

# BP Statistical Review of World Energy June 2017



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66<sup>th</sup> edition

**Other renewables consumption\***

Million tonnes oil equivalent	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Growth rate per annum			Share 2016
											2016	2016	2005-15	
US	22.8	24.8	29.7	33.9	39.3	45.7	51.7	60.2	67.2	71.5	<b>83.8</b>	16.9%	13.2%	20.0%
Canada	2.5	2.6	2.6	3.4	4.2	4.8	5.6	6.4	7.0	8.5	<b>9.2</b>	8.1%	13.8%	2.2%
Mexico	1.7	1.9	1.8	1.8	2.0	2.0	2.3	2.6	3.1	3.7	<b>4.1</b>	10.4%	7.2%	1.0%
<b>Total North America</b>	<b>27.0</b>	<b>29.4</b>	<b>34.1</b>	<b>39.2</b>	<b>45.5</b>	<b>52.5</b>	<b>59.6</b>	<b>69.3</b>	<b>77.2</b>	<b>83.6</b>	<b>97.1</b>	<b>15.7%</b>	<b>12.9%</b>	<b>23.1%</b>
Argentina	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.8	0.6	<b>0.7</b>	5.0%	8.4%	0.2%
Brazil	3.4	4.2	4.7	5.4	7.6	7.9	9.1	10.6	13.3	16.0	<b>19.0</b>	18.4%	17.8%	4.5%
Chile	0.3	0.6	0.7	1.0	0.6	1.1	1.2	1.4	1.6	1.9	<b>2.3</b>	19.9%	16.7%	0.5%
Colombia	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	<b>0.5</b>	15.4%	12.8%	0.1%
Ecuador	†	†	†	†	0.1	0.1	0.1	0.1	0.1	0.1	<b>0.1</b>	12.6%	18.1%	♦
Peru	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	<b>0.6</b>	29.9%	18.5%	0.1%
Trinidad & Tobago	†	†	†	†	†	†	†	†	†	†	<b>†</b>	-	-14.1%	♦
Venezuela	-	-	-	-	-	-	-	-	-	-	<b>†</b>	-	-	♦
Other S. & Cent. America	1.3	1.4	1.6	1.8	2.0	2.2	2.7	3.0	3.6	4.5	<b>5.1</b>	11.9%	14.5%	1.2%
<b>Total S. &amp; Cent. America</b>	<b>5.7</b>	<b>6.9</b>	<b>7.7</b>	<b>9.0</b>	<b>11.1</b>	<b>12.3</b>	<b>14.1</b>	<b>16.4</b>	<b>20.2</b>	<b>24.0</b>	<b>28.2</b>	<b>17.1%</b>	<b>16.6%</b>	<b>6.7%</b>
Austria	1.2	1.4	1.4	1.4	1.5	1.5	1.7	1.9	2.0	2.3	<b>2.4</b>	6.0%	10.5%	0.6%
Azerbaijan	-	-	-	†	†	-	-	†	†	†	<b>†</b>	66.3%	-	♦
Belarus	-	†	†	†	†	-	†	†	†	†	<b>0.1</b>	100.5%	65.2%	♦
Belgium	0.6	0.7	0.9	1.2	1.4	1.9	2.3	2.6	2.7	3.2	<b>3.2</b>	-1.7%	22.8%	0.8%
Bulgaria	†	†	†	0.1	0.2	0.2	0.5	0.6	0.6	0.7	<b>0.7</b>	1.5%	90.3%	0.2%
Czech Republic	0.2	0.3	0.4	0.5	0.7	1.2	1.3	1.5	1.6	1.7	<b>1.7</b>	-3.5%	27.5%	0.4%
Denmark	2.1	2.3	2.3	2.3	2.8	3.2	3.4	3.6	4.1	4.3	<b>4.1</b>	-5.7%	6.8%	1.0%
Finland	2.5	2.3	2.4	2.0	2.5	2.6	2.6	2.9	2.9	3.1	<b>3.4</b>	8.6%	3.5%	0.8%
France	1.4	1.9	2.3	2.8	3.4	4.4	5.5	5.8	6.5	7.9	<b>8.2</b>	2.9%	21.8%	1.9%
Germany	11.7	15.2	16.5	17.2	18.9	23.8	27.2	29.0	32.1	38.1	<b>37.9</b>	-0.9%	14.7%	9.0%
Greece	0.4	0.5	0.6	0.6	0.7	0.9	1.3	1.8	1.7	2.0	<b>2.1</b>	4.7%	20.2%	0.5%
Hungary	0.3	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	<b>0.8</b>	15.8%	6.3%	0.2%
Ireland	0.4	0.5	0.6	0.7	0.7	1.1	1.0	1.1	1.3	1.6	<b>1.5</b>	-5.8%	19.0%	0.4%
Italy	3.5	3.8	4.1	4.6	5.8	8.4	11.4	13.4	14.1	14.3	<b>15.0</b>	4.3%	16.4%	3.6%
Kazakhstan	†	†	†	†	†	-	†	†	†	†	<b>0.1</b>	95.1%	-	♦
Lithuania	†	†	†	0.1	0.1	0.1	0.2	0.2	0.3	0.3	<b>0.4</b>	20.0%	65.2%	0.1%
Netherlands	1.8	1.7	2.1	2.4	2.5	2.8	2.8	2.7	2.6	3.1	<b>3.1</b>	0.8%	6.3%	0.7%
Norway	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.6	<b>0.5</b>	-14.6%	12.5%	0.1%
Poland	0.5	0.7	1.0	1.4	1.8	2.4	3.4	3.3	4.0	4.7	<b>4.6</b>	-1.8%	28.9%	1.1%
Portugal	1.1	1.4	1.8	2.3	2.8	2.8	3.1	3.6	3.6	3.6	<b>3.7</b>	4.4%	16.2%	0.9%
Romania	†	†	†	†	0.1	0.4	0.6	1.2	1.5	2.2	<b>2.0</b>	-6.0%	109.1%	0.5%
Russian Federation	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	<b>0.2</b>	6.9%	4.0%	♦
Slovakia	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.5	0.5	<b>0.5</b>	1.8%	49.5%	0.1%
Spain	6.2	7.2	8.7	10.7	12.5	12.6	15.0	16.3	16.1	15.6	<b>15.5</b>	-0.9%	10.8%	3.7%
Sweden	2.1	2.5	2.8	3.2	3.6	4.0	4.4	4.8	5.0	6.1	<b>6.1</b>	-0.8%	12.4%	1.5%
Switzerland	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.7	<b>0.8</b>	17.6%	10.3%	0.2%
Turkey	0.1	0.2	0.3	0.5	0.9	1.3	1.7	2.3	2.8	3.9	<b>5.2</b>	33.8%	51.0%	1.2%
Turkmenistan	-	-	-	-	†	†	†	†	†	†	<b>†</b>	27.0%	-	♦
Ukraine	†	0.1	0.1	†	0.1	0.1	0.2	0.3	0.4	0.4	<b>0.3</b>	-12.4%	46.9%	0.1%
United Kingdom	3.1	3.3	3.8	4.5	5.0	6.5	8.1	11.0	13.3	17.5	<b>17.5</b>	-0.1%	20.4%	4.2%
Uzbekistan	-	-	-	-	-	-	-	†	†	†	<b>†</b>	50.0%	-	♦
Other Europe & Eurasia	0.7	0.9	1.1	1.3	1.4	1.6	1.9	2.0	2.2	2.3	<b>2.5</b>	7.7%	17.2%	0.6%
<b>Total Europe &amp; Eurasia</b>	<b>40.4</b>	<b>48.1</b>	<b>54.4</b>	<b>61.2</b>	<b>71.0</b>	<b>85.7</b>	<b>101.5</b>	<b>114.1</b>	<b>123.8</b>	<b>141.6</b>	<b>144.0</b>	<b>1.5%</b>	<b>15.0%</b>	<b>34.3%</b>
Iran	†	†	†	0.1	†	0.1	0.1	0.1	0.1	0.1	<b>0.1</b>	2.6%	20.0%	♦
Israel	†	†	†	†	†	0.1	0.1	0.1	0.2	0.3	<b>0.4</b>	37.1%	60.6%	0.1%
Kuwait	-	-	-	-	-	-	-	-	†	†	<b>†</b>	580.0%	-	♦
Qatar	-	-	-	-	-	-	†	†	†	†	<b>†</b>	10.0%	-	♦
Saudi Arabia	-	-	-	-	-	†	†	†	†	†	<b>†</b>	14.3%	-	♦
United Arab Emirates	-	-	-	†	†	†	†	†	0.1	0.1	<b>0.1</b>	2.6%	-	♦
Other Middle East	†	†	†	†	†	†	†	†	†	0.1	<b>0.2</b>	196.8%	39.9%	♦
<b>Total Middle East</b>	<b>†</b>	<b>†</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.7</b>	<b>42.0%</b>	<b>38.4%</b>	<b>0.2%</b>
Algeria	-	-	-	-	†	†	†	†	†	†	<b>0.1</b>	190.2%	-	♦
Egypt	0.1	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.4	<b>0.6</b>	35.5%	13.3%	0.1%
South Africa	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	1.4	<b>1.8</b>	26.3%	35.3%	0.4%
Other Africa	0.7	0.6	0.6	0.7	0.9	0.9	1.0	1.3	1.8	2.4	<b>2.6</b>	9.6%	16.6%	0.6%
<b>Total Africa</b>	<b>0.9</b>	<b>0.8</b>	<b>0.9</b>	<b>1.1</b>	<b>1.3</b>	<b>1.4</b>	<b>1.4</b>	<b>1.7</b>	<b>2.7</b>	<b>4.2</b>	<b>5.0</b>	<b>18.5%</b>	<b>19.6%</b>	<b>1.2%</b>
Australia	1.4	1.6	1.7	1.7	1.9	2.5	3.0	3.7	4.1	4.8	<b>5.4</b>	12.0%	14.9%	1.3%
Bangladesh	†	†	†	†	†	†	†	†	†	†	<b>†</b>	15.3%	40.8%	♦
China	2.5	3.5	6.4	11.0	15.9	22.8	29.4	42.3	50.8	64.4	<b>86.1</b>	33.4%	44.1%	20.5%
China Hong Kong SAR	†	†	†	†	†	†	†	†	†	†	<b>†</b>	-0.4%	-	♦
India	3.3	4.0	4.8	6.3	7.2	8.8	10.4	11.6	12.0	12.7	<b>16.5</b>	29.2%	18.8%	3.9%
Indonesia	1.5	1.6	1.9	2.1	2.1	2.2	2.2	2.2	2.3	2.4	<b>2.6</b>	7.1%	4.7%	0.6%
Japan	5.8	6.2	6.1	6.1	6.7	7.0	7.7	9.3	11.8	14.8	<b>18.8</b>	26.7%	10.0%	4.5%
Malaysia	-	†	†	0.3	0.3	0.3	0.4	0.3	0.3	0.3	<b>0.3</b>	21.6%	-	0.1%
New Zealand	1.0	1.1	1.3	1.6	1.8	2.0	2.0	2.0	2.3	2.4	<b>2.4</b>	-0.2%	10.0%	0.6%
Pakistan	-	-	-	-	†	†	†	0.1	0.2	0.3	<b>0.4</b>	47.0%	-	0.1%
Philippines	2.4	2.3	2.4	2.4	2.3	2.3	2.4	2.2	2.4	2.8	<b>3.1</b>	10.8%	2.2%	0.7%
Singapore	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	<b>0.2</b>	14.8%	6.2%	0.1%
South Korea	0.1	0.2	0.3	0.4	1.0	1.7	2.0	2.3	3.3	3.9	<b>4.3</b>	9.6%	45.6%	1.0%
Taiwan	0.5	0.6	0.6	0.6	0.7	0.8	0.8	0.9	0.9	1.0	<b>1.0</b>	1.8%	8.8%	0.2%
Thailand	0.5	0.6	0.5	0.5	0.8	0.9	1.2	1.6	2.0	2.3	<b>2.8</b>	24.4%	18.3%	0.7%
Vietnam	†	†	†	†	†	†	†	†	†	†	<b>0.1</b>	40.5%	15.9%	♦
Other Asia Pacific	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	<b>0.3</b>	1.3%	20.8%	0.1%
<b>Total Asia Pacific</b>	<b>19.2</b>	<b>22.0</b>	<b>26.2</b>	<b>33.3</b>	<b>41.1</b>	<b>51.7</b>	<b>61.8</b>	<b>79.0</b>	<b>93.0</b>	<b>112.7</b>	<b>144.5</b>	<b>27.9%</b>	<b>21.1%</b>	<b>34.4%</b>
<b>Total World</b>	<b>93.2</b>	<b>107.2</b>	<b>123.4</b>	<b>143.9</b>	<b>170.1</b>	<b>203.6</b>	<b>238.5</b>	<b>280.7</b>	<b>317.3</b>	<b>366.7</b>	<b>419.6</b>	<b>14.1%</b>	<b>16.1%</b>	<b>100.0%</b>
of which: OECD	75.9	86.9	98.2	110.8	127.9	151.5	175.2	199.4	221.0	248.9	<b>270.1</b>	8.2%	13.9%	64.4%
Non-OECD	17.3	20.3	25.1	33.0	42.2	52.1	63.4	81.3	96.3	117.8	<b>149.5</b>	26.6%	23.4%	35.6%
European Union	39.1	46.3	52.4	58.9	68.2	82.3	97.4	109.1	118.0	134.6	<b>135.6</b>	0.5%		

## Biofuels production

Thousand tonnes oil equivalent	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Growth rate per annum			Share 2016
											2016	2016	2005-15	
US	10670	14709	20934	23761	28044	31184	29808	31057	32890	33849	<b>35779</b>	5.4%	15.2%	43.5%
Canada	174	503	546	786	809	950	1017	1056	1188	1142	<b>1160</b>	1.2%	22.8%	1.4%
Mexico	-	5	5	5	14	13	15	58	58	58	<b>58</b>	-	-	0.1%
<b>Total North America</b>	<b>10844</b>	<b>15216</b>	<b>21485</b>	<b>24552</b>	<b>28866</b>	<b>32147</b>	<b>30840</b>	<b>32171</b>	<b>34137</b>	<b>35049</b>	<b>36997</b>	<b>5.3%</b>	<b>15.4%</b>	<b>45.0%</b>
Argentina	30	173	635	1055	1670	2234	2295	2014	2644	2038	<b>2828</b>	38.4%	71.7%	3.4%
Brazil	9590	12427	15486	15277	16866	14403	14739	17114	18005	19332	<b>18552</b>	-4.3%	8.4%	22.5%
Colombia	144	155	158	320	455	572	627	650	676	693	<b>626</b>	-10.0%	46.2%	0.8%
Other S. & Cent. America	513	596	806	634	229	310	300	354	378	379	<b>373</b>	-1.9%	6.5%	0.5%
<b>Total S. &amp; Cent. America</b>	<b>10278</b>	<b>13351</b>	<b>17085</b>	<b>17285</b>	<b>19220</b>	<b>17519</b>	<b>17961</b>	<b>20131</b>	<b>21703</b>	<b>22442</b>	<b>22378</b>	<b>-0.6%</b>	<b>9.8%</b>	<b>27.2%</b>
Austria	109	222	269	373	391	390	390	374	329	381	<b>419</b>	9.8%	18.0%	0.5%
Belgium	22	146	282	486	603	664	562	547	574	556	<b>558</b>	-	89.9%	0.7%
Finland	12	54	101	231	301	208	263	330	367	445	<b>446</b>	-	51.8%	0.5%
France	682	1153	2064	2408	2353	1935	2145	2306	2541	2519	<b>2226</b>	-11.9%	18.5%	2.7%
Germany	2603	3243	2805	2834	3022	2967	3031	2770	3460	3191	<b>3198</b>	-0.1%	7.2%	3.9%
Italy	594	448	623	772	678	486	298	457	585	582	<b>583</b>	-	5.1%	0.7%
Netherlands	23	82	78	242	391	674	1276	1495	1756	1675	<b>1680</b>	-	87.5%	2.0%
Poland	154	103	290	408	439	414	652	697	750	940	<b>898</b>	-4.6%	23.2%	1.1%
Portugal	70	162	149	226	284	330	276	274	301	321	<b>298</b>	-7.5%	79.7%	0.4%
Spain	273	378	384	1001	1312	851	620	749	1030	1122	<b>1148</b>	2.0%	14.0%	1.4%
Sweden	91	150	183	254	339	400	491	635	789	222	<b>211</b>	-5.1%	15.7%	0.3%
United Kingdom	228	374	289	220	304	322	303	517	403	310	<b>351</b>	12.8%	22.4%	0.4%
Other Europe & Eurasia	407	506	964	1190	1187	1235	1428	1351	1560	1749	<b>1761</b>	0.4%	19.2%	2.1%
<b>Total Europe &amp; Eurasia</b>	<b>5269</b>	<b>7021</b>	<b>8482</b>	<b>10646</b>	<b>11604</b>	<b>10876</b>	<b>11734</b>	<b>12503</b>	<b>14445</b>	<b>14012</b>	<b>13777</b>	<b>-1.9%</b>	<b>15.5%</b>	<b>16.7%</b>
Total Middle East	-	-	-	-	5	5	5	5	5	5	<b>5</b>	-	-	♦
Total Africa	9	6	11	18	8	8	23	32	40	40	<b>40</b>	-	<b>20.5%</b>	♦
Australia	59	76	119	174	222	223	239	202	169	157	<b>144</b>	-8.5%	21.9%	0.2%
China	925	982	1194	1224	1584	1970	2103	2346	2609	2653	<b>2053</b>	-22.8%	14.6%	2.5%
India	146	149	169	77	123	210	229	268	349	410	<b>505</b>	23.0%	12.7%	0.6%
Indonesia	44	217	530	469	723	1110	1397	1750	2547	1354	<b>2503</b>	84.3%	65.4%	3.0%
South Korea	41	78	146	358	511	309	283	321	337	385	<b>404</b>	4.7%	45.4%	0.5%
Thailand	87	148	525	656	700	765	1054	1330	1490	1603	<b>1610</b>	0.2%	39.9%	2.0%
Other Asia Pacific	144	227	390	478	443	692	997	1234	1873	1913	<b>1889</b>	-1.5%	69.1%	2.3%
<b>Total Asia Pacific</b>	<b>1446</b>	<b>1876</b>	<b>3074</b>	<b>3435</b>	<b>4306</b>	<b>5280</b>	<b>6300</b>	<b>7450</b>	<b>9374</b>	<b>8476</b>	<b>9110</b>	<b>7.2%</b>	<b>25.0%</b>	<b>11.1%</b>
<b>Total World</b>	<b>27848</b>	<b>37471</b>	<b>50138</b>	<b>55936</b>	<b>64008</b>	<b>65834</b>	<b>66863</b>	<b>72293</b>	<b>79703</b>	<b>80024</b>	<b>82306</b>	<b>2.6%</b>	<b>14.1%</b>	<b>100.0%</b>
of which: OECD	16174	22281	29997	35389	40889	43192	42733	44808	48698	49186	<b>50900</b>	3.2%	15.5%	61.8%
Non-OECD	11674	15190	20141	20547	23119	22642	24130	27485	31005	30838	<b>31407</b>	1.6%	12.2%	38.2%
European Union	5214	6945	8334	10461	11466	10707	11593	12394	14286	13820	<b>13580</b>	-2.0%	15.5%	16.5%
CIS	-	2	7	36	34	28	29	23	25	25	<b>25</b>	-	-	♦

♦Less than 0.05%.

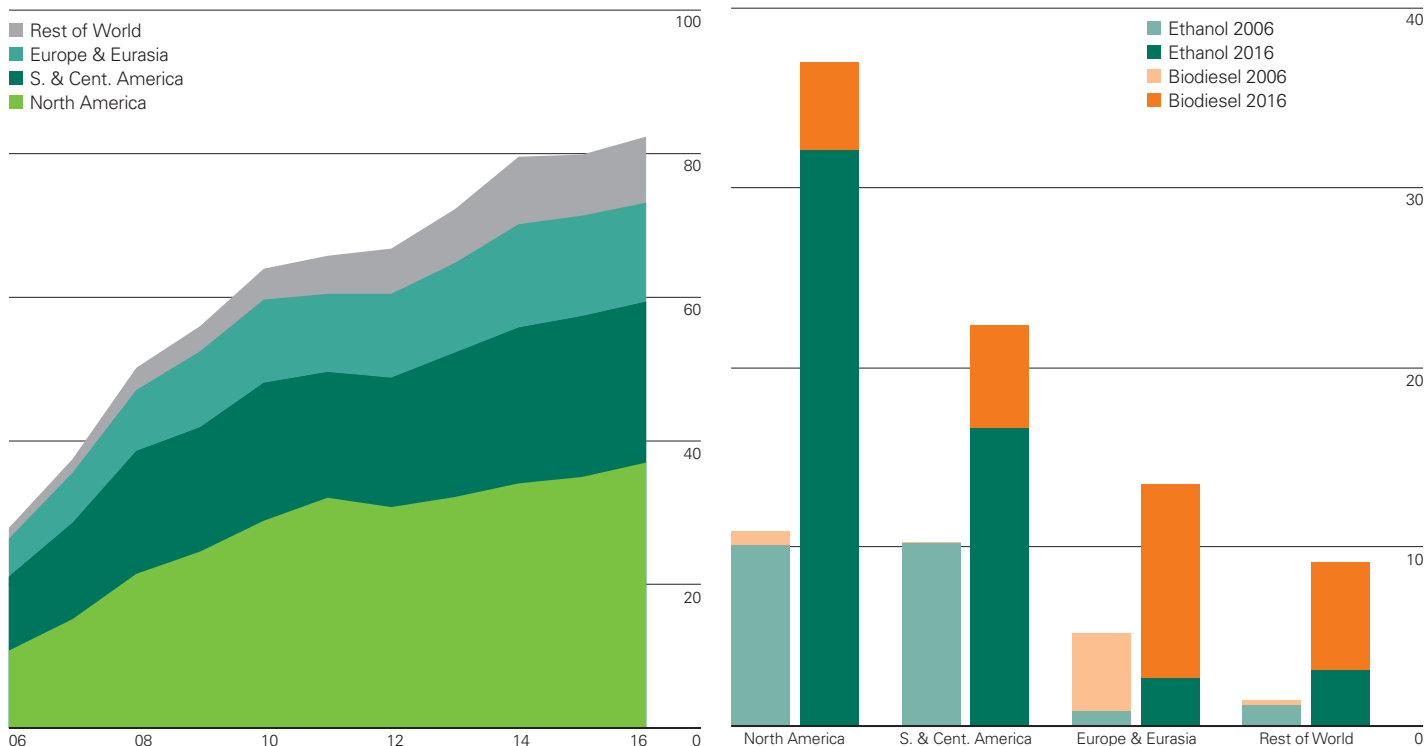
Source: Includes data from F.O. Lichts; US Energy Information Administration.

Notes: Consumption of fuel ethanol and biodiesel is included in oil consumption tables.

Annual changes and shares of total are calculated using thousand tonnes a day oil equivalent figures. Growth rates are adjusted for leap years.

## World biofuels production

Million tonnes oil equivalent



Global biofuels production rose by 2.6% in 2016, well below the 10-year average of 14.1%, but faster than in 2015 (0.4%). The US provided the largest increment (1930 thousand tonnes of oil equivalent, or ktoe). Global ethanol production increased by only 0.7%, partly due to falling production in Brazil. Biodiesel production rose by 6.5% with Indonesia providing more than half of the increment (1149 ktoe).

# Renewables: consumption – solar\*

Million tonnes oil equivalent	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Growth rate per annum			Share 2016
											2016	2015	2005-15	
US	0.2	0.2	0.4	0.5	0.7	1.1	2.0	3.6	6.6	8.9	<b>12.8</b>	43.6%	48.6%	17.1%
Canada	†	†	†	†	†	0.1	0.2	0.3	0.4	0.6	<b>0.7</b>	18.3%	64.0%	0.9%
Mexico	†	†	†	†	†	†	†	†	0.1	0.1	<b>0.1</b>	72.0%	39.2%	0.1%
<b>Total North America</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.7</b>	<b>1.2</b>	<b>2.2</b>	<b>3.9</b>	<b>7.1</b>	<b>9.6</b>	<b>13.6</b>	<b>42.3%</b>	<b>49.1%</b>	<b>18.1%</b>
Argentina	†	†	†	†	†	†	†	†	†	†	†	-3.1%	68.2%	♦
Brazil	-	-	-	-	-	-	†	†	†	†	†	50.5%	-	♦
Chile	-	-	-	-	-	-	†	†	0.1	0.3	<b>0.6</b>	96.6%	-	0.8%
Colombia	-	-	-	-	†	†	†	†	†	†	†	-	-	♦
Ecuador	†	†	†	†	-	-	†	†	†	†	†	7.2%	122.0%	♦
Peru	-	-	-	-	-	-	†	†	†	0.1	<b>0.1</b>	4.7%	-	0.1%
Trinidad & Tobago	-	-	†	†	†	†	†	†	†	†	†	-	-	♦
Venezuela	-	-	-	†	†	†	†	†	†	†	†	-	-	♦
Other S. & Cent. America	†	†	†	†	†	†	0.1	0.1	0.1	0.3	<b>0.5</b>	54.4%	36.2%	0.7%
<b>Total S. &amp; Cent. America</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.7</b>	<b>1.2</b>	<b>66.6%</b>	<b>47.4%</b>	<b>1.5%</b>
Austria	†	†	†	†	†	†	0.1	0.1	0.2	0.2	<b>0.2</b>	14.2%	46.2%	0.3%
Azerbaijan	-	-	-	-	-	-	-	†	†	†	†	1242.0%	-	♦
Belarus	-	-	-	-	-	-	-	†	†	†	†	310.0%	-	♦
Belgium	†	†	†	†	0.1	0.3	0.5	0.6	0.7	0.7	<b>0.7</b>	-4.0%	123.2%	0.9%
Bulgaria	-	-	-	†	†	†	0.2	0.3	0.3	0.3	<b>0.3</b>	1.6%	-	0.4%
Czech Republic	†	†	†	†	0.1	0.5	0.5	0.5	0.5	0.5	<b>0.5</b>	-6.2%	183.3%	0.6%
Denmark	†	†	†	†	†	†	†	0.1	0.1	0.1	<b>0.2</b>	22.8%	75.7%	0.2%
Finland	†	†	†	†	†	†	†	†	†	†	†	34.2%	12.8%	♦
France	†	†	†	†	0.1	0.5	0.9	1.1	1.3	1.7	<b>1.9</b>	11.4%	92.7%	2.5%
Germany	0.5	0.7	1.0	1.5	2.7	4.4	6.0	7.0	8.2	8.8	<b>8.6</b>	-1.6%	40.6%	11.5%
Greece	†	†	†	†	†	0.1	0.4	0.8	0.9	0.9	<b>0.9</b>	1.9%	128.6%	1.2%
Hungary	-	-	†	†	†	†	†	†	†	†	†	60.4%	-	0.1%
Ireland	-	-	-	†	†	†	†	†	†	†	†	229.6%	-	♦
Italy	†	†	†	0.2	0.4	2.4	4.3	4.9	5.0	5.2	<b>5.2</b>	-0.5%	93.6%	6.9%
Kazakhstan	-	-	-	-	-	-	-	†	†	†	†	84.3%	-	♦
Lithuania	-	-	-	-	-	-	†	†	†	†	†	-8.8%	-	♦
Netherlands	†	†	†	†	†	†	0.1	0.1	0.2	0.3	<b>0.3</b>	36.2%	41.8%	0.5%
Norway	-	-	†	†	†	†	†	†	†	†	†	48.8%	-	♦
Poland	-	-	-	-	-	-	†	†	†	†	†	116.9%	-	♦
Portugal	†	†	†	†	†	0.1	0.1	0.1	0.1	0.2	<b>0.2</b>	2.2%	70.7%	0.2%
Romania	-	-	-	†	†	†	†	0.1	0.3	0.4	<b>0.4</b>	-7.2%	-	0.6%
Russian Federation	-	-	-	-	-	-	†	†	†	†	†	115.7%	-	♦
Slovakia	-	-	-	-	†	0.1	0.1	0.1	0.1	0.1	<b>0.1</b>	4.9%	-	0.2%
Spain	†	0.1	0.6	1.4	1.6	2.0	2.7	2.9	3.1	3.1	<b>3.1</b>	-2.6%	67.9%	4.1%
Sweden	†	†	†	†	†	†	†	†	†	†	†	74.2%	47.4%	0.1%
Switzerland	†	†	†	†	†	†	0.1	0.1	0.2	0.3	<b>0.3</b>	23.6%	48.8%	0.4%
Turkey	-	-	-	-	-	-	†	†	†	†	†	253.3%	-	0.2%
Turkmenistan	-	-	-	-	†	†	†	†	†	†	†	27.0%	-	♦
Ukraine	-	-	-	-	-	-	0.1	0.1	0.1	0.1	<b>0.1</b>	-17.2%	-	0.1%
United Kingdom	†	†	†	†	†	0.1	0.3	0.5	0.9	1.7	<b>2.3</b>	35.7%	98.4%	3.1%
Uzbekistan	-	-	-	-	-	-	-	†	†	†	†	50.0%	-	♦
Other Europe & Eurasia	†	†	†	†	†	†	0.1	0.1	0.1	0.2	<b>0.2</b>	7.3%	45.1%	0.2%
<b>Total Europe &amp; Eurasia</b>	<b>0.6</b>	<b>0.9</b>	<b>1.7</b>	<b>3.2</b>	<b>5.3</b>	<b>10.6</b>	<b>16.3</b>	<b>19.6</b>	<b>22.4</b>	<b>24.9</b>	<b>25.9</b>	<b>3.6%</b>	<b>53.5%</b>	<b>34.4%</b>
Iran	-	-	-	-	-	-	-	-	†	†	†	700.0%	-	♦
Israel	-	-	-	†	†	†	0.1	0.1	0.2	0.3	<b>0.4</b>	39.5%	-	0.5%
Kuwait	-	-	-	-	-	-	-	-	†	†	†	580.0%	-	♦
Qatar	-	-	-	-	-	-	†	†	†	†	†	10.0%	-	♦
Saudi Arabia	-	-	-	-	-	-	†	†	†	†	†	14.3%	-	♦
United Arab Emirates	-	-	-	†	†	†	†	†	0.1	0.1	<b>0.1</b>	2.6%	-	0.1%
Other Middle East	-	-	†	†	†	†	†	†	†	†	†	270.1%	-	0.1%
<b>Total Middle East</b>	<b>-</b>	<b>-</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>0.1</b>	<b>0.1</b>	<b>0.3</b>	<b>0.4</b>	<b>0.6</b>	<b>47.0%</b>	<b>-</b>	<b>0.7%</b>
Algeria	-	-	-	-	†	†	†	†	†	†	†	252.5%	-	0.1%
Egypt	-	-	-	†	†	†	†	†	†	†	†	60.0%	-	♦
South Africa	†	†	†	†	†	†	†	0.1	0.3	0.6	<b>0.7</b>	18.8%	62.7%	1.0%
Other Africa	†	†	†	†	†	0.1	0.1	0.1	0.1	0.2	<b>0.3</b>	69.5%	58.1%	0.4%
<b>Total Africa</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.4</b>	<b>0.8</b>	<b>1.1</b>	<b>33.0%</b>	<b>62.0%</b>	<b>1.4%</b>
Australia	†	†	†	0.1	0.2	0.5	0.5	0.9	1.1	1.3	<b>1.6</b>	19.8%	53.1%	2.1%
Bangladesh	†	†	†	†	†	†	†	†	†	†	†	15.6%	43.1%	0.1%
China	†	†	†	0.1	0.2	0.6	0.8	1.9	5.3	8.7	<b>15.0</b>	71.5%	84.6%	19.9%
China Hong Kong SAR	-	-	-	-	†	†	†	†	†	†	†	-5.2%	-	♦
India	†	†	†	†	0.1	0.1	0.3	0.6	1.0	1.5	<b>2.7</b>	81.3%	80.2%	3.6%
Indonesia	-	-	†	†	†	†	†	†	†	†	†	395.8%	-	♦
Japan	0.5	0.5	0.6	0.7	0.9	1.2	1.7	2.9	5.3	8.3	<b>11.2</b>	34.8%	36.5%	14.9%
Malaysia	-	†	†	†	†	†	†	†	0.1	0.1	<b>0.1</b>	18.9%	-	0.1%
New Zealand	-	†	†	†	†	†	†	†	†	†	†	51.4%	-	♦
Pakistan	-	-	-	-	†	†	†	†	0.1	0.1	<b>0.1</b>	65.3%	-	0.2%
Philippines	†	†	†	†	†	†	†	†	†	†	†	585.6%	57.1%	0.3%
Singapore	-	-	-	†	†	†	†	†	†	†	†	66.9%	-	♦
South Korea	†	†	0.1	0.1	0.2	0.2	0.2	0.4	0.6	0.9	<b>1.2</b>	31.2%	75.5%	1.6%
Taiwan	†	†	†	†	†	†	†	0.1	0.1	0.2	<b>0.3</b>	29.0%	97.7%	0.3%
Thailand	†	†	†	†	†	†	0.1	0.2	0.3	0.4	<b>0.5</b>	31.3%	-	0.7%
Vietnam	-	-	-	-	-	-	-	-	†	†	†	37.5%	-	♦
Other Asia Pacific	†	†	†	†	†	†	†	†	†	†	†	18.5%	39.7%	0.1%
<b>Total Asia Pacific</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>1.0</b>	<b>1.5</b>	<b>2.7</b>	<b>3.8</b>	<b>7.1</b>	<b>14.0</b>	<b>21.6</b>	<b>33.0</b>	<b>52.5%</b>	<b>48.4%</b>	<b>43.8%</b>
<b>Total World</b>	<b>1.3</b>	<b>1.7</b>	<b>2.8</b>	<b>4.7</b>	<b>7.7</b>	<b>14.6</b>	<b>22.6</b>	<b>31.1</b>	<b>44.4</b>	<b>58.0</b>	<b>75.4</b>	<b>29.6%</b>	<b>50.7%</b>	<b>100.0%</b>
of which: OECD	1.3	1.7	2.8	4.6	7.3	13.7	20.8	27.2	36.0	44.6	<b>53.5</b>	19.7%	47.6%	71.0%
Non-OECD	0.1	0.1	0.1	0.1	0.3	1.0	1.8	3.9	8.4	13.4	<b>21.9</b>	63.0%	75.9%	29.0%
European Union	0.6	0.9	1.7	3.2	5.2	10.5	16.1	19.3	22.1	24.5	<b>25.2</b>	2.9%	53.4%	33.5%
CIS	-	-	-	-	†	†	0.1	0.1	0.1	0.1	<b>0.2</b>	14.5%	-	0.2%

\*Based on gross generation and not accounting for cross-border electricity supply. Converted on the basis of thermal equivalence assuming 38% conversion efficiency in a modern thermal power station.

†Less than 0.05.

♦Less than 0.05%.

Notes: Annual changes and share of total are calculated using million tonnes oil equivalent figures.

Growth rates are adjusted for leap years.

# Renewables: consumption – wind\*

Million tonnes oil equivalent	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Growth rate per annum			Share 2016
											2016	2015	2005-15	
US	6.1	7.9	12.7	16.9	21.6	27.5	32.2	38.4	41.5	43.6	<b>51.8</b>	18.4%	26.8%	23.8%
Canada	0.6	0.7	0.8	1.5	2.0	2.5	3.1	3.7	4.7	5.6	<b>6.2</b>	10.4%	31.8%	2.8%
Mexico	†	0.1	0.1	0.1	0.3	0.3	0.7	0.9	1.5	2.0	<b>2.4</b>	20.4%	84.6%	1.1%
<b>Total North America</b>	<b>6.6</b>	<b>8.6</b>	<b>13.6</b>	<b>18.5</b>	<b>23.9</b>	<b>30.3</b>	<b>36.0</b>	<b>43.1</b>	<b>47.6</b>	<b>51.1</b>	<b>60.3</b>	<b>17.6%</b>	<b>27.7%</b>	<b>27.8%</b>
Argentina	†	†	†	†	†	†	0.1	0.1	0.2	0.1	<b>0.1</b>	-8.1%	23.5%	0.1%
Brazil	0.1	0.1	0.3	0.3	0.5	0.6	1.1	1.5	2.8	4.9	<b>7.4</b>	51.8%	72.5%	3.4%
Chile	†	†	†	†	0.1	0.1	0.1	0.1	0.3	0.5	<b>0.5</b>	8.6%	77.0%	0.2%
Colombia	†	†	†	†	†	†	†	†	†	†	†	-22.0%	3.3%	♦
Ecuador	-	†	†	†	†	†	†	†	†	†	†	-15.3%	-	♦
Peru	†	†	†	†	†	†	†	†	0.1	0.1	<b>0.2</b>	70.3%	86.0%	0.1%
Trinidad & Tobago	-	-	-	-	-	-	-	-	-	-	-	-	-	♦
Venezuela	-	-	-	-	-	-	-	-	-	-	†	-	-	♦
Other S. & Cent. America	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.6	0.9	1.5	<b>1.8</b>	21.6%	35.8%	0.8%
<b>Total S. &amp; Cent. America</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.8</b>	<b>1.0</b>	<b>1.8</b>	<b>2.4</b>	<b>4.3</b>	<b>7.2</b>	<b>10.2</b>	<b>41.5%</b>	<b>50.5%</b>	<b>4.7%</b>
Austria	0.4	0.5	0.5	0.4	0.5	0.4	0.6	0.7	0.9	1.1	<b>1.2</b>	6.3%	13.8%	0.5%
Azerbaijan	-	-	-	†	†	-	-	†	†	†	†	285.9%	-	♦
Belarus	†	†	†	†	†	†	†	†	†	†	†	500.0%	38.5%	♦
Belgium	0.1	0.1	0.1	0.2	0.3	0.5	0.6	0.8	1.0	1.3	<b>1.3</b>	1.6%	37.7%	0.6%
Bulgaria	†	†	†	0.1	0.2	0.2	0.3	0.3	0.3	0.3	<b>0.3</b>	-5.3%	76.3%	0.1%
Czech Republic	†	†	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<b>0.1</b>	-13.5%	39.0%	0.1%
Denmark	1.4	1.6	1.6	1.5	1.8	2.2	2.3	2.5	3.0	3.2	<b>2.9</b>	-9.8%	7.9%	1.3%
Finland	†	†	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	<b>0.7</b>	31.5%	30.1%	0.3%
France	0.5	0.9	1.3	1.8	2.2	2.7	3.4	3.6	3.9	4.8	<b>4.7</b>	-2.2%	36.2%	2.2%
Germany	6.9	9.0	9.2	8.7	8.6	11.1	11.5	11.7	13.0	17.9	<b>17.5</b>	-2.5%	11.3%	8.1%
Greece	0.4	0.4	0.5	0.6	0.6	0.8	0.9	0.9	0.8	1.0	<b>1.1</b>	7.2%	13.8%	0.5%
Hungary	†	†	†	0.1	0.1	0.1	0.2	0.2	0.1	0.2	<b>0.2</b>	-0.9%	52.8%	0.1%
Ireland	0.4	0.4	0.5	0.7	0.6	1.0	0.9	1.0	1.2	1.5	<b>1.4</b>	-6.7%	19.4%	0.6%
Italy	0.7	0.9	1.1	1.5	2.1	2.2	3.0	3.4	3.4	3.4	<b>4.0</b>	18.4%	20.3%	1.8%
Kazakhstan	†	†	†	†	†	-	†	†	†	†	<b>0.1</b>	98.3%	-	♦
Lithuania	†	†	†	†	0.1	0.1	0.1	0.1	0.1	0.2	<b>0.2</b>	35.4%	84.2%	0.1%
Netherlands	0.6	0.8	1.0	1.0	0.9	1.2	1.1	1.3	1.3	1.7	<b>1.8</b>	4.9%	13.8%	0.8%
Norway	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.6	<b>0.5</b>	-16.1%	17.4%	0.2%
Poland	0.1	0.1	0.2	0.2	0.4	0.7	1.1	1.4	1.7	2.5	<b>2.8</b>	15.6%	55.1%	1.3%
Portugal	0.7	0.9	1.3	1.7	2.1	2.1	2.3	2.7	2.7	2.6	<b>2.8</b>	7.2%	20.7%	1.3%
Romania	†	†	†	†	0.1	0.3	0.6	1.0	1.1	1.6	<b>1.5</b>	-5.0%	-	0.7%
Russian Federation	†	†	†	†	†	†	†	†	†	†	†	-1.0%	36.1%	♦
Slovakia	†	†	†	†	†	†	†	†	†	†	†	-	-1.5%	♦
Spain	5.3	6.3	7.4	8.6	10.0	9.6	11.2	12.2	11.8	11.2	<b>11.1</b>	-1.2%	8.8%	5.1%
Sweden	0.2	0.3	0.5	0.6	0.8	1.4	1.6	2.2	2.5	3.7	<b>3.4</b>	-7.4%	32.9%	1.6%
Switzerland	†	†	†	†	†	†	†	†	†	†	†	-6.9%	30.0%	♦
Turkey	†	0.1	0.2	0.3	0.7	1.1	1.3	1.7	1.9	2.6	<b>3.7</b>	41.4%	69.7%	1.7%
Turkmenistan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ukraine	†	†	†	†	†	†	0.1	0.1	0.3	0.2	<b>0.2</b>	-11.9%	40.4%	0.1%
United Kingdom	1.0	1.2	1.6	2.1	2.3	3.5	4.5	6.4	7.2	9.1	<b>8.5</b>	-7.2%	30.1%	3.9%
Uzbekistan	†	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe & Eurasia	†	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.5	<b>0.5</b>	2.5%	29.0%	0.2%
<b>Total Europe &amp; Eurasia</b>	<b>18.8</b>	<b>24.0</b>	<b>27.4</b>	<b>30.6</b>	<b>34.6</b>	<b>42.0</b>	<b>48.4</b>	<b>55.5</b>	<b>59.6</b>	<b>71.9</b>	<b>72.6</b>	<b>0.8%</b>	<b>16.1%</b>	<b>33.5%</b>
Iran	†	†	†	0.1	†	†	†	0.1	0.1	0.1	<b>0.1</b>	-	18.6%	♦
Israel	†	†	†	†	†	†	†	†	†	†	†	-	-4.4%	♦
Kuwait	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Qatar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East	†	†	†	†	†	†	†	†	†	†	<b>0.1</b>	148.2%	45.3%	♦
<b>Total Middle East</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>0.1</b>	<b>†</b>	<b>0.1</b>	<b>†</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>35.6%</b>	<b>19.9%</b>	<b>0.1%</b>
Algeria	-	-	-	-	-	-	-	-	†	†	†	-	-	♦
Egypt	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	<b>0.6</b>	35.0%	13.0%	0.3%
South Africa	†	†	†	†	†	†	†	†	0.2	0.7	<b>0.9</b>	35.6%	74.1%	0.4%
Other Africa	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.7	0.9	<b>1.0</b>	14.9%	31.1%	0.5%
<b>Total Africa</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>1.2</b>	<b>2.0</b>	<b>2.5</b>	<b>26.3%</b>	<b>26.8%</b>	<b>1.2%</b>
Australia	0.5	0.6	0.8	1.0	1.1	1.5	1.7	2.1	2.2	2.7	<b>3.0</b>	11.5%	24.7%	1.4%
Bangladesh	†	†	†	†	†	†	†	†	†	†	†	-	14.8%	♦
China	0.8	1.2	3.0	6.2	10.1	15.9	21.7	31.9	35.3	42.0	<b>54.5</b>	29.4%	57.8%	25.1%
China Hong Kong SAR	†	†	†	†	†	†	†	†	†	†	†	-39.5%	-	♦
India	2.2	2.6	3.0	4.1	4.4	5.6	6.8	7.6	7.5	7.4	<b>10.1</b>	36.5%	18.5%	4.7%
Indonesia	-	†	†	†	†	†	†	†	†	†	†	300.0%	-	♦
Japan	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.1	1.2	<b>1.6</b>	35.1%	10.6%	0.7%
Malaysia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Zealand	0.1	0.2	0.2	0.3	0.4	0.4	0.5	0.5	0.5	0.5	<b>0.5</b>	-1.9%	14.4%	0.2%
Pakistan	-	-	-	-	-	†	†	†	0.1	0.2	<b>0.3</b>	59.4%	-	0.1%
Philippines	†	†	†	†	†	†	†	†	†	0.2	<b>0.2</b>	32.7%	45.6%	0.1%
Singapore	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Korea	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	<b>0.4</b>	32.2%	26.3%	0.2%
Taiwan	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.3	0.3	<b>0.3</b>	-5.5%	32.5%	0.2%
Thailand	-	-	-	†	†	†	†	0.1	0.1	0.1	<b>0.1</b>	48.7%	-	♦
Vietnam	-	-	†	†	†	†	†	†	†	†	<b>0.1</b>	56.1%	-	♦
Other Asia Pacific	†	†	†	†	†	†	†	0.1	0.1	0.1	<b>0.1</b>	-4.3%	40.1%	0.1%
<b>Total Asia Pacific</b>	<b>4.2</b>	<b>5.5</b>	<b>7.9</b>	<b>12.8</b>	<b>17.4</b>	<b>25.0</b>	<b>32.5</b>	<b>44.1</b>	<b>47.6</b>	<b>55.0</b>	<b>71.3</b>	<b>29.1%</b>	<b>35.1%</b>	<b>32.8%</b>
<b>Total World</b>	<b>30.1</b>	<b>38.7</b>	<b>49.6</b>	<b>62.9</b>	<b>77.3</b>	<b>98.8</b>	<b>119.2</b>	<b>145.8</b>	<b>160.5</b>	<b>187.4</b>	<b>217.1</b>	<b>15.6%</b>	<b>23.0%</b>	<b>100.0%</b>
of which: OECD	26.6	34.1	42.6	51.3	60.8	74.7	86.8	100.8	109.7	125.4	<b>136.2</b>	8.3%	19.3%	62.7%
Non-OECD	3.5	4.6	6.9	11.6	16.5	24.1	32.5	45.0	50.8	61.9	<b>80.9</b>	30.3%	39.8%	37.3%
European Union	18.6	23.7	26.9	30.0	33.7	40.6	46.6	53.1	56.9	68.3	<b>68.0</b>	-0.7%	15.6%	31.3%
CIS	†	†	†	†	†	†	0.1	0.1	0.3	0.3	<b>0.3</b>	10.0%	41.3%	0.2%

\*Based on gross generation and not accounting for cross-border electricity supply. Converted on the basis of thermal equivalence assuming 38% conversion efficiency in a modern thermal power station.

†Less than 0.05.

♦Less than 0.05%.

Notes: Annual changes and share of total are calculated using million tonnes oil equivalent figures. Growth rates are adjusted for leap years.

# Renewables: consumption – geothermal, biomass and other\*

Terawatt-hours	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Growth rate per annum			Share 2016
											2016	2015	2005-15	
US	16.5	16.7	16.6	16.6	17.0	17.1	17.4	18.3	19.0	18.9	<b>19.1</b>	0.8%	1.4%	15.1%
Canada	1.9	1.9	1.7	1.9	2.2	2.2	2.3	2.4	1.9	2.3	<b>2.3</b>	-	1.6%	1.8%
Mexico	1.7	1.9	1.8	1.7	1.7	1.7	1.5	1.7	1.6	1.7	<b>1.6</b>	-3.3%	-0.9%	1.3%
<b>Total North America</b>	<b>20.2</b>	<b>20.5</b>	<b>20.1</b>	<b>20.2</b>	<b>20.9</b>	<b>21.0</b>	<b>21.3</b>	<b>22.3</b>	<b>22.5</b>	<b>22.9</b>	<b>23.1</b>	<b>0.4%</b>	<b>1.3%</b>	<b>18.2%</b>
Argentina	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.5	<b>0.5</b>	8.6%	6.3%	0.4%
Brazil	3.3	4.1	4.4	5.1	7.1	7.3	8.0	9.2	10.5	11.1	<b>11.5</b>	3.6%	13.7%	9.1%
Chile	0.3	0.6	0.7	1.0	0.5	1.1	1.1	1.3	1.2	1.1	<b>1.2</b>	4.9%	10.8%	0.9%
Colombia	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	<b>0.5</b>	17.2%	13.2%	0.4%
Ecuador	†	†	†	†	0.1	0.1	0.1	0.1	0.1	0.1	<b>0.1</b>	19.8%	14.8%	0.1%
Peru	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	<b>0.3</b>	12.9%	11.9%	0.2%
Trinidad & Tobago	†	†	†	†	-	-	-	-	-	-	-	-	-100.0%	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other S. & Cent. America	1.1	1.3	1.5	1.6	1.8	1.9	2.1	2.3	2.5	2.7	<b>2.8</b>	1.5%	9.6%	2.2%
<b>Total S. &amp; Cent. America</b>	<b>5.5</b>	<b>6.6</b>	<b>7.3</b>	<b>8.5</b>	<b>10.3</b>	<b>11.2</b>	<b>12.2</b>	<b>13.9</b>	<b>15.6</b>	<b>16.1</b>	<b>16.8</b>	<b>4.1%</b>	<b>12.3%</b>	<b>13.3%</b>
Austria	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	<b>1.0</b>	3.9%	6.3%	0.8%
Azerbaijan	-	-	-	-	-	-	-	†	†	†	†	-4.3%	-	♦
Belarus	†	†	†	†	†	†	†	†	†	†	†	-	-	♦
Belgium	0.5	0.6	0.8	0.9	1.0	1.1	1.2	1.1	1.0	1.2	<b>1.2</b>	-3.7%	13.2%	0.9%
Bulgaria	-	-	†	†	†	†	†	†	†	0.1	<b>0.1</b>	36.9%	-	0.1%
Czech Republic	0.2	0.3	0.3	0.4	0.5	0.6	0.8	0.9	1.1	1.1	<b>1.1</b>	-1.1%	22.1%	0.8%
Denmark	0.7	0.7	0.7	0.8	1.0	1.0	1.0	1.0	1.0	1.0	<b>1.0</b>	4.2%	2.9%	0.8%
Finland	2.4	2.2	2.3	2.0	2.5	2.5	2.5	2.7	2.6	2.6	<b>2.7</b>	3.9%	1.8%	2.1%
France	0.9	1.0	1.0	1.0	1.1	1.2	1.2	1.2	1.3	1.5	<b>1.6</b>	9.9%	5.2%	1.3%
Germany	4.2	5.5	6.3	6.9	7.7	8.4	9.8	10.3	11.0	11.4	<b>11.7</b>	2.3%	13.4%	9.2%
Greece	†	†	†	†	†	†	†	†	†	0.1	<b>0.1</b>	1.3%	6.6%	♦
Hungary	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.5	<b>0.6</b>	18.6%	3.1%	0.5%
Ireland	†	†	†	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<b>0.1</b>	5.2%	13.8%	0.1%
Italy	2.8	2.8	3.0	2.9	3.4	3.7	4.1	5.1	5.6	5.8	<b>5.8</b>	0.5%	8.3%	4.6%
Kazakhstan	-	-	-	-	-	-	-	-	-	†	†	289.7%	-	♦
Lithuania	†	†	†	†	†	†	†	0.1	0.1	0.1	<b>0.1</b>	-3.1%	51.5%	0.1%
Netherlands	1.2	0.9	1.2	1.4	1.6	1.6	1.6	1.3	1.1	1.1	<b>1.0</b>	-13.7%	-0.7%	0.8%
Norway	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	†	†	-	-5.1%	♦
Poland	0.5	0.6	0.8	1.2	1.4	1.7	2.3	2.0	2.3	2.2	<b>1.8</b>	-21.5%	20.7%	1.4%
Portugal	0.4	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.7	0.7	<b>0.7</b>	-4.9%	6.7%	0.6%
Romania	†	†	†	†	†	†	†	0.1	0.1	0.1	<b>0.1</b>	-14.4%	56.4%	0.1%
Russian Federation	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<b>0.1</b>	-	0.8%	0.1%
Slovakia	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	<b>0.4</b>	0.8%	48.4%	0.3%
Spain	0.9	0.8	0.7	0.8	0.9	1.0	1.1	1.2	1.2	1.3	<b>1.4</b>	5.7%	5.4%	1.1%
Sweden	1.9	2.2	2.3	2.6	2.8	2.6	2.8	2.6	2.4	2.4	<b>2.6</b>	8.5%	3.7%	2.1%
Switzerland	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	<b>0.4</b>	15.2%	4.8%	0.4%
Turkey	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.6	0.9	1.2	<b>1.3</b>	8.5%	37.4%	1.0%
Turkmenistan	-	-	-	-	-	-	-	-	-	-	†	-	-	♦
Ukraine	-	0.1	0.1	†	†	†	†	†	†	†	†	-	-	♦
United Kingdom	2.1	2.1	2.2	2.4	2.7	2.9	3.3	4.1	5.1	6.7	<b>6.7</b>	0.4%	12.4%	5.3%
Uzbekistan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe & Eurasia	0.7	0.9	1.0	1.2	1.3	1.4	1.6	1.6	1.7	1.7	<b>1.8</b>	9.4%	14.4%	1.4%
<b>Total Europe &amp; Eurasia</b>	<b>21.0</b>	<b>23.2</b>	<b>25.4</b>	<b>27.4</b>	<b>31.1</b>	<b>33.2</b>	<b>36.8</b>	<b>39.1</b>	<b>41.8</b>	<b>44.8</b>	<b>45.5</b>	<b>1.4%</b>	<b>9.3%</b>	<b>35.8%</b>
Iran	-	-	-	†	†	†	†	†	†	†	†	-	-	♦
Israel	-	-	†	†	†	†	†	†	†	†	†	-	-	♦
Kuwait	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Qatar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East	†	†	†	†	†	†	†	†	†	†	†	6.4%	1.8%	♦
<b>Total Middle East</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>0.3%</b>	<b>37.8%</b>	<b>♦</b>
Algeria	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Africa	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<b>0.1</b>	-	1.3%	0.1%
Other Africa	0.6	0.5	0.5	0.6	0.7	0.7	0.7	0.7	1.0	1.4	<b>1.4</b>	-0.7%	11.5%	1.1%
<b>Total Africa</b>	<b>0.7</b>	<b>0.5</b>	<b>0.6</b>	<b>0.6</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.8</b>	<b>1.1</b>	<b>1.4</b>	<b>1.4</b>	<b>-0.7%</b>	<b>10.7%</b>	<b>1.1%</b>
Australia	0.9	1.0	0.8	0.6	0.6	0.6	0.7	0.8	0.8	0.8	<b>0.8</b>	-	-1.5%	0.6%
Bangladesh	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	1.6	2.2	3.4	4.7	5.6	6.3	6.9	8.4	10.1	13.6	<b>16.6</b>	21.4%	27.5%	13.1%
China Hong Kong SAR	-	-	-	†	†	†	†	†	†	†	†	-	-	♦
India	1.1	1.4	1.8	2.2	2.7	3.2	3.3	3.3	3.4	3.8	<b>3.6</b>	-5.3%	15.4%	2.9%
Indonesia	1.5	1.6	1.9	2.1	2.1	2.2	2.2	2.2	2.3	2.4	<b>2.5</b>	6.3%	4.7%	2.0%
Japan	4.9	5.0	4.8	4.6	4.9	4.8	5.0	5.2	5.3	5.3	<b>6.0</b>	12.2%	0.9%	4.7%
Malaysia	-	-	-	0.3	0.3	0.3	0.3	0.2	0.2	0.2	<b>0.3</b>	22.3%	-	0.2%
New Zealand	0.9	0.9	1.1	1.2	1.5	1.5	1.5	1.6	1.8	1.9	<b>1.9</b>	♦	9.0%	1.5%
Pakistan	-	-	-	-	-	-	-	-	†	0.1	<b>0.1</b>	-	-	0.1%
Philippines	2.4	2.3	2.4	2.3	2.3	2.3	2.4	2.2	2.4	2.6	<b>2.6</b>	2.3%	1.4%	2.1%
Singapore	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	<b>0.2</b>	11.4%	5.6%	0.2%
South Korea	0.1	0.1	0.1	0.1	0.7	1.3	1.5	1.7	2.5	2.7	<b>2.7</b>	-0.1%	46.7%	2.1%
Taiwan	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	<b>0.5</b>	-4.2%	1.4%	0.4%
Thailand	0.5	0.6	0.5	0.5	0.8	0.9	1.0	1.3	1.7	1.8	<b>2.2</b>	21.8%	15.6%	1.7%
Vietnam	†	†	†	†	†	†	†	†	†	†	†	-	1.7%	♦
Other Asia Pacific	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<b>0.1</b>	1.7%	12.9%	0.1%
<b>Total Asia Pacific</b>	<b>14.4</b>	<b>15.8</b>	<b>17.5</b>	<b>19.5</b>	<b>22.1</b>	<b>24.0</b>	<b>25.6</b>	<b>27.8</b>	<b>31.4</b>	<b>36.0</b>	<b>40.2</b>	<b>11.2%</b>	<b>10.3%</b>	<b>31.6%</b>
<b>Total World</b>	<b>61.8</b>	<b>66.8</b>	<b>70.9</b>	<b>76.2</b>	<b>85.2</b>	<b>90.2</b>	<b>96.7</b>	<b>103.8</b>	<b>112.3</b>	<b>121.4</b>	<b>127.1</b>	<b>4.4%</b>	<b>7.7%</b>	<b>100.0%</b>
of which: OECD	48.1	51.1	52.9	54.9	59.8	63.1	67.6	71.4	75.3	78.9	<b>80.4</b>	1.6%	5.6%	63.2%
Non-OECD	13.7	15.6	18.1	21.3	25.4	27.1	29.1	32.4	37.1	42.5	<b>46.7</b>	9.6%	13.4%	36.8%
European Union	19.9	21.8	23.8	25.7	29.3	31.3	34.7	36.7	39.1	41.8	<b>42.4</b>	1.0%	9.1%	33.4%
CIS	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	<b>0.2</b>	-0.4%	6.6%	0.2%

\*Based on gross generation and not accounting for cross-border electricity supply. Converted on the basis of thermal equivalence assuming 38% conversion efficiency in a modern thermal power station.

†Less than 0.05.

♦Less than 0.05%.

Notes: Annual changes and share of total are calculated using million tonnes oil equivalent figures. Growth rates are adjusted for leap years.

# Renewable energy – geothermal

## Cumulative installed geothermal power capacity\*

Megawatts	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Growth rate per annum			Share 2016
											2016	2016	2005-15	
Australia	†	†	†	1	1	1	1	2	2	2	<b>2</b>	–	30.2%	♦
Austria	1	1	1	1	1	1	1	1	1	1	<b>1</b>	–	1.6%	♦
China	28	28	24	24	24	24	24	27	27	27	<b>27</b>	–	-0.3%	0.2%
Costa Rica	163	163	163	166	166	208	208	208	208	208	<b>208</b>	–	2.5%	1.5%
El Salvador	195	195	204	204	204	204	204	204	204	204	<b>204</b>	–	3.1%	1.5%
Ethiopia	7	7	7	7	7	7	7	7	7	7	<b>7</b>	–	–	0.1%
France (Guadeloupe)	15	15	16	16	16	16	16	17	17	17	<b>17</b>	–	1.5%	0.1%
Germany	†	3	3	8	8	8	12	17	27	27	<b>27</b>	–	63.1%	0.2%
Guatemala	33	52	52	52	52	52	52	48	48	48	<b>48</b>	–	3.8%	0.4%
Iceland	312	485	576	576	575	665	665	665	665	665	<b>665</b>	–	12.6%	4.9%
Indonesia	850	980	1052	1189	1193	1209	1339	1339	1401	1401	<b>1590</b>	13.5%	5.1%	11.8%
Italy	811	811	811	843	883	883	875	876	916	916	<b>916</b>	–	1.5%	6.8%
Japan	534	532	536	536	536	536	536	537	539	544	<b>544</b>	–	0.2%	4.1%
Kenya	167	170	174	174	209	212	217	253	450	605	<b>676</b>	11.7%	13.7%	5.0%
Mexico	960	960	965	965	965	887	812	834	834	887	<b>907</b>	2.3%	-0.8%	6.7%
New Zealand	425	443	585	625	723	723	723	971	971	971	<b>971</b>	–	8.6%	7.2%
Nicaragua	78	88	88	88	88	88	160	160	160	160	<b>160</b>	–	7.5%	1.2%
Papua New Guinea	36	56	56	56	56	56	56	56	56	56	<b>56</b>	–	26.1%	0.4%
Philippines	1978	1958	1958	1953	1966	1783	1848	1868	1917	1917	<b>1929</b>	0.6%	-0.3%	14.4%
Portugal (The Azores)	16	29	29	29	29	29	29	29	29	29	<b>29</b>	–	6.1%	0.2%
Russia (Kamchatka)	79	82	82	82	82	82	82	82	82	82	<b>82</b>	–	0.4%	0.6%
Thailand	†	†	†	†	†	†	†	†	†	†	<b>†</b>	–	–	♦
Turkey	28	28	35	82	94	114	114	226	405	624	<b>775</b>	24.2%	40.8%	5.8%
US	2940	3037	3163	3289	3308	3318	3450	3524	3525	3596	<b>3596</b>	–	2.2%	26.8%
<b>Total World</b>	<b>9655</b>	<b>10121</b>	<b>10575</b>	<b>10928</b>	<b>11152</b>	<b>11071</b>	<b>11397</b>	<b>11917</b>	<b>12492</b>	<b>12995</b>	<b>13438</b>	<b>3.4%</b>	<b>3.3%</b>	<b>100.0%</b>

\*End of year.  
†Less than 0.05.  
♦Less than 0.05%.

Source: Includes data from ThinkGeoEnergy, International Geothermal Association.



# Renewable energy – solar

## Cumulative installed photovoltaic (PV) power\*

Megawatts	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Growth rate per annum			Share 2016
											2016	2016	2005-15	
US	295	455	753	1188	2040	3959	7328	12079	18317	25570	<b>40300</b>	57.6%	–	13.4%
Canada	21	26	33	95	281	558	827	1272	1904	2515	<b>2715</b>	8.0%	–	0.9%
Mexico	18	19	20	25	29	30	35	66	114	170	<b>320</b>	88.2%	–	0.1%
<b>Total North America</b>	<b>333</b>	<b>500</b>	<b>806</b>	<b>1308</b>	<b>2350</b>	<b>4547</b>	<b>8190</b>	<b>13416</b>	<b>20335</b>	<b>28255</b>	<b>43335</b>	<b>53.4%</b>	<b>–</b>	<b>14.4%</b>
Chile	–	–	–	–	–	–	2	15	218	848	<b>1603</b>	89.0%	–	0.5%
Honduras	–	3	3	4	4	4	5	5	5	393	<b>414</b>	5.3%	–	0.1%
Other S. & Cent. America	10	20	27	49	100	147	295	397	531	787	<b>970</b>	23.3%	–	0.3%
<b>Total S. &amp; Cent. America</b>	<b>10</b>	<b>23</b>	<b>30</b>	<b>53</b>	<b>104</b>	<b>151</b>	<b>302</b>	<b>417</b>	<b>754</b>	<b>2028</b>	<b>2987</b>	<b>47.3%</b>	<b>–</b>	<b>1.0%</b>
Austria	26	29	32	53	96	187	263	626	785	923	<b>1077</b>	16.7%	–	0.4%
Belgium	4	24	109	648	1066	2105	2800	3058	3153	3252	<b>3422</b>	5.2%	–	1.1%
Bulgaria	–	–	1	7	32	167	1010	1020	1026	1029	<b>1032</b>	0.3%	–	0.3%
Czech Republic	–	4	40	465	1727	1913	2022	2064	2068	2075	<b>2073</b>	-0.1%	–	0.7%
Denmark	3	3	3	5	7	17	408	563	606	830	<b>900</b>	8.4%	–	0.3%
Finland	2	2	3	5	7	8	8	8	11	15	<b>20</b>	33.3%	–	♦
France	38	76	180	371	1209	2973	4094	4748	5702	6571	<b>7130</b>	8.5%	–	2.4%
Germany	2899	4170	6120	10566	17944	25429	33033	36337	38343	39799	<b>41275</b>	3.7%	–	13.7%
Greece	7	9	20	56	206	624	1536	2579	2596	2604	<b>2611</b>	0.3%	–	0.9%
Hungary	–	–	1	1	2	4	12	35	77	168	<b>225</b>	33.9%	–	0.1%
Italy	50	120	458	1182	3504	12808	16456	18202	18606	18906	<b>19279</b>	2.0%	–	6.4%
Netherlands	48	49	53	64	85	143	363	723	1123	1575	<b>2100</b>	33.3%	–	0.7%
Norway	8	8	8	9	9	10	10	11	13	16	<b>27</b>	70.1%	–	0.0%
Portugal	4	15	56	99	134	175	244	299	416	455	<b>513</b>	12.7%	–	0.2%
Romania	–	–	–	–	–	1	41	761	1293	1326	<b>1372</b>	3.5%	–	0.5%
Slovakia	–	–	–	–	19	496	513	533	533	533	<b>540</b>	1.3%	–	0.2%
Spain	167	778	3829	3848	4330	4792	5104	5354	5376	5435	<b>5490</b>	1.0%	–	1.8%
Sweden	5	6	8	9	12	16	24	43	79	115	<b>175</b>	52.2%	–	0.1%
Switzerland	30	36	48	74	111	211	437	756	1061	1390	<b>1640</b>	18.0%	–	0.5%
Turkey	3	3	4	5	6	7	12	18	58	248	<b>832</b>	235.5%	–	0.3%
Ukraine	–	–	–	–	3	188	371	748	819	839	<b>938</b>	11.8%	–	0.3%
United Kingdom	14	18	24	31	96	996	1771	2897	5493	9688	<b>11727</b>	21.0%	–	3.9%
Other Europe & Eurasia	25	27	30	37	52	120	271	453	627	839	<b>974</b>	16.1%	–	0.3%
<b>Total Europe &amp; Eurasia</b>	<b>3330</b>	<b>5376</b>	<b>11027</b>	<b>17533</b>	<b>30654</b>	<b>53390</b>	<b>70802</b>	<b>81836</b>	<b>89864</b>	<b>98630</b>	<b>105371</b>	<b>6.8%</b>	<b>–</b>	<b>35.0%</b>
Israel	1	2	3	25	70	190	237	481	681	780	<b>910</b>	16.7%	–	0.3%
Other Middle East	–	–	2	11	13	14	39	75	115	173	<b>510</b>	194.8%	–	0.2%
<b>Total Middle East</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>36</b>	<b>83</b>	<b>204</b>	<b>276</b>	<b>556</b>	<b>796</b>	<b>953</b>	<b>1420</b>	<b>49.0%</b>	<b>–</b>	<b>0.5%</b>
South Africa	17	17	18	20	23	67	72	280	1034	1039	<b>1544</b>	48.6%	–	0.5%
Other Africa	37	61	77	118	200	264	337	409	484	614	<b>947</b>	54.2%	–	0.3%
<b>Total Africa</b>	<b>54</b>	<b>78</b>	<b>95</b>	<b>138</b>	<b>223</b>	<b>331</b>	<b>409</b>	<b>689</b>	<b>1518</b>	<b>1653</b>	<b>2491</b>	<b>50.7%</b>	<b>–</b>	<b>0.8%</b>
Australia	70	82	105	188	571	1377	2415	3226	4028	4735	<b>5488</b>	15.9%	–	1.8%
China	130	150	190	350	850	3550	6750	17740	28380	43530	<b>78070</b>	79.3%	–	25.9%
India	30	31	71	136	177	481	1176	2320	3062	5040	<b>9010</b>	78.8%	–	3.0%
Japan	1709	1919	2144	2627	3618	4914	6632	13599	23339	34151	<b>42750</b>	25.2%	–	14.2%
Malaysia	6	7	9	11	13	14	32	139	204	232	<b>286</b>	23.3%	–	0.1%
Pakistan	–	–	–	–	–	–	–	46	119	778	<b>978</b>	25.7%	–	0.3%
Philippines	1	1	1	1	12	14	16	21	22	144	<b>900</b>	525.0%	–	0.3%
South Korea	36	81	357	524	650	729	1024	1555	2481	3500	<b>4350</b>	24.3%	–	1.4%
Taiwan	–	2	6	10	22	118	223	392	620	842	<b>1210</b>	43.7%	–	0.4%
Thailand	30	32	33	43	49	242	388	824	1299	1424	<b>2150</b>	51.0%	–	0.7%
Other Asia Pacific	22	38	49	61	53	119	168	229	326	485	<b>677</b>	39.6%	–	0.2%
<b>Total Asia Pacific</b>	<b>2033</b>	<b>2344</b>	<b>2965</b>	<b>3951</b>	<b>6015</b>	<b>11559</b>	<b>18824</b>	<b>40090</b>	<b>63880</b>	<b>94861</b>	<b>145869</b>	<b>53.8%</b>	<b>–</b>	<b>48.4%</b>
<b>Total World</b>	<b>5762</b>	<b>8323</b>	<b>14927</b>	<b>23018</b>	<b>39430</b>	<b>70182</b>	<b>98803</b>	<b>137005</b>	<b>177147</b>	<b>226380</b>	<b>301473</b>	<b>33.2%</b>	<b>–</b>	<b>100.0%</b>

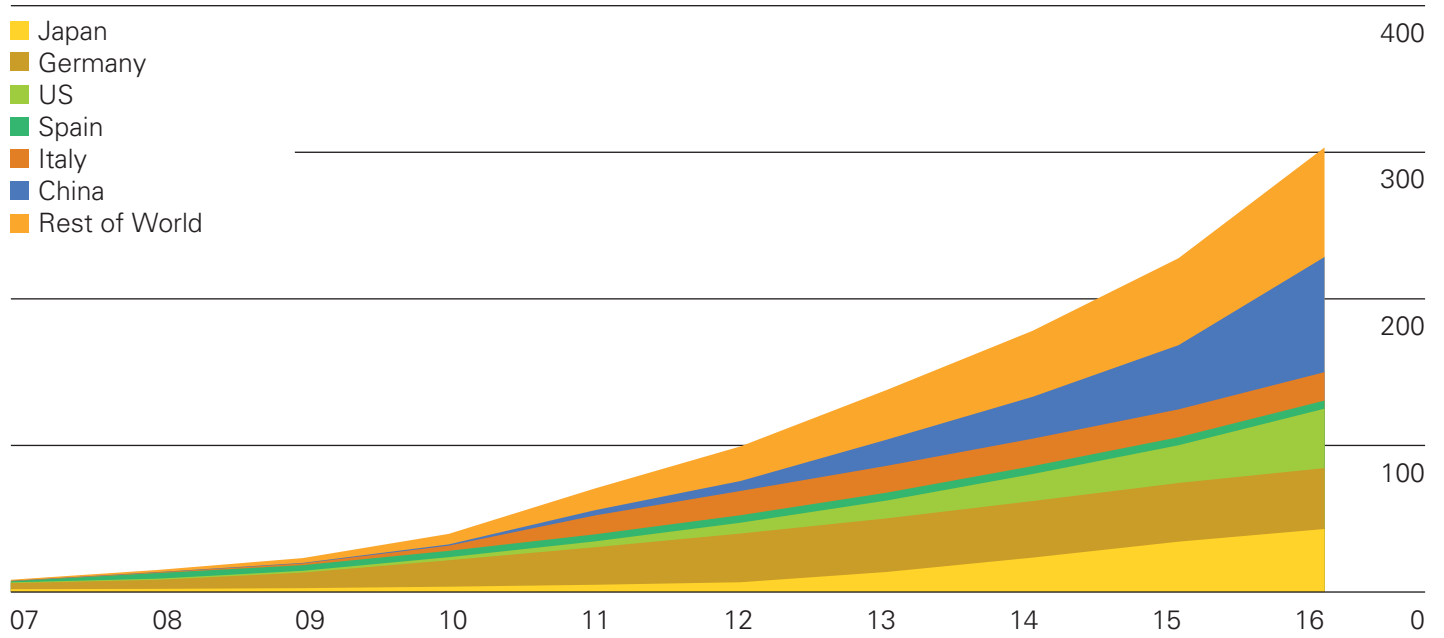
\*End of year.  
♦Less than 0.05%.

Source: Includes data from EurObserver, IEA Photovoltaic Power Systems Programme, © IRENA 2017, Solar Power Europe.



# Solar PV generation capacity

Gigawatts, cumulative installed capacity



Source: includes data from EurObserver, IEA PV Power Systems Programme and © IRENA 2017, Solar Power Europe.

# Renewable energy – wind

## Cumulative installed wind turbine capacity\*

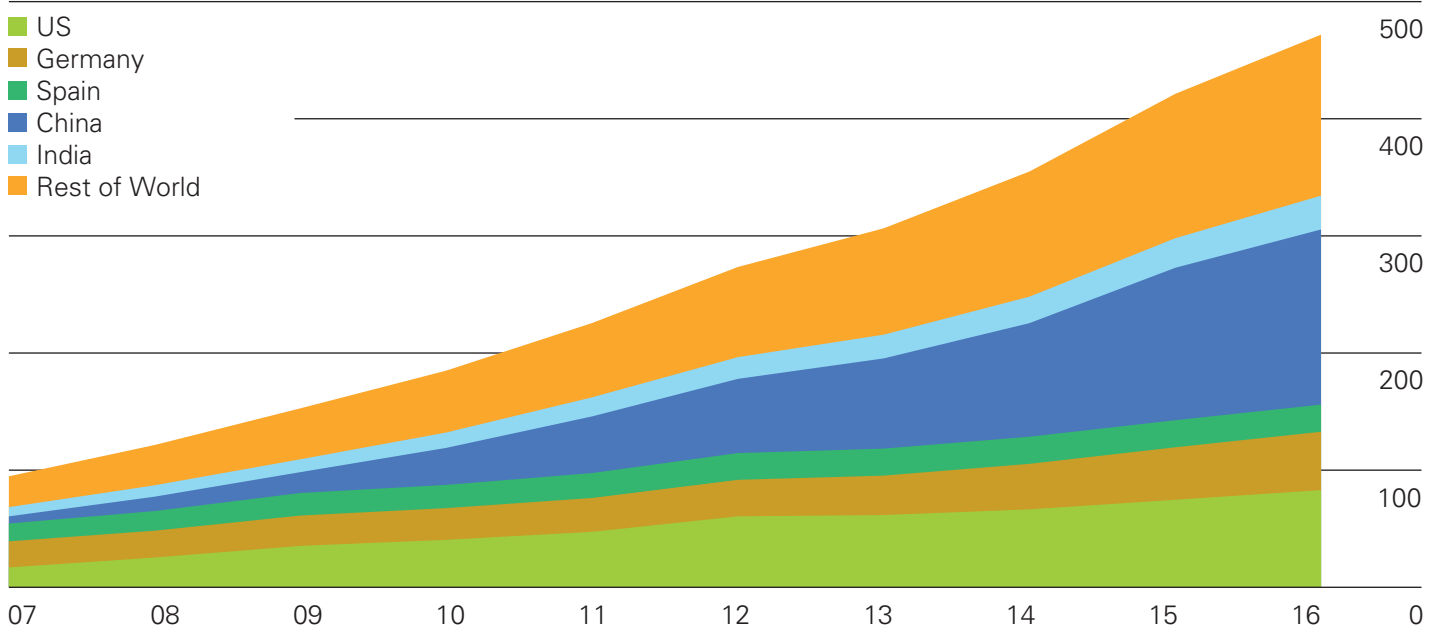
Megawatts	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Growth rate per annum			Share 2016
											2016	2016	2005-15	
US	11635	16879	25237	35159	40274	47084	60208	61292	66146	74260	<b>82453</b>	11.0%	23.2%	17.6%
Canada	1459	1845	2371	3321	4011	5278	6214	7813	9684	11209	<b>11890</b>	6.1%	32.3%	2.5%
Mexico	86	86	332	453	769	1123	1512	1988	2510	3224	<b>3678</b>	14.1%	101.0%	0.8%
<b>Total North America</b>	<b>13180</b>	<b>18810</b>	<b>27940</b>	<b>38933</b>	<b>45054</b>	<b>53485</b>	<b>67934</b>	<b>71093</b>	<b>78340</b>	<b>88693</b>	<b>98021</b>	<b>10.5%</b>	<b>24.6%</b>	<b>20.9%</b>
Argentina	31	31	33	33	33	112	166	242	295	303	<b>303</b>	–	25.6%	0.1%
Brazil	237	247	341	606	931	1431	2508	3466	5962	8726	<b>10740</b>	23.1%	76.9%	2.3%
Chile	2	20	20	163	163	184	202	301	764	911	<b>1424</b>	56.3%	84.4%	0.3%
Costa Rica	79	79	104	120	120	133	148	148	197	278	<b>319</b>	14.7%	13.4%	0.1%
Uruguay	0	1	15	31	41	43	56	59	529	845	<b>1210</b>	43.2%	–	0.3%
Other S. & Cent. America	54	58	118	127	259	703	896	1303	1445	2224	<b>2751</b>	23.7%	45.6%	0.6%
<b>Total S. &amp; Cent. America</b>	<b>403</b>	<b>436</b>	<b>631</b>	<b>1080</b>	<b>1547</b>	<b>2606</b>	<b>3976</b>	<b>5519</b>	<b>9192</b>	<b>13287</b>	<b>16747</b>	<b>26.0%</b>	<b>52.7%</b>	<b>3.6%</b>
Austria	966	983	997	997	1013	1082	1378	1661	2072	2390	<b>2618</b>	9.5%	11.3%	0.6%
Belgium	222	297	385	605	955	1147	1444	1720	1960	2170	<b>2401</b>	10.6%	28.5%	0.5%
Bulgaria	0	41	113	335	488	582	643	650	660	660	<b>660</b>	–	–	0.1%
Denmark	3101	3088	3159	3408	3805	3927	4137	4747	4778	4966	<b>5133</b>	3.4%	4.9%	1.1%
Finland	89	113	113	117	169	178	268	428	611	984	<b>1512</b>	53.7%	27.7%	0.3%
France	1585	2471	3671	4775	5940	6811	7583	8164	9337	10324	<b>11670</b>	13.0%	29.6%	2.5%
Germany	20474	22116	22794	25732	26903	28712	30979	33477	38614	44541	<b>49534</b>	11.2%	9.3%	10.6%
Greece	749	850	997	1155	1323	1634	1749	1866	1980	2136	<b>2374</b>	11.2%	13.5%	0.5%
Hungary	60	61	134	203	293	331	325	329	329	329	<b>329</b>	–	34.1%	0.1%
Ireland	748	807	1015	1187	1449	1688	1812	2100	2322	2500	<b>2824</b>	13.0%	17.5%	0.6%
Italy	2118	2721	3731	4845	5814	6936	8102	8542	8683	9137	<b>9257</b>	1.3%	18.2%	2.0%
Netherlands	1557	1745	2222	2226	2241	2309	2552	2714	2876	3402	<b>4191</b>	23.2%	10.8%	0.9%
Norway	328	355	385	390	411	487	705	818	859	869	<b>885</b>	1.8%	12.2%	0.2%
Poland	170	313	472	849	1231	1667	2547	3441	3885	5149	<b>5831</b>	13.2%	54.8%	1.2%
Portugal	1716	2150	2829	3474	3837	4214	4363	4557	4683	4770	<b>5005</b>	4.9%	15.9%	1.1%
Romania	3	15	76	129	470	990	1913	2608	2962	2985	<b>3037</b>	1.7%	–	0.6%
Spain	11595	15155	16699	19160	19715	21160	22722	22898	23025	22988	<b>23026</b>	0.2%	8.7%	4.9%
Sweden	571	789	1024	1537	2141	2904	3750	4474	5524	6128	<b>6618</b>	8.0%	27.2%	1.4%
Turkey	50	147	364	792	1320	1729	2261	2760	3630	4503	<b>5376</b>	19.4%	71.9%	1.1%
United Kingdom	1955	2477	3406	4422	5401	6467	8899	11212	13037	14291	<b>15695</b>	9.8%	26.7%	3.3%
Other Europe & Eurasia	246	324	338	565	885	1082	1557	1809	2110	2404	<b>2553</b>	6.2%	31.1%	0.5%
<b>Total Europe &amp; Eurasia</b>	<b>48303</b>	<b>57018</b>	<b>64923</b>	<b>76903</b>	<b>85804</b>	<b>96038</b>	<b>109689</b>	<b>120974</b>	<b>133937</b>	<b>147625</b>	<b>160530</b>	<b>8.7%</b>	<b>13.7%</b>	<b>34.2%</b>
Iran	48	74	84	92	93	98	98	98	117	117	<b>117</b>	–	19.0%	♦
Other Middle East	9	9	9	9	11	13	12	12	19	127	<b>202</b>	59.1%	30.3%	♦
<b>Total Middle East</b>	<b>57</b>	<b>83</b>	<b>93</b>	<b>101</b>	<b>104</b>	<b>111</b>	<b>110</b>	<b>110</b>	<b>136</b>	<b>244</b>	<b>319</b>	<b>30.7%</b>	<b>23.5%</b>	<b>0.1%</b>
Egypt	231	310	384	552	552	552	552	552	610	810	<b>810</b>	–	16.2%	0.2%
Ethiopia	–	–	–	–	–	81	81	171	171	324	<b>324</b>	–	–	0.1%
Morocco	122	124	206	254	263	292	394	495	798	798	<b>798</b>	–	28.7%	0.2%
South Africa	3	3	8	8	10	10	10	257	569	1079	<b>1473</b>	36.5%	80.1%	0.3%
Tunisia	19	19	19	53	53	53	173	200	233	245	<b>245</b>	–	29.1%	0.1%
Other Africa	11	13	22	23	28	49	56	62	74	125	<b>136</b>	8.8%	26.4%	0.0%
<b>Total Africa</b>	<b>386</b>	<b>469</b>	<b>639</b>	<b>890</b>	<b>906</b>	<b>1037</b>	<b>1266</b>	<b>1737</b>	<b>2455</b>	<b>3381</b>	<b>3786</b>	<b>12.0%</b>	<b>28.4%</b>	<b>0.8%</b>
Australia	796	972	1587	1886	2084	2476	2834	3489	4056	4436	<b>4576</b>	3.2%	20.0%	1.0%
China	2588	6031	12174	17672	31410	48046	62956	76560	96370	129340	<b>148640</b>	14.9%	58.9%	31.7%
India	6270	7845	9655	10926	13065	16179	18420	20150	22465	25088	<b>28700</b>	14.4%	18.9%	6.1%
Japan	1457	1681	2033	2208	2429	2595	2673	2722	2840	3084	<b>3280</b>	6.4%	10.3%	0.7%
New Zealand	169	320	322	497	524	623	623	623	683	690	<b>690</b>	0.0%	15.2%	0.1%
Pakistan	–	–	–	–	–	6	56	106	256	308	<b>591</b>	91.9%	–	0.1%
Philippines	25	25	25	33	33	33	33	33	283	394	<b>394</b>	–	31.8%	0.1%
South Korea	194	235	311	311	342	370	446	506	612	869	<b>1089</b>	25.3%	25.6%	0.2%
Taiwan	102	186	250	374	476	523	571	614	637	647	<b>682</b>	5.4%	39.1%	0.1%
Thailand	–	–	–	–	1	10	112	223	225	234	<b>449</b>	91.9%	–	0.1%
Other Asia Pacific	78	78	164	74	93	113	118	156	344	425	<b>496</b>	16.7%	19.4%	0.1%
<b>Total Asia Pacific</b>	<b>11679</b>	<b>17373</b>	<b>26521</b>	<b>33981</b>	<b>50457</b>	<b>70974</b>	<b>88842</b>	<b>105182</b>	<b>128771</b>	<b>165515</b>	<b>189587</b>	<b>14.5%</b>	<b>35.5%</b>	<b>40.4%</b>
<b>Total World</b>	<b>74008</b>	<b>94189</b>	<b>120747</b>	<b>151888</b>	<b>183872</b>	<b>224250</b>	<b>271817</b>	<b>304615</b>	<b>352831</b>	<b>418745</b>	<b>468989</b>	<b>12.0%</b>	<b>21.6%</b>	<b>100.0%</b>

\*End of year.  
♦Less than 0.05%.

Source: Includes data from Global Wind Energy Council, © IRENA 2017, Navigant Consulting.

# Wind generation capacity

Gigawatts, cumulative installed capacity



Source: includes data from Global Wind Energy Council, © IRENA 2017 and Navigant Consulting.