

ewz (Deutschland) GmbH. Annual Report 2017.



ewz (Deutschland) GmbH. **Annual Report 2017.**

ewz (Deutschland) GmbH is a wholly owned subsidiary
of ewz (Zurich Municipal Electric Utility).

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Foreword by the Executive Board. Summary of 2017.

There was a record increase in the number of wind energy plants in Europe in 2017, particularly offshore ones. A total of 13 new offshore wind farms were connected to the grid, including the world's first floating wind farm, Hywind Scotland. The biggest increases in output were seen in the United Kingdom and Germany (1 680 MW and 1 247 MW respectively). Furthermore, most of the eleven offshore wind farms that are currently under construction can be found off the coasts of these two countries.

Germany was also the main contributor to the expansion of onshore wind energy in 2017. The gross increase in production output amounted to 5 334 MW, generated by some 1 800 new wind turbines. While onshore wind farms with an output of around 1 692 MW were built in France, capacity in Sweden and Norway only increased by 197 MW and 324 MW respectively.

In the countries where ewz (Deutschland) GmbH wind farms are located, 2017 was again marked by varying production conditions. The four wind farms in the Atlantic portfolio in Sweden recorded their highest production output to date (197 GWh).

At 239 GWh, the volume of energy produced by the Høg-Jæren wind farm in Norway also exceeded expectations, though it still fell short of the highs recorded in 2014 and 2015. Reliable operations continued after Eurus Energy took over maintenance and servicing activities. At just under 31 GWh, the production output of the Epinette wind farm was lower than in previous years.

The German onshore wind farms achieved good production figures in 2017. The two wind farms Kleinbrenbach and Vogelsberg achieved the highest production volumes measured since their acquisition by ewz (Deutschland) GmbH. The annual output of the Schermen wind farm was also in line with expectations. However, in the first four months of the year, many of the turbines at the Dörnte wind farm suffered long down-



times. Once the technical problems were resolved, these losses were partially offset thanks to good wind conditions during the remainder of the year.

In the second full production year, the Butendiek offshore wind farm ran mostly according to plan from a technical perspective. Production of 1 174 GWh exceeded the target of 1 287 GWh by around 9%.

In Spain, the solar thermal power plant Puerto Errado 2 also functioned reliably in technical terms. Thanks to good sunlight conditions, it achieved by far its highest production output to date (43 GWh).

In February 2017, ewz (Deutschland) GmbH and a co-investor acquired a 24.51% interest in the turnkey wind farm Trianel Borkum II through the affiliated company ewz Offshore Borkum GmbH. Located around 45 kilometres to the north-west of the island Borkum in the North Sea, it will consist of 32 turbines. Construction work has been under way since autumn 2017. There is special emphasis on protecting marine mammals from noise emissions, especially during ramming work when laying the foundations. Commissioning of the offshore wind farm is planned for autumn 2019.

Shortly before the end of the year, ewz (Deutschland) GmbH acquired a 100% stake in two wind farm project companies in France. The Autremencourt wind farm, situated in the north-east of France and close to the Epinette wind farm, will consist of six turbines. It will begin operations in 2018. The Vihierois wind farm, around 90 kilometres south-east of Nantes, is currently under construction. It will be completed by mid-2019 and will consist of nine turbines. The plan is for both wind farms to be equipped with Nordex turbines with a total installed generating capacity of around 36 MW and an annual production volume of 100 GWh.

In December 2017, the management systems of ewz (Deutschland) GmbH and its five German wind farm companies passed the surveillance audit according to the ISO 9001:2015 standard.



Tiziano Bottinelli

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Borkum offshore wind farm,
North Sea, Germany: Bubble
curtain noise reduction
measure, © Trianel, Hero Lang

Activities of ewz (Deutschland) GmbH. Overview.

Key figures (as per December 2017).

Equity interests	13
Capacity (share of ewz)	129.5 MW
Capacity under construction (share of ewz)	60.9 MW
Power production (share of ewz)	342.1 GWh

Production sites of ewz (Deutschland) GmbH in Europe.

- 1 Høg-Jæren; Wind onshore NO
- 2 Mungseröd; Wind onshore SE
- 3 Ramsnäs; Wind onshore SE
- 4 Skalleberg; Wind onshore SE
- 5 Alered; Wind onshore SE
- 6 Butendiek; Wind offshore DE
- 7 Borkum; Wind offshore DE
- 8 Dörmte; Wind onshore DE
- 9 Schermen; Wind onshore DE
- 10 Crussow; Wind onshore DE
- 11 Vogelsberg; Wind onshore DE
- 12 Kleinbrembach; Wind onshore DE
- 13 Epinette; Wind onshore FR
- 14 Autrementcourt; Wind onshore FR
- 15 Vihiersois; Wind onshore FR
- 16 Puerto Errado 2; Solarthermie ES



Chronological overview.

A summary.

ewz (Deutschland) GmbH.

Founding of the holding company for the acquisition of equity interests in foreign renewable energy production facilities.

- **Crussow onshore wind farm, Germany.** Acquisition of three wind turbines.

Dörmte, Kleinbrembach, Schermen and Vogelsberg onshore wind farms, Germany.

Acquisition of a total of 27 wind turbines.

- **Høg-Jæren onshore wind farm, Norway.** Acquisition of a 20% share.

Puerto Errado 2 solar thermal power plant, Spain.

Acquisition of a 10% share.

Epinette onshore wind farm, France.

Acquisition of 100% of the construction-ready wind farm project. Realization of the first wind farm to be developed and owned by ewz.

Butendiek offshore wind farm, Germany.

Acquisition of a 49% equity interest in wpd Butendiek Beteiligungs GmbH, which in turn owns ten percent of the wind farm company.

Onshore Atlantic wind park portfolio, Sweden.

Acquisition of a 51% equity interest in the Atlantic wind park portfolio, consisting of the four wind farms Alered, Mungseröd, Ramsnäs and Skalleberg.

Borkum II offshore wind farm, North Sea, Germany.

Acquisition of a 26.26% equity interest in the offshore wind farm project Trianel Borkum II.

Autrementcourt and Vihiersois onshore wind farms, France.

Acquisition of a 100% share in the wind farm projects Autrementcourt and Vihiersois.

2008

2010

2011

2013

2015

2017

Portfolio.

Brief description.

Crussow wind farm, Brandenburg, Germany.



The wind farm is located 90 kilometers to the north-east of Berlin, close to Angermünde, in the Federal State of Brandenburg. The immediate surroundings consist of agricultural land with arable farming and meadows. ewz (Deutschland) GmbH acquired three of a total of eight turbines in the year 2008.

Capacity	6 MW
Wind turbines	3 Vestas V-80; 2 MW
Share of ewz	100%
Commissioning	2002
Power production	11 GWh

Dörnte wind farm, Lower Saxony, Germany.



The Dörnte wind farm is located in the district of Uelzen, Lower Saxony, 70 kilometers to the south east of Hamburg. The wind farm is surrounded by extensive arable land.

Capacity	16.5 MW
Wind turbines	11 REpower MD-77; 1.5 MW
Share of ewz	100%
Commissioning	2006
Power production	31 GWh

Kleinbrenbach wind farm, Thuringia, Germany.



The Kleinbrenbach wind farm is located in the district of Sömmerda, Thuringia, 75 kilometers to the south-west of Leipzig. The wind farm is built on a hill in the middle of arable farmland and cannot be seen from the village and borders directly on the Vogelsberg wind farm.

Capacity	10 MW
Wind turbines	5 Vestas V-90; 2 MW
Share of ewz	100%
Commissioning	2006
Power production	23 GWh

Schermen wind farm, Saxony-Anhalt, Germany.



The Schermen wind farm is located in the district of Jerichower Land, Saxony-Anhalt, 15 kilometers to the north-east of Magdeburg. It benefits from different wind strengths at different heights, as there are altitude differences of up to 20 meters between the individual turbines.

Capacity	16 MW
Wind turbines	8 Vestas V-90; 2 MW
Share of ewz	100%
Commissioning	2007 (6) und 2009 (2)
Power production	31 GWh

Vogelsberg wind farm, Thuringia, Germany.



The Vogelsberg wind farm is also located in the district of Sömmerda, Thuringia, 75 kilometers to the south west of Leipzig. The wind farm is surrounded by extensive corn fields and is situated on a slight rise. Only a high-voltage power line and the municipal boundary separate the Vogelsberg and Kleinbrenbach wind farms.

Capacity	6 MW
Wind turbines	3 Vestas V-90; 2 MW
Share of ewz	100%
Commissioning	2009
Power production	14 GWh

Høg-Jæren wind farm, Stavanger, Norway.



Since mid-2011, 26 wind turbines have been in operation at the Høg-Jæren wind farm; six more were added at the end of 2012. The site to the south of the port of Stavanger is one of the most productive inland sites for wind energy. The Høg-Jæren wind farm received the award of «Wind Warrior of the Year» in 2013 and 2014.

Capacity	73.6 MW
Wind turbines	32 Siemens SWT-2.3-93; 2.3 MW
Share of ewz	20%
Commissioning	2011 (26) 2012 (6)
Power production	237 GWh

Puerto Errado 2, Calasparra, Spain.



Puerto Errado 2, a solar power plant based on Fresnel technology, reached completion in the sun-drenched Spanish region of Murcia in 2010. It was built under Swiss management. Alongside two conventional power plant blocks, the facility comprises a solar field of around 302 000 m² of reflecting surface.

Capacity	30 MW
Technology	Lineare Fresnel-collectors
Share of ewz	10%
Commissioning	2012
Power production	43 GWh

Epinette wind farm, Nord Pas-de-Calais, France.



The site is close to the coast, around 30 kilometers from the English Channel, and benefits from especially high wind potential. ewz (Deutschland) GmbH took a stake in the wind farm project in 2013. It is the first wind farm to be developed and owned by ewz, realized after only one year of construction. It is also the first to enable ewz to gather experience with direct drive technology.

Capacity	12 MW
Wind turbines	6 Enercon E82; 2 MW
Share of ewz	100%
Commissioning	2014
Power production	36 GWh

Butendiek offshore wind farm, North Sea, Germany.



The Butendiek offshore wind farm lies in the German North Sea, around 32 kilometers from the island of Sylt. The first turbines began feeding electricity into the public grid in February 2015, only eleven months after construction started in March 2014. The fastest construction of an offshore wind farm in the North Sea to date was completed in August 2015.

Capacity	288 MW
Turbines	80 Siemens SWT-3.6-120; 3.6 MW
Share of ewz	4.9%
Commissioning	2015
Power production	1260 GWh

Atlantic wind park portfolio, southern Sweden.

The four wind farms Alered, Mungseröd, Ramsnäs and Skalleberg lie in wooded areas on hills around 200 kilometers apart and benefit from different wind regimes. ewz (Deutschland) GmbH acquired a 51 percent share in three of the four wind farms in January 2015 and in the fourth, Skalleberg, in March 2015 on a turnkey basis.



Windpark Alered.

Capacity	13.2 MW
Wind turbines	4 Vestas V-112; 3.3 MW
Share of ewz	51%
Commissioning	2014
Power production	35 GWh

Windpark Mungseröd.

Capacity	15 MW
Wind turbines	4 Vestas V-100; 1.8 MW 4 Vestas V-100; 2.0 MW
Share of ewz	51%
Commissioning	2014
Power production	46 GWh

Windpark Ramsnäs.

Capacity	13.4 MW
Wind turbines	3 Vestas V-100; 1.8 MW 4 Vestas V-100; 2.0 MW
Share of ewz	51%
Commissioning	2014
Power production	43 GWh

Windpark Skalleberg.

Capacity	19.4 MW
Wind turbines	2 Vestas V-90; 2.0 MW 3 Vestas V-100; 1.8 MW 5 Vestas V-100; 2.0 MW
Share of ewz	51%
Commissioning	2015
Power production	59 GWh

Autremencourt wind farm, Hauts-de-France region, France.



The Autremencourt wind farm is located in the north-east of France, in the Hauts-de-France region. It is situated close to ewz's Epinette wind farm, which has been in operation since 2014. ewz acquired the turnkey project (developed by Nordex) in December 2017. The wind farm is set to be completed and put into operation by the end of 2018.

Capacity	14.4 MW
Wind turbines	6 Nordex N117 R91; 2.4 MW
Share of ewz	100%
Commissioning	end of 2018
Power production	39 GWh

Vihierois wind farm, Pays de la Loire region, France.



The Vihierois wind farm is located in the Pays de la Loire region in western France, around 90 kilometres south-east of Nantes. Construction work has been under way since autumn 2017. ewz acquired the wind farm project from the developer Nordex in December. Commissioning is planned for the first quarter of 2019.

Capacity	21.6 MW
Wind turbines	9 Nordex N117 R91; 2.4 MW
Share of ewz	100%
Commissioning	Q1 2019
Power production	64 GWh

Borkum II wind farm, North Sea, Germany.



The offshore wind farm project Trianel Borkum II lies around 45 kilometres from the North Sea island of Borkum and approximately 65 kilometres from the mainland coast. ewz acquired an interest of 12.26% in the turnkey project in February 2017. Construction has been under way since autumn 2017 and is set to be completed in autumn 2019.

Capacity	202.6 MW
Wind turbines	32 Senvion 6.33 6M152
Share of ewz	12.26%
Commissioning	Q3 2019
Power production	800 GWh



Vihierois wind farm, Pays de la Loire region, France: Foundation of a wind turbine





Financial Report 2017. Encouraging Group result.

Consolidated profit and loss statement.

Net income after taxes achieved by the ewz (Deutschland) GmbH Group amounted to EUR 3.1 million at the end of 2017, representing a considerable increase compared to the previous year. The minority interests in earnings amounted to around EUR 0.7 million. Improved wind conditions led to a significant increase in revenue in Germany (+21%) and Sweden (+5%) on the previous year. Only France experienced a decline, with revenue down by around 4% due to weaker winds. Operating expenses were up by a total of 14% in comparison to 2016, due in particular to production-related maintenance costs and higher repair costs. At EUR 17.8 million, operating income before depreciation and amortization was up by around EUR 1.3 million on the previous year. Planned depreciation amounted to EUR 11.5 million in the year under review and was on a par with the previous year's level. At the end of 2017, operating income was EUR 1.4 million higher than in the previous year. The financial result improved by around EUR 0.5 million compared to 2016.

Consolidated balance sheet.

The balance sheet total as at 31 December 2017 amounted to EUR 232.5 million, up by around EUR 29.4 million on the previous year. Non-current assets increased by a total of EUR 24.0 million compared to the previous year. This was primarily due to acquisitions in Germany and France. Cash at banks increased by EUR 4.6 million. The equity ratio as at 31 December 2017 was up 9% to 52%. In addition to capital contributions by the parent company, this effect was attributable to the positive year-end result.

Consolidated cash flow statement.

In the year under review, the cash inflow from operating activities of the ewz (Deutschland) GmbH Group amounted to an encouraging EUR 14.1 million. Acquisitions in Germany and France resulted in a cash outflow, while loan repayments from minority participations led to a cash inflow on the investment side. Financing also generated a cash inflow amounting to EUR 25.5 million. This consisted of a capital contribution, the assumption of financial liabilities, and the repayment of a financial liability upon maturity.

Consolidated profit and loss statement. 2017.

Consolidated profit and loss statement.	2017	2016
	EUR	EUR
Revenue	24 135 614	22 790 223
Other revenues	1 491 267	550 083
Total revenues	25 626 881	23 340 306
Operating expenses	-7 854 597	-6 877 913
Operating income before depreciation and amortization	17 772 284	16 462 393
Depreciation and amortization	-11 531 642	-11 572 083
Operating income	6 240 642	4 890 310
Financial income	373 413	477 262
- Financial income from minority participations	373 391	477 261
- Other financial income	22	1
Financial expenses	-2 701 703	-3 290 733
- Interest costs affiliates	-264 335	-277 765
- Interest costs third parties	-2 347 048	-2 911 880
- Various financial expenses	-90 320	-101 088
Income before taxes	3 912 352	2 076 839
Taxes	-763 315	-695 388
Net income after taxes	3 149 037	1 381 451
Attributable to:		
- Shareholders of ewz (Deutschland) GmbH	2 455 755	873 431
- Non-controlling interests	693 282	508 020

Consolidated balance sheet. 2017.

Consolidated balance sheet.	2017	2016
	EUR	EUR
Long-term assets	195 954 245 84%	171 980 450 85%
Intangible assets / goodwill / company value	13 533 298	15 054 387
Property / plant / equipment	131 164 080	128 480 075
Participations / loans to minority participations	51 256 867	28 445 988
Short-term assets	36 538 560 16%	31 075 438 15%
Trade receivables	2 460 668	1 693 987
Receivables from minority participations	561 047	746 013
Other receivables	2 316 285	1 776 746
Accrued income	2 044 325	2 265 435
Cash at banks	29 156 235	24 593 257
ASSETS	232 492 805 100%	203 055 888 100%
Equity capital	120 731 637 52%	87 082 600 43%
Subscribed capital	25 000	25 000
Capital reserve	123 313 412	92 813 412
Shareholder loan	15 800 000	15 800 000
Retained earnings	-25 562 173	-26 435 604
Group profit	2 455 755	873 431
Non-controlling interests	4 699 643	4 006 361
Long-term liabilities	110 187 808 47%	88 894 206 44%
Financial liabilities	106 462 015	86 526 102
Provisions	3 725 793	2 368 104
Short-term liabilities	1 573 360 1%	27 079 082 13%
Financial liabilities	116 748	25 000 000
Other liabilities	829 334	1 454 370
Deferred income	627 278	624 712
LIABILITIES	232 492 805 100%	203 055 888 100%

Consolidated cash flow statement. 2017.

Consolidated cash flow statement.	2017
	EUR
Net income after taxes	3 149 037
Depreciation and amortization	11 531 642
Non-cash income / expenses	-420 713
Change in net current assets	-112 263
Cash inflow from operating activities	14 147 703
Retroactive price adjustments / goodwill	234 600
Addition to property plant and equipment	-12 706 790
Addition to goodwill	-222 368
Addition to minority participations	-30 831 085
Loan repayments from minority participations	8 440 918
Cash flow from investing activities	-35 084 725
Repayment of financial liabilities	-25 000 000
Assumption of financial liabilities	20 000 000
Capital contributions	30 500 000
Cash flow from financing activities	25 500 000
Net change in liquid assets	4 562 978
Balance as at 31 / 12 / 2016	24 593 257
Balance as at 31 / 12 / 2017	29 156 235
Increase in liquid assets (cash at banks)	4 562 978



Annex to consolidated financial statements. 2017.

Scope and principles of consolidation.

Name	Location	Share
Group companies		
ewz Windpark Crussow GmbH	Constance DE	100.00%
ewz Windpark Dörnte GmbH	Constance DE	100.00%
ewz Windpark Kleinbrembach GmbH	Constance DE	100.00%
ewz Windpark Schermen GmbH	Constance DE	100.00%
ewz Windpark Vogelsberg GmbH	Constance DE	100.00%
ewz parc éolien Epinette S.A.R.L.	Schiltigheim FR	100.00%
Parc Eolien Nordex LI S.A.S.	Paris FR	100.00%
Parc Eolien Nordex LIV S.A.S.	Paris FR	100.00%
ewz Atlantic Sverige AB	Malmö SE	51.00%
Affiliated companies		
ewz Offshore Borkum GmbH*	Constance DE	50.01%
wpd Butendiek Beteiligungs GmbH**	Bremen DE	49.00%
Jæren Energi AS	Stavanger NO	20.00%
Tubo Sol Puerto Errado 2 S.L.	Calasparra ES	10.00%

* ewz Offshore Borkum GmbH holds a 24.51% interest in the offshore wind farm Borkum.

** wpd Butendiek Beteiligungs GmbH holds a 10% interest in the offshore wind farm Butendiek.

Group companies

Companies controlled by ewz (Deutschland) GmbH are fully consolidated.

All Group-internal relationships are eliminated.

New additions in the year under review:

Parc Eolien Nordex LI S.A.S. (Autremencourt wind farm)*

Parc Eolien Nordex LIV S.A.S. (Vihierois wind farm)*

* Project companies with facilities under construction.

Affiliated companies

Minority participations in affiliated companies are recognised in the consolidated financial statements at acquisition value, taking into account any impairment losses.

New addition in the year under review:

ewz Offshore Borkum GmbH

The consolidated financial statements are based on the individual financial statements of the Group companies. The consolidated annual financial statements are not subject to an audit requirement.

The accounting date for all companies is 31 December.

Business activity.

ewz (Deutschland) GmbH is a wholly owned subsidiary of ewz (Zurich Municipal Electric Utility). The long-term strategic objective of the company is to acquire, finance and manage power production plants abroad, with the aim of safeguarding the future energy supply for ewz customers from diversified renewable energy sources in other countries. In the medium term, this objective will be achieved by securing interesting production locations and enhancing technological and country-specific know-how. In the initial phase, the electricity that is produced by the plants abroad is to be sold via local support schemes or long-term sales contracts, where possible.

Accounting and valuation principles.

Accounting and valuation are based on the going-concern principle.

Tangible and intangible assets are valued at acquisition cost less depreciation.

Depreciation is calculated on a regular straight-line basis over the useful life of the assets.

Intangible assets / goodwill / company value 15 – 20 years
Property, plant and equipment

- *Wind turbines* 16 – 20 years
- *Other technical systems* 3 – 5 years

Financial assets are recognised on the balance sheet at acquisition value, taking into account any necessary value adjustments.

All receivables and the cash at banks are recognised at nominal value. No adjustments are necessary.

Payments before the balance sheet date are recognised as prepaid expenses and deferred charges if they represent expenses for a certain period after that point in time.

Equity capital is recognised at nominal value. Loans granted by ewz / city of Zurich to ewz (Deutschland) GmbH are subordinated and can therefore be considered in the equity ratio.

Liabilities are generally recognised at amortised cost.

Liabilities with a remaining term of less than one year are posted as short-term liabilities.

Provisions are recognised at the settlement amounts that have been determined by applying sound business judgement.



Crusow wind farm,
Brandenburg, Germany

Impressum.

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Transformer station Borkum offshore wind farm,
North Sea, Germany, © Trianel

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Units of measurement.

GWh = Gigawatt hour (1 billion watt hours)

MW = Megawatt (1 million watts)

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