

# PERFORMANCE INDICATORS



<b>PROMOTION OF RENEWABLE ENERGIES</b>					
	Un.	2019	2018	2017	2016
<b>TOTAL INSTALLED CAPACITY</b>					
	<b>MW</b>	<b>26 525</b>	<b>26 996</b>	<b>26 597</b>	<b>25 067</b>
Renewable installed capacity	%	73,9	74,4	73,6	72,0
Renewable installed capacity	<b>MW</b>	<b>19 597</b>	<b>20 093</b>	<b>19 695</b>	<b>18 158</b>
Wind	MW	10 667	11 156	10 531	9 969
Hydro	MW	8 728	8 728	8 870	7 946
Mini-Hydro	MW	57	65	148	160
Solar	MW	145	145	145	82
<b>Non-renewable installed capacity</b>					
	<b>MW</b>	<b>6 928</b>	<b>6 902</b>	<b>6 902</b>	<b>6 910</b>
CCGT	MW	3 729	3 729	3 729	3 736
Coal	MW	3 150	3 124	3 124	3 124
Cogeneration and Waste	MW	49	49	49	49
<b>TOTAL NET GENERATION <sup>1</sup></b>					
	<b>GWh</b>	<b>66 231</b>	<b>71 614</b>	<b>69 627</b>	<b>69 634</b>
Generation from renewable sources	%	66,6	66,5	56,1	65,5
Generation from renewable sources	<b>GWh</b>	<b>44 137</b>	<b>47 655</b>	<b>39 045</b>	<b>45 611</b>
Wind	GWh	29 768	28 133	27 466	24 334
Hydro	GWh	13 958	18 899	11 186	20 589
Mini-Hydro	GWh	138	397	238	549
Solar	GWh	273	226	155	139
Generation from non-renewable sources	<b>GWh</b>	<b>22 095</b>	<b>23 959</b>	<b>30 582</b>	<b>24 023</b>
CCGT	GWh	10 183	5 333	8 029	5 242
Coal	GWh	10 856	17 471	21 444	17 665
Cogeneration, Waste and Heat	GWh	1 055	1 155	1 109	1 117
Capacity under construction	MW	664	344	828	1 267
Avoided CO <sub>2</sub> emissions <sup>2</sup>	ktCO <sub>2</sub>	24 725	29 221	26 799	32 724
<b>CLIMATE CHANGE</b>					
<b>HYDROELECTRIC PRODUCTIVITY INDEX</b>					
Portugal	#	0,81	1,05	0,47	1,33
Spain	#	0,90	1,28	0,52	1,10
<b>EMISSIONS</b>					
<b>Specific CO<sub>2</sub> emissions <sup>3</sup></b>					
Global	g/kWh	216	257	332	271
Thermal	g/kWh	649	768	756	787
<b>CO<sub>2</sub> equivalent emissions</b>					
<b>SCOPE 1</b>	<b>ktCO<sub>2</sub>eq</b>	<b>14 363</b>	<b>18 429</b>	<b>23 159</b>	<b>18 931</b>
Stationary combustion	ktCO <sub>2</sub> eq	14 338	18 404	23 129	18 900
SF <sub>6</sub> Emissions	ktCO <sub>2</sub> eq	9	10	10	8
Company fleet	ktCO <sub>2</sub> eq	15	15	20	18
Natural gas consumption	ktCO <sub>2</sub> eq	0,04	0,19	0,22	0,48
Natural gas losses	ktCO <sub>2</sub> eq	0,00	0,00	0,00	4,99
<b>SCOPE 2 (Location-based <sup>4</sup>) <sup>6</sup></b>	<b>ktCO<sub>2</sub>eq</b>	<b>846</b>	<b>602</b>	<b>818</b>	<b>547</b>
Electricity consumption in office buildings	ktCO <sub>2</sub> eq	0,8	2,0	2,0	0,1
Electricity losses in distribution	ktCO <sub>2</sub> eq	824	577	795	540
Renewable plants self-consumption	ktCO <sub>2</sub> eq	21	23	21	7
<b>SCOPE 2 (Market-based <sup>5</sup>) <sup>6</sup></b>	<b>ktCO<sub>2</sub>eq</b>	<b>829</b>	<b>585</b>	<b>802</b>	<b>547</b>
Electricity consumption in office buildings	ktCO <sub>2</sub> eq	0,1	0,0	0,1	0,1
Electricity losses in distribution	ktCO <sub>2</sub> eq	824	577	795	540
Renewable plants self-consumption	ktCO <sub>2</sub> eq	5	8	7	7
<b>SCOPE 3</b>	<b>ktCO<sub>2</sub>eq</b>	<b>11 730</b>	<b>11 334</b>	<b>13 039</b>	<b>12 469</b>
Purchased goods and services (C01)	ktCO <sub>2</sub> eq	28	49	54	55
Capital Goods (C02)	ktCO <sub>2</sub> eq	349	330	324	287
Fuel and energy related activities (C03)	ktCO <sub>2</sub> eq	6 784	6 399	8 344	7 091
Upstream transportation and distribution (C04)	ktCO <sub>2</sub> eq	611	675	454	304
Business Travels (C06)	ktCO <sub>2</sub> eq	7	10	11	11
Use of sold products (C11)	ktCO <sub>2</sub> eq	3 951	3 871	3 852	4 722

<b>CLIMATE CHANGE</b>					
<b>EMISSIONS</b>					
<b>SF6</b>	<b>kg</b>	<b>394</b>	<b>440</b>	<b>422</b>	<b>331</b>
Portugal	kg	194	246	307	213
Spain	kg	54	100	59	40
Brazil	kg	140	92	55	77
North America	kg	6	0	0	0
Rest of the world	kg	0	3	0	1
<b>ENERGY EFFICIENCY</b>					
<b>INTERNAL ENERGY EFFICIENCY</b>					
<b>Thermal efficiency</b>	<b>%</b>	<b>46</b>	<b>45</b>	<b>46</b>	<b>45</b>
Coal plants	%	35,6	35,1	35,6	35,7
Natural gas combined cycle plant	%	54,4	53,1	53,5	52,5
Energy intensity	MJ/€	13,8	15,4	17,6	15,1
<b>Electricity Distribution grid losses</b>					
Technical losses	%	5,6	5,4	5,6	5,7
Total losses	%	8,9	8,8	9,2	9,2
<b>EXTERNAL ENERGY EFFICIENCY</b>					
Savings in energy efficiency services <sup>7</sup>	TWh	3,0	2,6	1,5	1,2
CO <sub>2</sub> avoided emissions in the final customer <sup>7</sup>	ktCO <sub>2</sub>	1 169	948	707	471
Energy consumed outside the organization <sup>8</sup>	TJ	290 331	304 391	309 233	324 286
<b>SUSTAINABLE MOBILITY</b>					
Fleet electrification	%	9,0	7,5	5,6	n.d.
Fleet Electric vehicles	#	283	278	207	n.d.
Electric charging points	#	772	467	n.d.	n.d.
Customers with electric mobility solutions	#	10 100	5 546	n.d.	n.d.
<b>ENVIRONMENTAL PROTECTION</b>					
<b>ISO 14001 CERTIFICATION</b>					
ISO 14001 certification <sup>9</sup>	%	96,4	96,3	88,1	90,8
<b>PREVENTION OF POLLUTION</b>					
<b>Total NO<sub>x</sub> emissions</b>					
Portugal	kt	2,8	4,6	6,1	5,2
Spain	kt	3,9	5,7	6,0	5,9
Brazil	kt	4,1	3,9	4,9	5,2
<b>Total SO<sub>2</sub> emissions</b>					
Portugal	kt	2,0	3,8	4,3	3,5
Spain	kt	1,5	6,0	8,2	6,5
Brazil	kt	12,8	11,4	17,2	9,9
<b>Total particulate matter emissions</b>					
Portugal	kt	0,04	0,09	0,04	0,04
Spain	kt	0,10	0,24	0,56	0,61
Brazil	kt	1,52	1,72	0,89	0,52
<b>WASTE MATERIALS</b>					
<b>Waste</b>	<b>t</b>	<b>232 181</b>	<b>349 329</b>	<b>666 771</b>	<b>477 373</b>
<b>Hazard waste</b>	<b>%</b>	<b>2,2</b>	<b>1,5</b>	<b>0,9</b>	<b>1,3</b>
<b>Non-hazard waste</b>	<b>%</b>	<b>97,8</b>	<b>98,5</b>	<b>99,1</b>	<b>98,7</b>
<b>Recovered waste</b>	<b>t</b>	<b>210 846</b>	<b>272 964</b>	<b>304 167</b>	<b>288 898</b>
Recycled waste	t	126 236	219 972	249 733	257 711
Other	t	84 610	52 992	54 434	31 186
<b>Non-recovered waste</b>	<b>t</b>	<b>21 335</b>	<b>76 365</b>	<b>362 604</b>	<b>188 475</b>
<b>Main waste categories</b>					
Fly ash	%	82,7	79,6	83,4	67,8
Slag	%	13,2	16,3	14,7	29,1
Gypsum	%	1,8	2,3	1,1	1,6
Used oils	%	0,10	0,13	0,09	0,14
PCB	%	0,01	0,01	0,01	0,02
Metals	%	2,2	1,7	0,7	1,3

<b>ENVIRONMENTAL PROTECTION</b>					
<b>WASTE MATERIALS</b>					
	<b>t</b>	<b>523 303</b>	<b>862 060</b>	<b>1 176 343</b>	<b>1 080 960</b>
<b>By-products</b>					
Gypsum	t	99 787	165 785	197 668	139 644
Fly ash	t	157 253	311 234	298 883	463 943
Slag	t	34 082	35 712	13 022	n.a.
<b>Specific production of waste materials</b>	<b>t/GWh</b>	<b>7,9</b>	<b>12,0</b>	<b>16,9</b>	<b>15,5</b>
<b>Recovered waste materials</b>	<b>%</b>	<b>95,9</b>	<b>91,1</b>	<b>69,2</b>	<b>82,6</b>
<b>NATURAL RESOURCES</b>					
<b>Total water withdrawal <sup>10</sup></b>					
	<b>10<sup>3</sup>xm<sup>3</sup></b>	<b>996 309</b>	<b>1 537 614</b>	<b>1 758 432</b>	<b>1 510 277</b>
Freshwater	10 <sup>3</sup> xm <sup>3</sup>	18 315	19 544	24 824	25 016
Salt and estuarine water	10 <sup>3</sup> xm <sup>3</sup>	977 994	1 518 069	1 733 609	1 485 262
<b>In water-stressed regions <sup>11</sup></b>	<b>10<sup>3</sup>xm<sup>3</sup></b>	<b>11 774</b>	<b>10 326</b>	<b>13 796</b>	<b>14 157</b>
<b>Total water discharge <sup>10</sup></b>					
	<b>10<sup>3</sup>xm<sup>3</sup></b>	<b>976 302</b>	<b>1 517 952</b>	<b>1 732 345</b>	<b>1 485 618</b>
Discharge into inland water	10 <sup>3</sup> xm <sup>3</sup>	1 783	1 471	1 886	1 519
Discharge into estuary water and sea	10 <sup>3</sup> xm <sup>3</sup>	974 516	1 516 478	1 730 456	1 484 090
Municipal treatment	10 <sup>3</sup> xm <sup>3</sup>	2,27	2,67	2,93	8,95
<b>In water-stressed regions <sup>11</sup></b>	<b>10<sup>3</sup>xm<sup>3</sup></b>	<b>1 255</b>	<b>848</b>	<b>1 266</b>	<b>3 853</b>
<b>Total water consumption</b>					
	<b>10<sup>3</sup>xm<sup>3</sup></b>	<b>21 736</b>	<b>21 800</b>	<b>28 370</b>	<b>29 000</b>
Total freshwater consumption	10 <sup>3</sup> xm <sup>3</sup>	16 817	18 372	23 234	23 817
<b>In water-stressed regions <sup>11</sup></b>	<b>10<sup>3</sup>xm<sup>3</sup></b>	<b>11 192</b>	<b>10 130</b>	<b>13 796</b>	<b>14 157</b>
<b>Specific fresh water consumption <sup>12</sup></b>	<b>m<sup>3</sup>/GWh</b>	<b>254</b>	<b>257</b>	<b>334</b>	<b>342</b>
<b>Fossil fuel consumption</b>					
Coal	t	4 184 714	6 808 296	8 339 258	7 010 434
Natural gas	Nm <sup>3</sup>	1 847 369 713	1 013 863 751	1 489 213 344	1 025 114 039
Diesel	t	3 970	4 575	4 135	5 260
Fuel oil	t	8 371	7 363	4 535	9 178
Other gases	Nm <sup>3</sup>	3 235 607 030	3 814 437 570	3 945 566 758	2 787 537 500
<b>Primary energy consumption</b>					
Coal	TJ	101 514	165 982	204 044	169 582
Natural gas	TJ	70 823	40 425	57 013	39 160
Diesel	TJ	173	202	182	230
Fuel oil	TJ	337	297	183	373
Waste gas	TJ	11 836	14 509	15 016	10 994
<b>Chemicals consumption</b>					
Sodium hydroxyde	t	892	178	1 682	1 561
Hydrochloric acid	t	1 008	1 247	3 225	2 734
Sodium hypochlorite	t	4 175	3 673	3 006	4 268
Ammonia	t	10 557	16 562	22 821	23 259
Limestone	t	54 267	71 807	77 299	58 096
Acquired oils	t	229	138	90	120
<b>Environmental fines</b>	<b>000€</b>	<b>4</b>	<b>3</b>	<b>19</b>	<b>29</b>

<sup>1</sup> The total net generation includes steam.

<sup>2</sup> CO<sub>2</sub> emissions that would have occurred if the electricity generated by renewable energy sources were produced by thermal power plants. For each country, it is obtained by multiplying the net renewable energy production by the emission factor of the thermoelectric mix of that country.

<sup>3</sup> The stationary emissions do not include those produced by the burning of ArcelorMittal steel gases in EDP's power plant in Spain. Includes only stationary emissions.

<sup>4</sup> Based on global emission factors of each geography.

<sup>5</sup> Based in the suppliers' emission factors.

<sup>6</sup> Calculation methodology of Scope 2 was revised to avoid emissions duplication with scope 1.

<sup>7</sup> Reviewed and harmonized methodology for all geographies, including the Consumption Efficiency Promotion Plan (PPEC) projects.

<sup>8</sup> Consider only the category "Use of sold products" of GHG Protocol Corporate Value Chain (Scope 3).

<sup>9</sup> Aggregated certification indicator due to assets with potential environmental impacts.

<sup>10</sup> Hydropowerplants not included.

<sup>11</sup> Baseline water stress > 20%.

<sup>12</sup> The series was revised to include only freshwater. In the past, it also included estuarine water.

n.a. - not applicable; N/A - not available

PERFORMANCE INDICATORS BY GEOGRAPHY



2019	UN	Group	Portugal	Spain	Brazil	North America	Rest of the World
<b>ENVIRONMENTAL MANAGEMENT</b>							
ISO 14001 Certification <sup>1</sup>	%	96	98	98	95	94	95
EMAS Registration	%	36	85	N/A	n.a.	n.a.	N/A
<b>TOTAL ENERGY CONSUMPTION</b>	<b>TJ</b>	<b>201 318</b>	<b>89 496</b>	<b>65 007</b>	<b>46 740</b>	<b>18</b>	<b>57</b>
<b>PRIMARY ENERGY CONSUMPTION</b>	<b>TJ</b>	<b>184 894</b>	<b>81 258</b>	<b>65 007</b>	<b>38 605</b>	<b>18</b>	<b>5</b>
Coal	TJ	101 514	39 731	23 379	38 404	n.a.	n.a.
Fuel oil	TJ	337	315	22	n.a.	n.a.	n.a.
Natural gas	TJ	70 823	41 093	29 730	n.a.	0	0
Blast furnace gas	TJ	10 213	n.a.	10 213	n.a.	n.a.	n.a.
Coke gas	TJ	616	n.a.	616	n.a.	n.a.	n.a.
Diesel oil	TJ	173	7	30	136	n.a.	n.a.
Iron and steel industry gas	TJ	1 006	n.a.	1 006	n.a.	n.a.	n.a.
Fuel for vehicle fleet	TJ	211	112	10	66	18	5
<b>ENERGY INTENSITY <sup>2</sup></b>	<b>MJ/EUR</b>	<b>14</b>	<b>14</b>	<b>20</b>	<b>11</b>	<b>0</b>	<b>0</b>
<b>THERMAL POWER PLANT EFFICIENCY (capacity based)</b>	<b>%</b>	<b>46</b>	<b>46</b>	<b>45</b>	<b>36</b>	<b>n.a.</b>	<b>n.a.</b>
<b>ELECTRICITY CONSUMPTION</b>							
Generation self-consumption	MWh	3 383 149	2 500 743	405 552	423 133	39 555	14 165
Administrative service	MWh	33 548	24 313	2 203	5 480	1 311	241
Grid losses	%	8,9	9,6	3,6	9,9	n.a.	n.a.
<b>GHG EMISSION</b>							
<b>Direct emissions (scope 1)</b>	<b>ktCO<sub>2eq</sub></b>	<b>14 363</b>	<b>6 028</b>	<b>3 872</b>	<b>4 461</b>	<b>1</b>	<b>0</b>
Stationary combustion <sup>3</sup>	ktCO <sub>2eq</sub>	14 338	6 015	3 870	4 453	n.a.	n.a.
SF6 Emissions	ktCO <sub>2eq</sub>	9	5	1	3	0	0
Company fleet	ktCO <sub>2eq</sub>	15	8	1	4	1	0
Natural gas consumption	ktCO <sub>2eq</sub>	0,04	0,03	0,00	0,00	0,00	0,00
<b>Indirect emissions (scope 2) <sup>4</sup></b>	<b>ktCO<sub>2eq</sub></b>	<b>846</b>	<b>655</b>	<b>0</b>	<b>169</b>	<b>17</b>	<b>5</b>
Electricity consumption in office buildings	ktCO <sub>2eq</sub>	0,8	0,0	0,0	0,0	0,7	0,1
Electricity losses	ktCO <sub>2eq</sub>	824	655	0	169	n.a.	n.a.
Renewable plants self-consumption	ktCO <sub>2eq</sub>	21,3	0,0	0,0	0,0	16,2	5,1
<b>Other indirect emissions (scope 3)</b>	<b>ktCO<sub>2eq</sub></b>	<b>11 730</b>	<b>3 954</b>	<b>5 321</b>	<b>2 218</b>	<b>198</b>	<b>39</b>
Purchased goods and services (C01)	ktCO <sub>2eq</sub>	28	9	9	9	0	0
Capital Goods (C02)	ktCO <sub>2eq</sub>	349	37	63	15	195	39
Fuel and energy related activities (C03)	ktCO <sub>2eq</sub>	6 784	2 855	2 076	1 853	0	0
Upstream transportation and distribution (C04)	ktCO <sub>2eq</sub>	611	236	36	339	0	0
Business Travels (C06)	ktCO <sub>2eq</sub>	7	2	1	2	3	0
Use of sold products (C11)	ktCO <sub>2eq</sub>	3 951	814	3 137	0	0	0
<b>GHG EMISSIONS INTENSITY <sup>5</sup></b>	<b>kgCO<sub>2</sub>/EUR</b>	<b>1,1</b>	<b>1,0</b>	<b>1,2</b>	<b>1,3</b>	<b>0,0</b>	<b>0,0</b>
<b>CO<sub>2</sub> AVOIDED EMISSIONS <sup>6</sup></b>	<b>ktCO<sub>2</sub></b>	<b>24 725</b>	<b>5 652</b>	<b>2 914</b>	<b>1 928</b>	<b>11 850</b>	<b>2 381</b>
<b>TOTAL EMISSIONS</b>							
CO <sub>2</sub> <sup>3,7</sup>	kt	14 338	6 015	3 870	4 453	n.a.	n.a.
NO <sub>x</sub>	kt	10,8	2,8	3,9	4,1	n.a.	n.a.
SO <sub>2</sub>	kt	16,3	2,0	1,5	12,8	n.a.	n.a.
Particulate matter	kt	1,66	0,04	0,10	1,52	n.a.	n.a.
Mercury	kg	18	12	3	3	n.a.	n.a.
SF6	kg	394	194	54	140	6	0
Volatile Organic Compounds	t	351	237	115	N/A	n.a.	n.a.
<b>SPECIFIC OVERALL EMISSIONS</b>							
CO <sub>2</sub> <sup>3,7</sup>	g/kWh	216	266	272	464	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0,2	0,1	0,3	0,4	n.a.	n.a.
SO <sub>2</sub>	g/kWh	0,2	0,1	0,1	1,3	n.a.	n.a.
Particulate matter	g/kWh	0,03	0,00	0,01	0,16	n.a.	n.a.
<b>SPECIFIC THERMAL EMISSIONS</b>							
CO <sub>2</sub> <sup>3,7</sup>	g/kWh	649	583	480	1 201	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0,5	0,3	0,5	1,1	n.a.	n.a.
SO <sub>2</sub>	g/kWh	0,7	0,2	0,2	3,4	n.a.	n.a.
Particulate matter	g/kWh	0,08	0,00	0,01	0,41	n.a.	n.a.
<b>TOTAL WATER WITHDRAWAL BY SOURCE</b>							
Ocean	10 <sup>3</sup> x m <sup>3</sup>	965 783	646 499	319 284	n.a.	n.a.	n.a.
Surface	10 <sup>3</sup> x m <sup>3</sup>	17 477	12 212	5 245	21	n.a.	n.a.
Water hole	10 <sup>3</sup> x m <sup>3</sup>	191	191	0	0	n.a.	n.a.
Well	10 <sup>3</sup> x m <sup>3</sup>	2	0	0	0	2	0
Municipal water supplies	10 <sup>3</sup> x m <sup>3</sup>	11 610	1 514	617	9 478	1	0
Other private entity	10 <sup>3</sup> x m <sup>3</sup>	1 247	324	922	0	n.a.	0
<b>MAIN USE OF WATER</b>							
Cooling water	10 <sup>3</sup> x m <sup>3</sup>	991 423	658 690	324 242	8 490	n.a.	n.a.
Row water	10 <sup>3</sup> x m <sup>3</sup>	4 670	1 947	1 781	942	n.a.	n.a.
Potable water	10 <sup>3</sup> x m <sup>3</sup>	181	103	10	66	3	0

2019	UN	Group	Portugal	Spain	Brazil	North America	Rest of the World
<b>WASTEWATER</b>							
Wastewater from generation with treatment	10 <sup>3</sup> x m <sup>3</sup>	1 803	427	1 309	67	n.a.	n.a.
Discharge into estuarine water and sea	10 <sup>3</sup> x m <sup>3</sup>	974 516	654 114	319 729	672	n.a.	n.a.
Discharge into inland water	10 <sup>3</sup> x m <sup>3</sup>	1 783	3	1 780	n.a.	n.a.	n.a.
<b>WASTE MATERIALS</b>	<b>t</b>	<b>523 303</b>	<b>287 096</b>	<b>118 477</b>	<b>115 808</b>	<b>879</b>	<b>1 042</b>
<b>Waste</b>	<b>t</b>	<b>232 181</b>	<b>22 740</b>	<b>91 711</b>	<b>115 808</b>	<b>879</b>	<b>1 042</b>
<b>Hazard waste</b>	<b>%</b>	<b>2,2</b>	<b>8,8</b>	<b>0,5</b>	<b>2,0</b>	<b>34,1</b>	<b>7,6</b>
Waste with PCB	t	25,2	0,8	24,4	0,0	0,0	0,0
<b>Non-hazard waste</b>	<b>%</b>	<b>97,8</b>	<b>91,2</b>	<b>99,5</b>	<b>98,0</b>	<b>65,9</b>	<b>92,4</b>
<b>Recovered waste</b>	<b>t</b>	<b>210 846</b>	<b>21 221</b>	<b>89 081</b>	<b>98 972</b>	<b>589</b>	<b>983</b>
Recycled waste	t	126 236	17 492	87 354	20 092	494	804
Other	t	84 610	3 729	1 727	78 881	94	179
<b>Non-recovered waste</b>	<b>t</b>	<b>21 335</b>	<b>1 520</b>	<b>2 630</b>	<b>16 836</b>	<b>290</b>	<b>59</b>
<b>By-products</b>	<b>t</b>	<b>291 122</b>	<b>264 356</b>	<b>26 766</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>
Gypsum	t	99 787	73 021	26 766	n.a.	n.a.	n.a.
Fly ash	t	157 253	157 253	n.a.	n.a.	n.a.	n.a.
Slag	t	34 082	34 082	n.a.	n.a.	n.a.	n.a.
<b>Recovered waste materials</b>	<b>%</b>	<b>96</b>	<b>99</b>	<b>98</b>	<b>85</b>	<b>67</b>	<b>94</b>
<b>DISTRIBUTION IN PROTECTED AREAS</b>							
<b>High voltage distribution grid in protected areas</b>	<b>km</b>	<b>1 408</b>	<b>918</b>	<b>119</b>	<b>370</b>	<b>n.a.</b>	<b>n.a.</b>
Overhead	km	1 394	904	119	370	n.a.	n.a.
Underground	km	14	14	0	0	n.a.	n.a.
<b>Medium voltage distribution grid in protected areas</b>	<b>km</b>	<b>15 822</b>	<b>9 159</b>	<b>930</b>	<b>5 733</b>	<b>n.a.</b>	<b>n.a.</b>
Overhead	km	14 787	8 182	879	5 725	n.a.	n.a.
Underground	km	1 035	977	51	7	n.a.	n.a.
<b>Substations in protected areas</b>	<b>#</b>	<b>46</b>	<b>19</b>	<b>17</b>	<b>10</b>	<b>n.a.</b>	<b>n.a.</b>
<b>TRANSMISSION IN PROTECTED AREAS</b>							
<b>High voltage transmission grid in protected areas</b>	<b>km</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>97</b>	<b>n.a.</b>	<b>n.a.</b>
Overhead	km	n.a.	n.a.	n.a.	97	n.a.	n.a.
Underground	km	n.a.	n.a.	n.a.	0	n.a.	n.a.
<b>Substations in protected areas</b>	<b>#</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>0</b>	<b>n.a.</b>	<b>n.a.</b>
<b>FLOODED AREAS BY RESERVOIRS</b>	<b>ha</b>	<b>5 999</b>	<b>5 666</b>	<b>330</b>	<b>3</b>	<b>n.a.</b>	<b>n.a.</b>
<b>ENVIRONMENTAL COMPLAINTS</b>	<b>#</b>	<b>347</b>	<b>57</b>	<b>8</b>	<b>169</b>	<b>83</b>	<b>30</b>

<sup>1</sup> Aggregated certification indicator due to assets with potential environmental impacts.

<sup>2</sup> Primary energy consumption by turnover.

<sup>3</sup> The stationary emissions do not include those produced by the burning of ArcelorMittal steel gases in EDP's power plants in Spain.

<sup>4</sup> Calculation according with GHG Protocol based location methodology.

<sup>5</sup> Scope 1 and Scope 2 emissions by turnover.

<sup>6</sup> CO<sub>2</sub> emissions that would have occurred if the electricity generated by renewable energy sources were produced by thermal power plants. For each country, it is obtained by multiplying the net renewable production energy by the emission factor of the thermoelectric mix of that country.

<sup>7</sup> Includes only stationary combustion emissions.

n.a. - not applicable; N/A - not available

2018	UN	Group	Portugal	Spain	Brazil	North America	Rest of the World
<b>ENVIRONMENTAL MANAGEMENT</b>							
ISO 14001 Certification <sup>1</sup>	%	96	97	97	95	96	95
EMAS Registration	%	46	75	N/A	n.a.	n.a.	N/A
<b>TOTAL ENERGY CONSUMPTION</b>	<b>TJ</b>	<b>234 747</b>	<b>116 110</b>	<b>76 076</b>	<b>42 489</b>	<b>8</b>	<b>65</b>
<b>PRIMARY ENERGY CONSUMPTION</b>	<b>TJ</b>	<b>221 634</b>	<b>109 400</b>	<b>76 076</b>	<b>36 146</b>	<b>8</b>	<b>4</b>
Coal	TJ	165 982	79 306	50 757	35 919	n.a.	n.a.
Fuel oil	TJ	297	264	32	n.a.	n.a.	n.a.
Natural gas	TJ	40 425	29 696	10 726	n.a.	3	0
Blast furnace gas	TJ	12 356	n.a.	12 356	n.a.	n.a.	n.a.
Coke gas	TJ	934	n.a.	934	n.a.	n.a.	n.a.
Diesel oil	TJ	202	2	45	155	n.a.	n.a.
Iron and steel industry gas	TJ	1 220	n.a.	1 220	n.a.	n.a.	n.a.
Fuel for vehicle fleet	TJ	218	132	6	72	5	3
<b>ENERGY INTENSITY <sup>2</sup></b>	<b>MJ/EUR</b>	<b>15</b>	<b>15</b>	<b>25</b>	<b>12</b>	<b>0</b>	<b>0</b>
<b>THERMAL POWER PLANT EFFICIENCY (capacity based)</b>	<b>%</b>	<b>45</b>	<b>48</b>	<b>45</b>	<b>34</b>	<b>n.a.</b>	<b>n.a.</b>
<b>ELECTRICITY CONSUMPTION</b>							
Generation self-consumption	MWh	3 527 172	2 508 720	577 610	389 701	34 456	16 685
Administrative service	MWh	34 990	25 518	2 749	5 172	1 311	241
Grid losses	%	8,8	9,6	3,4	9,9	n.a.	n.a.
<b>GHG EMISSION</b>							
<b>Direct emissions (scope 1)</b>	<b>ktCO<sub>2eq</sub></b>	<b>18 429</b>	<b>9 106</b>	<b>5 345</b>	<b>3 977</b>	<b>0</b>	<b>0</b>
Stationary combustion <sup>3</sup>	ktCO <sub>2eq</sub>	18 404	9 090	5 342	3 971	n.a.	n.a.
SF6 Emissions	ktCO <sub>2eq</sub>	10	6	2	2	0	0
Company fleet	ktCO <sub>2eq</sub>	15	10	0	4	0	0
Natural gas consumption	ktCO <sub>2eq</sub>	0,19	0,04	0,00	0,00	0,14	0,01
<b>Indirect emissions (scope 2) <sup>4</sup></b>	<b>ktCO<sub>2eq</sub></b>	<b>602</b>	<b>441</b>	<b>0</b>	<b>136</b>	<b>17</b>	<b>8</b>
Electricity consumption in office buildings	ktCO <sub>2eq</sub>	1,8	0,0	0,0	0,0	1,7	0,1
Electricity losses	ktCO <sub>2eq</sub>	577	441	0	136	n.a.	n.a.
Renewable plants self-consumption	ktCO <sub>2eq</sub>	22,8	0,0	0,0	0,0	14,9	7,9
<b>Other indirect emissions (scope 3)</b>	<b>ktCO<sub>2eq</sub></b>	<b>11 334</b>	<b>3 818</b>	<b>4 707</b>	<b>2 593</b>	<b>168</b>	<b>48</b>
Purchased goods and services (C01)	ktCO <sub>2eq</sub>	49	16	16	16	0	0
Capital Goods (C02)	ktCO <sub>2eq</sub>	330	38	67	14	162	48
Fuel and energy related activities (C03)	ktCO <sub>2eq</sub>	6 399	2 737	1 501	2 162	0	0
Upstream transportation and distribution (C04)	ktCO <sub>2eq</sub>	675	240	36	400	0	0
Business Travels (C06)	ktCO <sub>2eq</sub>	10	2	1	2	5	0
Use of sold products (C11)	ktCO <sub>2eq</sub>	3 871	785	3 086	0	0	0
<b>GHG EMISSIONS INTENSITY <sup>5</sup></b>	<b>kgCO<sub>2</sub>/EUR</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>
<b>CO<sub>2</sub> AVOIDED EMISSIONS <sup>6</sup></b>	<b>ktCO<sub>2</sub></b>	<b>29 221</b>	<b>9 259</b>	<b>3 633</b>	<b>1 911</b>	<b>11 495</b>	<b>2 923</b>
<b>TOTAL EMISSIONS</b>							
CO <sub>2</sub> <sup>3,7</sup>	kt	18 404	9 090	5 342	3 971	n.a.	n.a.
NO <sub>x</sub>	kt	14,3	4,6	5,7	3,9	n.a.	n.a.
SO <sub>2</sub>	kt	21,3	3,8	6,0	11,5	n.a.	n.a.
Particulate matter	kt	2,05	0,09	0,24	1,72	n.a.	n.a.
Mercury	kg	50	27	14	9	n.a.	n.a.
SF6	kg	440	246	100	92	0	3
Volatile Organic Compounds	t	367	332	35	N/A	n.a.	n.a.
<b>SPECIFIC OVERALL EMISSIONS</b>							
CO <sub>2</sub> <sup>3,7</sup>	g/kWh	257	321	380	386	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0,2	0,2	0,4	0,4	n.a.	n.a.
SO <sub>2</sub>	g/kWh	0,3	0,1	0,4	1,1	n.a.	n.a.
Particulate matter	g/kWh	0,03	0,00	0,02	0,17	n.a.	n.a.
<b>SPECIFIC THERMAL EMISSIONS</b>							
CO <sub>2</sub> <sup>3,7</sup>	g/kWh	768	719	680	1 149	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0,6	0,4	0,7	1,1	n.a.	n.a.
SO <sub>2</sub>	g/kWh	0,9	0,3	0,8	3,3	n.a.	n.a.
Particulate matter	g/kWh	0,09	0,01	0,03	0,50	n.a.	n.a.
<b>TOTAL WATER WITHDRAWAL BY SOURCE</b>							
Ocean	10 <sup>3</sup> x m <sup>3</sup>	1 509 190	1 098 254	410 935	n.a.	n.a.	n.a.
Surface	10 <sup>3</sup> x m <sup>3</sup>	14 403	8 880	5 518	5	n.a.	n.a.
Water hole	10 <sup>3</sup> x m <sup>3</sup>	183	182	0	0	n.a.	n.a.
Well	10 <sup>3</sup> x m <sup>3</sup>	3	0	0	0	2	1
Municipal water supplies	10 <sup>3</sup> x m <sup>3</sup>	12 438	2 363	794	9 273	6	2
Other private entity	10 <sup>3</sup> x m <sup>3</sup>	1 397	426	970	0	n.a.	0
<b>MAIN USE OF WATER</b>							
Cooling water	10 <sup>3</sup> x m <sup>3</sup>	1 531 530	1 107 087	416 132	8 311	n.a.	n.a.
Row water	10 <sup>3</sup> x m <sup>3</sup>	5 887	2 917	2 050	920	n.a.	n.a.
Potable water	10 <sup>3</sup> x m <sup>3</sup>	177	111	10	45	9	2



2018	UN	Group	Portugal	Spain	Brazil	North America	Rest of the World
<b>WASTEWATER</b>							
Wastewater from generation with treatment	10 <sup>3</sup> x m <sup>3</sup>	1 984	456	1 464	65	n.a.	n.a.
Discharge into estuarine water and sea	10 <sup>3</sup> x m <sup>3</sup>	1 510 986	1 098 589	411 745	651	n.a.	n.a.
Discharge into inland water	10 <sup>3</sup> x m <sup>3</sup>	6 964	5 515	1 449	n.a.	n.a.	n.a.
<b>WASTE MATERIALS</b>							
<b>Waste</b>	<b>t</b>	<b>862 060</b>	<b>495 956</b>	<b>238 032</b>	<b>126 909</b>	<b>1 029</b>	<b>134</b>
<b>Hazard waste</b>	<b>%</b>	<b>1,5</b>	<b>10,7</b>	<b>0,3</b>	<b>1,2</b>	<b>29,5</b>	<b>52,8</b>
Waste with PCB	t	18,0	2,0	16,0	0,0	0,0	0,0
<b>Non-hazard waste</b>	<b>%</b>	<b>98,5</b>	<b>89,3</b>	<b>99,7</b>	<b>98,8</b>	<b>70,5</b>	<b>47,2</b>
<b>Recovered waste</b>	<b>t</b>	<b>272 964</b>	<b>23 301</b>	<b>177 632</b>	<b>71 192</b>	<b>738</b>	<b>102</b>
Recycled waste		219 972	20 907	176 137	22 212	671	47
Other	t	52 992	2 394	1 495	48 980	67	55
<b>Non-recovered waste</b>	<b>t</b>	<b>76 365</b>	<b>3 829</b>	<b>16 495</b>	<b>55 717</b>	<b>291</b>	<b>33</b>
<b>By-products</b>	<b>t</b>	<b>512 731</b>	<b>468 826</b>	<b>43 905</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>
Gypsum	t	165 785	121 880	43 905	n.a.	n.a.	n.a.
Fly ash	t	311 234	311 234	n.a.	n.a.	n.a.	n.a.
Slag	t	35 712	35 712	n.a.	n.a.	n.a.	n.a.
<b>Recovered waste materials</b>	<b>%</b>	<b>91</b>	<b>99</b>	<b>93</b>	<b>56</b>	<b>72</b>	<b>76</b>
<b>DISTRIBUTION IN PROTECTED AREAS</b>							
<b>High voltage distribution grid in protected areas</b>	<b>km</b>	<b>1 310</b>	<b>918</b>	<b>119</b>	<b>273</b>	<b>n.a.</b>	<b>n.a.</b>
Overhead	km	1 296	904	119	273	n.a.	n.a.
Underground	km	14	14	0	0	n.a.	n.a.
<b>Medium voltage distribution grid in protected areas</b>	<b>km</b>	<b>15 730</b>	<b>9 133</b>	<b>930</b>	<b>5 667</b>	<b>n.a.</b>	<b>n.a.</b>
Overhead	km	14 706	8 166	879	5 661	n.a.	n.a.
Underground	km	1 024	967	51	6	n.a.	n.a.
<b>Substations in protected areas</b>	<b>#</b>	<b>47</b>	<b>19</b>	<b>17</b>	<b>11</b>	<b>n.a.</b>	<b>n.a.</b>
<b>TRANSMISSION IN PROTECTED AREAS</b>							
<b>High voltage transmission grid in protected areas</b>	<b>km</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>10</b>	<b>n.a.</b>	<b>n.a.</b>
Overhead	km	n.a.	n.a.	n.a.	10	n.a.	n.a.
Underground	km	n.a.	n.a.	n.a.	0	n.a.	n.a.
<b>Substations in protected areas</b>	<b>#</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>0</b>	<b>n.a.</b>	<b>n.a.</b>
<b>FLOODED AREAS BY RESERVOIRS</b>	<b>ha</b>	<b>6 025</b>	<b>5 690</b>	<b>330</b>	<b>5</b>	<b>n.a.</b>	<b>n.a.</b>
<b>ENVIRONMENTAL COMPLAINTS</b>	<b>#</b>	<b>250</b>	<b>69</b>	<b>5</b>	<b>129</b>	<b>19</b>	<b>28</b>

<sup>1</sup> Aggregated certification indicator due to assets with potential environmental impacts.

<sup>2</sup> Primary energy consumption by turnover.

<sup>3</sup> The stationary emissions do not include those produced by the burning of ArcelorMittal steel gases in EDP's power plants in Spain.

<sup>4</sup> Calculation according with GHG Protocol based location methodology.

<sup>5</sup> Scope 1 and Scope 2 emissions by turnover.

<sup>6</sup> CO<sub>2</sub> emissions that would have occurred if the electricity generated by renewable energy sources were produced by thermal power plants. For each country, it is obtained by multiplying the net renewable energy production by the emission factor of the thermoelectric mix of that country.

<sup>7</sup> Includes only stationary combustion emissions.

n.a. - not applicable; N/A - not available

2017	UN	Group	Portugal	Spain	Brazil	North America	Rest of the World
<b>ENVIRONMENTAL MANAGEMENT</b>							
ISO 14001 Certification <sup>1</sup>	%	88	87	99	94	74	99
EMAS Registration	%	55	75	31	n.a.	n.a.	N/A
<b>TOTAL ENERGY CONSUMPTION</b>	<b>TJ</b>	<b>291 045</b>	<b>139 326</b>	<b>95 501</b>	<b>56 147</b>	<b>17</b>	<b>55</b>
<b>PRIMARY ENERGY CONSUMPTION</b>	<b>TJ</b>	<b>276 668</b>	<b>131 848</b>	<b>95 501</b>	<b>49 298</b>	<b>17</b>	<b>4</b>
Coal	TJ	204 044	89 646	65 276	49 122	n.a.	n.a.
Fuel oil	TJ	183	126	57	n.a.	n.a.	n.a.
Natural gas	TJ	57 013	41 946	15 063	n.a.	3	0
Blast furnace gas	TJ	12 897	n.a.	12 897	n.a.	n.a.	n.a.
Coke gas	TJ	968	n.a.	968	n.a.	n.a.	n.a.
Diesel oil	TJ	182	1	78	103	n.a.	n.a.
Iron and steel industry gas	TJ	1 151	n.a.	1 151	n.a.	n.a.	n.a.
Fuel for vehicle fleet	TJ	231	130	11	73	13	3
<b>ENERGY INTENSITY <sup>2</sup></b>	<b>MJ/EUR</b>	<b>18</b>	<b>17</b>	<b>26</b>	<b>14</b>	<b>0</b>	<b>0</b>
<b>THERMAL POWER PLANT EFFICIENCY (capacity based)</b>	<b>%</b>	<b>46</b>	<b>48</b>	<b>46</b>	<b>35</b>	<b>n.a.</b>	<b>n.a.</b>
<b>ELECTRICITY CONSUMPTION</b>							
Generation self-consumption	MWh	4 511 002	3 324 455	670 483	473 802	28 317	13 945
Administrative service	MWh	36 189	26 326	2 737	5 459	1 435	231
Grid losses	%	9,2	10,0	3,5	10,5	n.a.	n.a.
<b>GHG EMISSION</b>							
<b>Direct emissions (scope 1)</b>	<b>ktCO<sub>2eq</sub></b>	<b>23 159</b>	<b>10 746</b>	<b>7 014</b>	<b>5 398</b>	<b>1</b>	<b>0</b>
Stationary combustion <sup>3</sup>	ktCO <sub>2eq</sub>	23 129	10 729	7 008	5 392	n.a.	n.a.
SF6 Emissions	ktCO <sub>2eq</sub>	10	7	1	1	0	0
Company fleet	ktCO <sub>2eq</sub>	20	10	4	4	1	0
Natural gas consumption	ktCO <sub>2eq</sub>	0,22	0,04	0,00	0,00	0,17	0,01
<b>Indirect emissions (scope 2) <sup>4</sup></b>	<b>ktCO<sub>2eq</sub></b>	<b>818</b>	<b>619</b>	<b>0</b>	<b>177</b>	<b>16</b>	<b>7</b>
Electricity consumption in office buildings	ktCO <sub>2eq</sub>	1,8	0,0	0,0	0,0	1,7	0,1
Electricity losses	ktCO <sub>2eq</sub>	795	619	0	177	0	0
Renewable plants self-consumption	ktCO <sub>2eq</sub>	20,7	0,0	0,0	0,0	14,0	6,7
<b>Other indirect emissions (scope 3)</b>	<b>ktCO<sub>2eq</sub></b>	<b>13 039</b>	<b>4 574</b>	<b>5 264</b>	<b>2 992</b>	<b>160</b>	<b>48</b>
Purchased goods and services (C01)	ktCO <sub>2eq</sub>	54	18	18	18	0	0
Capital Goods (C02)	ktCO <sub>2eq</sub>	324	39	70	10	157	48
Fuel and energy related activities (C03)	ktCO <sub>2eq</sub>	8 344	3 614	2 087	2 644	0	0
Upstream transportation and distribution (C04)	ktCO <sub>2eq</sub>	454	106	29	319	0	0
Business Travels (C06)	ktCO <sub>2eq</sub>	11	5	1	2	4	0
Use of sold products (C11)	ktCO <sub>2eq</sub>	3 852	793	3 059	0	0	0
<b>GHG EMISSIONS INTENSITY <sup>5</sup></b>	<b>kgCO<sub>2</sub>/EUR</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>
<b>CO<sub>2</sub> AVOIDED EMISSIONS <sup>6</sup></b>	<b>ktCO<sub>2</sub></b>	<b>26 799</b>	<b>4 833</b>	<b>3 301</b>	<b>1 811</b>	<b>12 459</b>	<b>4 394</b>
<b>TOTAL EMISSIONS</b>							
CO <sub>2</sub> <sup>3 6</sup>	kt	23 129	10 729	7 008	5 392	n.a.	n.a.
NO <sub>x</sub>	kt	17,0	6,1	6,0	4,9	n.a.	n.a.
SO <sub>2</sub>	kt	29,8	4,3	8,2	17,2	n.a.	n.a.
Particulate matter	kt	1,49	0,04	0,56	0,89	n.a.	n.a.
Mercury	kg	60	27	24	9	n.a.	n.a.
SF6	kg	422	307	59	55	0	0
Volatile Organic Compounds	t	547	452	95	N/A	n.a.	n.a.
<b>SPECIFIC OVERALL EMISSIONS</b>							
CO <sub>2</sub> <sup>3 6</sup>	g/kWh	332	418	445	570	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0,2	0,2	0,4	0,5	n.a.	n.a.
SO <sub>2</sub>	g/kWh	0,4	0,2	0,5	1,8	n.a.	n.a.
Particulate matter	g/kWh	0,02	0,00	0,04	0,09	n.a.	n.a.
<b>SPECIFIC THERMAL EMISSIONS</b>							
CO <sub>2</sub> <sup>3 6</sup>	g/kWh	756	679	688	1 173	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0,6	0,4	0,6	1,1	n.a.	n.a.
SO <sub>2</sub>	g/kWh	1,0	0,3	0,8	3,7	n.a.	n.a.
Particulate matter	g/kWh	0,05	0,00	0,05	0,19	n.a.	n.a.
<b>WATER COLLECT BY SOURCE</b>							
Ocean	10 <sup>3</sup> x m <sup>3</sup>	1 721 378	1 219 363	502 014	n.a.	n.a.	n.a.
River/Stream	10 <sup>3</sup> x m <sup>3</sup>	20 025	12 231	7 788	6	n.a.	n.a.
Water hole	10 <sup>3</sup> x m <sup>3</sup>	170	170	0	0	n.a.	n.a.
Well	10 <sup>3</sup> x m <sup>3</sup>	11	0	0	9	2	0
Municipal water supplies	10 <sup>3</sup> x m <sup>3</sup>	15 460	2 595	1 037	11 821	6	2
Other private entity	10 <sup>3</sup> x m <sup>3</sup>	1 388	396	991	1	n.a.	0
<b>MAIN USE OF WATER</b>							
Cooling water	10 <sup>3</sup> x m <sup>3</sup>	1 751 479	1 231 553	509 326	10 600	n.a.	n.a.
Row water	10 <sup>3</sup> x m <sup>3</sup>	6 729	3 088	2 464	1 178	n.a.	n.a.
Potable water	10 <sup>3</sup> x m <sup>3</sup>	208	128	11	58	8	2
<b>WASTEWATER</b>							
Wastewater from generation with treatment	10 <sup>3</sup> x m <sup>3</sup>	2 088	531	1 470	87	n.a.	n.a.
Discharge into estuarine water and sea	10 <sup>3</sup> x m <sup>3</sup>	1 730 456	1 226 949	502 639	868	n.a.	n.a.
Discharge into inland water	10 <sup>3</sup> x m <sup>3</sup>	1 886	10	1 877	n.a.	n.a.	n.a.



2017	UN	Group	Portugal	Spain	Brazil	North America	Rest of the World
<b>WASTE MATERIALS</b>	t	1 176 343	484 273	329 065	361 847	1 065	94
<b>Waste</b>	t	666 771	35 870	267 896	361 847	1 065	94
<b>Hazard waste</b>	%	0,9	7,4	0,3	0,6	43,7	72,2
Waste with PCB	t	36,0	7,0	29,0	0,0	0,0	0,0
<b>Non-hazard waste</b>	%	99,1	92,6	99,7	99,4	56,3	27,8
<b>Recovered waste</b>	t	304 167	30 115	189 556	83 568	850	78
Recycled waste	t	249 733	26 269	188 917	33 774	745	29
Other	t	54 434	3 846	639	49 794	105	49
<b>Non-recovered waste</b>	t	362 604	5 755	78 340	278 278	215	15
<b>By-products</b>	t	509 572	448 404	61 169	n.a.	n.a.	n.a.
Gypsum	t	197 668	136 499	61 169	n.a.	n.a.	n.a.
Fly ash	t	298 883	298 883	n.a.	n.a.	n.a.	n.a.
Slag	t	13 022	13 022	n.a.	n.a.	n.a.	n.a.
<b>Recovered waste materials</b>	%	69	99	76	23	80	84
<b>DISTRIBUTION IN PROTECTED AREAS</b>							
<b>High voltage distribution grid in protected areas</b>	km	1 229	914	122	193	n.a.	n.a.
Overhead	km	1 215	900	122	193	n.a.	n.a.
Underground	km	14	14	0	0	n.a.	n.a.
<b>Medium voltage distribution grid in protected areas</b>	km	13 693	9 109	866	3 718	n.a.	n.a.
Overhead	km	12 671	8 141	818	3 712	n.a.	n.a.
Underground	km	1 022	968	48	6	n.a.	n.a.
<b>Substations in protected areas</b>	#	46	19	19	8	n.a.	n.a.
<b>FLOODED AREAS BY RESERVOIRS</b>	ha	6 025	5 690	330	5	n.a.	n.a.
<b>ENVIRONMENTAL COMPLAINTS</b>	#	163	74	16	47	1	25

<sup>1</sup> Aggregated certification indicator due to assets with potential environmental impacts.

<sup>2</sup> Primary energy consumption by turnover.

<sup>3</sup> The stationary emissions do not include those produced by the burning of ArcelorMittal steel gases in EDP's power plants in Spain.

<sup>4</sup> Calculation according with GHG Protocol based location methodology.

<sup>5</sup> Scope 1 and Scope 2 emissions by turnover.

<sup>6</sup> CO<sub>2</sub> emissions that would have occurred if the electricity generated by renewable energy sources were produced by thermal power plants. For each country, it is obtained by multiplying the net renewable energy production by the emission factor of the thermoelectric mix of that country.

<sup>7</sup> Includes only stationary combustion emissions.

n.a. - not applicable; N/A - not available

2016	UN	Group	Portugal	Spain	Brazil	North America	Rest of the World
<b>ENVIRONMENTAL MANAGEMENT</b>							
ISO 14001 Certification <sup>1</sup>	%	93	94	100	93	81	96
EMAS Registration	%	58	82	31	n.a.	n.a.	N/A
<b>TOTAL ENERGY CONSUMPTION</b>	<b>TJ</b>	<b>234 442</b>	<b>110 872</b>	<b>68 681</b>	<b>54 812</b>	<b>18</b>	<b>58</b>
<b>PRIMARY ENERGY CONSUMPTION</b>	<b>TJ</b>	<b>220 587</b>	<b>105 508</b>	<b>68 681</b>	<b>46 376</b>	<b>18</b>	<b>4</b>
Coal	TJ	169 582	78 270	45 156	46 156	n.a.	n.a.
Fuel oil	TJ	373	256	116	n.a.	n.a.	n.a.
Natural gas	TJ	39 160	26 837	12 320	n.a.	3	0
Blast furnace gas	TJ	8 925	n.a.	8 925	n.a.	n.a.	n.a.
Coke gas	TJ	1 125	n.a.	1 125	n.a.	n.a.	n.a.
Diesel oil	TJ	230	9	77	144	n.a.	n.a.
Iron and steel industry gas	TJ	944	n.a.	944	n.a.	n.a.	n.a.
Fuel for vehicle fleet	TJ	248	136	17	77	15	4
<b>ENERGY INTENSITY<sup>2</sup></b>	<b>MJ/EUR</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>19</b>	<b>0</b>	<b>0</b>
<b>THERMAL POWER PLANT EFFICIENCY (capacity based)</b>	<b>%</b>	<b>45</b>	<b>47</b>	<b>45</b>	<b>35</b>	<b>n.a.</b>	<b>n.a.</b>
<b>ELECTRICITY CONSUMPTION</b>							
Generation self-consumption	MWh	3 496 546	2 412 524	567 533	471 808	29 721	14 960
Administrative service	MWh	35 236	24 779	3 644	5 325	1 260	228
Grid losses	%	9,2	9,5	4,0	11,0	n.a.	n.a.
<b>GHG EMISSION</b>							
<b>Direct emissions (scope 1)</b>	<b>ktCO<sub>2eq</sub></b>	<b>18 931</b>	<b>8 835</b>	<b>4 908</b>	<b>5 186</b>	<b>1</b>	<b>0</b>
Stationary combustion <sup>3</sup>	ktCO <sub>2eq</sub>	18 900	8 819	4 902	5 180	n.a.	n.a.
SF <sub>6</sub> Emissions	ktCO <sub>2eq</sub>	8	5	1	2	0	0
Company fleet	ktCO <sub>2eq</sub>	18	10	1	5	1	0
Natural gas consumption	ktCO <sub>2eq</sub>	0,48	0,06	0,25	0,00	0,17	0,01
Natural gas losses	ktCO <sub>2eq</sub>	5,0	0,9	4,1	n.a.	n.a.	n.a.
<b>Indirect emissions (scope 2)<sup>4</sup></b>	<b>ktCO<sub>2eq</sub></b>	<b>547</b>	<b>348</b>	<b>0</b>	<b>191</b>	<b>0</b>	<b>8</b>
Electricity consumption in office buildings	ktCO <sub>2eq</sub>	0	0	0	0	0	0
Electricity losses	ktCO <sub>2eq</sub>	539,6	348,5	0,0	191,1	n.a.	n.a.
Renewable plants self-consumption	ktCO <sub>2eq</sub>	7,7	0,0	0,0	0,0	0,0	7,7
<b>Other indirect emissions (scope 3)</b>	<b>ktCO<sub>2eq</sub></b>	<b>12 469</b>	<b>3 725</b>	<b>6 274</b>	<b>2 288</b>	<b>135</b>	<b>47</b>
Purchased goods and services (C01)	ktCO <sub>2eq</sub>	55	18	18	18	0	0
Capital Goods (C02)	ktCO <sub>2eq</sub>	287	39	68	3	131	47
Fuel and energy related activities (C03)	ktCO <sub>2eq</sub>	7 091	2 767	2 274	2050	0	0
Upstream transportation and distribution (C04)	ktCO <sub>2eq</sub>	304	74	15	215	0	0
Business Travels (C06)	ktCO <sub>2eq</sub>	11	4	1	2	4	0
Use of sold products (C11)	ktCO <sub>2eq</sub>	4 722	824	3 898	0	0	0
<b>GHG EMISSIONS INTENSITY<sup>5</sup></b>	<b>kgCO<sub>2</sub>/EUR</b>	<b>1,3</b>	<b>1,2</b>	<b>1,4</b>	<b>2,2</b>	<b>0,0</b>	<b>0,0</b>
<b>CO<sub>2</sub> AVOIDED EMISSIONS<sup>6</sup></b>	<b>ktCO<sub>2</sub></b>	<b>32 724</b>	<b>12 206</b>	<b>4 115</b>	<b>2 245</b>	<b>10 590</b>	<b>3 567</b>
<b>TOTAL EMISSIONS</b>							
CO <sub>2</sub> <sup>3,6</sup>	kt	18 900,4	8 818,9	4 901,6	5 179,9	n.a.	n.a.
NO <sub>x</sub>	kt	16,2	5,2	5,9	5,2	n.a.	n.a.
SO <sub>2</sub>	kt	19,89	3,47	6,50	9,92	n.a.	n.a.
Particulate matter	kt	1	0	1	1	n.a.	n.a.
Mercury	kg	100	69	31	0	n.a.	n.a.
SF <sub>6</sub>	kg	331	213	40	77	0	1
Volatile Organic Compounds	t	232	151	81	N/A	n.a.	n.a.
<b>SPECIFIC OVERALL EMISSIONS</b>							
CO <sub>2</sub> <sup>3,6</sup>	g/kWh	271	285	369	543	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0,2	0,2	0,4	0,5	n.a.	n.a.
SO <sub>2</sub>	g/kWh	0,3	0,1	0,5	1,0	n.a.	n.a.
Particulate matter	g/kWh	0,02	0,00	0,05	0,05	n.a.	n.a.
<b>SPECIFIC THERMAL EMISSIONS</b>							
CO <sub>2</sub> <sup>3,6</sup>	g/kWh	787	726	659	1 169	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0,7	0,4	0,8	1,2	n.a.	n.a.
SO <sub>2</sub>	g/kWh	0,8	0,3	0,9	2,2	n.a.	n.a.
Particulate matter	g/kWh	0,05	0,00	0,08	0,12	n.a.	n.a.
<b>TOTAL WATER WITHDRAWAL BY SOURCE</b>							
Ocean	10 <sup>3</sup> x m <sup>3</sup>	1 477 099	1 113 985	363 114	n.a.	n.a.	n.a.
Surface	10 <sup>3</sup> x m <sup>3</sup>	16 037	8 163	7 868	6,0	n.a.	n.a.
Water hole	10 <sup>3</sup> x m <sup>3</sup>	149,3	147,4	0,0	1,8	n.a.	n.a.
Well	10 <sup>3</sup> x m <sup>3</sup>	11,70	0,00	0,01	9,83	2	0
Municipal water supplies	10 <sup>3</sup> x m <sup>3</sup>	15 561	2 385	751	12 412	12	2
Other private entity	10 <sup>3</sup> x m <sup>3</sup>	1 420	401	1 018	0,02	0	0
<b>MAIN USE OF WATER</b>							
Cooling water	10 <sup>3</sup> x m <sup>3</sup>	1 503 732	1 122 131	370 466	11 135	n.a.	n.a.
Row water	10 <sup>3</sup> x m <sup>3</sup>	5 995	2 827	1 930	1 237	n.a.	n.a.
Potable water	10 <sup>3</sup> x m <sup>3</sup>	208	123	15	55	13	2
<b>WASTEWATER</b>							
Wastewater from generation with treatment	10 <sup>3</sup> x m <sup>3</sup>	4 933	709	2 400	1 824	n.a.	n.a.
Discharge into estuarine water and sea	10 <sup>3</sup> x m <sup>3</sup>	1 484 090	1 117 568	364 698	1 824	n.a.	n.a.
Discharge into inland water	10 <sup>3</sup> x m <sup>3</sup>	1 519	30	1 488	n.a.	n.a.	n.a.

2016	UN	Group	Portugal	Spain	Brazil	North America	Rest of the World
<b>WASTE MATERIALS</b>	t	1 080 960	679 290	223 612	177 196	701	161
<b>Waste</b>	t	477 373	109 448	189 866	177 196	701	161
<b>Hazard waste</b>	%	1,3	3,6	0,6	0,6	42,7	61,6
Waste with PCB	t	86,0	0,0	86,0	0,0	0,0	0,0
<b>Non-hazard waste</b>	%	98,7	96,4	99,4	99,4	57,3	38,4
<b>Recovered waste</b>	t	288 898	103 718	146 552	38 020	489	119
Recycled waste	t	257 711	99 692	142 858	14 717	395	50
Other	t	31 186	4 026	3 694	23 303	94	69
<b>Non-recovered waste</b>	t	188 475	5 731	43 314	139 176	212	42
<b>By-products</b>	t	603 588	569 842	33 746	n.a.	n.a.	n.a.
Gypsum	t	139 644	105 898	33 746	n.a.	n.a.	n.a.
Fly ash	t	463 943	463 943	n.a.	n.a.	n.a.	n.a.
Slag	t	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Recovered waste materials</b>	%	83	99	81	21	70	74
<b>DISTRIBUTION IN PROTECTED AREAS</b>							
<b>High voltage distribution grid in protected areas</b>	km	1 139	905	122	112	n.a.	n.a.
Overhead	km	1 125	891	122	112	n.a.	n.a.
Underground	km	14	14	0	0	n.a.	n.a.
<b>Medium voltage distribution grid in protected areas</b>	km	13 494	9 039	866	3 589	n.a.	n.a.
Overhead	km	12 500	8 098	818	3 584	n.a.	n.a.
Underground	km	994	941	48	5	n.a.	n.a.
<b>Substations in protected areas</b>	#	43	19	19	5	n.a.	n.a.
<b>FLOODED AREAS BY RESERVOIRS</b>	ha	6 025	5 690	330	4	n.a.	n.a.
<b>ENVIRONMENTAL COMPLAINTS</b>	#	167	35	2	49	9	72

<sup>1</sup> Aggregated certification indicator due to assets with potential environmental impacts.

<sup>2</sup> Primary energy consumption by turnover.

<sup>3</sup> The stationary emissions do not include those produced by the burning of ArcelorMittal steel gases in EDP's power plants in Spain.

<sup>4</sup> Calculation according with GHG Protocol based location methodology.

<sup>5</sup> Scope 1 and Scope 2 emissions by turnover.

<sup>6</sup> CO<sub>2</sub> emissions that would have occurred if the electricity generated by renewable energy sources were produced by thermal power plants. For each country, it is obtained by multiplying the net renewable energy production by the emission factor of the thermoelectric mix of that country.

<sup>7</sup> Includes only stationary combustion emissions.

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