POLENERGIA

RENEWABLE ENERGY

CONVENTIONAL ENERGY

DISTRIBUTION

TRADE

POLENERGIA 3Q 2016 Results

November 9, 2016

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Please contact PolenergiaIR@polenergia.pl for questions on any content of this presentation

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01 Summary

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Summary of YTD 2016: continued negative impact of GC market

- **Increasing revenues:** PLN 2.2bn revenues, increase by 6% y/y
- **Profitability:** 9M 2016 adjusted EBITDA decreased by 5% to PLN 155,3m as compared to 9M 2015 due to lower green certificates prices and worse wind conditions, partly offset by better conventional energy results
- **369MW capacity installed**: 245,3MW wind farms, 124MW ENS and cogeneration, 20% increase YoY
- **Market Prices:** electricity prices in Q3 (~149 PLN/MWh) decrease below YTD average of 158 PLN/MWh. Historically low prices GC hitting c. 33 PLN/MWh in Q3 (average YTD 85 PLN/MWh)
- **Conventional Power**: YTD EBITDA improvement due to effect of annual price projections update in Q1 and resultant positive stranded cost effect
- **Trading:** negatively affected by collapse in GC market, partially offset by good results on trading
- **Distribution:** improved performance mainly due to reversal of rebate provision and higher volumes and margins on energy and gas distribution. Net investments will increase RAB by 26% in 2017-2018
- **Offshore:** environmental decision for Bałtyk Środkowy III obtained in July 2016, strong value growth potential
- **Bernau-Szczecin pipeline:** PLN 42m write-off due to inability to execute project
- **Biomass:** 32MW Wińsko project obtained construction permit

- **Regulatory perspectives remain uncertain for onshore wind although Polenergia diversified profile is helping to hedge risk;**
- **Very positive offshore sentiment provides significant growth potential and value upside**

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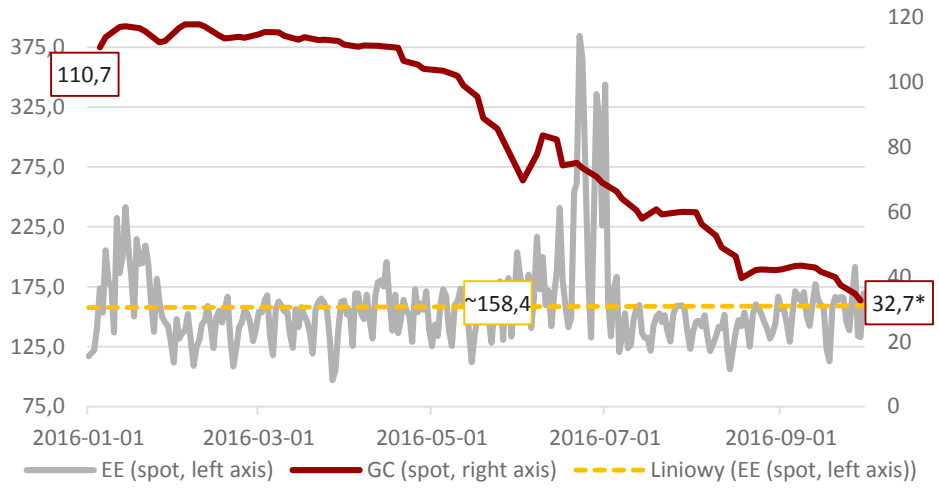
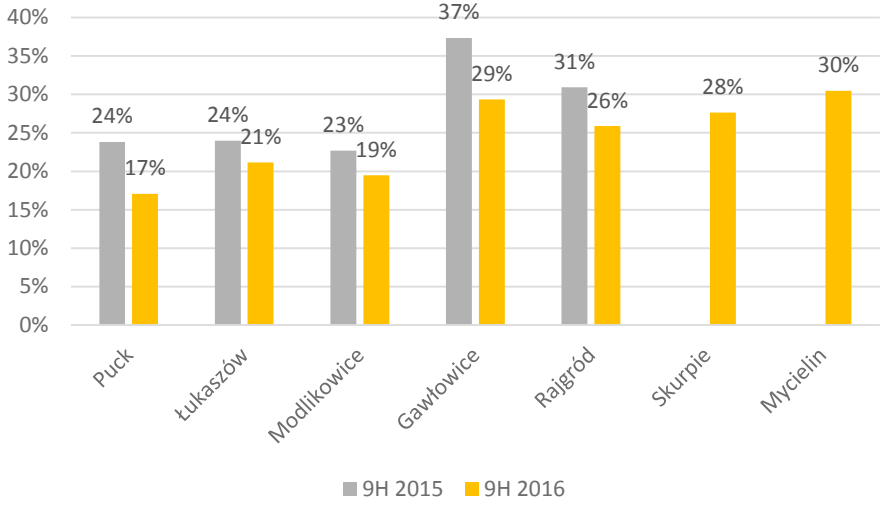
Lower productivity and GC prices in renewable portfolio, although load factors above Polish average

GC market prices (PLN/MWh)

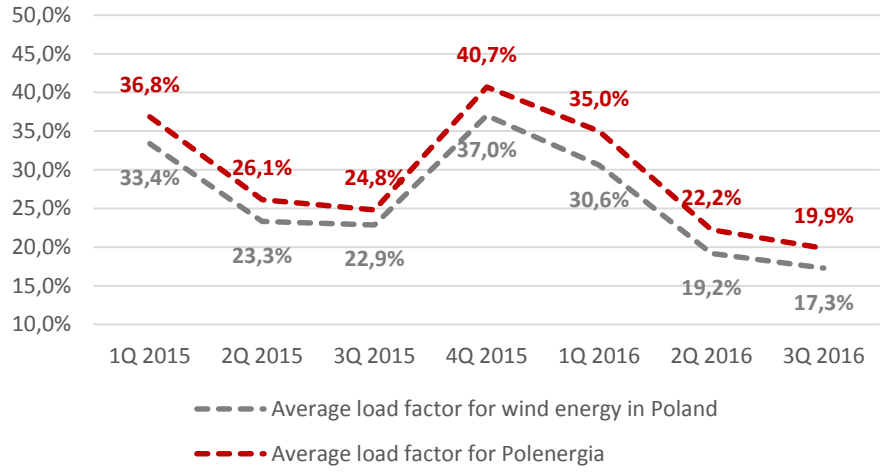


* - price of GC as at 30th of September
Source: TGE

Load factors 9M 2016 versus 9M 2015



Productivity of Polenergia wind farm projects above average



- **GC prices were decreasing, while electricity prices were stable except from fluctuations at the end of June**
- **9M 2016 productivity of wind farms was below 9M 2015 productivity, (due to weak Q2 and Q3 wind conditions) but has exceeded the average wind farm productivity in Poland**
- **Polenergia consequently achieves higher average productivity as compared to the wind industry in Poland**

Source: Polenergia calculation based on own and ARE data

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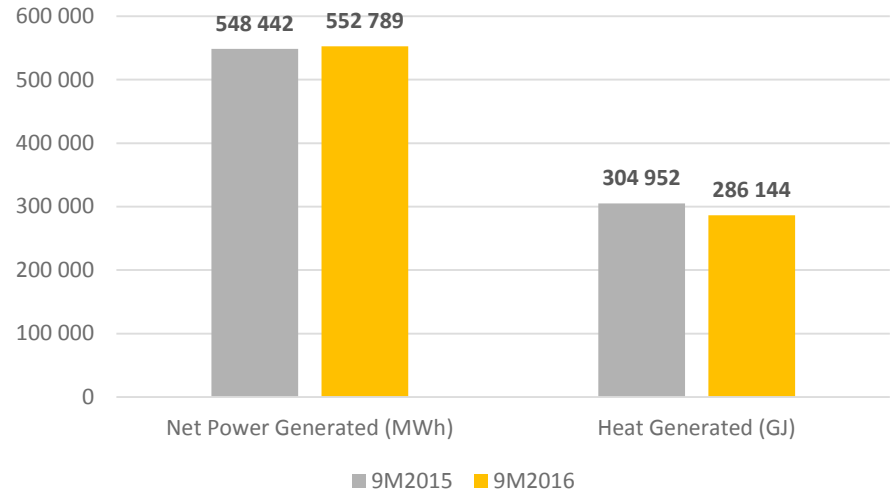
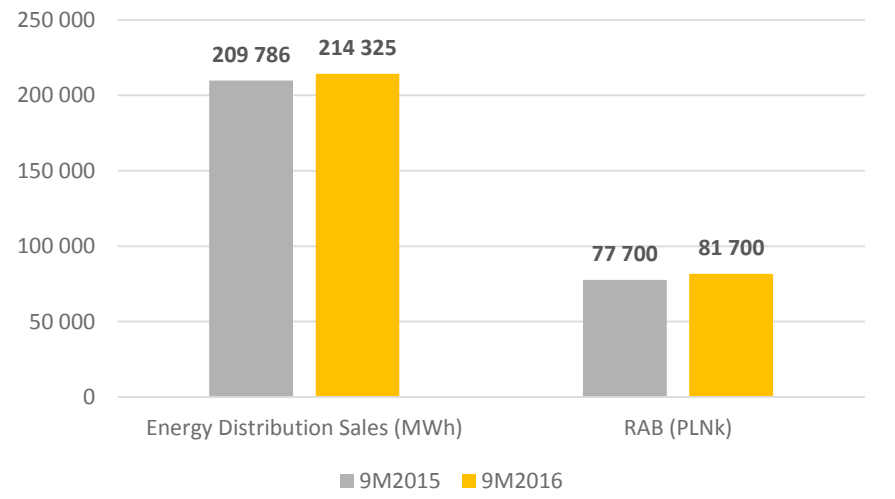
Stable operational data in Conventional and Distribution, uplift in Trading

Conventional (ENS) volumes: 9M 2016 vs. 9M 2015

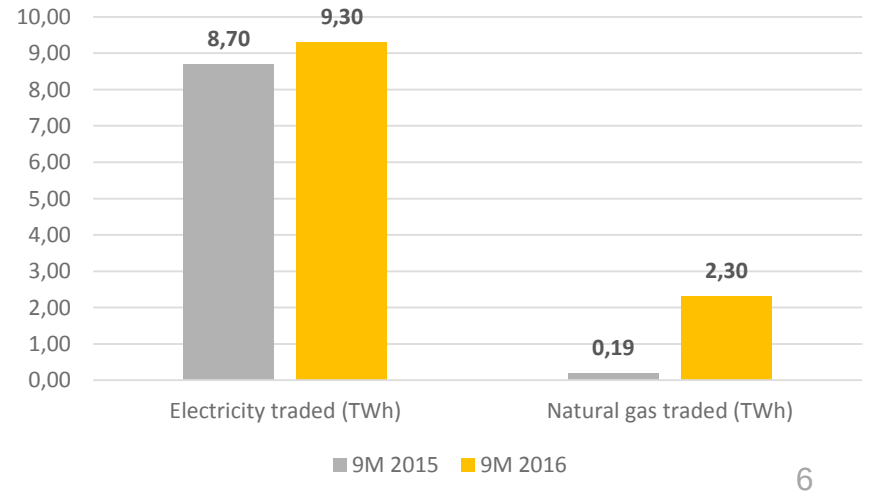


Distribution volumes: 9M 2016 vs. 9M 2015



- **Conventional generation maintains productivity on the 2015 level**
- **Increase in distributions volumes and RAB base positively impacts Distribution results**
- **Visible increase in electricity traded volumes and significant increase in gas traded volumes**

Trading volumes: 9M 2016 vs. 9M 2015



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02 Financial Results

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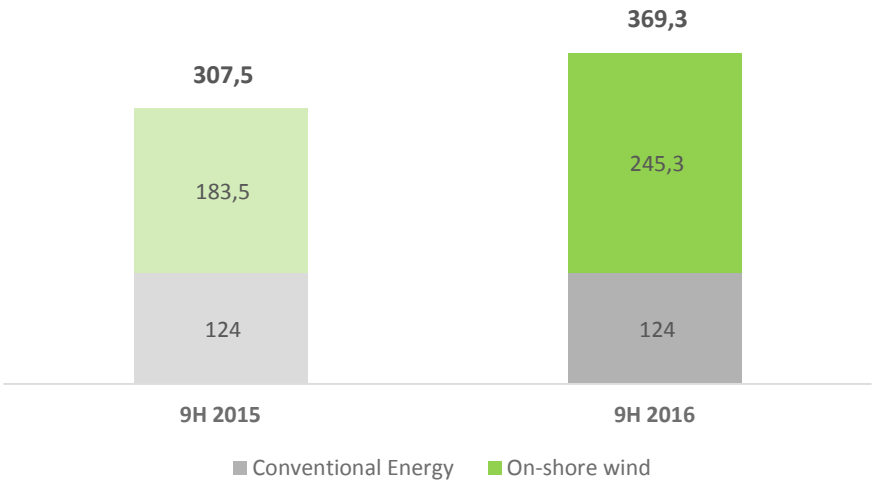
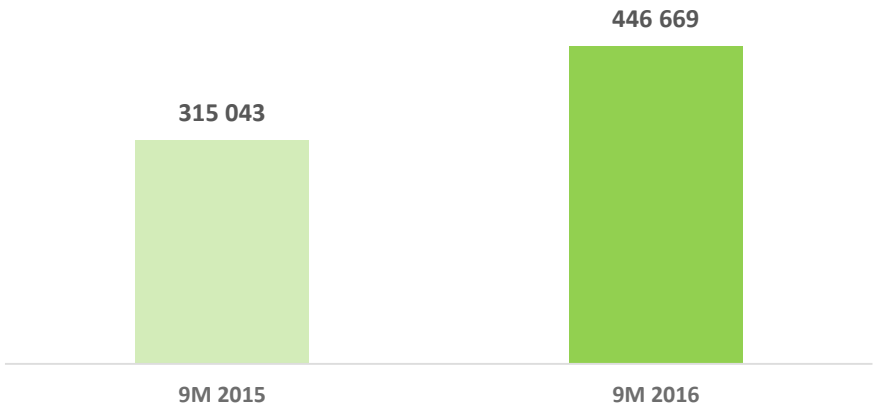
9M 2016/9M 2015 comparison

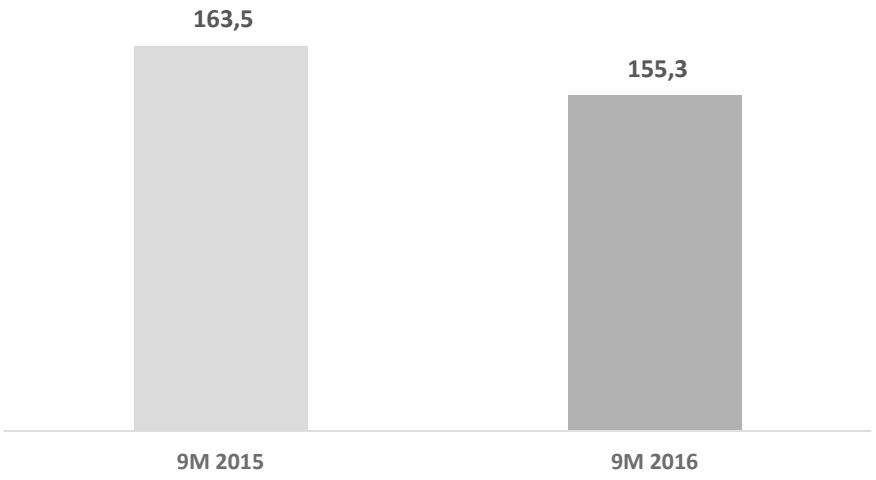
Total Capacity (MW)



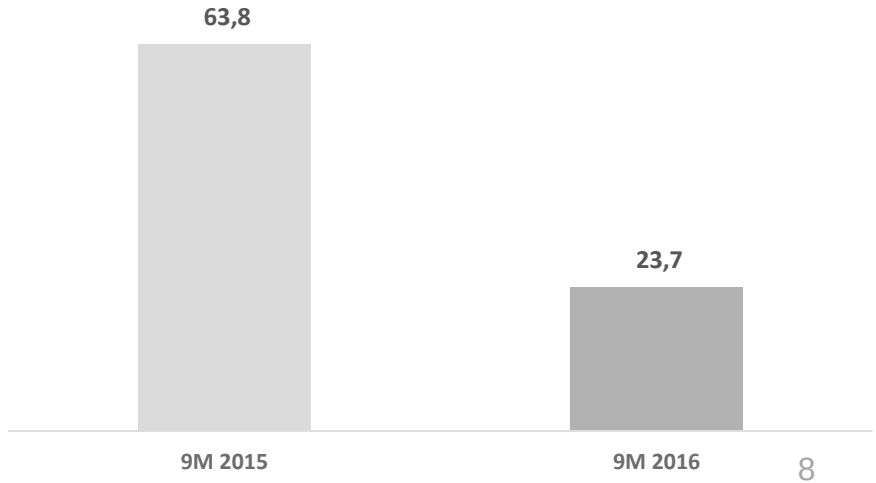
Onshore Volumes (Certificates, MWh)



Adjusted EBITDA (PLNm)



Adjusted Net income (PLNm)



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Consolidated results for 9M 2016 – P&L

	Polenergia Group Income Statement (kPLN)	9M 2016	9M 2015	Diff y/y	Diff y/y [%]
	Revenues from sales	**2 156 254**	**2 032 321**	**123 933**	
	Including trading segment	1 705 160	1 517 667	187 493	
	Cost of sales	(2 064 792)	(1 913 813)	(150 979)	
	Including trading segment	(1 703 518)	(1 506 417)	(197 101)	
	Gross profit on sales	**91 462**	**118 508**	**(27 046)**	**-23%**
	Other operating income	6 355	6 326	29	
	Administrative expenses	(23 165)	(23 709)	544	
	Other operating expenses	(104 893)	(2 785)	(102 108)	
	Gross result on sale (EBIT)	**(30 241)**	**98 340**	**(128 581)**	
	Depreciation	85 551	63 174	22 377	
	Eliminating the effect of development write-off	102 861	-	102 861	
	EBITDA	**158 171**	**161 514**	**(3 343)**	**-2%**
	Eliminating the effect of purchase price allocation	(2 043)	1 809	(3 852)	
	Elimination of fundraising costs	-	173	(173)	
	Eliminating the effect of Zakrzów CHP sale	(813)	-	(813)	
	Adjusted EBITDA*	**155 315**	**163 496**	**(8 181)**	**-5%**
	Financial income	6 986	5 828	1 158	
	Financial expenses	(48 045)	(34 225)	(13 820)	
	Profit (loss) before tax	**(71 300)**	**69 943**	**(141 243)**	
	Income tax	(2 901)	(17 206)	14 305	
	Net Profit (loss)	**(74 201)**	**52 737**	**(126 938)**	
1	Eliminating the effect of the purchase price allocation	4 500	7 614	(3 114)	
2	Eliminating the effect of unrealized exchange differences	494	(262)	756	
3	Elimination of the effect of AMC loans valuation	1 720	3 557	(1 837)	
	Elimination of fundraising costs	-	140	(140)	
4	Eliminating the effect of development write-off	96 517	-	96 517	
5	Eliminating the effect of Zakrzów CHP sale	(5 285)	-	(5 285)	
	Adjusted Net Profit*	**23 745**	**63 786**	**(40 041)**	
	Adjusted EBITDA margin	**7,2%**	**8,0%**	**-0,8%**	
	Adjusted EBITDA (excluding trading segment)	**160 185**	**158 435**	**1 750**	
	Adjusted EBITDA margin (excluding trading segment)	**35,5%**	**30,8%**	**4,7%**	

*) adjusted for non-cash/one-off items

Higher sales revenues result from increase of gross sales volume and from development of gas sales.

Lower sales excl. trading segment result from decrease of electricity sales volume in PE-D (low-margin segment).

Detailed analysis of EBITDA by segment is presented on the following pages.

Higher financial income due to sale of Zakrzów CHP, partly offset by lower interest income resulting from lower cash balance and lower interest rates.

Higher interest expense resulting from commencement of new projects partially offset by decrease in debt in other operating assets.

Lower income tax results from lower profit before tax and reversal of part of deferred tax liability due to write-downs made.

1) Purchase price allocation effect of non-goodwill assets (amortization)
2) Unrealized exchange differences (mostly in Dipol due to loan in EUR)
3) AMC: IFRS accounting approach to loan valuation
4) Wind farm and project Hans development write-off
5) Result on Zakrzów CHP sale

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Consolidated results for 3Q 2016 – P&L

	Polenergia Group Income Statement (kPLN)	Q3 2016	Q3 2015	Diff y/y	Diff y/y [%]
	Revenues from sales	**789 760**	**676 975**	**112 785**	
	Including trading segment	659 534	511 805	147 729	
	Cost of sales	(776 318)	(640 028)	(136 290)	
	Including trading segment	(659 905)	(508 384)	(151 521)	
	Gross profit on sales	**13 442**	**36 947**	**(23 505)**	**-64%**
	Other operating income	1 746	3 453	(1 707)	
	Administrative expenses	(6 731)	(8 767)	2 036	
	Other operating expenses	(49 023)	(654)	(48 369)	
	Gross result on sale (EBIT)	**(40 566)**	**30 979**	**(71 545)**	
	Depreciation	29 369	21 615	7 754	
	Eliminating the effect of development write-off	48 648	-	48 648	
	EBITDA	**37 451**	**52 594**	**(15 143)**	**-29%**
	Eliminating the effect of purchase price allocation	(681)	603	(1 284)	
	Elimination of fundraising costs	-	30	(30)	
	Eliminating the effect of Zakrzów CHP sale	-	-	-	
	Adjusted EBITDA*	**36 770**	**53 227**	**(16 457)**	**-31%**
	Financial income	1 317	872	445	
	Financial expenses	(15 875)	(11 295)	(4 580)	
	Profit (loss) before tax	**(55 124)**	**20 556**	**(75 680)**	
	Income tax	5 970	(3 825)	9 795	
	Net Profit (loss)	**(49 154)**	**16 731**	**(65 885)**	
1	Eliminating the effect of the purchase price allocation	1 500	2 538	(1 038)	
2	Eliminating the effect of unrealized exchange differences	(617)	214	(831)	
3	Elimination of the effect of AMC loans valuation	715	1 150	(435)	
	Elimination of fundraising costs	-	24	(24)	
4	Eliminating the effect of development write-off	42 304	-	42 304	
5	Eliminating the effect of Zakrzów CHP sale	-	-	-	
	Adjusted Net Profit*	**(5 252)**	**20 657**	**(25 909)**	
	Adjusted EBITDA margin	**4,7%**	**7,9%**	**-3,2%**	
	Adjusted EBITDA (excluding trading segment)	**39 131**	**51 599**	**(12 468)**	
	Adjusted EBITDA margin (excluding trading segment)	**30,0%**	**31,2%**	**-1,2%**	

*) adjusted for non-cash/one-off items

Higher sales revenues result from increase of gross sales volume and from development of gas sales.

Lower sales excl. trading segment result from decrease of electricity sales volume in PE-D (low-margin segment).

Detailed analysis of EBITDA by segment is presented on the following pages.

Higher financial income due to higher unrealized exchange differences and higher interest income.

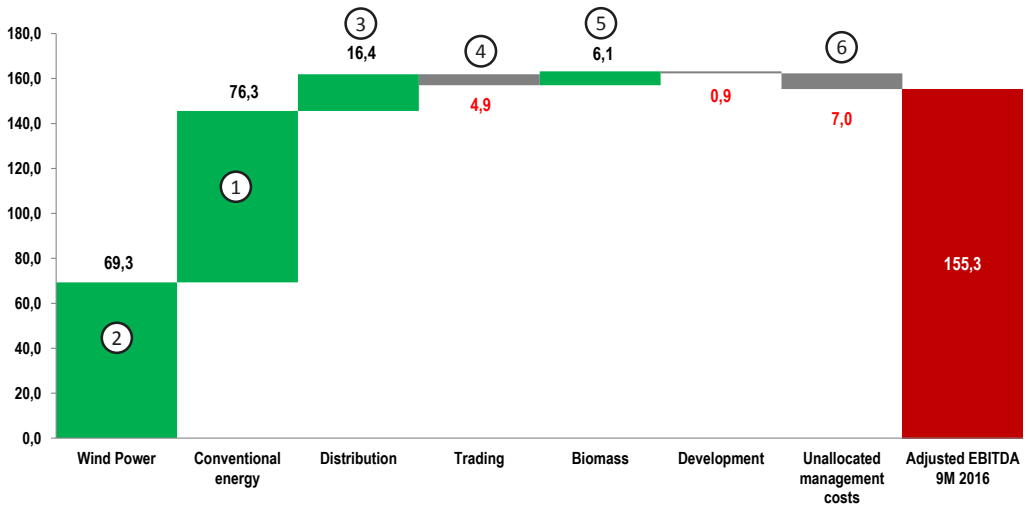
Higher interest expense resulting from commencement of new projects partially offset by decrease in debt in other operating assets.

Lower income tax results from lower profit before tax and reversal of part of deferred tax liability due to write-downs made.

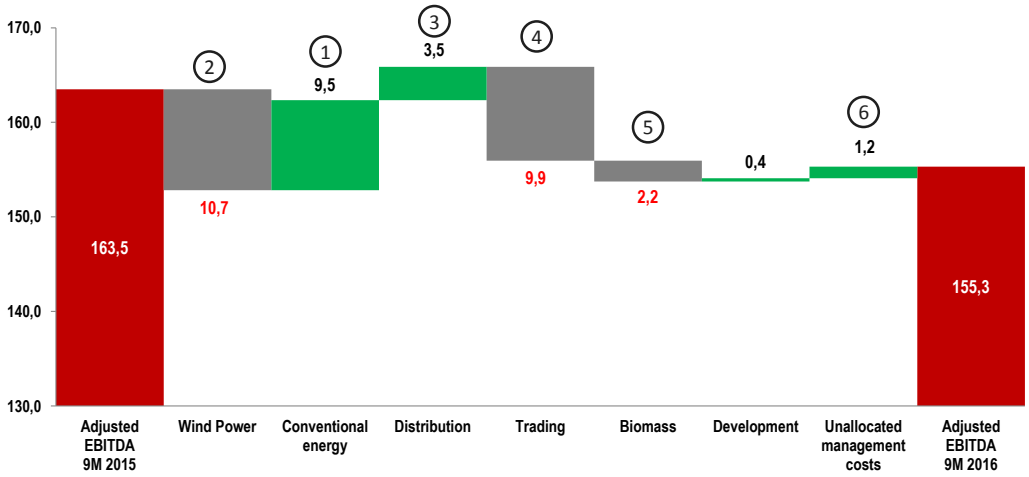
1) Purchase price allocation effect of non-goodwill assets (amortization)
2) Unrealized exchange differences (mostly in Dipol due to loan in EUR)
3) AMC: IFRS accounting approach to loan valuation
4) Write-off resulting from WTI Act
5) Result on Zakrzów CHP sale

Consolidated results for 9M 2016 – EBITDA Analysis

EBITDA Build-up 9M 2016



EBITDA Bridge 9M 2016/ 9M 2015



1. **Conventional energy:** higher EBITDA (by PLN 9.5m) results from update of energy, gas and CO2 price forecasts for 2016 – 2020 (in 1Q 2016) that changed allocation of stranded costs compensation in the whole compensation system period (2008 – 2020).
2. **Wind farm segment:** decrease in EBITDA (by PLN 10.7m y/y) despite commencement of new projects (Mycielin 48MW and Skurpie 43,7MW) mainly due to lower green certificates prices and worse wind conditions.
3. **Distribution segment:** EBITDA increased y/y (by PLN 3.5m) mainly due to reversal of rebate provision. On operating level higher margins and volumes in electricity and gas distribution segment.
4. **Trading segment:** EBITDA decreased y/y (by PLN 9.9m) mainly due to lower green certificates prices. This effect was partially offset by better trading results.
5. **Biomass:** lower y/y EBITDA (by PLN 2.2m) results from lower sales volume.
6. **Unallocated management costs:** reduction (by PLN 1.2m) is a result of savings program initiated in 2Q 2016, however Q3 includes redundancy costs that are spread over 2016. Additionally 3Q 2015 base include positive one-off events.

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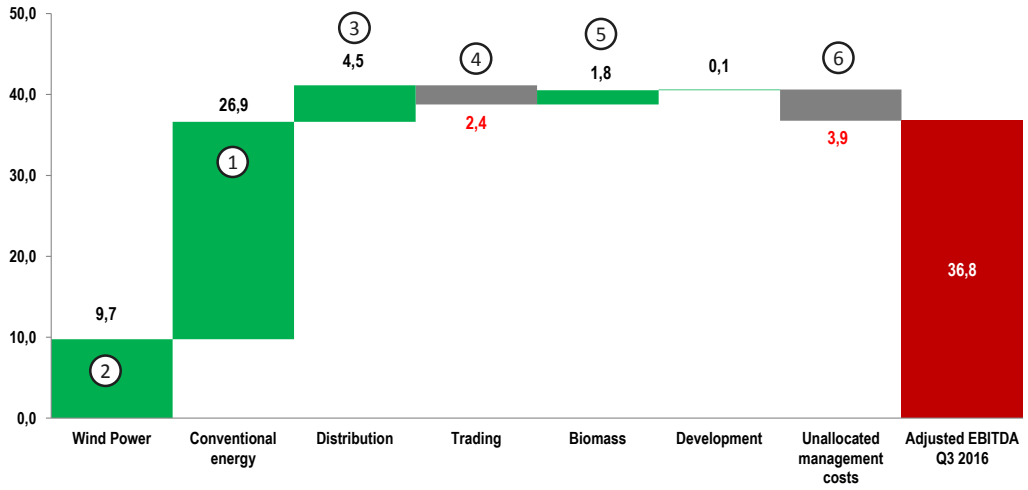
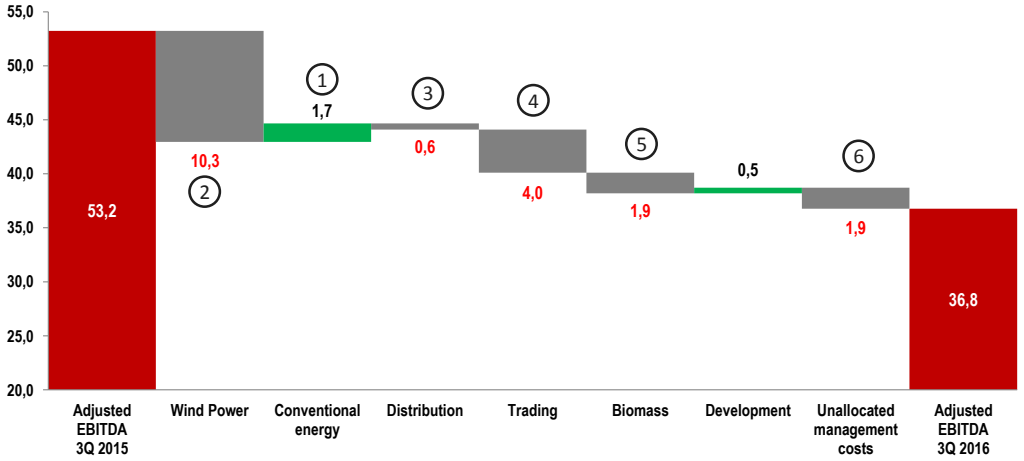
Consolidated results for 3Q 2016 – EBITDA Analysis

EBITDA Build-up 3Q 2016



EBITDA Bridge 3Q 2016/ 3Q 2015



1. **Conventional energy:** higher EBITDA (by PLN 1.7m).
2. **Wind farm segment:** decrease in EBITDA (by PLN 10.3m y/y) despite commencement of new projects (Mycielin 48MW and Skurpie 43,7MW) mainly due to lower green certificates prices and worse wind conditions.
3. **Distribution segment:** EBITDA decreased y/y (by PLN 0,6m) due to high 2015 base (result of one-off event).
4. **Trading segment:** EBITDA decreased y/y (by PLN 4.0m) mainly due to lower green certificates prices. This effect was partially offset by better trading results.
5. **Biomass:** lower y/y EBITDA (by PLN 1.9m) results from lower sales volume.
6. **Unallocated management costs:** costs increase is a result of redundancy costs that are spread over 2016 and 2015 one-off. HQ costs will decrease on a full year basis and will substantially decrease (by c. PLN 6-7m) on a cash basis in 2017.

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Consolidated cash flow analysis

Consolidated statement of cash flows (PLN m)	3Q 2016	9M 2016
A. Cash flows from operating activities		
I.EBITDA	37	158
II. Adjustments	11	(27)
III. Net cash flow from operating activities (I+/-II)	**48**	**131**
B. Cash flows from investing activities		
I. Cash received	0	5
II. Expenses	(11)	(75)
III. Net cash flow from investing activities (I-II)	**(11)**	**(70)**
C. Cash flows from financing activities		
I. Cash received	1	81
II. Expenses, incl:	(57)	(162)
Dividends and other distribution to owners	(23)	(23)
III. Net cash flow from financing activities (I-II)	**(57)**	**(81)**
D. Net cash flow, total (A.III+/-B.III+/-C.III)	**(20)**	**(20)**
E. Balance transition of cash, including:	(20)	(20)
F. Cash and cash equivalents at beginning of period	362	362
G. Consolidated cash and cash equivalents at end of period	**342**	**342**
Consolidated debt	**1 129**	**1 129**
Consolidated net debt	**787**	**787**

Adjustments include mainly change in working capital (PLN -14m) and CIT settlement (PLN -13m).

Development expenditures include construction of Mycielin WF (PLN 47m), distribution segment (PLN 7m), conventional energy (PLN 6m) and project development (PLN 16m).

Cash inflows result from debt drawdawns including: Mycielin WF (PLN 53m), GSR (PLN 22m) and distribution segment (PLN 6m).

Debt repayment and interest payments - mainly Wind Farms (PLN 97m), ENS (PLN 37m) and distribution segment (1m). Dividend payment (PLN 23m).

- **Adjusted EBITDA for the last 12M (from October 1st 2015 to September 30th 2016) amounted to PLN 214.7m and Group's net debt at September 30th 2016 was PLN 786.6m**
- **It implies Net debt / EBITDA ratio of 3.66x**

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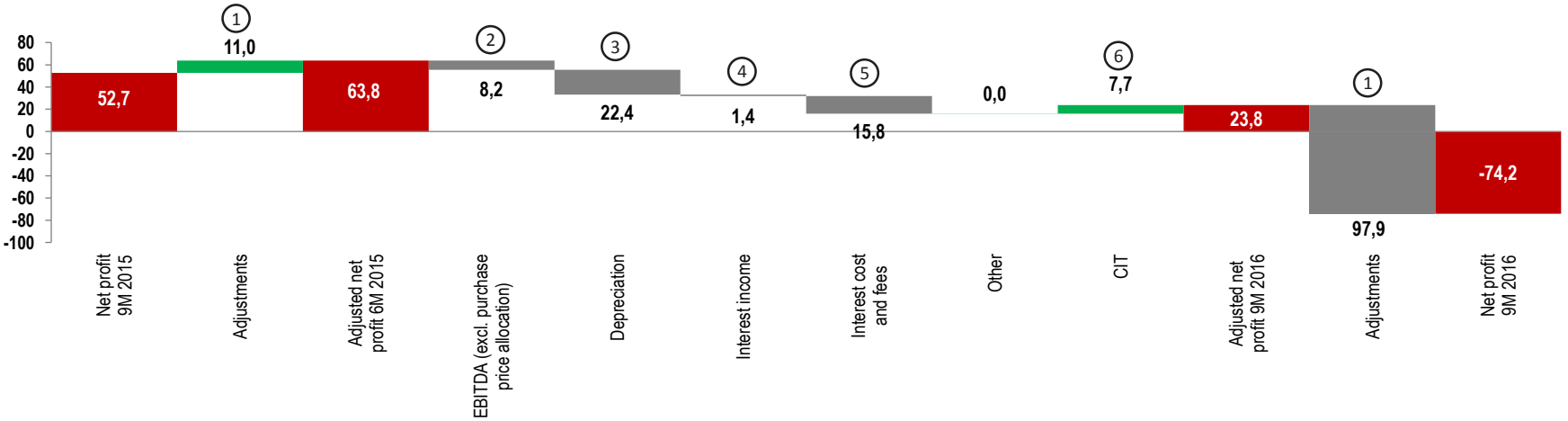
Net profit - overview of the changes y / y



Adjusted net profit decreased by PLN 40.0m, due to:

1. Change in adjustments: detailed decomposition of normalizing adjustments for 9M 2016 and 9M 2015 was presented on P&L summary page (explained in detail on slide 9);
2. Decreased Adjusted EBITDA (explained in detail on slide 11);
3. Increased depreciation (by PLN 22.4m), which is primarily driven by depreciation of new wind farm projects;
4. Lower interest income (by PLN 1.4m) resulting form lower cash balance and lower interest rates;
5. Higher interest costs and fees (by PLN 15.8m) resulting from increased debt service due to commisioning of new projects;
6. Positive CIT impact (PLN 7.7m) due to lower profit before tax as a result of all above mentioned effects

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Balance sheet

Assets (PLN m)	As at 30.09.2016	As at 31.12.2015	Diff
Fixed assets (long-term)	**2 350**	**2 448**	**(98)**
Tangible fixed assets	2 091	2 192	(101)
Intangible assets	42	49	(7)
Goodwill of subordinate entities	185	185	(0)
Financial assets	12	6	6
Long-term receivables	5	5	(0)
Deferred income tax	16	11	5
Accruals	0	0	0
Current Assets (short-term)	**589**	**751**	**(162)**
Stock	38	47	(9)
Receivables from deliveries and services	118	159	(41)
Receivables from income tax	4	3	1
Other short-term receivables	18	65	(47)
Accruals	5	11	(6)
Short-term financial assets	63	104	(41)
Cash and cash equivalents	342	362	(20)
Total Assets	**2 939**	**3 199**	**(260)**

Write-off of wind farms in development and project Hans partially offset by increased value of Mycielin wind farm due to capex spent in the period.

Change in receivables result from decrease in trade receivables in wind farms, distribution and trading segments.

Mainly valuation of contracts in trading segment.

Liabilities (PLN m)	As at 30.09.2016	As at 31.12.2015	Diff
Equity	**1 302**	**1 397**	**(95)**
Long-term liabilities	**1 257**	**1 304**	**(47)**
Loans and borrowings	1 029	1027	2
Provision from deferred income tax	67	66	1
Reserves	1	2	(1)
Accruals	60	64	(4)
Other liabilities	100	145	(45)
Current liabilities	**380**	**498**	**(118)**
Loans and borrowings	100	121	(21)
Trade payables	131	179	(48)
A liability for income tax	1	7	(6)
Other liabilities	128	166	(38)
Reserves	3	4	(1)
Accruals	17	21	(4)
Total liabilities	**2 939**	**3 199**	**(260)**

Other liabilities consist of ENS liabilities due to long term contracts termination settlement (KDT) and PPA liability.

Trade payables decreased as a result of change in trade liabilities in distribution and in Mycielin WF.

Mainly valuation of contracts in trading segment.

- **Adjusted EBITDA for the last 12M (from October 1st 2015 to September 30th 2016) amounted to PLN 214.7m and Group's net debt at September 30th 2016 was PLN 786.6m**
- **It implies Net debt / EBITDA ratio of 3.66x**

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03 Market Update and Regulatory Surrounding

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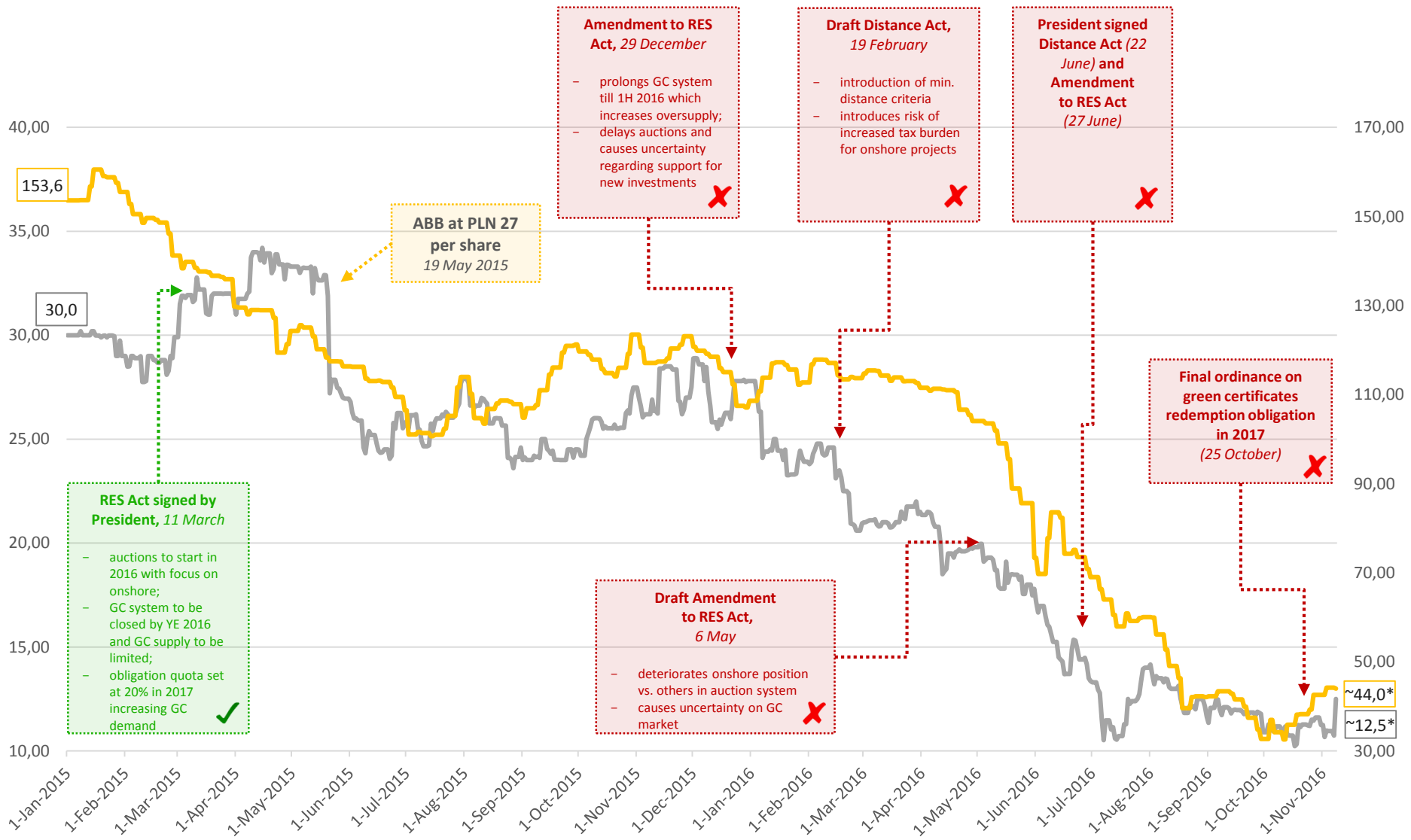
Evolution of regulatory uncertainty and effect on share price



* - price of GC and Polenergia share as at 8th of November

Source: TGE, WSE

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Key strategic directions to be continued in Q4 2016

1. **Continue cost savings (current plan: PLN7-9m reduction in 2017)**
2. **Continue to defend value of onshore operating wind farms**
   - Prepare for „switch" into auctions
   - Real Estate Tax risk
   - Bank discussions continued
3. **Grow value of ready to build WF / prepare for auctions**
   - Wind farms alone
   - Hybrid auction preparation/potential
4. **Capacity auctions**
   - ENS: critical part of Polish electricity system after black start services contract with PSE in case of total Polish Power System (KSE) failure (black-out).
   - New installations: EP
5. **Grow value of offshore**
   - Foundation for Sustainable Energy (FNEZ) requested inclusion of offshore wind in Morawiecki Plan as part of strategic project „Integrated development of offshore energy and industry".
   - Sector coalition to be formed from all potential sector participants (e.g. investors, offtakers, shipyards, construction companies, cable manufactures, and steel mills)
   - According to McKinsey report offshore can be very beneficial for Polish economy (additional PLN 60bn of GDP and 77k workplaces).

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Regulatory issues: Amendment to RES Act and WTI Act

Amendment to RES Act (Signed by the President on June 27, came into force on July 1)

❑ **The new shape of auction baskets**
- All Polenergia development projects (biomass, onshore, offshore) are captured. Potential for hybrid combination.
- Reference prices (as per draft resolution) create opportunity for Polenergia in all above mentioned technologies – see next slide.

❑ **The new shape of green certificates system**
- The Act excluded the "blue" basket certificates for biogas with redemption obligation set at the level of 0.3% in 2016. As a consequence the GC requirement was set at the level of 14,7%.
- Ministry of Energy has announced on October 25 the increase in GC redemption requirements from 14,7% to 15,4% in 2017 which increases the annual demand for green certificates by ca. 1TWh.

❑ **Modification of specific provisions relating to offshore FW**
- The project extends the time to produce electricity from offshore wind to 120 months from the signing of connection agreement. Changing the period to produce electricity and basket definition indicate the importance of offshore FW technology in the Government strategy – significant, potential upside for Polenergia.

❑ **Introduction of local biomass definition**
- New type of biomass has been introduced – local biomass - agricultural biomass produced originally within 300 km from the plant.
- To receive a GC or support under the auction an appropriate share of local biomass will have to be maintain. The size of this contribution will be set out implementing provisions.
- By setting purchase obligation of local biomass at sufficiently high level (will be specified in implementing provisions) the Government may increase the demand for agricultural biomass – positive for Polenergia as produced pellets may increase.
- It is also possible top use this “tool” to increase the cost of biomass which can result in smaller supply of green certificates from co-firing.

Wind Turbine Investment Act (Signed by the President on June 22, came into force on July 16)

❑ **Property tax**
- The extension of "building” definition by the technical part of the windmill (including a turbine), may constitute basis for the request to the calculation of property tax base including wind turbine.
- However there are some signals that there is no intention of the Ministry of Finance and Commune Administrators to collect higher property taxes.

❑ **Minimum distance**
- Minimum distance: 10h.
- Wind farms that already posses or have initiated the procedure for the issuance of building permit as at the date on which the Act comes into force will get them for 3 years period in accordance to old rules (i.e. without taking into account minimum distance requirement). During this period FW must received a use permit.
- Polenergia has a building permit for a 267 MW WF ready for auction, these farms are unaffected. All projects affected by the distance limitation have been already written off in Q2.

POLENERGIA

Regulatory issues: draft ordinance on reference prices announced

Installation type		Reference price	Opportunity for Polenergia
Biomass	≤50MW	415	✓
Onshore	>1MW	385*	✓
Offshore		470	✓
Hybrid Installation	>1MW	430	✓

* - It is not clear whether this also applies to existing projects. Recent press reports suggest level of 415 PLN/MWh for existing projects (Rzeczpospolita, 18 October).

Reference prices announced support our key focus areas: Offshore, Hybrid, Onshore and Biomass

POLENERGIA

Offshore windfarms: huge growth potential maintained

- **Two projects of offshore wind farms with a total capacity of 1,2 GW**, which are scheduled to commence operations consecutively in 2022 and 2026; Commencement of construction is expected in 2019.
- **In July 2016 obtained Poland's first environmental permit for Offshore Wind Farm Baltyk Środkowy III project with planned capacity of 600 MW.** The decision for another 600 MW is expected later this year;

Positive impact on the Polish economy

- Total potential investment will greatly benefit the local communities and the Polish economy. Local Polish content, directly or indirectly, could account for about PLN 6bn (60% of total costs).
- PLN 60bn in additional GDP and up to 77 thousand jobs across entire Polish economy – easily offsetting (or providing an alternative) to any potential restructuring effect of Polish coal mines thus providing a good replacement alternative for the Polish State.
- MS TFI (PGZ Group) owns 38% of Bilfinger Mars Offshore in Szczecin (foundations for Offshore). Vice President of MS TFI recently stated that *„soon the first offshore wind farm project will be build in Poland*". Baltyk Srodkowy III developed by Polenergia is the most advanced Offshore project in Poland.
- Deputy Minister of Maritime Economy Paweł Brzezicki, during opening ceremony of offshore wind tower production line in Gdańsk Shipyard, mentioned about Polenergia plans for the construction of the first offshore wind farm in Poland and Gdańsk Shipyard "will have a big part in this project"

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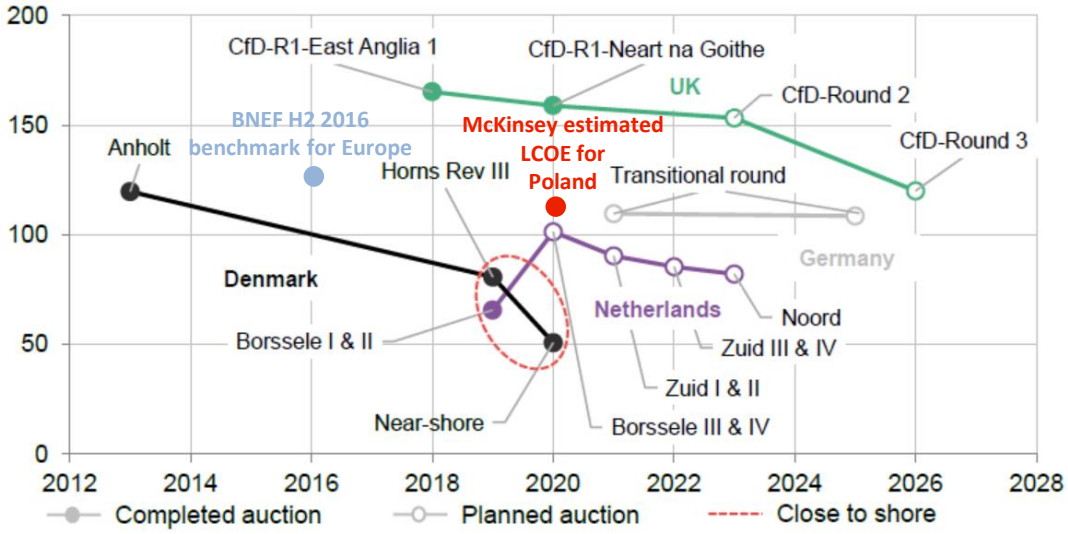
Offshore at sub EUR100/MWh in 2020 will compete with other RES

Technology cost comparison

Estimated LCOE by year of comissioning, 2012-28 (2016 $/MWh)



Proven fall in costs from offshore wind

- Competitive bidding for projects has driven global LCOE from offshore wind down 22% to a benchmark estimate of **$126 per megawatt-hour in H2 2016**
- In September ’16, two offshore wind projects in Danish waters totalling 350 megawatts were awarded to Vattenfall, the utility, with a record-breaking bid of just **60 euros ($67.33) per MWh.**
- In July, another utility, Dong Energy, won a contract to develop a 700MW Dutch offshore array at **72.70 euros per MWh**.
- Offshore wind is not the only technology to have significantly improved its LCOE this year:
  - **Onshore wind’s global benchmark estimate is $68 per MWh** for the second half of 2016, some 16% below the first half of the year.
  - **Onshore wind is already cost-competitive with coal and gas-fired generation in many countries.**

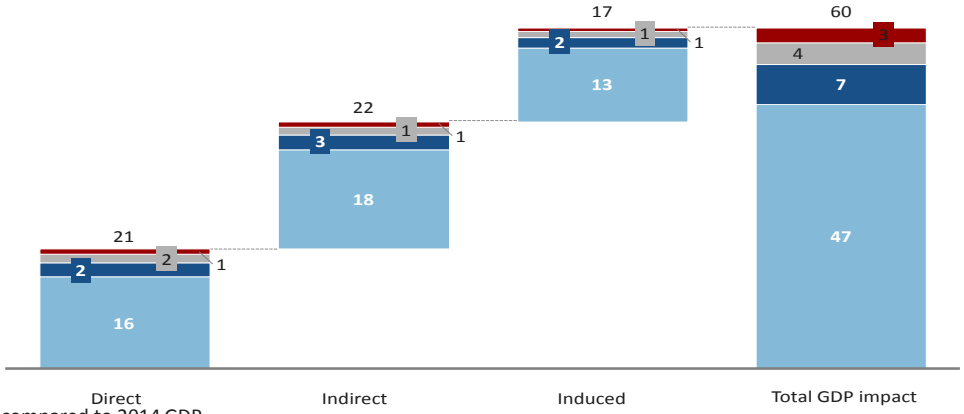
McKinsey estimates target 2020 LCOE level at ca. EUR100/MWh – in line with the BNEF estimate. Final „net” LCOE will be significantly lower if the positive levelized impact of increased GDP is taken into consideration.

SOURCE: McKinsey, BNEF

POLENERGIA

Offshore could have significant impact on Polish economy

Impact on GDP 2019-2030 from 6 GW wind farms, PLN billion



1 In 2014 prices, compared to 2014 GDP

Percent of 10 year GDP[1]

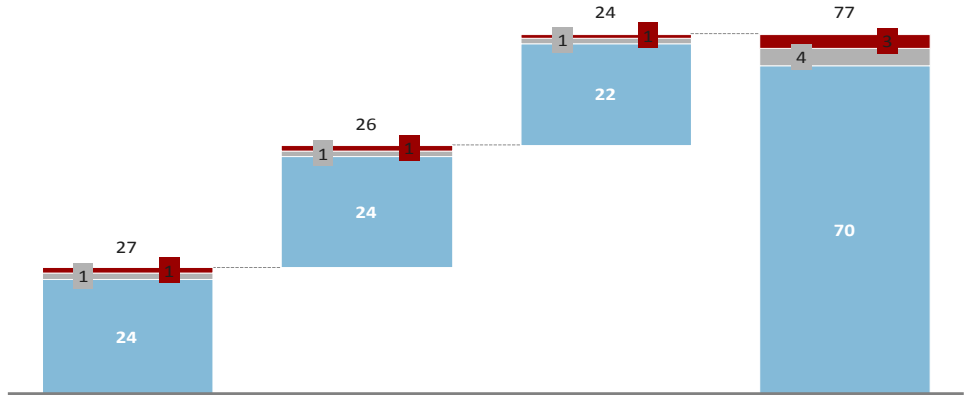
0.34

Potential Tax revenues

PLN 15bn

Infrastructure
Export
O&M
Capex

Impact on employment 2019-2030 from 6 GW wind farms, thousands of FTEs (average)



1 For Q1 2016 – unemployed 1.2 million

SOURCE: GUS; McKinsey

Percent of unemployed[1]

6,4

> PLN 60bn in additional GDP and up to 77 thousand jobs across entire Polish economy – easily offsetting (or providing an alternative) to any potential restructuring effect of Polish coal mines thus providing a good replacement alternative for the Polish State.

SOURCE: McKinsey

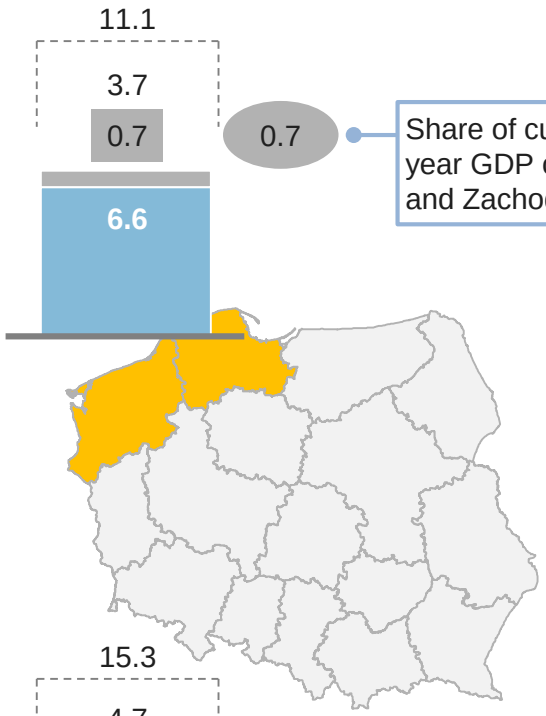
POLENERGIA

Coastal regions will not be the only beneficiaries of Offshore investments

Economic impact of offshore wind on Pomorskie and Zachodniopomorskie in 2020-2030 – over PLN 11 billion GDP and over 15 000 jobs

Indirect and induced impact[3] | O&M (direct impact) | Construction + export (direct impact)

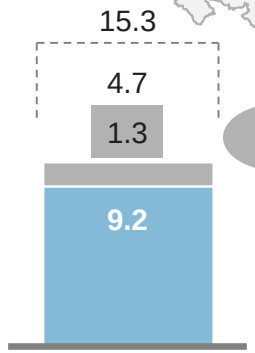
Cumulative GDP impact 2020-2030
PLN billion



0.7

Share of cumulative 10-year GDP of Pomorskie and Zachodniopomorskie[1]

New jobs 2020-2030
Thousands of FTEs



9.6

Share of unemployment in Pomorskie and Zachodniopomorskie[2]

Companies in Poland already involved in offshore wind development

Current coal mining regions of Poland will also benefit from the offshore wind industry

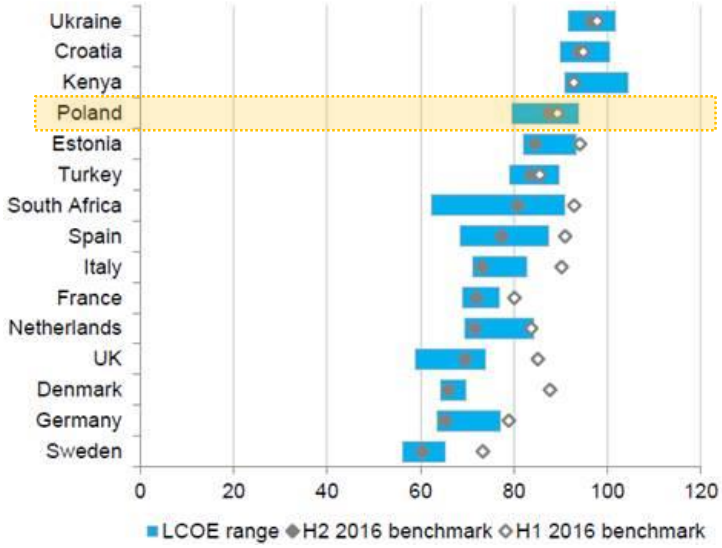
1 Based on latest available GDP by voievodship GUS data (2012)
2 Based on GUS Q1 2016 data
3 Share of indirect and induced estimated based on share in Polish GDP in 2012 of Pomorskie (5.7%) and Zachodniopomorskie (3.7%)

SOURCE: McKinsey

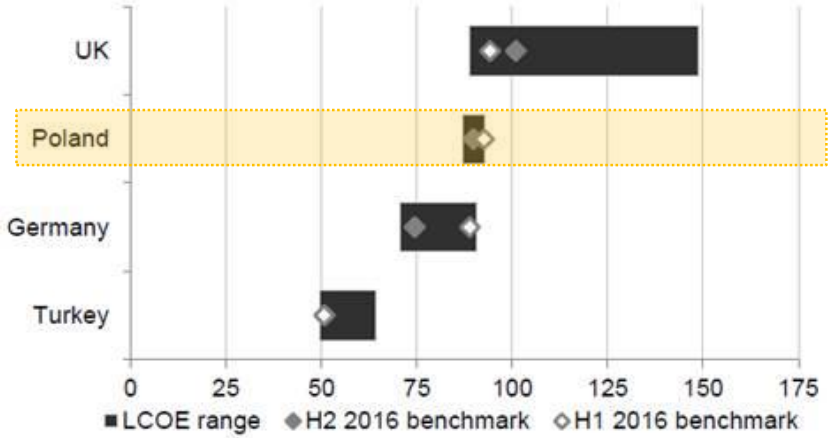
POLENERGIA

Onshore and coal LCOE: Poland vs. Europe

LCOE Onshore wind:



LCOE Coal:



- **Energy from onshore wind is already cheaper than from coal in Poland based on LCOE (87$/MWh vs 90$/MWh)**
- LCOE of onshore wind continues to fall, with EMEA country benchmarks down 12% to **$60-96/MWh** compared with H1 2016. Onshore wind LCOE for Poland in H2 2016 is estimated at ~ **87 $/MWh.**
- The new average capacity factor for onshore wind in EMEA is 31.8%, a 4.4% per cent increase from H1 2016.
- There is little to no build-out of coal-fired capacity in the main markets of EMEA with the exception of Turkey with an LCOE of $51/MWh, and **Poland at $90/MWh.**

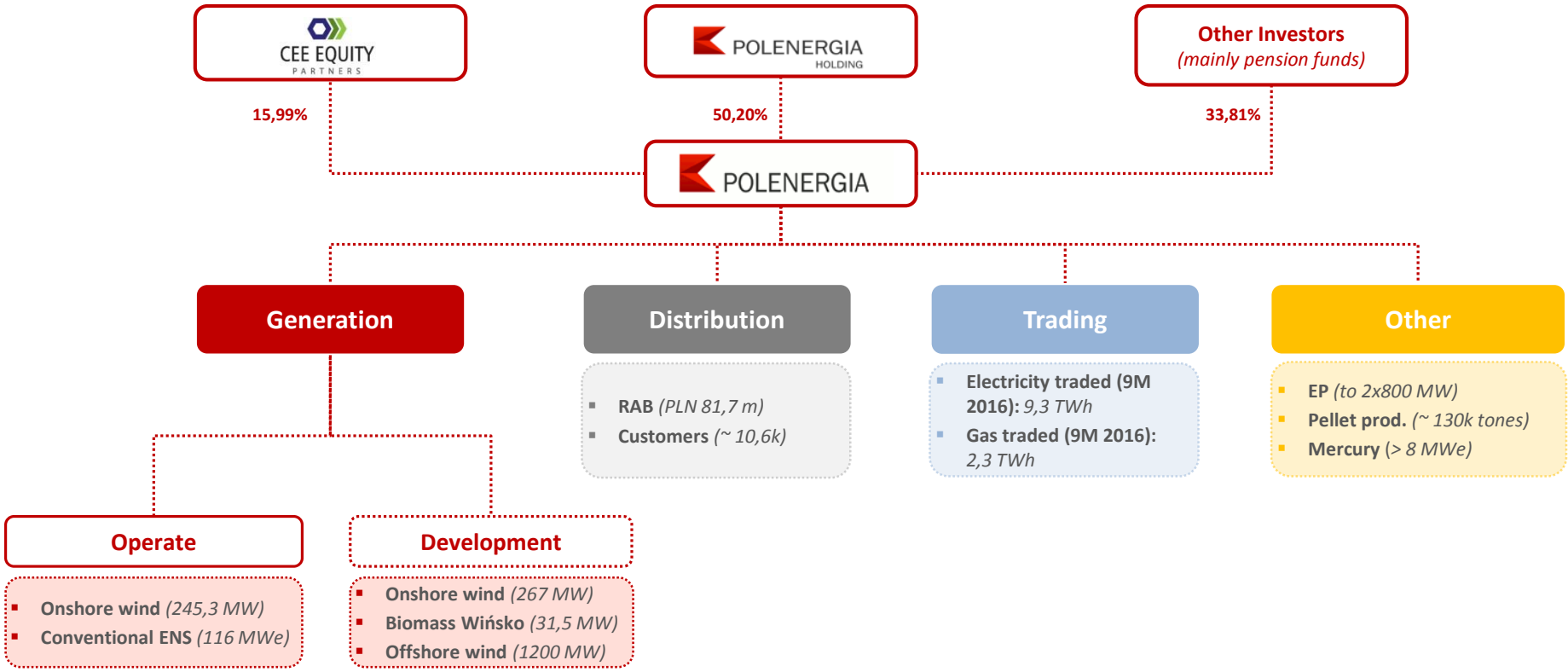
Source: BNEF

POLENERGIA

4A Business/Project Descriptions

POLENERGIA

Group Structure



Polenergia S.A. is listed on the Warsaw Stock Exchange, (c. 45 million shares traded), and is included in WIG80 index

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Generation (in operation): Onshore wind

Operating wind farms

#	Location	Capacity (MW)	COD	Clients
1	**Puck**	**22,0**	2007	Energa, Polenergia Obrót
2	**Modlikowice**	**24,0**	2012	Tauron Sprzedaż
3	**Łukaszów**	**34,0**	2011	Tauron Sprzedaż
4	**Gawłowice**	**48,3**	10.2014	Polenergia Obrót
5	**Rajgród**	**25,3**	11.2014	Polenergia Obrót
6	**Skurpie**	**43,7**	08.2015	Polenergia Obrót
7	**Mycielin**	**48,0**	12.2015	Polenergia Obrót
		245,3 MW		

WF Puck
- Combined project capacity equals 22,0 MWe, comprise 11 turbine (Gamesa) 2,0 MW each;
- Location: Pomorskie voivodeship, district Puck;
- COD in January 2007;
- Average annual production of approximately 42 GWh;

WF Modlikowice
- Combined project capacity equals 24,0 MWe, comprise 12 turbine (Vestas) 2,0 MW each;
- Location: Dolnośląskie voivodeship, district złotoryjski;
- COD in 2012;
- Average annual production of approximately 50 GWh;

WF Łukaszów
- Combined project capacity equals 34,0 MWe, comprise 17 turbine (Vestas) 2,0 MW each;
- Location: Dolnośląskie voivodeship, district złotoryjski;
- COD in 2012;
- Average annual production of approximately 74 GWh;

WF Gawłowice
- Combined project capacity equals 48,3 MWe, comprise 21 turbine (Siemens) 2,3 MW each;
- Location: Kuj. – pom. voivodeship, district grudziądzki;
- COD in November 2014;
- Planned annual production of approximately 144 GWh;

WF Rajgród
- Combined project capacity equals 25,3 MWe, comprise 11 turbine (Siemens) 2,3 MW each;
- Location: Podlaskie voivodeship, district grajewski;
- COD in October 2014;
- Planned annual production of approximately 67 GWh;

WF Skurpie
- Combined project capacity equals 43,7 MWe, comprise 19 turbine (Siemens) 2,3 MW each;
- Location: Warmińsko-Mazurskie voivodeship, district działdowski;
- COD in August 2014;
- Planned annual production of approximately 122 GWh;

WF Mycielin
- Combined project capacity equals 48 Mwe, comprise 24 turbine (Vestas) 2,0 MW each;
- Location: Lubuskie voivodeship, district szprotawski;
- COD in December 2015;
- Planned annual production of approximately 136 MWh;

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Generation (in operation): Conventional ENS

Elektrociepłownia Nowa Sarzyna (ENS) is the first private gas power plant built in Poland as a green field project. The power plant has been in the commercial operation since June 2000.

Business overview

- **The facility is supplied with natural gas and has a total electricity output of 116 MWe and heat output of 70 MWt. The electrical energy generated by Nowa Sarzyna CHP is transmitted to the National Energy System via three 110 kV overhead transmission lines.**
- Operating with high efficiency unit works as a power system.
- CHP meets polish environmental standards.
- Income and cash flow secured by stranded cost compensation system.
- ENS become a part of the agreement with PSE (entered into force on 1 July) under which provides services including reconstruction of the power system within the scope necessary to restore operation process of the National Power System (KSE) after a black-out.

Location of facility in Poland

Details of compensation formula

- ENS generates revenue through the sale of electricity and heat, additionally receives compensation for stranded costs, gas compensation and yellow certificates.
- Guaranteed compensation for stranded costs in principle is calculated in such way to balance power sales with the cost of fuel and operating expense.
- Depreciation (included in the compensation) allows for debt service and interest costs.
- Gas Compensation and yellow certificates increase the profit before tax.

Technical Specifications

Installed capacity	116 MWe, 70 MWt
Net capacity	113 MWe
Avg. net output	Electricity ca. 750 GWh Heating ca. 435 TJ
Technology	CCGT
Fuel	Natural gas / fuel oil backup
Efficiency	HHV (47.7%), LHV (52.9%)
Type	2*1 CCGT Thomassen (GE)
COD	2000
Availability	96.5%

Nowa Sarzyna CHP is uniquely predisposed to cooperate with the National Power System by provision of different system services including reconstruction of the power system under agreement with the system operator

POLENERGIA

Generation (in development): Onshore wind/ Biomass Wińsko

Pipeline build up

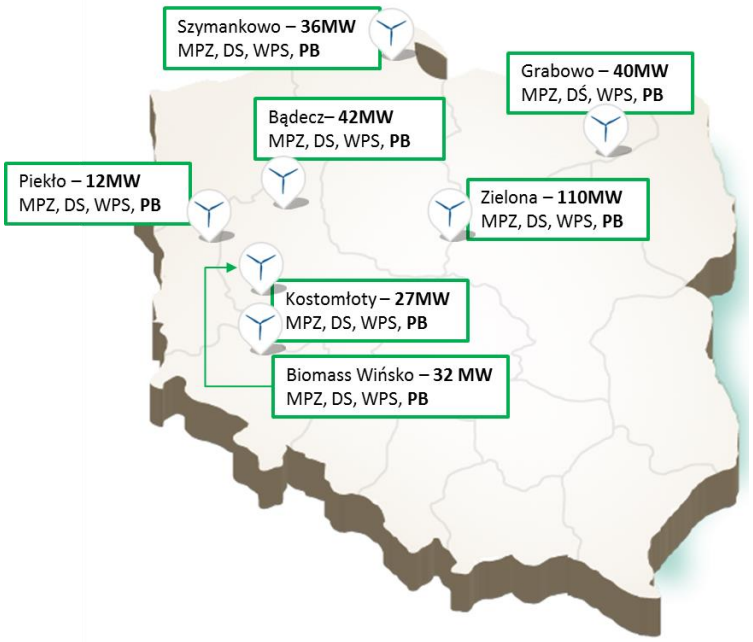
- The portfolio of operating wind farms at the end of 9M 2016 equal to **245,3 MW of installed capacity**;
- Additional portfolio of 6 wind farms projects with capacity of **267MW** in ready to build stage as follow:

#	Location	Power (MW)	Building permit	Possible completion
1	**Piekło**	**12**	**Secured**	2017
2	**Grabowo**	**40**	**Secured**	2017
3	**Zielona**	**110**	**Secured**	2018
4	**Kostomłoty**	**27**	**Secured**	2018
5	**Bądecz**	**42**	**Secured**	2018
6	**Szymankowo**	**36**	**Secured**	2019
		267 MW		

Biomass – Wińsko Power Plant in development

Polenergia is currently working on power plant with a capacity of 31,5 MWe in Wińsko - received all permits

Key features	
Turbine	Condensation / Alstom
Cauldron	Vibrating grate / DP Cleantech
Installed power	31,5 MWe
Start-up	2020
Client	Delivery to the grid
Productivity (load factor)	92%
Efficiency	Electric 33%
Operational period	30 years



Projects with Building Permit

Achieved stages of the development:

MPZ - Local Development Plan
DŚ - Environmental Decision
WPS - Terms of connections to the Network
PB - Building Permit

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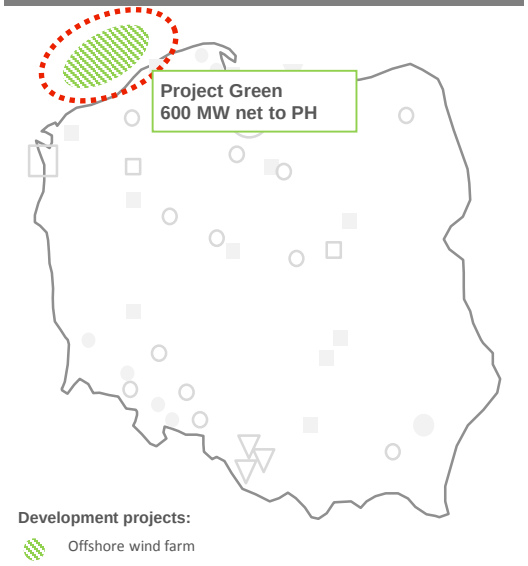
Generation (in development): Offshore wind

Description

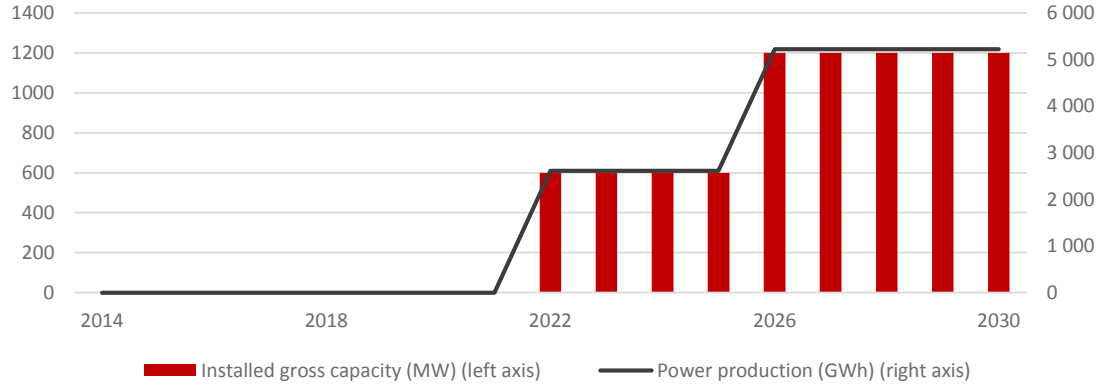
- Two projects with total power of c. 1.2 GW
- The plan is to build offshore projects in cooperation with an experienced industrial player (50/50 JV)
- An additional option is third project with a capacity of 1,6 GW with a valid location permit
- In August 2014, connection agreement for 1200 MW with PSE SA was signed
- In July 2016 obtained Poland's first environmental permit for Offshore Wind Farm Baltyk Środkowy III project with planned capacity of 600 MW
- Polenergia is the No 1 in Poland in the offshore wind development. PGE Group, second behind with their 1 GW project is about 2 years less advanced (beginning of environmental survey)
- No other companies have secured connection agreements, with no further offshore wind connection capacity available in the system now.

Location and power



	Bałtyk Środkowy III	Bałtyk Środkowy II	Bałtyk Północny (susp.)
Site Permit Net Area (sq.km)	116,6	122	128,5
Site Permit Max. Capacity (MW)	1200	1200	1560
Planned Capacity (MW)	600	600	>600
Depth (m)	25-39	23-41	25-35
Distance to the shore (straight line, km)	22	37	81
Planned turbines (MW)	8	8-10	8-10
Planned number of turbines	75	60-75	60-75+
Average wind speed (m/s)	9-10	9-10	9-10

Installed capacity and electricity generation



Planned key dates	Bałtyk Środkowy III	Bałtyk Środkowy II
Environmental decision	Secured	4Q 2016
Construction start	2020	2023
Commisionig date	2021/22	2026

Leading developer of offshore in Poland, supported by increasingly attractive cost economics. Also, the Polish government wants to impose regulations to support offshore wind farm projects.

Polenergia Distribution

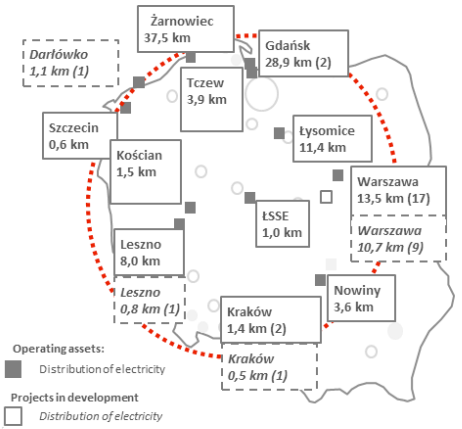
Business overview

- Polenergia Dystrybucja is a distributor and supplier of electricity to industrial, residential and commercial customers, ie. residential areas, factories, office buildings and shopping centers. The Company is operating in various regions of Poland, additionally with a country-wide energy sales license.
- Regulated entity based on WACC / WRA with approved investment plans ensuring stable and predictable cash flows.

Distribution „islands" across Poland/majority in Warsaw;

- *Largest Polish independent distributor after main 4 Polish state-owned DSOs, 2nd largest in Warsaw after Innogy*
- *31 projects in operation and 20 in development based on ERO approved Investment Plan until 2020*
- *c.10,5k clients distributing 285 GWh across 110 km of power lines, 87 substations and 143 transformers*

The length of the distribution network (number of projects)



Increase in value and benefits for customers

Combined profits: Effective use of cooperation between the regulated activities (distribution of electricity) and commercial (sales of energy).

Unique package of benefits: Immediate settlement or reduction of electrical infrastructure costs, Competitive tariffs for distribution and connection to the grid, all costs associated with the maintenance of infrastructure covered by Polenergia Distribution, settlement for electricity by company, the ability to change vendors (TPA) by the customers

Part of Polenergia Group: strategic player with strong financial discipline

Obtaining a license to distribute electricity for the electrical infrastructure (ie. the "last mile") in non-residential buildings, ie. shopping centers and office buildings. Providing partners with opportunities to optimize the cost of electricity infrastructure during construction and maintenance.

Business results	Unit	9M 2015	9M 2016
Distribution sales	**GWh**	**209,8**	**214,3**
Electricity sales	GWh	223,8	114,7
CAPEX	m PLN	4,6	6,3
RAB (end of year)	**m PLN**	**77,7**	**81,7**

	In use	In Development	Total
Distribution power	**75 MW**	**19 MW**	**94MW**
Final users	10,6k	5,1k	16,6k
Number of substations	91	25	116
Number of transformers	**146**	**34**	**180**

Stable regulatory returns combined with profits on electricity supply to the final customers

Polenergia Trading

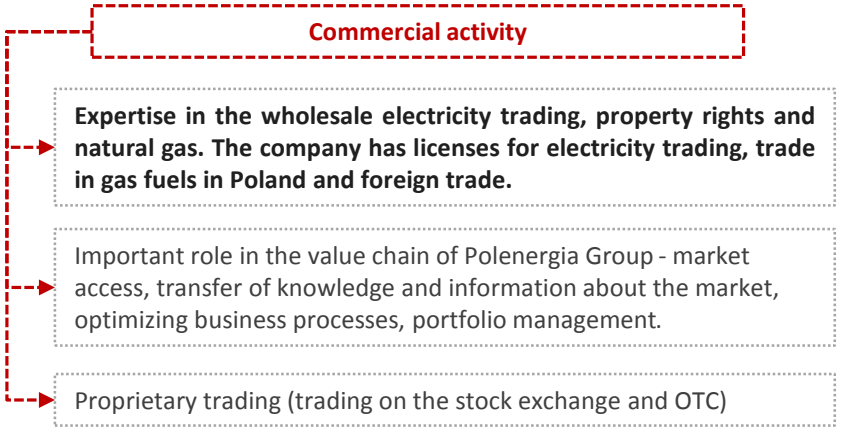
Polenergia Trading specializes in wholesale trading of electricity, natural gas, property rights and certificates of origin, as well as the management of energy contracts for the Polenergia Group entities and other external companies.

Busieness overview

- Polenergia Trading is one of the most dynamically growing companies in the sector of electric energy trade in Poland.
- Central platform for trading and risk management located in Warsaw.
- The Company specializes in wholesale trading of electricity, natural gas, property rights and certificates of origin both under long-term contracts and current transactions and operates as market maker on the POLPX property right market.

Key highlights 2016

- In July 2016 Polenergia Trading signed an agreement with TGE (Polish Power Exchange) to play the **market maker role** with respect to electricity instruments.
- In 2016 Polenergia Obrót started supplying gas in a physical delivery point.
- **As the first company on the Polish market**, Polenergia Trading initiated transactions for certificates of origin on behalf of energy producers from Polenergia Group (certificates originated from one of the wind farms in Polenergia Group).
- In 2014 Polenergia Trading obtained concession for trade in natural gas and trade in gas with foreign clients and actively participates in this market. In 9M 2016 the company increased its natural gas volume to 2,3 TWh



Business results	Unit	2015	9M 2015	9M 2016
Electricity traded	**TWh**	**12**	**8,7**	**9,3**
Natural gas traded	GWh	290	188	2300

Current market share of Trading in the wholesale energy market in Poland is estimated at approx. 5-5,5% in 2016.

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Other

In operations

Pellet production

- In response to the growing demand, since 2008 Polenergia launched 3 projects which produce pellet from agricultural biomass, required for power industry and municipal power plants. The company has three pellet factories
  - North Factory, located in Sępólno Krajeńskie
  - South Factory, located in Ząbkowice Śląskie
  - East Factory, located in Zamość

	North Factory	South Factory	East Factory
Start-up	2009	2010/2011	2012
Annual production (t)*	28k	50k	54k

* Production in 2015, only pellet production

Gas – Mercury Power Plant

- The power plant is located in Walbrzych
- Launched in July 2006.
- Power unit boiler fueled with gas and steam turbine with power above 8 MWe
- Power unit generates electricity from gas that is a byproduct in the production of coke in WZK Victoria
- The power plant operates on the basis of a contract concluded between Polenergia and Victoria WZK for supply of coke oven gas and electricity reception. The contract is valid until December 31 2021.

Development

Coal – Eletrownia Północ (development limited)

- The construction of coal-fired power plants with total capacity of 2 * 800 MW using supercritical technology.
- The project will be based on a long-term PPA contract with a guaranteed collection price for 20 years.

Key features	
Planned power	to 2*800 Mwe
Efficiency	over 45%
Fuel (coal)	20-22 GJ/ton