	*(6,964)*	*-*	*(20,731)*
Expenditure written off due to project discontinuation	*-*	*-*	*-*	*-*	*(255)*	*(255)*
Other	*167*	*(590)*	*1,878*	*(6,495)*	*(8,515)*	*(13,555)*
Gross carrying amount Dec 31 2014	**493,495**	**4,488,657**	**5,607,338**	**1,020,064**	**292,379**	**11,901,933**
Accumulated depreciation Jan 1 2014 (restated)	**15,499**	**1,134,001**	**1,531,793**	**387,626**	**-**	**3,068,919**
Depreciation	*1,530*	*171,185*	*243,783*	*76,004*	*-*	*492,502*

Exchange differences on translating foreign operations	*-*	*8*	*810*	*16,515*	*-*	*17,333*
Reclassification to non-current assets (or disposal group) held for sale (2)	*(24)*	*(2,601)*	*(4,278)*	*(23,614)*	*-*	*(30,517)*
Sale	*(121)*	*(583)*	*(12,541)*	*(2,077)*	*-*	*(15,322)*
Decommissioning	*-*	*(1,630)*	*(10,529)*	*(6,471)*	*-*	*(18,630)*
Other	*(122)*	*(920)*	*1,246*	*(305)*	*-*	*(101)*
Accumulated depreciation Dec 31 2014	**16,762**	**1,299,460**	**1,750,284**	**447,678**	**-**	**3,514,184**
Impairment losses Jan 1 2014 (restated)	**1,045**	**16,021**	**480**	**1,795**	**22,657**	**41,998**
Recognised	*150*	*24,918*	*6,014*	*1,565*	*5*	*32,652*
Exchange differences on translating foreign operations	*-*	*-*	*-*	*-*	*-*	*-*
Used/Reversed	*(13)*	*(1,968)*	*(1,015)*	*(36)*	*(28)*	*(3,060)*
Reclassification to non-current assets (or disposal group) held for sale (2)	*(115)*	*(1,505)*	*(3)*	*(363)*	*-*	*(1,986)*
Impairment losses Dec 31 2014	**1,067**	**37,466**	**5,476**	**2,961**	**22,634**	**69,604**
Net carrying amount Dec 31 2014	**475,666**	**3,151,731**	**3,851,578**	**569,425**	**269,745**	**8,318,145**

(1) Estimated cost of site reclamation and clean-up nad of dismantling of a subsea pipeline operated by subsidiary Energobaltic Sp. z o.o. (LOTOS Petrobaltic Group).

(2) Jasło and Czechowice-Dziedzice Branches operating as separate, organised parts of business in Jasło and Czechowice-Dziedzice; see Note 17 <http://raportroczny.lotos.pl/en/financial-information/consolidated-financial-statements-for-2014/notes-to-the-financial-statements/17.-non-current-assets-or-disposal-groups-held-for-sale> .

PLN '000	Land	Buildings, structures	Plant and equipment	Vehicles, other	Property, plant and equipment under construction	Total
Gross carrying amount Jan 1 2013 (restated)	**443,869**	**4,290,909**	**5,399,440**	**847,128**	**303,570**	**11,284,916**
Purchase	*1,234*	*9,020*	*6,694*	*16,057*	*365,958*	*398,963*
Transfer from property, plant and equipment under construction	*29,692*	*125,822*	*157,536*	*56,605*	*(385,129)*	*(15,474)*
Exchange differences on translating foreign operations	*-*	*27*	*(397)*	*(3,821)*	*(267)*	*(4,458)*
Borrowing costs	*-*	*-*	*-*	*-*	*1,842*	*1,842*
Contribution of B-4 and B-6 field development assets to Baltic Gas Sp. z o.o. i wspólnicy sp.k. (1)	*-*	*-*	*-*	*-*	*(2,363)*	*(2,363)*
Sale	*(952)*	*(3,449)*	*(6,715)*	*(2,430)*	*(33)*	*(13,579)*
Decommissioning	*-*	*(5,968)*	*(12,998)*	*(186,257)*	*(37)*	*(205,260)*
Reclassification to non-current assets (or disposal groups) held for sale (2)	*(923)*	*(23,556)*	*(21,676)*	*(1,717)*	*-*	*(47,872)*
Expenditure written off due to project discontinuation	*-*	*-*	*-*	*-*	*(1,828)*	*(1,828)*
Deconsolidation (LOTOS Tank Sp. z o.o.) (3)	*-*	*(3,987)*	*(1,944)*	*(8,026)*	*(5)*	*(13,962)*
Other	*14*	*3,196*	*12,726*	*(18,472)*	*(2,176)*	*(4,712)*
Gross carrying amount Dec 31 2013 (restated)	**472,934**	**4,392,014**	**5,532,666**	**699,067**	**279,532**	**11,376,213**
Accumulated depreciation Jan 1 2013 (restated)	**14,006**	**962,379**	**1,291,954**	**504,598**	**-**	**2,772,937**
Depreciation	*1,492*	*180,153*	*262,510*	*73,921*	*-*	*518,076*
Exchange differences on translating foreign operations	*-*	*1*	*(135)*	*(2,970)*	*-*	*(3,104)*
Sale	*(4)*	*(1,070)*	*(5,069)*	*(2,075)*	*-*	*(8,218)*

Decommissioning	*-*	*(3,546)*	*(11,570)*	*(185,946)*	*-*	*(201,062)*
Reclassification to non-current assets (or disposal groups) held for sale (2)	*(70)*	*(3,734)*	*(4,806)*	*(960)*	*-*	*(9,570)*
Deconsolidation (LOTOS Tank Sp. z o.o.) (3)	*-*	*(831)*	*(694)*	*(241)*	*-*	*(1,766)*
Other	*75*	*649*	*(397)*	*1,299*	*-*	*1,626*
Accumulated depreciation Dec 31 2013 (restated)	**15,499**	**1,134,001**	**1,531,793**	**387,626**	**-**	**3,068,919**
Impairment losses Jan 1 2013 (restated)	**941**	**24,225**	**17,073**	**1,246**	**23,359**	**66,844**
Recognised	*952*	*13,866*	*2,058*	*593*	*30*	*17,499*
Used/Reversed	*(179)*	*(6,849)*	*(5,040)*	*(91)*	*(732)*	*(12,891)*
Reclassification to non-current assets (or disposal groups) held for sale (2)	*(669)*	*(15,221)*	*(13,611)*	*(201)*	*-*	*(29,702)*
Other	*-*	*-*	*-*	*248*	*-*	*248*
Impairment losses Dec 31 2013 (restated)	**1,045**	**16,021**	**480**	**1,795**	**22,657**	**41,998**
Net carrying amount Dec 31 2013	**456,390**	**3,241,992**	**4,000,393**	**309,646**	**256,875**	**8,265,296**

(1) Joint venture operated jointly with CalEnergy Resources Poland Sp. z o.o., related to development of the B-4 and B-6 gas fields (see Note 2 to the 2013 consolidated financial statements).

(2) Including assets associated with the Waterproofing Materials Production Plant sold by LOTOS Asfalt Sp. z o.o. in 2013.

(3) Sale of shares in LOTOS Tank Sp. z o.o. (currently LOTOS-Air BP Polska Sp. z o.o.) to a third party (see Note 2 to the consolidated financial statements for 2013). Currently, a joint venture agreement between Grupa LOTOS S.A. and BP Europe SE to conduct activity consisting in supply of aviation fuel through LOTOS - Air BP Polska Sp. z o.o.

Refinery and other property, plant and equipment include chiefly Group's assets related to downstream and support activities, such as the service station network, rolling stock, storage depots, refinery infrastructure and property on which the production plants, production units, pipelines and office buildings are located. The item also comprises other upstream segment assets, including ships and a multi-purpose mobile drilling rig.

In 2014, capital expenditure incurred by the Group on refinery and other property, plant and equipment was PLN 621,720 thousand, and related mainly to the extension of the fuel depot in Poznań, construction of the Hydrogen Recovery Unit and extension of the service station network. The PLN 398,963 thousand of capital expenditure made in 2013 concentrated chiefly on extension of the service station network and modernisation work performed during the overhaul shutdown in Q2 2013. The capital expenditure incurred by the Group is related to the 2013–2015 Efficiency and Growth Programme.

Impairment losses on refinery and other property, plant and equipment

In 2014, the Group made a revaluation of its refinery and other property, plant and equipment. The impairment losses totalled PLN 32,652 thousand (2013: PLN 17,499 thousand), while impairment loss reversals amounted to PLN 421 thousand (2013: PLN 10,056 thousand). In 2014, impairment losses and reversal of impairment losses were presented under *Other expenses* (see Note 9.4), whereas in 2013 they had been disclosed under *Other income* (see Note 9.3).

In 2014, LOTOS Paliwa Sp. z o.o. recognised an impairment loss on service station assets in the amount of PLN 15,765 thousand; see Note 9.4 (2013: PLN 11.912 thousand; see Note 9.3). The recoverable amount of property, plant and equipment related to the service station network was determined based on the value in use of each station, calculated with the discounted cash flow method. Future cash flows were calculated based on five-year cash-flow projections, prepared using budget projections for 2015 (in 2013: for 2014) and the cash inflow and outflow plan for subsequent years, based on the development strategy until 2018. The residual value for the discounted cash flows was calculated using the growing perpetuity formula. A fixed growth rate of 1.0% (2013: 1.84%) was used to extrapolate cash-flow projections beyond the five-year period. The extrapolation was based on a quantitative forecast of the fuel consumption growth rate in Poland in 2013–2021. LOTOS Paliwa Sp. z o.o.'s net weighted average cost of capital (WACC) was assumed at 6.13% (2013: 7.16%), based on the company's capital structure. Discounted cash flows calculated separately for each cash-generating unit were grossed up.

Calculation of the value in use of cash-generating units is most sensitive to the following variables:

- gross margin, which depends on average values of unit margins in the period preceding the budget period (an 8% average year-on-year decline of the margin was assumed),
- discount rates, reflecting risks typical to the cash-generating unit (the median price for five-year PLN-denominated notes quoted in November 2014 was adopted),
- volumes based on fuel consumption growth rate (a 4% increase was assumed),
- market share in the budget period (a stable market share was assumed),
- growth rate used to extrapolate cash-flow projections beyond the budget period, based on a quantitative forecast of the fuel consumption growth rate in Poland in 2013–2021, prepared using GUS, NBP and JBC reports (for gasolines), and based on GDP market consensus.

As regards the calculation of the service stations' value in use, the Management Board is of the opinion that no reasonably probable change to any of the key assumptions listed above will result in the carrying amount of the service station assets exceeding their recoverable amount to a significant extent.

As at December 31st 2014, LOTOS Asfalt Sp. z o.o. tested for impairment its Jasło and Czechowice plant assets. As a result of the test, LOTOS Asfalt Sp. z o.o. recognised an impairment loss of PLN 15,893 thousand on its Jasło plant assets (see Note 9.4). The impairment loss was recognised based on the assumption that the bitumen business would be restructured after the launch of the EFRA Project, and such restructuring would involve suspending the operation of the Jasło and Czechowice plants' infrastructure, while holding the relevant production capacities on stand-by in Gdańsk. The impairment test was performed using the discounted cash flow method. The analysis covered the planned cash flows in 2015–2017. The test assumed a sales volume growth in 2016–2017 (by about 27% in 2016 compared with 2015 and a further 9% in 2017 compared with 2016), expected in connection with Poland's absorption of funds available from the new EU budget until 2020 on development of its road infrastructure. The sales growth assumed for 2016 was based on the new EU financial framework and the schedule of investment projects planned as part of the National Road Construction Programme 2014–2020, which envisages considerable expenditure on road infrastructure. The company has taken into account the negative impact of the cement technology on its sales growth, however given that the road construction process involving this technology is quite advanced, the cementing work should not peak before the end of 2018. In 2016–2017 margins were assumed to remain roughly unchanged from their budgeted 2015 level, the net weighted average cost of capital (WACC) was put at 9%, and fixed costs were assumed to remain stable as were distribution costs per unit (comprising mainly costs of transport); the computations were performed using fixed prices (inflation was eliminated both from revenue/costs and the discount rate).

In 2013, in connection with the sale of the Waterproofing Materials Production Plant assets, LOTOS Asfalt Sp. z o.o. reversed an impairment loss of PLN 8,000 thousand on these assets (see Note 9.3).

13.3 Other information concerning property, plant and equipment

	Property, plant and equipment used under finance lease	
PLN '000	**Dec 31 2014**	**Dec 31 2013**
Gross carrying amount	198,557	198,737
Accumulated depreciation	47,328	47,379
Net carrying amount	151,229	151,358

The Group uses finance leases to finance primarily rolling stock assets (downstream segment).

The table below presents items under which depreciation of property, plant and equipment was recognised:

PLN '000	Year ended Dec 31 2014	Year ended Dec 31 2013
Cost of sales	654,683	490,215
Distribution costs	63,030	58,575
Administrative expenses	17,128	21,450
Change in products and adjustments to cost of sales	16,915	11,303
Total	**751,756**	**581,543**

In 2014, the Group capitalised finance costs of PLN 2,803 thousand as property, plant and equipment under construction (2013: PLN 1,842 thousand)(see note 13.2). As at December 31st 2014, financing costs capitalised as property, plant and equipment totalled PLN 5,719 thousand (December 31st 2013: 43,009 thousand).

As at December 31st 2014, the Group's contractual commitments, not disclosed in the statement of financial position, concerning future expenditure on property, plant and equipment amounted to PLN 808.860 thousand and related mostly to the conversion of a drilling platform into a production platform at LOTOS Petrobaltic S.A., a delayed coking unit (the EFRA Project), construction of a Hydrogen Recovery Unit (HRU) at the Refinery, and extension of the service station network.

As at December 31st 2013, the Group's contractual commitments, not disclosed in the statement of financial position, concerning future expenditure on property, plant and equipment amounted to PLN 582,966 thousand and related mostly to acquisition of a new drilling rig by SPV Baltic Sp. z o.o., conversion of a drilling platform into a production platform at LOTOS Petrobaltic S.A., a delayed coking unit (the EFRA Project), and extension of the fuel depot in Poznań.

The Group's future contractual commitments follow from the 2013–2015 Efficiency and Growth Programme.

As at December 31st 2014, property, plant and equipment serving as collateral for the Group's liabilities was PLN 7,038,347 thousand (December 31st 2013: PLN 7,877,463 thousand).