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## APPROACH TO SUSTAINABILITY REPORTING

## Accurate, comparable and reliable reporting

ABB seeks to provide clear and transparent information on how it measures and discloses its environmental, social and governance impacts

ABB's sustainability reporting is guided by the Global Reporting Initiative (GRI) Standards and the EU directive on non-financial reporting, which enable us to transparently share ABB's material economic, environmental and social impacts and how we manage them. Omission from the material issues addressed in our report does not mean that the issue is not managed by ABB.

### Reporting boundaries

Our formal sustainability reporting system covers all ABB Group companies worldwide, including wholly owned subsidiaries and majority-owned joint ventures. A complete list of direct and indirect subsidiaries may be found in ABB's 2018 Annual Report.

### Changes in 2018

Entities acquired in the course of 2018 (notably GE Industrial Solutions) are not integrated into ABB's environmental and social reporting for the year. In December 2018, ABB announced the divestment of its Power Grids business to Hitachi and plans to close the sale in the first half of 2020. Until the closing, Power Grids will remain under the management control of ABB and continues to be included in all non-financial reporting.

### Data collection processes

We rely on three online data reporting systems to measure and gather performance data from across ABB. Hazards and Sustainability Observation Tours (SOTs) are reported by

employees via an end-user global system. Incidents from ABB entities in every country are collected by HSE/SA professionals and entered into a second system. The third system collects annual social data from every country and annual environmental data from every production and service site, as well as a majority of our office locations.

Data in this report relating to health and safety and our social performance covers 99 percent of all ABB employees. Data relating to our environmental performance was sourced from 554 ABB sites and offices, covering approximately 94 percent of our employees. Data on the environmental performance of all remaining employees, who are located at non-manufacturing sites with insignificant impacts, is generated by estimating energy, water and waste parameters pro rata.

### Calculation of energy and greenhouse gas data

ABB uses a market-based method to calculate and report scope 2 greenhouse gas (GHG) emissions. For purchased electricity and district heat, we have obtained local emission factors from suppliers. For data prior to 2017, where necessary, we have sourced factors from the International Energy Agency's CO<sub>2</sub> Emissions from Fuel Combustion 2013 databases or from national or regional inventories. Emission factors for fuel used at ABB sites are sourced from the GHG Protocol's Emission Factors from Cross-Sector

Tools (March 2017). From 2017, emissions from ABB's vehicle fleet are based on lease contract distances and CO<sub>2</sub> per kilometer factors per vehicle.

Scope 2 GHG emissions for electricity have also been calculated using the location-based method (source IEA) and are provided for comparison below.

Scope 2 GHG emissions from electricity	Kilotons CO <sub>2</sub> e
Market-based:	597
Location-based:	564

GHG emissions from air travel are calculated using the emission factors published by the UK Department for Business, Energy & Industrial Strategy (BEIS) in its "2018 Government GHG Conversion Factors for Company Reporting."

### Independent assurance summary

Bureau Veritas UK Limited (BV) has been engaged by ABB Ltd to provide independent assurance over ABB's Sustainability Report 2018, published on the company's website. The aim of this verification is to provide assurance to ABB's stakeholders over the accuracy, reliability and objectivity of the performance data in scope and also ensure that it covers the topics that are material to the business and to the stakeholders. BV's full Assurance Statement is published [here](#).

## SUMMARY OF GRI INDICATORS

# ABB Group Sustainability Indicators 2018

## Environmental

GRI ref.	Indicator description	Data assured	2018	2017	2016	2015	2014
	<b>Hazardous materials</b>						
	Phthalates (tons)	✓	99	106	191	878	258
	Brominated flame retardants (tons)	✓	0.0	0.0	0.0	0.0	1.9
	Lead in submarine cables (tons)	✓	— <sup>1</sup>	0.017	8,246	8,376	7,842
	Organic lead in polymers (tons)	✓	0.0	0.29	1.0	1.4	0.1
	Lead in other products (tons), e.g., backup batteries and counterweights in robots	✓	2,686	2,548	3,321	1,684	1,884
	Cadmium in batteries (tons) <sup>2</sup>	✓	113.3	71.3	53.0	98.3	79.5
	Cadmium in lead alloy and other uses (tons)	✓	0.3	0.4	7.3	6.4	6.0
	Mercury in products (tons)	✓	0.001	0.001	0.002	0.007	0.071
	SF <sub>6</sub> insulation gas (inflow to ABB facilities) (tons) <sup>3</sup>	✓	1,286	1,425	1,653	1,658	1,483
	SF <sub>6</sub> insulation gas (outflow to customers) (tons) <sup>3</sup>	✓	1,279	1,417	1,644	1,648	1,466
	No. of transformers with PCB oil in ABB facilities	✓	6	0	0	0	0
	No. of capacitors with PCB oil in ABB facilities	✓	0	0	0	0	0
	Mercury in instruments in ABB facilities (tons)	✓	0.215	0.215	0.238	0.225	0.320
<b>302-1</b>	<b>Energy consumption (gigawatt-hours – GWh)</b>						
	Biofuels <sup>4</sup>	✓	51.6	64.4	52	46	44
	Oil (11.63 MWh/ton)	✓	48.5	58.5	71	79	85
	Diesel (11.75 MWh/ton)	✓	4.8	5.8	9	8	11
	Coal (7.56 MWh/ton)	✓	0	0	0	0	0
	Gas <sup>5,6</sup>	✓	658	647	658	737	708
	District heat consumption <sup>5</sup>	✓	201	209	198	181	198
	Electricity consumption <sup>5,6</sup>	✓	1,571	1,561	1,620	1,608	1,628
	<b>Total energy used</b>	✓	<b>2,535</b>	<b>2,546</b>	<b>2,607</b>	<b>2,658</b>	<b>2,675</b>
	Electricity sold	✓	2	5	2	1	2
<b>302-3</b>	<b>Energy intensity (MWh/million \$ sales)<sup>7</sup></b>	✓	72	74	77	75	67
<b>302-4</b>	<b>Reduction of energy consumption (GWh)</b>		11	61	51	17	161

## Environmental continued

GRI ref.	Indicator description	Data assured	2018	2017	2016	2015	2014
<b>303-1</b>	<b>Water withdrawal (kilotons)</b>						
	Purchased from water companies <sup>5</sup>	✓	3,721	3,678	3,800	4,000	4,200
	Groundwater extracted by ABB	✓	2,499	2,726	2,300	3,200	3,100
	Surface water extracted by ABB	✓	2,561	2,849	3,000	2,400	2,800
	Collection of rainwater	✓	<100	<100	<100	<100	<100
	Waste water from external source	✓	<100	<100	<100	<100	<100
	Water withdrawal from areas of water stress <sup>8</sup>	✓	2,778	2,694	2,730	2,993	2,951
	<b>Total water withdrawal</b>	✓	<b>8,827</b>	<b>9,280</b>	<b>9,100</b>	<b>9,700</b>	<b>10,100</b>
<b>303-3</b>	<b>Water recycled and reused</b>						
	Volume of water reused and recycled (kilotons)		7,449	7,807	10,600	5,200	5,200
	As percentage of total water withdrawal (%)		84	84	116	54	51
<b>Greenhouse gas (GHG) emissions<sup>9</sup> (kilotons CO<sub>2</sub> equivalent)</b>							
<b>305-1</b>	<b>Scope 1</b>						
	CO <sub>2</sub> from the use of energy <sup>6</sup>	✓	148	149	155	173	170
	SF <sub>6</sub> (in CO <sub>2</sub> equivalents) <sup>10</sup>	✓	150	175	221	237	382
	CO <sub>2</sub> from transport by own fleet <sup>11</sup>		63	63	350	350	350
<b>305-2</b>	<b>Scope 2</b>						
	District heat consumption	✓	30	28	31	29	35
	Electricity consumption <sup>6</sup>	✓	597	606	614	684	682
	<b>Total scope 1 and 2 GHG emissions</b>	✓	<b>988</b>	<b>1,020</b>	<b>1,371</b>	<b>1,473</b>	<b>1,618</b>
<b>305-3</b>	<b>Scope 3</b>						
	Air travel <sup>12, 13</sup>	✓	138	150	164	158	171
<b>305-4</b>	<b>GHG emissions intensity (tons CO<sub>2</sub> equivalents/million \$)<sup>14</sup></b>						
	Tons CO <sub>2</sub> equivalents per million \$ sales	✓	32	34	45	46	45
<b>305-7</b>	<b>Emissions of volatile organic compounds (tons)</b>						
	Volatile organic compounds (VOC)	✓	882	987	1,105	1,223	1,291
	Chlorinated volatile organic compounds (VOC-Cl) <sup>15</sup>	✓	4	3	6	13	20
	<b>Emissions of NO<sub>x</sub> and SO<sub>x</sub> (tons SO<sub>2</sub> and NO<sub>2</sub>)</b>						
	SO <sub>x</sub> from burning coal		0	0	0	0	0
	SO <sub>x</sub> from burning oil and biofuels		72	89	82	97	97
	NO <sub>x</sub> from burning coal		0	0	0	0	0
	NO <sub>x</sub> from burning oil and biofuels		54	67	72	73	73
	NO <sub>x</sub> from burning gas		142	140	142	159	153

## Environmental continued

GRI ref.	Indicator description	Data assured	2018	2017	2016	2015	2014
<b>306-1</b>	<b>Water discharge by quality and destination (kilotons)</b>						
	Public sewer		6,130	3,039	4,200	3,100	3,000
	treated (percentage)		21%	38%	21%	28%	30%
	untreated (percentage)		79%	62%	79%	72%	70%
	Recipient <sup>16</sup>		761	444	4,500	2,600	2,900
	treated (percentage)		90%	81%	15%	90%	90%
	untreated (percentage)		10%	19%	85%	10%	10%
	Hazardous treatment company		47	45	300	360	400
	treated (percentage)		47%	13%	71%	90%	75%
	untreated (percentage)		53%	87%	29%	10%	25%
	External use		1	0	0	<100	<100
	treated (percentage)		100%	-	-	63%	50%
	untreated (percentage)		-	-	-	37%	50%
<b>306-2</b>	<b>Waste (kilotons)</b>						
	Scrap metal recycled	✓	156	153	148	158	162
	Non-hazardous waste recycled <sup>5</sup>	✓	62	61	53	53	49
	Non-hazardous waste sent for disposal <sup>5</sup>	✓	37	36	37	44	44
	Hazardous waste recycled <sup>17</sup>	✓	5	5	7	5	5
	Hazardous waste sent for disposal <sup>17</sup>	✓	6	8	8	10	13
	<b>Total waste (generated)</b>	✓	<b>266</b>	<b>263</b>	<b>254</b>	<b>270</b>	<b>273</b>
<b>306-3</b>	<b>Numbers of significant spills<sup>18</sup></b>						
	Oil spills		15	19	17	11	7
	Chemical spills		9	10	6	1	0
	Emissions to air		5	3	6	11	3
	Others		14	12	9	0	0
	<b>Total number of significant spills</b>		<b>43</b>	<b>44</b>	<b>38</b>	<b>23</b>	<b>10</b>

## Social

GRI ref.	Indicator description	Data assured	2018		2017		2016		2015		2014	
401-1	Total number and rates of new employee hires and employee turnover											
	Total workforce by region (ABB employees) <sup>19</sup>											
	Europe		68,300		63,000		61,400		61,600		63,000	
	The Americas		35,600		28,800		29,000		30,900		32,200	
	Asia, Middle East and Africa		42,700		43,000		41,900		43,300		45,200	
	Total		146,600		134,800		132,300		135,800		140,400	
	Employee turnover											
	Turnover of all employees <sup>20</sup>											
	Europe		6,509	10%	7,105	11%	6,063	10%	5,891	9%	5,877	9%
	The Americas		3,986	11%	3,148	11%	5,338	17%	5,409	17%	5,379	17%
	Asia, Middle East and Africa		5,127	12%	3,749	9%	4,430	11%	4,946	12%	5,701	13%
	Total employee turnover: ABB Group		15,622	11%	14,002	10%	15,831	12%	16,246	12%	16,957	12%
	Turnover of all female employees <sup>20</sup>											
	Europe		2,053	3%	2,097	3%	1,571	2%	1,498	2%	1,370	2%
	The Americas		1,154	3%	940	3%	1,265	4%	1,418	5%	1,307	4%
	Asia, Middle East and Africa		967	2%	855	2%	882	2%	1,093	3%	1,311	6%
	Total female employee turnover: ABB Group		4,174	3%	3,892	3%	3,718	3%	4,009	3%	3,882	3%
	Employee hires											
	Hires of all employees <sup>20</sup>											
	Europe		7,848	11%	6,888	11%	5,656	9%	5,672	9%	6,195	10%
	The Americas		3,525	10%	3,905	13%	3,354	11%	3,573	11%	4,142	13%
	Asia, Middle East and Africa		5,281	12%	4,403	11%	2,920	7%	3,777	9%	5,493	13%
	Total employee hires: ABB Group		16,654	11%	15,196	11%	11,930	9%	13,022	10%	15,830	12%
	Hires of all female employees <sup>20</sup>											
	Europe		2,442	4%	2,161	3%	1,681	3%	1,520	2%	1,597	3%
	The Americas		950	3%	1,030	3%	937	3%	769	2%	1,010	3%
	Asia, Middle East and Africa		1,076	3%	900	2%	586	1%	761	2%	1,308	3%
	Total female employee hires: ABB Group		4,468	3%	4,091	3%	3,204	2%	3,050	2%	3,915	3%

## Social continued

GRI ref.	Indicator description	Data assured	2018	2017	2016	2015	2014
<b>403-2</b>	<b>Occupational health and safety: Injuries, lost days, diseases and fatalities</b>						
	Employee work-related fatalities <sup>21, 23</sup>	✓	0	1	0	0	1
	Incident rate <sup>22</sup>	✓	0.00	0.00	0.00	0.00	0.00
	Employee business travel fatalities <sup>21, 24</sup>	✓	1	1	1	0	0
	Incident rate <sup>22</sup>	✓	0.00	0.00	0.00	0.00	0.00
	Contractor work-related fatalities <sup>21, 23</sup>	✓	3	2	5	2	2
	Contractor business travel fatalities <sup>21, 25</sup>	✓	0	0	2	0	0
	Members of the public fatalities <sup>21</sup>	✓	0	0	0	1	0
	Employee total recordable incident number <sup>23, 27</sup>	✓	830	1,049	1,140	1,310	1,500
	Injury rate <sup>22</sup>	✓	0.58	0.73	0.79	0.87	0.99
	Contractor total recordable incident number <sup>23, 27</sup>	✓	203	205	277	343	333
	Injury rate <sup>22</sup>	✓	0.58	0.52	0.70	0.80	0.78
	Employee lost time incident number <sup>23</sup>	✓	386	472	441	531	652
	Injury rate <sup>22</sup>	✓	0.27	0.33	0.30	0.36	0.43
	Contractor lost time incident number <sup>23</sup>	✓	97	95	118	163	200
	Injury rate <sup>22</sup>	✓	0.28	0.24	0.30	0.38	0.47
	Employee lost days due to industrial incidents <sup>28</sup>		6,650	7,331	6,905	7,831	8,415
	Days lost rate <sup>26</sup>		4.63	5.11	4.78	5.26	5.52
	Employee occupational health illness	✓	30	35	65	46	17
	Employee occupational health illness rate <sup>22</sup>	✓	0.02	0.02	0.05	0.03	0.01
	Sustainability Observation Tours (SOT) conducted <sup>23</sup>	✓	144,738	182,265	178,473	139,124	–
	SOT rate <sup>29</sup>	✓	1.01	1.27	1.24	0.92	–
	Hazards reported <sup>23</sup>	✓	389,733	585,627	621,849	520,942	–
	Hazards reporting rate <sup>29</sup>	✓	2.72	4.08	4.31	3.51	–
	<b>Data by region</b>						
	<b>Employee work-related fatalities: ABB Group</b>	✓	0	1	0	0	1
	Europe	✓	0	0	0	0	0
	The Americas	✓	0	1	0	0	0
	Asia, Middle East and Africa	✓	0	0	0	0	1
	<b>Employee business travel fatalities: ABB Group</b>	✓	1	1	1	0	0
	Europe	✓	0	0	0	0	0
	The Americas	✓	0	0	1	0	0
	Asia, Middle East and Africa	✓	1	1	0	0	0

## Social continued

GRI ref.	Indicator description	Data assured	2018	2017	2016	2015	2014
	<b>Contractor work-related fatalities: ABB Group</b>	✓	<b>3</b>	2	5	2	2
	Europe	✓	<b>0</b>	0	0	0	0
	The Americas	✓	<b>1</b>	1	0	0	0
	Asia, Middle East and Africa	✓	<b>2</b>	1	5	2	2
	<b>Contractor business travel fatalities: ABB Group</b>	✓	<b>0</b>	0	2	0	0
	Europe	✓	<b>0</b>	0	0	0	0
	The Americas	✓	<b>0</b>	0	2	0	0
	Asia, Middle East and Africa	✓	<b>0</b>	0	0	0	0
	<b>Employee total recordable injury rate: ABB Group</b>	✓	<b>0.58</b>	0.73	0.79	0.88	0.10
	Europe	✓	<b>0.66</b>	0.86	0.96	1.02	1.16
	The Americas	✓	<b>0.97</b>	1.17	1.18	1.40	1.57
	Asia, Middle East and Africa	✓	<b>0.19</b>	0.24	0.27	0.31	0.39
	<b>Contractor total recordable injury rate: ABB Group</b>	✓	<b>0.58</b>	0.52	0.70	0.80	0.78
	Europe	✓	<b>1.52</b>	1.38	1.69	1.88	1.97
	The Americas	✓	<b>0.74</b>	0.96	1.47	1.54	1.40
	Asia, Middle East and Africa	✓	<b>0.26</b>	0.24	0.35	0.37	0.35
	<b>Employee lost time injury rate: ABB Group</b>	✓	<b>0.27</b>	0.33	0.30	0.36	0.43
	Europe	✓	<b>0.39</b>	0.48	0.47	0.56	0.66
	The Americas	✓	<b>0.30</b>	0.34	0.29	0.33	0.40
	Asia, Middle East and Africa	✓	<b>0.07</b>	0.09	0.08	0.08	0.12
	<b>Contractor lost time injury rate: ABB Group</b>	✓	<b>0.28</b>	0.24	0.30	0.38	0.47
	Europe	✓	<b>0.91</b>	0.73	0.93	1.03	1.38
	The Americas	✓	<b>0.29</b>	0.35	0.81	0.84	0.86
	Asia, Middle East and Africa	✓	<b>0.08</b>	0.10	0.07	0.12	0.15
	<b>Employee days lost rate: ABB Group</b>		<b>4.63</b>	5.11	4.78	5.26	5.52
	Europe		<b>6.19</b>	6.95	5.98	7.32	8.25
	The Americas		<b>6.46</b>	6.43	7.81	6.02	8.28
	Asia, Middle East and Africa		<b>1.05</b>	1.49	0.99	1.74	1.72
	<b>Employee occupational health disease rate: ABB Group</b>	✓	<b>0.02</b>	0.02	0.05	0.03	0.01
	Europe	✓	<b>0.04</b>	0.05	0.09	0.06	0.02
	The Americas	✓	<b>0.00</b>	0.00	0.02	0.02	0.03
	Asia, Middle East and Africa	✓	<b>0.01</b>	0.00	0.05	0.00	0.00



## Social continued

GRI ref.	Indicator description	Data assured	2018	2017	2016	2015	2014
	<b>SOT rate: ABB Group</b>	✓	<b>1.01</b>	1.27	1.24	0.92	–
	Europe	✓	<b>0.92</b>	0.84	0.76	0.51	–
	The Americas	✓	<b>1.09</b>	1.71	1.87	1.41	–
	Asia, Middle East and Africa	✓	<b>1.10</b>	1.61	1.53	1.17	–
	<b>Hazard rate: ABB Group</b>	✓	<b>2.72</b>	4.08	4.31	3.51	–
	Europe	✓	<b>2.38</b>	3.37	3.65	2.67	–
	The Americas	✓	<b>2.66</b>	4.81	4.78	4.25	–
	Asia, Middle East and Africa	✓	<b>3.28</b>	4.64	5.03	4.19	–
<b>406-1</b>	<b>Non-discrimination</b>						
	Total number of incidents of discrimination		<b>0</b>	0	0	0	1
	Total number of incidents of harassment		<b>25</b>	9	5	8	10
<b>415-1</b>	<b>Public policy</b>						
	Financial and in-kind political contributions		<b>\$11,500</b>	\$300	\$10,400	\$12,600	\$13,000
<b>404-1</b>	<b>Training and education</b>						
	<b>Training per year per employee (average hours)</b>						
	China		<b>16</b>	17	25	22	26
	Czech Republic		<b>12</b>	13	14	14	13
	Finland		<b>13</b>	13	15	17	19
	Germany		<b>18</b>	18	18	18	18
	India		<b>12</b>	5	3	2	12
	Italy		<b>16</b>	12	10	12	12
	Poland		<b>35</b>	20	12	10	11
	Sweden		<b>12</b>	12	10	10	12
	Switzerland		<b>14</b>	14	15	14	16
	USA		<b>16</b>	24	24	27	32
<b>404-3</b>	<b>Employees receiving regular performance and career development reviews<sup>30</sup></b>						
	Top and senior managers		<b>89%</b>	94%	92%	85%	87%
	Middle and lower managers		<b>93%</b>	96%	94%	90%	91%
	Other employees		<b>91%</b>	91%	91%	87%	88%
	<b>Total workforce</b>		<b>91%</b>	91%	92%	87%	88%

## Social continued

GRI ref.	Indicator description	Data assured	2018	2017	2016	2015	2014
<b>405-1</b>	<b>Diversity and equal opportunity</b>						
	<b>Composition of governance bodies</b>						
	<b>Board of Directors</b>						
	Women in Board (percentage)		<b>18%</b>	10%	18%	13%	13%
	Age group diversity (percentage)						
	<30 years old		<b>0%</b>	0%	0%	0%	0%
	30–50 years old		<b>9%</b>	0%	0%	0%	0%
	>50 years old		<b>91%</b>	100%	100%	100%	100%
	Number of nationalities		<b>7</b>	8	10	8	7
	<b>Executive Committee</b>						
	Women in Executive Committee (percentage)		<b>9%</b>	9%	9%	9%	9%
	Age group diversity total (percentage)						
	<30 years old		<b>0%</b>	0%	0%	0%	0%
	30–50 years old		<b>0%</b>	27%	18%	27%	36%
	>50 years old		<b>100%</b>	73%	82%	73%	64%
	Number of nationalities		<b>8</b>	8	7	8	8
	<b>Employees in senior and middle management<sup>21</sup></b>						
	Women in senior and middle management		<b>17%</b>	16%	18%	17%	15%
	Men in senior and middle management		<b>83%</b>	84%	82%	83%	85%
	<b>Total workforce (ABB employees)</b>						
	Women in total workforce		<b>23%</b>	23%	23%	23%	22%
	Men in total workforce		<b>77%</b>	77%	77%	77%	78%

1 Reporting on lead in submarine cables is discontinued from 2018 due to the divestment of our high-voltage cables and cable accessories businesses in Q1 2017.

2 From 2018 we report all cadmium in batteries in one category. Data from 2013–2017 on cadmium in industrial and rechargeable batteries, respectively, have been summed up and are included here.

3 Data on inflow and outflow of SF<sub>6</sub> insulation gas have been restated for 2017, due to an error in the reporting from one site.

4 Biofuels were reported as a separate category in 2017. Biofuel consumption, total energy used, and energy intensity have been restated for 2014–2016, since the use of biofuels was previously not reported at one of our large facilities.

5 Results for these indicators are based on reported data covering 94% of employees in 2018, 93% in 2017, 97% in 2016, 95% in 2015 and 93% in 2014, plus energy use per employee for the remaining employees pro rata. See the Approach to reporting section for more details.

6 Gas and electricity consumption and the associated greenhouse gas (GHG) emissions have been restated for 2014–2017, due to the correction of earlier conversion factor errors at one of our large facilities.

7 Includes sales from Power Grids division.

8 Water withdrawal from areas of water stress have been restated for 2013–2017, due to earlier errors in reporting of water for remediation projects at two sites.

9 See Approach to reporting chapter for more details on GHG emission calculation.

10 In 2015, we updated the factor used to convert SF<sub>6</sub> emissions to CO<sub>2</sub> equivalents to 22,800 kg CO<sub>2</sub>e/kg SF<sub>6</sub>, as recommended by the UK Department of Energy & Climate Change in July 2014, and have applied that factor to SF<sub>6</sub> data reported for all years.

11 For 2018 we use the same data as for 2017. For 2017 data see Approach to reporting; 2014–2016 data was estimated.

12 The air travel indicator included data from ABB Bulgaria, Croatia, Greece, Kazakhstan and Romania for the first time in 2016 and from ABB China and Thomas & Betts for the first time in 2014.

13 Data for air travel is calculated using the emission factors published by the UK Department for Business, Energy & Industrial Strategy in its "2018 Government GHG Conversion Factors for Company Reporting – Methodology Paper for Emission Factors – Final Report."

14 The GHG emissions intensity includes Scope 1+2+3 emissions. Includes sales from Power Grids division.

15 Emissions of Chlorinated volatile organic compounds (VOC-Cl) are included in the Volatile organic compounds (VOC) reported in the line above.

16 Cooling water quality remains unchanged by its use at ABB and is discharged without treatment. Data for 2016 exceptionally included discharge of cooling water to recipient.

17 Hazardous waste as classified in the country where it is generated.

18 An environmental incident is regarded as significant if at least one of the following criteria applies to the incident: obligation to inform local authorities or a governmental agency about the incident and/or regulatory violation; inspection by an environmental agency results in a formal complaint; environmental Notice of Violation, a Consent Order or a Potential Responsible Party (PRP) notification; imposition of a penalty or fine; significant impact on an ecosystem; costs related to the incident exceed, or may exceed, \$10,000.

19 Includes GE Industrial Solutions acquired in 2018.

20 Includes part-time employees. Turnover rate calculated as number of ABB employees (full- and part-time) leaving during the year/total number of ABB employees (full- and part-time) as at 31 December. For the purpose of this calculation, employees and external workforce who leave the organization voluntarily or involuntarily whether due to dismissal, retirement, end of fixed-term contract or death in service or any other reason, are included. However, involuntary turnover arising out of divestments is excluded from the definition.

21 Fatalities include deaths occurring within one year as a result of injuries sustained and commuting is excluded.

22 The number of recorded incidents multiplied by 200,000/total hours worked.

23 Data covers incidents that happened at workplace (ABB facility, customer site, project site).

24 Includes incidents during business travel by road. Air and rail travels are excluded.

25 Includes incidents during business travel between ABB work place (ABB facility, customer site, project site).

26 The number of days lost multiplied by 200,000/total hours worked.

27 Total recordable incidents include fatal, lost-time incident, serious injury incident, medical treatment incident, occupational illness and restricted workday cases.

28 Days lost are calendar days and are counted from the day after the incident.

29 Rate is calculated per employee.

30 Eligible employees included in ABB HR system. Data covers previous year's cycle with completion by Q1 of the reporting year.

31 This indicator focuses on senior and middle management and includes employees in hay grades 1 to 10.

## CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

# ABB enables seven of the United Nations' Sustainable Development Goals

The following case studies illustrate just some of the many ways ABB is enabling the global community to meet many of the underlying SDG targets



## Affordable and clean energy

ABB's microgrids, powered by renewable energy, bring electricity to remote places and provide clean backup power to outage-prone regions. Microgrids can integrate multiple distributed generation sources, and their benefits are realized almost immediately. ABB is partnering with the rural arctic communities of Deering and Buckland, Alaska, to install advanced, modular "plug-and-play" microgrids to support the adoption of wind power.



## Clean water and sanitation

ABB is helping water companies achieve their own targets for SDG 6 through our solutions and expertise, which optimize processes and minimize leaks and water loss in distribution networks and transmission systems. ABB's distributed control system with integrated leakage and event management for Ho Chi Minh City will reduce non-revenue water loss from 30 percent to 10 percent by digitally monitoring the water network and initiating repairs in near-real time.



## Decent work and economic growth

Industrial automation is bringing back jobs to old manufacturing centers, generating new growth. For example, in an old television factory in South Wales, UK, ABB's YuMi robots are helping workers with the assembly of Raspberry Pi, Britain's smallest – and most popular – computer. Automation, in combination with shipping and logistics savings, has made South Wales a cost-effective production base for Raspberry Pi.



## Industry, innovation and infrastructure

ABB will invest €100 million in Austria to build a state-of-the-art innovation and training campus at the home of B&R in Eggelsberg, Upper Austria. It is the largest organic investment in industrial automation in ABB's more than 130-year history and lays the foundation for around 1,000 new high-tech jobs in Austria. This new R&D campus will open in 2020.



## Sustainable cities and communities

The key to sustainable urban living is building smarter cities, managed with advanced technologies and systems that will allow them to accommodate swelling populations without overwhelming infrastructure or services. ABB is partnering with the [Smart Cities Council](#) and with communities all over the world to make them cleaner, smarter and more sustainable while laying the groundwork for the city of future.



## Responsible consumption and production

ABB has taken a significant step towards making its production processes both circular and sustainable by closing a major deal for recycled copper. Installation Products, which is part of ABB's Electrical Products business, was the first to sign a deal with Aurubis, one of our key copper suppliers globally. Aurubis specializes in non-ferrous metals reclamation from scrap.



## Partnerships for the goals

ABB is a founding partner of United for Efficiency (U4E), a public-private multi-stakeholder collaboration partnership led by the United Nations Environment Programme. U4E helps governments develop and implement national and regional strategies for improved energy efficiency, and ABB is sharing our expertise in motors and transformers, policies, regulations and standards, as well as potential applications for the best available technologies.

## CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

# ABB contributes to ten of the United Nations' Sustainable Development Goals

The following case studies illustrate just some of the many ways in which ABB is contributing to global efforts towards many of the underlying SDG targets



## No poverty

In response to Typhoon Haiyan, which devastated the Philippines in 2013, ABB raised over \$500,000, donating some of those funds to Gawad Kalinga, a non-profit committed to fighting poverty. Since then, ABB and Gawad Kalinga have worked together on an ABB Global Village, in the province of Negros, providing new homes and critical infrastructure to a small rural community in one of the most severely-hit and poorest areas of the island, helping to give those affected a new start.



## Zero hunger

Participants in the ABB 5K road race in Houston, Texas, USA, have the option to run, jog or walk on behalf of Kids' Meals, a first-responder to children five-years-old and under facing debilitating hunger due to extreme poverty. Every year, a number of runners in the ABB 5K commit to raising \$250 for hungry children. Kids' Meals delivers free healthy meals to the children's doorsteps, and collaborates with their families to help end the cycle of poverty.



## Good health and well-being

Since 1979, ABB has successfully delivered and installed safety systems in more than 55 countries for the oil & gas sector, the chemical sector and other major industries. A pioneer in the development of advanced safety technologies, our flagship System 800xA integrated control and safety system provides people, equipment and the environment with the safety, security and protection required for almost any project.



## Quality education

As part of its broad effort to support training for skilled manufacturing jobs, ABB pledged in 2018 to embrace apprenticeship programs in the United States, where the company has 24,000 employees. By supporting the lifelong learning of its employees, ABB is creating new and more affordable ways for people to upskill and secure higher-paying jobs.



## Gender equality

For the fourth year running, in 2018 ABB Hungary announced its scholarship for female technical university and college students. The program, "ABB mentoring scheme for female students," aims to strengthen the participation of women in technical fields and to provide female students with the opportunity to familiarize themselves with the products, services, and operation of an international company.



## Reduced inequality

As a major sponsor of the Special Olympics Germany, ABB has been supporting the games through volunteer helpers since 2000. For the first time ever, ABB's technology contributed to the Olympics in 2018 by providing a charging infrastructure for electric vehicles around the "Olympic Town" in Kiel.



## Climate action

ABB is a member of the Alliance of CEO Climate Leaders, an informal group facilitated by the World Economic Forum. Together we signed an open letter ahead of COP24 to confirm our commitment to fast-track solutions to help deliver on an enhanced and more ambitious global action plan to tackle climate change and meet the goals set out at the 2015 Paris Climate Agreement.



## Life below water

By the Ocean we Unite, a Dutch foundation, uses advanced solutions supplied by ABB to study, measure and report on the rising concentration of plastics in the ocean. The foundation leverages the ABB Ability Marine Advisory System – OCTOPUS to plan optimal routes for its research vessel, maximizing the ship's fuel efficiency and operational impact. At the same time, ABB Ability Fleet Portal helps the foundation gather and analyze real-time data from the vessel's onboard sensors.



## Life on land

ABB recently completed a major life-cycle assessment of HVDC Light Generation 5 M9 to quantify its long-term environmental impact. The study took all materials and transmission losses into account. The study concluded that over the past 10 years, ABB has cut the carbon footprint of HVDC light by 66 percent. After power losses, civil works and construction materials, main circuit equipment and converter valves had the largest environmental impact from a delivery of an ABB HVDC system.



## Peace, justice and strong institutions

ABB has a decade-long partnership with the International Committee of the Red Cross (ICRC) that was renewed for three years at the end of 2017. Regular exchanges between ABB and ICRC staff helped identify focus areas to further improve energy efficiencies. ABB will continue to support ICRC's activities related to renewable energy and use of technology in the electrification value chain.