



POLENERGIA 1Q 2017 Results

11th of May 2017



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Summary of Q1 2017



- <u>Conventional Power:</u> stable operating results once up for effect of one-off in Q1 2016 adjusted; On January 24, 2017 ENS and Ciech Sarzyna executed the Heat Supply and Site Services agreements for the period 2020-2030.
- <u>Distribution</u>: stable performance in Q1 2017 one-off in Q1 2016 adjusted, showing a RAB growth of 5% to PLN 85,5 m
- <u>Trading</u>: positive results on gas, CO2 & electricity trading when taking out the negative effect of green certificates;
- <u>Offshore</u>: Strong value growth potential maintained. Second environmental decision for Bałtyk Środkowy II obtained in April 2017;
- <u>Costs Savings</u>: continuing cost savings showing PLN 4m reduction in all costs outside COGS, a significant portion of which is as a result of continuing cost savings at HQ level <u>Storage Co-operation agreed</u>: as part of diversification strategy Polenergia signed an MOU with Convergent Energy + Power.



- <u>Market Prices</u>: drop in green certificate prices to historical low levels hitting average c. 35 PLN/MWh in Q1 2017 comparing to 114,5 PLN/MWh in Q1 2016;
- Wind productivity: Q1 2017 underperformed Q1 2016 by 7%. Still Polenergia visibly outperforms the market by 11%.
- Biomass: lower results from lower sales volume.
- <u>Regulation</u>: partial increase in property tax liabilities due to the Wind Turbine Investment Act however 30% of all wind farms (in terms of capacity) in 2017 secured property tax at historic levels.

- Low Green Certificate prices and effect of Q1 2016 One-Off items. After adjustment for those effects relatively stable performance in other segments
- Cost savings continue to be visible
- Positive developments on Offshore. Storage co-operation with Convergent Power

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

GC and Black Energy: 1Q 2017 versus 1Q 2016 (PLN/MWh)



45% 39%_{38%} 40% 37%_{35%} 37% 40% 34%33% 35% 31% 29% 27% 30% 24%23% 25% 25% 20% 15% 10% 5% 0% Puck Łukaszów Modlikowice Gawłowice Rajgród Skurpie Mycielin

Load factors 1Q 2017 versus 1Q 2016

■ 1Q 2016 ■ 1Q 2017

Productivity of Polenergia wind farm projects above average



- GC prices decrease continued, while electricity prices were stable
- Productivity below Q1 2016 but still above average in Poland

Stable operational performance

Conventional (ENS) volumes: 1Q 2017 vs. 1Q 2016



Distribution volumes: 1Q 2017 vs. 1Q 2016



 ENS maintained stable power production and increased heat generation

- Increase in distribution volumes and RAB base for the Distribution business
- Visible increase in electricity/gas traded volumes as well as new volumes in CO₂ as a result of this new trading activity



Trading volumes: 1Q 2017 vs. 1Q 2016

Strategic Roundup

Focus	Strategic Objective	Status
	1. Cost Optimization	 Continuation of costs savings (2m reduction on salaries Q/Q continuing PLN 9m reduction at YE 2016). PLN 0.6m of O&M in Wind Farms to be continued in next quarters.
Resolve Current Issues	2. Defend Value	 Banking negotiations continue on wind farms to reprofile debt where necessary, negotiations are tough due to the external environment; Auction readiness of onshore wind and biomass (single or hybrid auction preparation/potential if regulation allows this).
	3. Real Estate Tax Risk Minimization	 Multi-directional strategy which already hedged fully 30% of existing wind farm capacity for 2017 whilst minimising where possible the remaining farms.
	4. Offshore	 — Second environmental decision for Bałtyk Środkowy II obtained in April 2017; — Continue to develop the offshore project in accordance with plan.
Secure Growth and Diversification	 5. Technological/ Geographical Diversification CONVERGENT ENERGY + POWER Solarcentury Solarcentury 	 Continue development of pilot projects in PV within Polenergia Dystrybucja business within own client base and distribution development projects; Polenergia is analyzing the potential for strategic growth focused on geographic and technological diversification, still remaining focused on renewables but widening its focus to PV and energy storage; Signed MOU with Convergent Power: cooperation with US storage developer focussing on finding storage projects in Poland, Germany, Austria, Switzerland and Italy in first instance; Signed MOU with Solarcentury: first pilot project - submitted bid for 6MW PV hybrid project for a gold mine in Namibia under long term offtake and potential financing cooperation with BGK; A new strategy is planned to be announced in Q3/Q4 2017, subject to the approval by the Polenergia Supervisory Board. Advisor appointed to assist with the process, a global Clean Tech expert – FTI Consulting.







Consolidated results for 3M 2017 – P&L

Polenergia Group Income Statement (mPLN)	3M 2017	3M 2016	Diff y/y
Revenues from sales	709,9	722,5	(12,6)
Cost of Goods Sold	(684,4)	(653,6)	(30.8)
of which costs by kind	(106,0)	(110,2)	4,2 —
Gross profit on sales	25,5	68,9	(43,4)
Selling, general and administrative costs	(8,2)	(9,0)	0,7
Other operating income/costs	1,4	1,1	0,2
A Gross result on sale (EBIT)	18,7	61,1	(42,4)
Depreciation	24,5	26,7	(2,2)
EBITDA	43,2	87,8	(44,6)
Eliminating the effect of purchase price allocation	(0,7)	(0,7)	
Adjusted EBITDA*	42,5	87,1	(44,6)
B Financial income	3,4	1,2	2,2
C Financial expenses	(16,8)	(14,4)	(2,5)
A+B+C Profit (loss) before tax	5,2	47,9	(42,7)
Income tax	(3,6)	(11,5)	7,8
Net Profit (loss)	1,6	36,4	(34,8)
1 Eliminating the effect of the purchase price allocation	1,5	1,5	\
Eliminating the effect of unrealized exchange differences	(0,8)	0,2	(1,1)
③ Elimination of the effect of AMC loans valuation	0,7	0,4	0,2
Adjusted Net Profit*	2,9	38,6	(35,7)
Adjusted EBITDA margin	6,0%	12,1%	
Revenues from sales in Trading segment	572,6	538,2	34,4
Costs of Goods Sold in Trading segment	(569,6)	(529,2)	(40,3)
Adjusted EBITDA (excl. trading segment)	41,7	80,5	(38,8)
Adjusted EBITDA margin (excl. trading segment)	30,4%	43,7%	

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

Decline in profitability results from decrease of GC prices, worse wind conditions and one-off effect in the conventional energy and distribution segments from Q1 2016 Lower sales excl. trading segment result from decrease of GC prices and worse wind conditions in WF segment and effect of lower energy, gas and CO2 price forecasts in Conventional Energy segment partly offset by increase of sales volume and from development of gas trading segment.

Variances on costs by kind level and SG&A discussed on following slides. Mainly decrease of remuneration and social insurance costs due to costs saving programme (totalling to PLN 9.1m in entire 2016 and further PLN 2.0m in 2017).

Depreciation decrease due to longer useful economic life of fixed assets in WF segment, extension to 25 years.

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

Higher financial income mainly due to higher interest income and positive FX differences.

Higher financial expense resulting from commencement of new projects (interest capitalized during construction in 1Q 2016) partially offset by decrease in debt in other operating assets.

Lower income tax results from lower profit before tax.

Adjustments:

- 1) Purchase price allocation effect of non-goodwill assets (amortization) due to PESA/PEP merger in 8/2014
- 2) Unrealized exchange differences (mostly in Dipol due to loan in EUR)
- 3) AMC: IFRS accounting approach to loan valuation



Operating Cost in Polenergia S.A. Group

Costs bridge 2017/2016



Costs by kind decomposition	3M 2017	3M 2016	Diff
Depreciation	24,5	26,7	(2,2)
Usage of materials and energy	50,9	51,5	(0,6)
External services	14,1	13,8	0,3
Taxes and fees	6,7	6,2	0,4
Remuneration & social security and other benefits	9,1	11,1	(2,0)
Other costs	0,8	0,9	(0,1)
TOTAL	106,0	110,2	(4,2)
- Value of goods and materials sold (positive value)	586,6	552,4	34,2
- Selling, general and administrative costs (negative value)	(8,2)	(9,0)	0,7
Cost of Goods Sold	684,4	653,6	30,8

- 1. Depreciation: decrease mainly due to longer economic useful life of fixed assets in WF segment.
- 2. Usage of materials and energy: decrease mainly due to lower usage of materials and energy in biomass and disposal of Zakrzów CHP, partially netted by higher gas costs in ENS (higher volume and price).
- 3. External services: slight increase of external services.
- 4. Taxes and fees: increase results from real estate tax in wind farms, mainly in WF Mycielin (first RET payment in 2017, no RET in 2016 due to start of operations), partly offset by prudent approach to VAT settlement.
- 5. Remuneration & social security and other benefits: decrease of remuneration costs due to costs saving programme at HQ (Polenergia SA stand alone) level and other operating business (in total of PLN 2.0m).
- 6. Other costs: decrease of other costs resulting from reduction of group business costs.
- 7. Value of goods and materials sold: increase results from change of costs in Trading segment, impact due to increase of volume without impact on margin
- 8. Selling, general and administrative costs: lower costs inter alia as a result of costs saving programme.



Consolidated results for 3M 2017 – EBITDA Analysis





- Conventional energy: lower EBITDA (by PLN 14.3m) results from one-off effect of 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 (impact of non-recurring items of c. PLN 16m).
- 2. Wind farm segment: decrease in EBITDA (by PLN 21.9m) resulting from lower GC prices and higher cost of real estate tax partly offset by lower service costs.
- Distribution segment: EBITDA decreased (by PLN 2.9m) mainly due to high 2016 base (reversal of discount provision) (impact of non-recurring items of c. PLN 2.8m).
- Trading segment: EBITDA decreased (by PLN 5.9m) mainly due to lower green certificates prices and nonrecurring gas transaction. This effect was partially offset by better electricity, CO2 and gas trading results.
- **5. Biomass:** lower EBITDA (by PLN 2.2m) results from lower sales volume.
- **6. Unallocated administrative costs:** reduction results from cost optimisations as well as from higher cost base in Q12016 (VAT provision).

Consolidated results for 3M 2017 – EBITDA adjusted for 2016 One-Offs & GC effect



- Conventional Energy: EBITDA normalised due to one-off effect of 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 (impact of non-recurring items of PLN 16m) in ENS as well as disposal of Zakrzów CHP (impact of PLN 0.8m)
- 2. Wind farm segment: after adjusting due to GC effect noticeable O&M savings partially offset by slightly negative volume variance (lower Load Factor by 3.2 pp).
- 3. Distribution segment: normalised effect of reversal of discount provision recognized in Q1 2016 as well as discontinued gas sales operations.
- 4. Trading segment: EBITDA normalised due to negative impact of Green Certificates trading as well as one-off gas trading showing positive trend.
- 5. Unallocated administrative costs: reduction results from cost optimisations as well as from higher cost base in Q12016 (VAT provision).

Adjustments for Q1 2016 One-Offs as well as the effect of falling GS show positive/stable operations of most key remaining business lines with O&M cost savings in Wind neutralizing the lower productivity in Q1 2017

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Net profit - overview of the changes y / y

EBITDA / Net profit [m PLN]	3M 2017	3M 2016	Difference	Adjustments [m PLN]	2017	2016	Difference
EBITDA	43,2	87,8	(44,6)	Effect of the purchase price allocation	1,5	1,5	0,0
Adjusted EBITDA	42,5	87,1	(44,6)	Effect of unrealized exchange differences	(0,8)	0,2	(1,1)
Net Profit/Loss	1,6	36,4	(34,8)	Effect of AMC loans valuation	0,7	0,4	0,2
Adjusted Net Profit/Loss	2,9	38,6	(35,7)	TOTAL	1,3	2,2	(0,8)



Adjusted net profit decreased by PLN 35.7m, due to:

- 1. Detailed decomposition of normalizing adjustments for 3M 2017 and 3M 2016 is presented above;
- 2. Decreased EBITDA (worse by PLN 44.6m);
- 3. Lower depreciation (by PLN 2.2m) resulting from longer economic useful life of fixed assets in Wind Farms (prolongation of economic useful life of wind farm turbines to 25 years after consultation with turbines manufacturers);
- 4. Higher financial income (by PLN 2.2m) mainly due to higher interest income and higher revenues from FX differences;
- 5. Higher financial costs (by PLN 2.5m) mainly due to higher interest costs and fees.
- 6. Positive CIT impact (by PLN 7.8m) due to lower gross profit.



Balance sheet

Assets (PLN m)	As at 31.03.2017	As at 31.12.2016	Diff
Fixed assets (long-term)	2 242	2 271	(29)
Tangible fixed assets	1 982	2 000	(18)
Intangible assets	37	39	(2)
Goodwill of subordinate entities	185	185	(0)
Financial assets	10	12	(2)
Long-term receivables	5	5	(0)
Deferred income tax	23	30	(7)
Accruals	0	0	0
Current Assets (short-term)	599	703	(104)
Stock	36	41	(5)
Receivables from deliveries and services	107	149	(42)
Receivables from income tax	6	6	(0)
Other short-term receivables	23	20	3
Accruals	15	6	9
Short-term financial assets	66	100	(34)
Cash and cash equivalents	347	381	(34)
Total Assets	2 842	2 974	(132)

Liabilities (PLN m)	As at 31.03.2017	As at 31.12.2016	Diff
Equity	1 270	1 267	3
Long-term liabilities	935	1 016	(81)
Loans and borrowings	760	820	(60)
Provision from deferred income tax	63	66	(3)
Reserves	25	26	(1)
Accruals	58	59	(1)
Other liabilities	29	45	(16)
Current liabilities	637	692	(55)
Loans and borrowings	324	296	28
Trade payables	126	156	(30)
A liability for income tax	0	1	(1)
Other liabilities	170	220	(50)
Reserves	3	3	0
Accruals	14	15	(1)
Total liabilities	2 842	2 974	(132)

Current depreciation of operating assets, partially offset by increase resulting from CAPEX spent in the period in distribution and development segments.

Decrease in receivables results from decrease in trade receivables in wind farms, distribution, trading and HQ segments.

Mainly valuation of contracts in PE Obrót.

Change of cash balance was described in part related to cash flows.

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

Increase of overdraft.

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

Mainly liabilities in ENS, EP and valuation of contracts in trading segment.

Adjusted EBITDA for the last 12M (from April 1st 2016 to March 31st 2017) amounted to PLN 183.4m and Group's net debt at March 31st 2017 was PLN 736.8m

It implies Net debt / EBITDA ratio of 4.02x



Consolidated cash flow analysis

Consolidated statement of cash flows (PLN m)	3M 2017	3M 2016
A. Cash flows from operating activities		
I.EBITDA	43	88
II. Adjustments	(27)	(40)
III. Net cash flow from operating activities (I+/-II)	16	48
B. Cash flows from investing activities		
I. Cash received	0	0
II. Expenses	(5)	(47)
III. Net cash flow from investing activities (I-II)	(5)	(47)
C. Cash flows from financing activities		
I. Cash received	10	45
II. Expenses	(55)	(65)
III. Net cash flow from financing activities (I-II)	(45)	(20)
D. Net cash flow, total (A.III+/-B.III+/-C.III)	(34)	(20)
E. Balance transition of cash, including:	(34)	(19)
F. Cash and cash equivalents at beginning of period	381	362
G. Consolidated cash and cash equivalents at end of period	347	343
Consolidated debt	1 084	1 137
Consolidated net debt	737	794

Adjustments include mainly change in working capital (PLN -24m) in trading and distribution and CIT settlement (PLN -1m).

Development expenditures include development of distribution segment (PLN 2m), and project development (PLN 3m).

Cash inflows result from investment debt drawdown in distribution segment (PLN 6m) and overdraft in ENS (PLN 4m).

Debt repayment and interest payments - mainly Wind Farms (PLN 38m), ENS (PLN 11m) and distribution segment (PLN 6m).

Of which PLN183m of cash at Polenergia SA level as development funds, hedge against market uncertainty and funds for diversification/growth

- Adjusted EBITDA for the last 12M (from April 1st 2016 to March 31st 2017) amounted to PLN 183.4m and Group's net debt at March 31st 2017 was PLN 736.8m
- It implies Net debt / EBITDA ratio of 4.02x. Increase as compared to 2016 (3,25x) results from lower last 12M EBITDA.

Lower Net Debt results from deleveraging, however Net Debt / EBITDA is higher comparing to 2016 due to lower LTM EBITDA





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Development of market regulatory uncertainty and effect on share price



Regulatory issues: draft ordinance on reference prices confirmed

Installation type		Reference price 2017	Opportunity for Polenergia
Biomass	≤50MW	415	\checkmark
Onshore	>1MW	350	\checkmark
Offshore		470	\checkmark
Hybrid Installation	>1MW	405	\checkmark

- Ordinance regarding reference prices was published in March 2017.
- Ordinances regarding maximum volumes and value of energy that can be purchased through auction and sequence of auctions in 2017 were published in April.

In December 2016 Polish Energy Regulatory Office organized auctions for the following technology baskets:

Technology basket	Outcome	Price (PLN)
Existing agricultural biogas plants with installed capacity \leq 1MW	7 offers submitted, 7 won. Total energy sold: 824,6 TWh	Min: 502,2 Max: 504,6
Existing agricultural biogas plants with installed capacity > 1MW	Auction did not happen due to too few	offers submitted
New installations, other than mentioned in Art. 73 sec. 3a item 1-3 and 6, RES Act, with installed capacity ≤ 1MW (PV installations)	152 offers submitted, 84 won. Total energy sold: 1 567,3 TWh	Min: 253,5 Max: 408,8
Installations with an installed capacity ≤ 1 MW, with installed capacity utilization above 3 504 MWh / MW / year and with the emission not exceeding 100 kg / MWh (hydro plants)	49 offers submitted, 49 won. Total energy sold: 416,6 TWh	Min: 30,0 Max: 468,0

December 2016 auction was a test auction effectively, with minimal voluments sold. Reference prices & volumes published in 2017 continue to support our key focus areas

Poland subject to serious risk of not meeting 2020 EU renewable energy targets



Source: Ecofys

The estimated Poland's RES share range between 10.0% and 13.8% in 2020 for the pessimistic and optimistic scenarios respectively, while the target is set at 15,5%



The cost of missing EU targets can be significant



In order to avoid substantial cost of statistical transfer, Poland needs to invest in new RES capacities and support the cheapest technologies such as onshore wind and PV



International Arbitration Success Precedent concerning Spain and prospects for Poland

Spain loses ICSID international arbitration over cuts to renewables

- Spain must pay €128 million plus interest for cuts to compensation for concentrating solar power (CSP) plants as ordered by the World Bank's ICSID. Many other cases for investors in renewable energy projects are pending;
- The court filed in favor of British-based Eiser Infrastructure Limited and its affiliate Energia Solar Luxemburg;
- Major setback for Spain in international courts due to these cuts. Currently there are 26 cases brought by international investors regarding cuts to payment for renewable energy projects, including PV projects, pending before ICSID;
- This ruling by ICSID is centered on the consequences of Spain's electricity reform in 2013 and 2014.

8 international arbitration claims in Poland – Prime Minister firmly allocates responsibility for management to Minister of Energy

 In letter to Minister of Energy, a Prime Minister highlighted a historical position of ministry. According to Ministry of Energy the Wind Turbine Investment Act purpose was to regulate supervision of wind farms in the context construction regulations.

Postive news on international arbitration trends setting a relevant precedent for Poland

Status of Offshore Wind



Offshore levelized cost of electricity (LCOE) systematic falls...



Source: Own calculation based on Bloomberg New Energy Finance (BNEF)

Systematic decrease LCOE of offshore wind energy

C POLENERGIAcontinuing with recent Auctions in Germany to "grid parity"



Strike price by year of auction, 2013-2017 (EUR/MWh)

- Dong Energy smashed through its own target of bringing offshore cost down below EUR 100/MWh (\$110/MWh) by 2020. On 5 July 2016, an auction in the Netherlands saw Dong win the 700MW Borssele I & II project with a EUR 73/MWh
- Vattenfall has gone even further by securing the 350MW 'near-shore' concession from the Danish government with a bid of EUR 64/MWh for the first 12-13 years.

Dong and EnBW Germany's first zero subsidy winning bid in April 2017 was possible only due to the followings reasons:

- Dong and EnBW are betting that Germany's future wholesale power price will rise and match, or exceed, their required strike price.
- Attributed some of their large expected cost savings to 'clustering': reduced costs from nearby projects (with the same owner) sharing
 operation and maintenance services.
- Importantly, while the result is for 'zero-subsidy' this does not mean 'zero-support' will still benefit from a number of protections under the German renewables law, including a guaranteed and paid for transmission line, preferential grid access, and protection against negative pricing events.

Whilst the latest auction in Germany showed that subsidy-free offshore technology is closer than it seemed before, we expect in Poland for LCOE to be c.EUR80-100MWh in 2020-2025 – this is still an attactive level

Effective "Net LCOE" for Poland at cEUR40/MWh



LCOE of offshore wind farms in the 1st half of 2017 in Europe (EUR / MWh)

Source: LCOE for Poland based on McKinsey estimates, other data: calculation based on BNEF

- According to conservative McKinsey estimates, the average offshore LCOE in Poland will amount to 96 EUR/MWh in 2020*
- McKinsey indicates that taking into account market potential of 6 GW, the total impact of offshore wind on the Polish GDP is about PLN 52 billion which translates to approx. 57 EUR/MWh, resulting that the average net cost for the Polish economy will amount to only ~ 39 EUR / MWh.
- At the same time, the total amount of subsidy required to 6 GW of offshore wind farms project amount to PLN 42 billion and is 23% lower than estimated positive impact on GDP.

It is profitable for Poland to invest in offshore wind farms at a cost of approx. 100 EUR/MWh, as taking into account the impact on GDP (estimated at 57 EUR/MWh), the net cost of the energy produced from this source for Poland will amount only to 39 EUR / MWh



Groundbreaking Storage Co-operation with Convergent Power

Convergent Power overview

- History: founded in late 2011 with a pure-play focus on energy storage project development Convergent Power develops, owns, and operates cost-effective energy storage assets, creating new value for utilities, electricity end-users, and project investors (see: http://www.convergentep.com/);
- Market Leader in US/Canada: US\$40m in energy storage financing raised and deployed to-date in US and Canada; 70MW & 230MWh of projects contracted (7 Utilities + 3 large Industrial Customers). Trusted by investors such a Statoil (global energy player) and Great Plains Energy (leading US utility).
- Strong revenue stream: projects have stable revenues and create new value for the electric grid and its customers. All Convergent Projects in US/Canada generate high target equity IRR.
- Technology-neutral: select technologies / vendors to meet the application, safety & financing requirements of specific applications.



Cumulative energy storage deployment by application, 2014-24 (MW)



Source: BNEF

According to BNEF, in 2016 in Germany there were 241MW of installed storage capacity. By 2024 installed capacity is estimated to increase to 4 819MW, which means 20 times increase. Total investment in new storage capacities in Germany is projected to amount to USD 4bn.

Approx. USD 2,5bn will be invested in energy storage in Italy. This will translate into increase of installed capacity from 58MW in 2016 to 2 606 MW in 2024 (40 times increase).

Partnership with Convergent Power to allow Polenergia become a technology agnostic IPP storage developer who owns, and operates cost-effective, high-yielding and financeable projects for both utilities and industrial customers

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Increases System Flexibility

- Instantaneous, reliable response / dispatch within load pockets
- Modular design & fast install for staged expansion to dynamically respond to load growth
- Dynamic real & reactive power
- Islanding, black-start, and voltage ride-through capabilities
- Renewable energy integration

Customer Benefits

- Avoidance of power outages; increased reliability
- Bill savings reduced wholesale pricing, deferred T&D costs, increased system reliability

A Total Resource Cost Benefit Optimal location for maximizing stacked value streams



T&D Constraints

- Expand and optimize capital spend to address T&D constraints
- Expedites solutions by reducing permitting and construction time
- Extends life / increases utilization/reliability of existing infrastructure

Wholesale Market Revenues

- Energy arbitrage (including negative pricing)
- Operating reserves and regulating services
- Emergency response services (black start)
- Generation capacity (planning margins, etc.)

MOU terms agreed with Poland, Germany, Italy, Switzerland and Austria as initial target countries







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

Generation (in operation): Onshore wind

Operating wind farms

# Location	Capacity (MW)	COD	Clients	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;
1 Puck	22.0	2007	Energa, Polenergia	Average annual production of approximately 42 GWh;
	22,0	2007	Obrót	WF Modlikowice Combined project capacity equals 24,0 MWe, comprise 12 turbine (Vestas) 2,0 MW each; Location: Delac flaglic university delation distribute to the middle.
2 Modlikowice	24,0	2012	Tauron Sprzedaż	 Control pointosiaskie volvodesnip, district ziotoryjski; 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;
3 Łukaszów	34,0	2012	Tauron Sprzedaż	 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;
4 Gawłowice	Gawłowice 48,3	,3 11.2014 Polen	Polenergia Obrót	 Location: Kuj. – pom. voivodeship, district grudziądzki; COD in November 2014; Planned annual production of approximately 144 GWh;
5 Rajgród	25,3	10.2014	Polenergia Obrót	WF Rajgród • Combined project capacity equals 25,3 MWe, comprise 11 turbine (Siemens) 2,3 MW each; • Location: Podlaskie voivodeship, district grajewski; • Obbin 0. Podlaskie voivodeship, district grajewski;
				 COD in October 2014; Planned annual production of approximately 67 GWh;
6 Skurpie	43,7	08.2015	Polenergia Obrót	WF Skurpie • Combined project capacity equals 43,7 MWe, comprise 19 turbine (Siemens) 2,3 MW each;
7 Mycielin	48,0	12.2015	Polenergia Obrót	 Location: Warmińsko-Mazurskie voivodeship, district działdowski; COD in August 2015; Planned annual production of approximately 122 GWh;
	245,3 MW			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.



Technical Specifications

Location of facility in Poland

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%)		
Туре	2*1 CCGT Thomassen (GE)		
COD	2000		
Availability	96.5%		

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.

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 31



Generation (in development): Onshore wind/ Biomass Wińsko

Pipeline build up

- The portfolio of operating wind farms at the end of Q1 2017 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
1	Piekło	12	Secured
2	Grabowo	40	Secured
3	Zielona	110	Secured
4	Kostomłoty	27	Secured
5	Bądecz	42	Secured
6	Szymankowo	36	Secured
		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



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.



	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

1400						6 000
1200						5 000
1000						4 000
800						3 000
600						2 000
400						2 000
200						1 000
0						0
	2014	2018	2022	2026	2030	
		Installed gross capacity (MW) (left axis)		n) (right axis)	

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

Installed capacity and electricity generation

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.

Offshore could have significant impact on Polish economy



> 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.

Coastal regions will not be the only beneficiaries of Offshore investments



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 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
- o 31 projects in operation and 20 in development based on ERO approved Investment Plan until 2020
- o 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 nonresidential buildings, ie. shopping centers and office buildings. Providing partners with opportunities to optimize the cost of electricity infrastructure during construction and maintenance.

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

Business results	Unit	FY 2015	FY 2016
Distribution sales	GWh	278,8	284,0
Electricity sales	GWh	294,2	140,2
CAPEX	m PLN	6,9	8,2
RAB (end of year)	m PLN	77,8	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



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 2016 the company increased its natural gas volume to 2,8 TWh

Commercial activity
 Expertise in the wholesale electricity trading, property rights and natural gas. The company has licenses for electricity trading, trade in gas fuels in Poland and foreign trade.
 Important role in the value chain of Polenergia Group - market access, transfer of knowledge and information about the market, optimizing business processes, portfolio management.

Proprietary trading (trading on the stock exchange and OTC)

Business results	Unit	2015	2016
Electricity traded	TWh	12	14
Natural gas traded	GWh	290	2780

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



Other

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)*	21k	41k	52k

* Production in 2016, 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.

Coal – Elektrownia 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.

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

In operations