

BP Statistical Review of World Energy June 2016



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Renewable energy

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Appendices

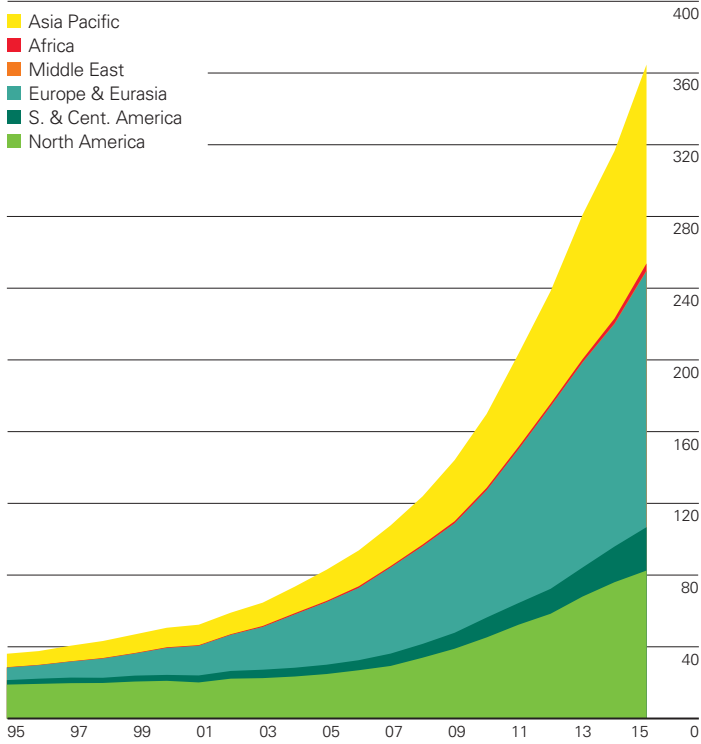
- A1 Solar – Consumption
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- A4 Geothermal – Cumulative installed geothermal power capacity
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- A6 Solar PV generation capacity
- A7 Wind – Cumulative installed wind turbine capacity
- A8 Wind capacity


65th edition

The logo for the 65th edition, featuring the number '65' in a large, outlined font. The '6' contains a small globe icon. Below the number, the text '65th edition' is written in a bold, sans-serif font.

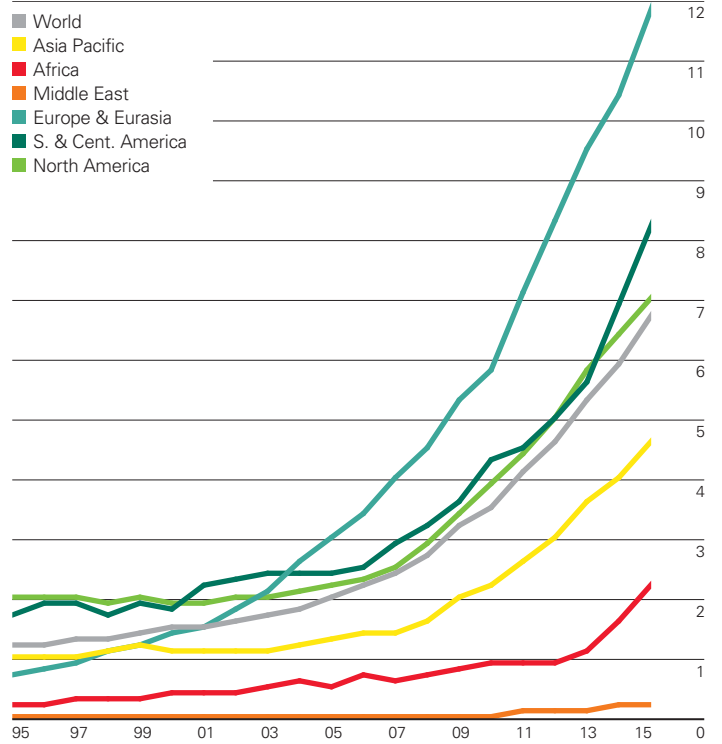
Other renewables consumption by region

Million tonnes oil equivalent



Other renewables share of power generation by region

Percentage



Renewable energy in power generation grew by 15.2%, slightly below the 10-year average growth rate, but the largest increment on record (+48 mtoe). Globally, wind provided the largest growth increment (+28 mtoe), but solar had the highest growth rate (+32.6%). Regionally, Europe & Eurasia and Asia Pacific provided the largest growth increments (+18.8 mtoe and 17.5 mtoe, respectively). Non-hydro renewable energy accounted for 6.7% of global power generation in 2015, up from 2% a decade ago. The Europe & Eurasia region has the highest share of power from renewables, at 11.9% (reaching 18.6% in the EU).

Biofuels production

| Thousand tonnes oil equivalent | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Change 2015 over 2014 | 2015 share of total |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------------|---------------------|
| US | 7478 | 9746 | 13456 | 19149 | 21697 | 25568 | 28518 | 27270 | 28462 | 30118 | 30983 | 2.9% | 41.4% |
| Canada | 133 | 160 | 461 | 501 | 721 | 741 | 851 | 1001 | 972 | 1104 | 1059 | -4.1% | 1.4% |
| Mexico | - | - | 4 | 4 | 4 | 13 | 12 | 14 | 53 | 53 | 53 | - | 0.1% |
| Total North America | 7612 | 9906 | 13922 | 19654 | 22422 | 26322 | 29381 | 28285 | 29487 | 31275 | 32095 | 2.6% | 42.9% |
| Argentina | 9 | 29 | 172 | 632 | 1049 | 1663 | 2224 | 2285 | 2005 | 2577 | 1961 | -23.9% | 2.6% |
| Brazil | 7835 | 8729 | 11323 | 14137 | 13964 | 15440 | 13210 | 13518 | 15687 | 16517 | 17636 | 6.8% | 23.6% |
| Colombia | 14 | 131 | 141 | 145 | 303 | 439 | 554 | 608 | 629 | 654 | 670 | 2.4% | 0.9% |
| Other S. & Cent. America | 185 | 469 | 546 | 736 | 585 | 316 | 470 | 453 | 567 | 599 | 599 | - | 0.8% |
| Total S. & Cent. America | 8043 | 9358 | 12182 | 15650 | 15900 | 17859 | 16459 | 16863 | 18888 | 20348 | 20867 | 2.6% | 27.9% |
| Austria | 70 | 105 | 220 | 263 | 354 | 375 | 370 | 370 | 354 | 310 | 360 | 16.4% | 0.5% |
| Belgium | 1 | 21 | 140 | 278 | 473 | 582 | 623 | 520 | 505 | 530 | 514 | -3.1% | 0.7% |
| Finland | 6 | 11 | 51 | 96 | 267 | 363 | 207 | 179 | 52 | 52 | 65 | 25.5% | 0.1% |
| France | 439 | 665 | 1122 | 2012 | 2312 | 2269 | 1859 | 2071 | 2220 | 2603 | 2592 | -0.4% | 3.5% |
| Germany | 1525 | 2488 | 3181 | 2727 | 2728 | 2888 | 2925 | 2888 | 2632 | 3371 | 3130 | -7.1% | 4.2% |
| Italy | 340 | 585 | 443 | 617 | 758 | 670 | 479 | 292 | 447 | 571 | 621 | 8.7% | 0.8% |
| Netherlands | 3 | 22 | 80 | 77 | 241 | 384 | 651 | 1250 | 1445 | 1749 | 1749 | - | 2.3% |
| Poland | 109 | 144 | 96 | 279 | 393 | 421 | 398 | 631 | 674 | 731 | 882 | 20.5% | 1.2% |
| Portugal | 1 | 70 | 162 | 149 | 226 | 284 | 330 | 276 | 274 | 301 | 315 | 4.6% | 0.4% |
| Spain | 282 | 251 | 352 | 359 | 958 | 1267 | 809 | 586 | 709 | 988 | 1005 | 1.7% | 1.3% |
| Sweden | 48 | 88 | 146 | 178 | 246 | 276 | 330 | 398 | 543 | 774 | 701 | -9.5% | 0.9% |
| United Kingdom | 39 | 219 | 359 | 276 | 220 | 304 | 251 | 287 | 482 | 359 | 359 | - | 0.5% |
| Other Europe & Eurasia | 293 | 391 | 489 | 929 | 1150 | 1207 | 1252 | 1390 | 1440 | 1472 | 1434 | -2.6% | 1.9% |
| Total Europe & Eurasia | 3156 | 5061 | 6840 | 8241 | 10325 | 11291 | 10385 | 11136 | 11778 | 13811 | 13726 | -0.6% | 18.3% |
| Total Middle East | - | - | - | - | - | 4 | 4 | 4 | 4 | 4 | 4 | - | ♦ |
| Total Africa | 6 | 6 | 6 | 11 | 17 | 32 | 25 | 27 | 32 | 54 | 69 | 28.1% | 0.1% |
| Australia | 20 | 54 | 70 | 111 | 165 | 200 | 217 | 189 | 188 | 178 | 205 | 14.8% | 0.3% |
| China | 622 | 846 | 901 | 1096 | 1124 | 1479 | 1673 | 1929 | 2101 | 2207 | 2430 | 10.1% | 3.2% |
| India | 114 | 134 | 136 | 155 | 70 | 113 | 192 | 208 | 248 | 320 | 362 | 13.1% | 0.5% |
| Indonesia | 9 | 44 | 216 | 528 | 464 | 718 | 1104 | 1388 | 1740 | 2532 | 1344 | -46.9% | 1.8% |
| South Korea | 9 | 39 | 74 | 141 | 343 | 491 | 308 | 272 | 308 | 323 | 375 | 15.9% | 0.5% |
| Thailand | 52 | 80 | 138 | 495 | 619 | 661 | 721 | 994 | 1251 | 1402 | 1508 | 7.5% | 2.0% |
| Other Asia Pacific | 10 | 137 | 217 | 373 | 455 | 435 | 693 | 983 | 1233 | 1753 | 1863 | 6.2% | 2.5% |
| Total Asia Pacific | 834 | 1335 | 1752 | 2899 | 3241 | 4097 | 4909 | 5963 | 7070 | 8716 | 8086 | -7.2% | 10.8% |
| Total World | 19651 | 25666 | 34702 | 46454 | 51905 | 59605 | 61163 | 62278 | 67260 | 74208 | 74847 | 0.9% | 100.0% |
| of which: OECD | 10778 | 15024 | 20802 | 27919 | 32921 | 37990 | 39930 | 39528 | 41381 | 45211 | 46026 | 1.8% | 61.5% |
| Non-OECD | 8872 | 10642 | 13900 | 18535 | 18984 | 21614 | 21233 | 22750 | 25880 | 28997 | 28822 | -0.6% | 38.5% |
| European Union | 3133 | 5012 | 6768 | 8100 | 10149 | 11105 | 10172 | 10998 | 11673 | 13704 | 13618 | -0.6% | 18.2% |
| CIS | - | - | 1 | 7 | 34 | 37 | 28 | 29 | 23 | 23 | 23 | - | ♦ |

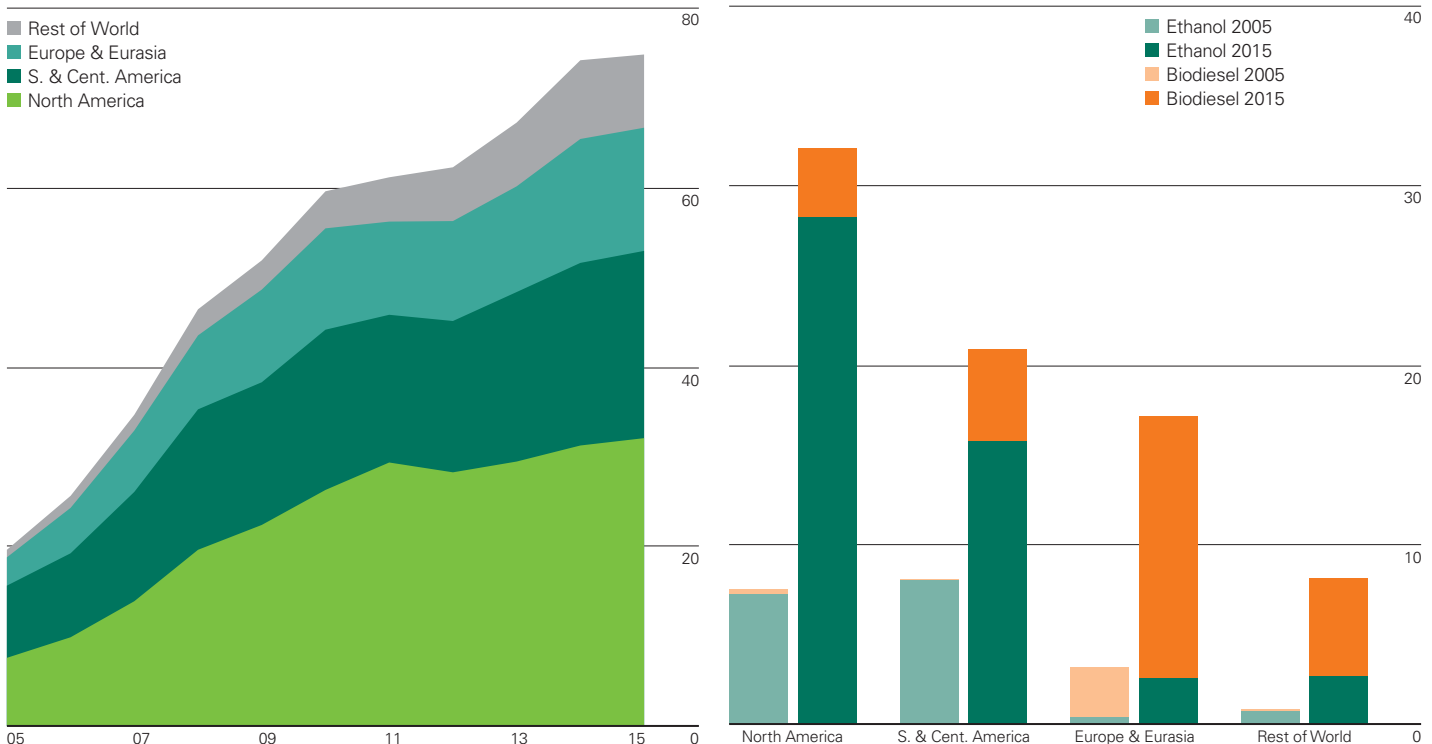
♦Less than 0.05%.

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

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

World biofuels production

Million tonnes oil equivalent



World biofuels production increased by 0.9% in 2015, the slowest rate of growth since output declined in 2000. Global ethanol production increased by 4.1%, the third consecutive year of growth, led by increases from Asia Pacific, South & Central America, and North America. Biodiesel production declined by 4.9% in 2015, with output declining in all of the major producing regions.

Renewables: consumption – solar*

| Million tonnes oil equivalent | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Change 2015 over 2014 | 2015 share of total |
|-------------------------------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-----------------------|---------------------|
| US | 0.2 | 0.2 | 0.2 | 0.4 | 0.5 | 0.7 | 1.1 | 2.0 | 3.6 | 6.2 | 8.8 | 41.8% | 15.4% |
| Canada | † | † | † | † | † | † | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 38.8% | 1.0% |
| Mexico | † | † | † | † | † | † | † | † | † | † | 0.1 | 58.4% | 0.1% |
| Total North America | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.7 | 1.2 | 2.2 | 3.9 | 6.7 | 9.5 | 41.8% | 16.6% |
| Argentina | † | † | † | † | † | † | † | † | † | † | † | -6.4% | ♦ |
| Brazil | - | - | - | - | - | - | - | † | † | † | † | 184.5% | ♦ |
| Chile | - | - | - | - | - | - | - | † | † | 0.1 | 0.3 | 182.0% | 0.5% |
| Colombia | - | - | - | - | - | - | † | † | † | † | † | 16.0% | ♦ |
| Ecuador | † | † | † | † | † | - | † | † | † | † | † | 118.0% | ♦ |
| Peru | - | - | - | - | - | - | - | † | † | † | 0.1 | 15.6% | 0.1% |
| Trinidad & Tobago | - | - | - | - | - | † | † | † | † | † | † | 18.1% | ♦ |
| Venezuela | - | - | - | - | - | † | † | † | † | † | † | 22.3% | ♦ |
| Other S. & Cent. America | † | † | † | † | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 122.3% | 0.5% |
| Total S. & Cent. America | † | † | † | † | † | † | 0.1 | 0.1 | 0.2 | 0.3 | 0.7 | 122.7% | 1.2% |
| Austria | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.2 | 0.2 | 21.9% | 0.4% |
| Azerbaijan | - | - | - | - | - | - | - | - | † | † | † | 41.4% | ♦ |
| Belarus | - | - | - | - | - | - | † | † | † | † | † | 38.0% | ♦ |
| Belgium | † | † | † | † | † | 0.1 | 0.3 | 0.5 | 0.6 | 0.7 | 0.7 | 9.7% | 1.2% |
| Bulgaria | - | - | - | - | † | † | † | 0.2 | 0.3 | 0.3 | 0.3 | 11.6% | 0.6% |
| Czech Republic | † | † | † | † | † | 0.1 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 6.6% | 0.9% |
| Denmark | † | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.1 | 1.5% | 0.2% |
| Finland | † | † | † | † | † | † | † | † | † | † | † | 27.0% | ♦ |
| France | † | † | † | † | † | 0.1 | 0.5 | 0.9 | 1.1 | 1.3 | 1.7 | 25.1% | 2.9% |
| Germany | 0.3 | 0.5 | 0.7 | 1.0 | 1.5 | 2.7 | 4.4 | 6.0 | 7.0 | 8.2 | 8.7 | 6.6% | 15.2% |
| Greece | † | † | † | † | † | † | 0.1 | 0.4 | 0.8 | 0.9 | 0.8 | -7.6% | 1.4% |
| Hungary | - | - | - | † | † | † | † | † | † | † | † | 91.3% | ♦ |
| Ireland | - | - | - | - | † | † | † | † | † | † | † | 33.9% | ♦ |
| Italy | † | † | † | † | 0.2 | 0.4 | 2.4 | 4.3 | 4.9 | 5.0 | 5.7 | 13.0% | 10.0% |
| Kazakhstan | - | - | - | - | - | † | † | † | † | † | † | 44.6% | ♦ |
| Lithuania | - | - | - | - | - | - | † | † | † | † | † | - | ♦ |
| Netherlands | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.2 | 0.2 | 10.5% | 0.3% |
| Norway | - | - | - | - | - | † | † | † | † | † | † | 17.9% | ♦ |
| Poland | - | - | - | - | - | - | † | † | † | † | † | 714.3% | ♦ |
| Portugal | † | † | † | † | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 25.8% | 0.3% |
| Romania | - | - | - | - | † | † | † | † | 0.1 | 0.3 | 0.4 | 53.4% | 0.8% |
| Russian Federation | - | - | - | - | - | - | † | † | † | † | † | 109.3% | ♦ |
| Slovakia | - | - | - | - | - | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 15.6% | 0.2% |
| Spain | † | † | 0.1 | 0.6 | 1.4 | 1.6 | 2.0 | 2.7 | 2.9 | 3.1 | 3.1 | 1.6% | 5.5% |
| Sweden | † | † | † | † | † | † | † | † | † | † | † | 71.1% | ♦ |
| Switzerland | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.2 | 0.3 | 33.3% | 0.4% |
| Turkey | - | - | - | - | - | † | † | † | † | † | 0.1 | 328.9% | 0.1% |
| Turkmenistan | - | - | - | - | - | † | † | † | † | † | † | 31.8% | ♦ |
| Ukraine | - | - | - | - | - | - | † | 0.1 | 0.1 | 0.1 | 0.1 | -6.3% | 0.2% |
| United Kingdom | † | † | † | † | † | † | 0.1 | 0.3 | 0.5 | 0.9 | 1.7 | 86.6% | 3.0% |
| USSR | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Uzbekistan | - | - | - | - | - | † | † | † | † | † | † | 23.1% | ♦ |
| Other Europe & Eurasia | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.1 | 0.2 | 24.2% | 0.3% |
| Total Europe & Eurasia | 0.3 | 0.6 | 0.9 | 1.7 | 3.2 | 5.3 | 10.6 | 16.3 | 19.6 | 22.4 | 25.2 | 12.9% | 44.1% |
| Iran | - | - | - | - | - | † | † | † | † | † | † | 88.6% | ♦ |
| Israel | - | - | - | - | † | † | † | 0.1 | 0.1 | 0.2 | 0.2 | 34.5% | 0.4% |
| Kuwait | - | - | - | - | - | † | † | † | † | † | † | 36.9% | ♦ |
| Qatar | - | - | - | - | - | † | † | † | † | † | † | 52.9% | ♦ |
| Saudi Arabia | - | - | - | - | - | - | † | † | † | † | † | - | ♦ |
| United Arab Emirates | - | - | - | - | † | † | † | † | † | 0.1 | 0.1 | 24.7% | 0.1% |
| Other Middle East | - | - | - | - | - | † | † | † | † | † | † | 57.6% | ♦ |
| Total Middle East | - | - | - | - | † | † | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 36.8% | 0.7% |
| Algeria | - | - | - | - | - | † | † | † | † | † | † | 31.7% | ♦ |
| Egypt | - | - | - | - | - | † | † | † | † | † | † | 14.3% | ♦ |
| South Africa | † | † | † | † | † | † | † | † | 0.1 | 0.3 | 0.4 | 71.6% | 0.8% |
| Other Africa | † | † | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 18.1% | 0.4% |
| Total Africa | † | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.5 | 0.7 | 48.3% | 1.2% |
| Australia | † | † | † | † | 0.1 | 0.2 | 0.5 | 0.5 | 0.9 | 1.1 | 1.4 | 22.6% | 2.4% |
| Bangladesh | † | † | † | † | † | † | † | † | † | † | 0.1 | 16.4% | 0.1% |
| China | † | † | † | † | 0.1 | 0.2 | 0.6 | 1.4 | 3.5 | 5.2 | 8.9 | 69.7% | 15.5% |
| China Hong Kong SAR | - | - | - | - | - | † | † | † | † | † | † | -6.5% | ♦ |
| India | † | † | † | † | † | 0.1 | 0.1 | 0.3 | 0.6 | 1.0 | 1.5 | 50.9% | 2.6% |
| Indonesia | - | - | - | † | † | † | † | † | † | † | † | 39.5% | ♦ |
| Japan | 0.3 | 0.4 | 0.4 | 0.5 | 0.6 | 0.7 | 1.0 | 1.4 | 2.4 | 4.4 | 7.0 | 58.6% | 12.2% |
| Malaysia | - | - | † | † | † | † | † | † | † | † | † | 61.3% | ♦ |
| New Zealand | - | - | † | † | † | † | † | † | † | † | † | 96.7% | ♦ |
| Pakistan | - | - | - | - | - | † | † | † | † | 0.1 | 0.3 | 214.3% | 0.5% |
| Philippines | † | † | † | † | † | † | † | † | † | † | † | 680.2% | 0.1% |
| Singapore | - | - | - | - | † | † | † | † | † | † | † | 86.0% | ♦ |
| South Korea | † | † | † | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.4 | 0.6 | 0.9 | 49.4% | 1.5% |
| Taiwan | † | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.2 | 58.7% | 0.3% |
| Thailand | - | † | † | † | † | † | † | 0.1 | 0.2 | 0.4 | 0.5 | 28.1% | 1.0% |
| Vietnam | - | - | - | - | - | † | † | † | † | † | † | 22.0% | ♦ |
| Other Asia Pacific | † | † | † | † | † | † | † | † | † | † | † | 15.5% | 0.1% |
| Total Asia Pacific | 0.4 | 0.4 | 0.5 | 0.6 | 0.8 | 1.4 | 2.5 | 4.1 | 8.2 | 13.1 | 20.8 | 58.9% | 36.3% |
| Total World | 0.9 | 1.2 | 1.7 | 2.8 | 4.6 | 7.5 | 14.4 | 23.1 | 32.3 | 43.2 | 57.3 | 32.6% | 100.0% |
| of which: OECD | 0.8 | 1.2 | 1.6 | 2.6 | 4.5 | 7.2 | 13.4 | 20.5 | 26.7 | 34.7 | 43.5 | 25.5% | 76.0% |
| Non-OECD | † | 0.1 | 0.1 | 0.1 | 0.2 | 0.4 | 1.0 | 2.5 | 5.6 | 8.5 | 13.7 | 61.7% | 24.0% |
| European Union | 0.3 | 0.6 | 0.9 | 1.7 | 3.2 | 5.2 | 10.5 | 16.1 | 19.3 | 22.0 | 24.8 | 12.6% | 43.3% |
| CIS | - | - | - | - | - | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 4.4% | 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%.

n/a not available.

Renewables: consumption – wind*

| Million tonnes oil equivalent | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Change 2015 over 2014 | 2015 share of total |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|-----------------------|---------------------|
| US | 4.1 | 6.1 | 7.9 | 12.7 | 16.9 | 21.6 | 27.5 | 32.2 | 38.4 | 41.5 | 43.6 | 5.1% | 22.9% |
| Canada | 0.4 | 0.6 | 0.7 | 0.8 | 1.5 | 2.0 | 2.5 | 3.1 | 3.7 | 4.7 | 5.6 | 19.3% | 2.9% |
| Mexico | † | † | 0.1 | 0.1 | 0.1 | 0.3 | 0.4 | 0.8 | 0.9 | 1.4 | 1.8 | 27.5% | 0.9% |
| Total North America | 4.4 | 6.6 | 8.6 | 13.6 | 18.5 | 23.9 | 30.3 | 36.1 | 43.0 | 47.6 | 51.0 | 7.2% | 26.8% |
| Argentina | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.2 | 0.2 | -3.3% | 0.1% |
| Brazil | † | 0.1 | 0.1 | 0.3 | 0.3 | 0.5 | 0.6 | 1.1 | 1.5 | 2.8 | 4.9 | 78.0% | 2.6% |
| Chile | † | † | † | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.5 | 47.4% | 0.3% |
| Colombia | † | † | † | † | † | † | † | † | † | † | † | -2.6% | ♦ |
| Ecuador | - | - | † | † | † | † | † | † | † | † | † | 23.9% | ♦ |
| Peru | † | † | † | † | † | † | † | † | † | 0.1 | 0.1 | 133.9% | 0.1% |
| Trinidad & Tobago | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Venezuela | - | - | - | - | - | - | - | - | - | - | † | - | ♦ |
| Other S. & Cent. America | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 | 0.6 | 0.9 | 1.5 | 61.4% | 0.8% |
| Total S. & Cent. America | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.8 | 1.0 | 1.7 | 2.4 | 4.3 | 7.2 | 69.2% | 3.8% |
| Austria | 0.3 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 | 0.6 | 0.7 | 0.9 | 1.2 | 33.1% | 0.6% |
| Azerbaijan | - | - | - | - | † | † | † | - | † | † | † | 147.8% | ♦ |
| Belarus | † | † | † | † | † | † | † | † | † | † | † | - | ♦ |
| Belgium | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.5 | 0.6 | 0.8 | 1.0 | 1.3 | 20.6% | 0.7% |
| Bulgaria | † | † | † | † | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 9.4% | 0.2% |
| Czech Republic | † | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 20.2% | 0.1% |
| Denmark | 1.5 | 1.4 | 1.6 | 1.6 | 1.5 | 1.8 | 2.2 | 2.3 | 2.5 | 3.0 | 3.2 | 8.1% | 1.7% |
| Finland | † | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.5 | 110.8% | 0.3% |
| France | 0.2 | 0.5 | 0.9 | 1.3 | 1.7 | 2.1 | 2.6 | 3.2 | 3.4 | 3.7 | 4.6 | 24.7% | 2.4% |
| Germany | 6.2 | 6.9 | 9.0 | 9.2 | 8.7 | 8.6 | 11.1 | 11.5 | 11.7 | 13.0 | 19.9 | 53.4% | 10.5% |
| Greece | 0.3 | 0.4 | 0.4 | 0.5 | 0.6 | 0.6 | 0.8 | 0.9 | 0.9 | 0.8 | 1.0 | 25.5% | 0.6% |
| Hungary | † | † | † | † | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 6.0% | 0.1% |
| Ireland | 0.3 | 0.4 | 0.4 | 0.5 | 0.7 | 0.6 | 1.0 | 0.9 | 1.0 | 1.2 | 1.5 | 27.8% | 0.8% |
| Italy | 0.5 | 0.7 | 0.9 | 1.1 | 1.5 | 2.1 | 2.2 | 3.0 | 3.4 | 3.4 | 3.3 | -3.3% | 1.7% |
| Kazakhstan | - | † | † | † | † | † | † | † | † | † | † | - | ♦ |
| Lithuania | † | † | † | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 26.4% | 0.1% |
| Netherlands | 0.5 | 0.6 | 0.8 | 1.0 | 1.0 | 0.9 | 1.2 | 1.1 | 1.3 | 1.3 | 1.7 | 29.2% | 0.9% |
| Norway | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 | 0.5 | 0.6 | 13.5% | 0.3% |
| Poland | † | 0.1 | 0.1 | 0.2 | 0.2 | 0.4 | 0.7 | 1.1 | 1.4 | 1.7 | 2.4 | 40.7% | 1.3% |
| Portugal | 0.4 | 0.7 | 0.9 | 1.3 | 1.7 | 2.1 | 2.1 | 2.3 | 2.7 | 2.7 | 2.6 | -4.3% | 1.4% |
| Romania | - | † | † | † | † | 0.1 | 0.3 | 0.6 | 1.0 | 1.1 | 1.6 | 49.1% | 0.8% |
| Russian Federation | † | † | † | † | † | † | † | † | † | † | † | 103.8% | ♦ |
| Slovakia | † | † | † | † | † | † | † | † | † | † | † | - | ♦ |
| Spain | 4.8 | 5.3 | 6.3 | 7.4 | 8.6 | 10.0 | 9.6 | 11.2 | 12.2 | 11.8 | 11.2 | -5.7% | 5.9% |
| Sweden | 0.2 | 0.2 | 0.3 | 0.5 | 0.6 | 0.8 | 1.4 | 1.6 | 2.2 | 2.6 | 3.8 | 44.8% | 2.0% |
| Switzerland | † | † | † | † | † | † | † | † | † | † | † | - | ♦ |
| Turkey | † | † | 0.1 | 0.2 | 0.3 | 0.7 | 1.1 | 1.3 | 1.7 | 1.9 | 2.6 | 35.6% | 1.4% |
| Turkmenistan | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ukraine | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.3 | 0.2 | -9.3% | 0.1% |
| United Kingdom | 0.7 | 1.0 | 1.2 | 1.6 | 2.1 | 2.3 | 3.5 | 4.5 | 6.4 | 7.2 | 9.2 | 26.3% | 4.8% |
| USSR | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Uzbekistan | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other Europe & Eurasia | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 | 0.4 | 0.5 | 22.2% | 0.3% |
| Total Europe & Eurasia | 16.1 | 18.8 | 24.0 | 27.4 | 30.6 | 34.5 | 41.9 | 48.3 | 55.3 | 59.6 | 73.7 | 23.7% | 38.7% |
| Iran | † | † | † | † | 0.1 | † | † | † | † | 0.1 | 0.1 | - | ♦ |
| Israel | † | † | † | † | † | † | † | † | † | † | † | - | ♦ |
| Kuwait | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Qatar | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Saudi Arabia | - | - | - | - | - | - | - | - | - | - | - | - | - |
| United Arab Emirates | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other Middle East | † | † | † | † | † | † | † | † | † | † | † | 2320.3% | ♦ |
| Total Middle East | † | † | † | † | 0.1 | † | 0.1 | † | † | 0.1 | 0.1 | 49.9% | ♦ |
| Algeria | - | - | - | - | - | - | - | - | - | - | † | - | ♦ |
| Egypt | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 4.5% | 0.2% |
| South Africa | † | † | † | † | † | † | † | † | † | 0.2 | 0.5 | 100.3% | 0.3% |
| Other Africa | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 | 0.7 | 0.9 | 30.3% | 0.5% |
| Total Africa | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 | 0.7 | 1.2 | 1.7 | 37.2% | 0.9% |
| Australia | 0.3 | 0.5 | 0.6 | 0.8 | 1.0 | 1.2 | 1.3 | 1.7 | 2.1 | 2.2 | 2.4 | 9.4% | 1.3% |
| Bangladesh | † | † | † | † | † | † | † | † | † | † | † | - | ♦ |
| China | 0.4 | 0.8 | 1.2 | 3.0 | 6.2 | 10.1 | 15.9 | 21.7 | 31.9 | 36.2 | 41.9 | 15.8% | 22.0% |
| China Hong Kong SAR | - | † | † | † | † | † | † | † | † | † | † | -9.9% | ♦ |
| India | 1.4 | 2.2 | 2.6 | 3.0 | 4.1 | 4.4 | 5.6 | 6.8 | 7.6 | 8.4 | 9.4 | 11.6% | 4.9% |
| Indonesia | - | - | † | † | † | † | † | † | † | † | † | 31.6% | ♦ |
| Japan | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.2 | 1.1 | 1.2 | 7.7% | 0.6% |
| Malaysia | - | - | - | - | - | - | - | - | - | - | - | - | - |
| New Zealand | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 6.4% | 0.3% |
| Pakistan | - | - | - | - | - | - | † | † | † | 0.1 | 0.1 | 41.4% | 0.1% |
| Philippines | † | † | † | † | † | † | † | † | † | † | 0.1 | 322.1% | 0.1% |
| Singapore | - | - | - | - | - | - | - | - | - | - | - | - | - |
| South Korea | † | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 25.7% | 0.2% |
| Taiwan | † | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 1.6% | 0.2% |
| Thailand | - | - | - | - | † | † | † | † | 0.1 | 0.1 | 0.1 | - | 0.1% |
| Vietnam | - | - | - | † | † | † | † | † | † | † | † | 79.8% | ♦ |
| Other Asia Pacific | † | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.1 | 14.7% | 0.1% |
| Total Asia Pacific | 2.7 | 4.2 | 5.5 | 7.9 | 12.8 | 17.5 | 24.9 | 32.5 | 44.1 | 49.4 | 56.7 | 14.8% | 29.8% |
| Total World | 23.6 | 30.1 | 38.7 | 49.6 | 62.8 | 77.3 | 98.6 | 119.1 | 145.6 | 162.1 | 190.3 | 17.4% | 100.0% |
| of which: OECD | 21.4 | 26.6 | 34.1 | 42.6 | 51.2 | 60.8 | 74.5 | 86.7 | 100.7 | 109.6 | 127.0 | 15.9% | 66.7% |
| Non-OECD | 2.2 | 3.5 | 4.6 | 6.9 | 11.6 | 16.5 | 24.1 | 32.4 | 45.0 | 52.5 | 63.3 | 20.6% | 33.3% |
| European Union | 16.0 | 18.6 | 23.7 | 27.0 | 30.0 | 33.7 | 40.5 | 46.5 | 53.0 | 56.8 | 70.2 | 23.5% | 36.9% |
| CIS | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.3 | 0.2 | -8.1% | 0.1% |

*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%.
n/a not available.

Renewables: consumption – geothermal, biomass and other*

| Terawatt-hours | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Change 2015 over 2014 | 2015 share of total |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|-----------------------------|---------------------------|
| US | 16.4 | 16.5 | 16.7 | 16.6 | 16.6 | 17.0 | 17.1 | 17.4 | 18.3 | 19.0 | 19.3 | 1.4% | 16.4% |
| Canada | 2.1 | 2.0 | 1.9 | 1.6 | 1.7 | 2.1 | 2.1 | 1.2 | 1.2 | 1.2 | 1.2 | – | 1.0% |
| Mexico | 1.8 | 1.7 | 1.9 | 1.8 | 1.7 | 1.7 | 1.7 | 1.5 | 1.7 | 1.6 | 1.7 | 4.0% | 1.4% |
| Total North America | 20.3 | 20.2 | 20.5 | 20.0 | 20.0 | 20.7 | 20.9 | 20.2 | 21.1 | 21.8 | 22.1 | 1.5% | 18.9% |
| Argentina | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.7 | 7.8% | 0.6% |
| Brazil | 3.1 | 3.3 | 4.1 | 4.4 | 5.1 | 7.1 | 7.3 | 8.0 | 9.2 | 10.5 | 11.3 | 8.4% | 9.7% |
| Chile | 0.4 | 0.3 | 0.6 | 0.7 | 1.0 | 0.5 | 1.1 | 1.1 | 1.3 | 1.3 | 1.2 | -12.0% | 1.0% |
| Colombia | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 3.5% | 0.3% |
| Ecuador | † | † | † | † | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 2.1% | 0.1% |
| Peru | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | – | 0.2% |
| Trinidad & Tobago | † | † | † | † | † | – | – | – | – | – | – | – | – |
| Venezuela | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Other S. & Cent. America | 1.1 | 1.1 | 1.3 | 1.5 | 1.6 | 1.7 | 1.7 | 2.0 | 2.2 | 2.3 | 2.5 | 7.7% | 2.1% |
| Total S. & Cent. America | 5.0 | 5.5 | 6.6 | 7.3 | 8.4 | 10.3 | 11.1 | 12.0 | 13.6 | 15.3 | 16.3 | 6.3% | 13.9% |
| Austria | 0.6 | 0.8 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | – | 0.8% |
| Azerbaijan | – | – | – | – | – | – | – | – | – | † | † | 24.9% | ♦ |
| Belarus | – | † | † | † | † | † | † | † | † | 0.1 | 0.1 | 56.0% | 0.1% |
| Belgium | 0.3 | 0.5 | 0.5 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.1 | 1.0 | 1.2 | 26.1% | 1.1% |
| Bulgaria | – | – | – | † | † | † | † | † | † | † | 0.1 | 52.0% | 0.1% |
| Czech Republic | 0.1 | 0.2 | 0.3 | 0.3 | 0.4 | 0.5 | 0.6 | 0.8 | 0.9 | 1.1 | 1.1 | 2.7% | 0.9% |
| Denmark | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | -7.7% | 0.8% |
| Finland | 2.1 | 2.4 | 2.2 | 2.3 | 2.0 | 2.5 | 2.5 | 2.5 | 2.7 | 2.6 | 2.6 | -3.2% | 2.2% |
| France | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.1 | 1.3 | 1.3 | 1.4 | 1.5 | 1.6 | 8.1% | 1.4% |
| Germany | 3.2 | 4.2 | 5.5 | 6.3 | 6.9 | 7.8 | 8.5 | 10.1 | 10.6 | 11.2 | 11.3 | 1.3% | 9.7% |
| Greece | † | † | † | † | † | † | † | † | † | † | 0.1 | 7.0% | ♦ |
| Hungary | 0.4 | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | -1.1% | 0.4% |
| Ireland | † | † | † | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | -12.6% | 0.1% |
| Italy | 2.6 | 2.8 | 2.8 | 3.0 | 2.9 | 3.4 | 3.7 | 4.1 | 5.1 | 5.6 | 5.7 | 1.6% | 4.8% |
| Kazakhstan | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Lithuania | † | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.1 | 22.6% | 0.1% |
| Netherlands | 1.2 | 1.2 | 0.9 | 1.2 | 1.4 | 1.6 | 1.6 | 1.6 | 1.3 | 1.1 | 0.8 | -30.4% | 0.7% |
| Norway | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | – | 0.1% |
| Poland | 0.3 | 0.5 | 0.6 | 0.8 | 1.2 | 1.4 | 1.7 | 2.3 | 2.0 | 2.3 | 2.2 | -4.3% | 1.8% |
| Portugal | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | -2.1% | 0.6% |
| Romania | † | † | † | † | † | † | † | † | 0.1 | 0.1 | 0.1 | 4.2% | 0.1% |
| Russian Federation | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | ♦ | 0.1% |
| Slovakia | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 22.6% | 0.3% |
| Spain | 0.8 | 0.9 | 0.8 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.2 | 1.1 | 1.1 | -1.3% | 0.9% |
| Sweden | 1.7 | 1.8 | 2.2 | 2.3 | 2.5 | 2.7 | 2.6 | 2.8 | 2.6 | 2.4 | 2.4 | -0.4% | 2.1% |
| Switzerland | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | – | 0.3% |
| Turkey | † | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 | 0.4 | 0.6 | 0.9 | 1.1 | 27.3% | 0.9% |
| Turkmenistan | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Ukraine | – | – | 0.1 | 0.1 | † | † | † | † | † | † | † | – | ♦ |
| United Kingdom | 2.1 | 2.1 | 2.1 | 2.2 | 2.4 | 2.7 | 2.9 | 3.3 | 4.1 | 5.1 | 6.6 | 27.8% | 5.6% |
| USSR | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Uzbekistan | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Other Europe & Eurasia | 0.4 | 0.7 | 0.9 | 1.0 | 1.2 | 1.3 | 1.4 | 1.6 | 1.6 | 1.7 | 1.7 | -1.1% | 1.4% |
| Total Europe & Eurasia | 18.4 | 20.9 | 23.1 | 25.3 | 27.2 | 31.1 | 33.3 | 37.2 | 39.4 | 42.2 | 44.0 | 4.3% | 37.5% |
| Iran | – | – | – | – | † | † | † | † | † | † | † | – | ♦ |
| Israel | – | – | – | † | † | † | † | † | † | † | † | – | ♦ |
| Kuwait | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Qatar | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Saudi Arabia | – | – | – | – | – | – | – | – | – | – | – | – | – |
| United Arab Emirates | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Other Middle East | † | † | † | † | † | † | † | † | † | † | † | – | ♦ |
| Total Middle East | † | † | † | † | † | † | † | † | † | † | † | – | ♦ |
| Algeria | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Egypt | – | – | – | – | – | – | – | – | – | – | – | – | – |
| South Africa | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | – | 0.1% |
| Other Africa | 0.4 | 0.6 | 0.5 | 0.5 | 0.6 | 0.7 | 0.6 | 0.6 | 0.7 | 1.0 | 1.4 | 36.6% | 1.2% |
| Total Africa | 0.5 | 0.7 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.8 | 1.1 | 1.4 | 34.3% | 1.2% |
| Australia | 0.9 | 0.9 | 1.0 | 0.8 | 0.6 | 0.6 | 0.6 | 0.7 | 0.8 | 0.8 | 0.8 | – | 0.6% |
| Bangladesh | – | – | – | – | † | † | † | † | † | † | † | – | ♦ |
| China | 1.2 | 1.6 | 2.2 | 3.4 | 4.7 | 5.6 | 7.2 | 7.7 | 8.7 | 10.5 | 12.0 | 13.8% | 10.2% |
| China Hong Kong SAR | – | – | – | – | – | – | – | – | – | – | – | – | – |
| India | 0.9 | 1.1 | 1.4 | 1.8 | 2.2 | 2.7 | 3.2 | 3.6 | 4.1 | 4.3 | 4.6 | 9.2% | 4.0% |
| Indonesia | 1.5 | 1.5 | 1.6 | 1.9 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.3 | 2.4 | 2.2% | 2.0% |
| Japan | 5.7 | 5.7 | 5.9 | 5.7 | 5.5 | 5.5 | 5.5 | 5.7 | 6.0 | 6.1 | 6.3 | 3.4% | 5.3% |
| Malaysia | – | – | – | – | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | – | 0.2% |
| New Zealand | 0.8 | 0.9 | 0.9 | 1.1 | 1.2 | 1.5 | 1.5 | 1.5 | 1.6 | 1.8 | 1.9 | 7.2% | 1.6% |
| Pakistan | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Philippines | 2.2 | 2.4 | 2.3 | 2.4 | 2.3 | 2.3 | 2.3 | 2.4 | 2.2 | 2.4 | 2.5 | 6.1% | 2.2% |
| Singapore | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 4.8% | 0.1% |
| South Korea | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.4 | 0.4 | 0.4 | – | 0.3% |
| Taiwan | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 4.2% | 0.4% |
| Thailand | 0.4 | 0.5 | 0.6 | 0.5 | 0.5 | 0.8 | 0.9 | 1.0 | 1.3 | 1.5 | 1.6 | 5.7% | 1.4% |
| Vietnam | † | † | † | † | † | † | † | † | † | † | † | – | ♦ |
| Other Asia Pacific | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 1.7% | 0.1% |
| Total Asia Pacific | 14.4 | 15.3 | 16.7 | 18.4 | 20.4 | 22.3 | 24.6 | 26.1 | 28.2 | 30.9 | 33.4 | 8.1% | 28.5% |
| Total World | 58.7 | 62.5 | 67.5 | 71.6 | 76.8 | 85.1 | 90.5 | 96.3 | 103.2 | 111.3 | 117.3 | 5.3% | 100.0% |
| of which: OECD | 46.5 | 48.9 | 51.9 | 53.5 | 55.5 | 59.8 | 62.8 | 66.3 | 70.1 | 73.6 | 75.8 | 3.0% | 64.6% |
| Non-OECD | 12.1 | 13.7 | 15.6 | 18.0 | 21.3 | 25.3 | 27.8 | 30.0 | 33.1 | 37.7 | 41.5 | 10.0% | 35.4% |
| European Union | 17.6 | 19.8 | 21.7 | 23.7 | 25.5 | 29.3 | 31.4 | 35.0 | 37.1 | 39.4 | 41.0 | 4.0% | 35.0% |
| CIS | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 18.8% | 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%.

n/a not available.

Renewable energy – geothermal

Cumulative installed geothermal power capacity*

| Megawatts | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Change 2015 over 2014 | 2015 share of total |
|-----------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------------------|---------------------------|
| Australia | † | † | † | † | 1 | 1 | 1 | 1 | 2 | 2 | 2 | – | ♦ |
| Austria | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | – | ♦ |
| China | 28 | 28 | 28 | 24 | 24 | 24 | 24 | 24 | 27 | 27 | 27 | – | 0.2% |
| Costa Rica | 163 | 163 | 163 | 163 | 166 | 166 | 208 | 208 | 208 | 208 | 208 | – | 1.6% |
| El Salvador | 151 | 195 | 195 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | – | 1.6% |
| Ethiopia | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | – | 0.1% |
| France (Guadeloupe) | 15 | 15 | 15 | 16 | 16 | 16 | 16 | 16 | 17 | 17 | 17 | – | 0.1% |
| Germany | † | † | 3 | 3 | 8 | 8 | 8 | 12 | 17 | 27 | 27 | – | 0.2% |
| Guatemala | 33 | 33 | 52 | 52 | 52 | 52 | 52 | 52 | 48 | 48 | 48 | – | 0.4% |
| Iceland | 202 | 312 | 485 | 576 | 576 | 575 | 665 | 665 | 665 | 665 | 665 | – | 5.1% |
| Indonesia | 850 | 850 | 980 | 1052 | 1189 | 1193 | 1209 | 1339 | 1339 | 1401 | 1401 | – | 10.8% |
| Italy | 791 | 811 | 811 | 811 | 843 | 883 | 883 | 875 | 876 | 916 | 916 | – | 7.0% |
| Japan | 534 | 534 | 532 | 532 | 500 | 502 | 502 | 502 | 503 | 539 | 544 | 1.0% | 4.2% |
| Kenya | 167 | 167 | 170 | 174 | 174 | 209 | 212 | 217 | 253 | 450 | 605 | 34.4% | 4.7% |
| Mexico | 960 | 960 | 960 | 965 | 965 | 965 | 887 | 812 | 834 | 834 | 887 | 6.4% | 6.8% |
| New Zealand | 425 | 425 | 443 | 585 | 625 | 723 | 723 | 723 | 971 | 971 | 971 | – | 7.5% |
| Nicaragua | 78 | 78 | 88 | 88 | 88 | 88 | 88 | 160 | 160 | 160 | 160 | – | 1.2% |
| Papua New Guinea | 6 | 36 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | – | 0.4% |
| Philippines | 1978 | 1978 | 1958 | 1958 | 1953 | 1966 | 1783 | 1848 | 1868 | 1917 | 1917 | – | 14.8% |
| Portugal (The Azores) | 16 | 16 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | – | 0.2% |
| Russia (Kamchatka) | 79 | 79 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | – | 0.6% |
| Thailand | † | † | † | † | † | † | † | † | † | † | † | – | ♦ |
| Turkey | 20 | 28 | 28 | 35 | 82 | 94 | 114 | 114 | 226 | 405 | 624 | 54.1% | 4.8% |
| US | 2893 | 2940 | 3037 | 3163 | 3289 | 3308 | 3318 | 3450 | 3524 | 3525 | 3596 | 2.0% | 27.7% |
| Total World | 9396 | 9655 | 10121 | 10575 | 10928 | 11152 | 11071 | 11397 | 11917 | 12492 | 12995 | 4.0% | 100.0% |

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

Sources: ThinkGeoEnergy, International Geothermal Association, and national sources.

Renewable energy – solar

Cumulative installed photovoltaic (PV) power*

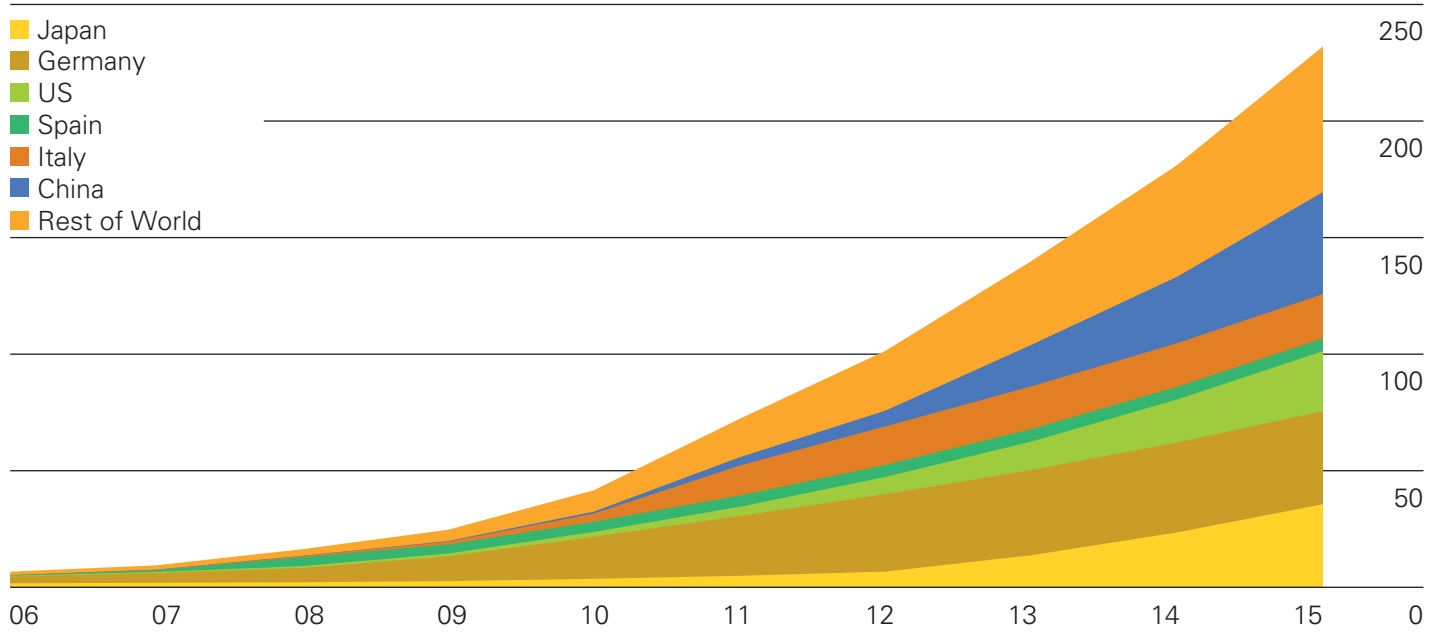
| Megawatts | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Change 2015 over 2014 | 2015 share of total |
|----------------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|-----------------------|---------------------|
| US | 190 | 295 | 455 | 753 | 1188 | 2040 | 3961 | 7330 | 12106 | 18317 | 25577 | 39.6% | 11.1% |
| Canada | 17 | 21 | 26 | 33 | 95 | 281 | 558 | 827 | 1272 | 1904 | 2504 | 31.5% | 1.1% |
| Mexico | 19 | 20 | 21 | 22 | 25 | 31 | 40 | 52 | 112 | 179 | 282 | 57.5% | 0.1% |
| Total North America | 226 | 335 | 502 | 807 | 1308 | 2352 | 4559 | 8209 | 13490 | 20400 | 28363 | 39.0% | 12.3% |
| Austria | 24 | 26 | 29 | 32 | 54 | 97 | 189 | 365 | 628 | 787 | 937 | 19.1% | 0.4% |
| Belgium | 4 | 4 | 24 | 109 | 648 | 1066 | 2105 | 2819 | 3077 | 3156 | 3251 | 3.0% | 1.4% |
| Bulgaria | – | – | † | 1 | 7 | 32 | 167 | 1010 | 1020 | 1021 | 1036 | 1.4% | 0.4% |
| Czech Republic | – | 1 | 4 | 65 | 463 | 1953 | 1971 | 2087 | 2132 | 2134 | 2150 | 0.7% | 0.9% |
| Denmark | 3 | 3 | 3 | 3 | 5 | 7 | 17 | 408 | 563 | 606 | 783 | 29.2% | 0.3% |
| Finland | 1 | 2 | 2 | 3 | 5 | 7 | 8 | 8 | 8 | 14 | 19 | 34.7% | ♦ |
| France | 26 | 37 | 72 | 113 | 370 | 1207 | 2967 | 4087 | 4739 | 5678 | 6557 | 15.5% | 2.8% |
| Germany | 2056 | 2899 | 4170 | 6120 | 10566 | 17944 | 25429 | 33033 | 36337 | 38343 | 39698 | 3.5% | 17.2% |
| Greece | 5 | 7 | 9 | 20 | 56 | 206 | 624 | 1536 | 2579 | 2595 | 2606 | 0.4% | 1.1% |
| Italy | 38 | 50 | 120 | 458 | 1181 | 3502 | 12803 | 16450 | 18198 | 18622 | 18922 | 1.6% | 8.2% |
| Netherlands | 45 | 48 | 49 | 53 | 64 | 85 | 143 | 363 | 723 | 1048 | 1405 | 34.1% | 0.6% |
| Norway | 7 | 8 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 13 | 15 | 15.6% | ♦ |
| Portugal | 2 | 4 | 15 | 56 | 99 | 135 | 169 | 228 | 281 | 391 | 454 | 16.1% | 0.2% |
| Romania | – | – | – | – | – | – | 3 | 49 | 1022 | 1293 | 1325 | 2.5% | 0.6% |
| Slovakia | – | – | – | – | – | 145 | 487 | 543 | 588 | 590 | 600 | 1.7% | 0.3% |
| Spain | 55 | 167 | 778 | 3829 | 3848 | 4330 | 4792 | 5104 | 5354 | 5376 | 5432 | 1.0% | 2.4% |
| Sweden | 4 | 5 | 6 | 8 | 9 | 12 | 16 | 24 | 43 | 79 | 130 | 64.2% | 0.1% |
| Switzerland | 27 | 30 | 36 | 48 | 73 | 110 | 211 | 437 | 756 | 1061 | 1361 | 28.3% | 0.6% |
| Turkey | 2 | 3 | 3 | 4 | 5 | 6 | 7 | 12 | 18 | 58 | 266 | 360.5% | 0.1% |
| United Kingdom | 11 | 14 | 18 | 24 | 27 | 95 | 1005 | 1774 | 2892 | 5461 | 9071 | 66.1% | 3.9% |
| Rest of European Union | 25 | 25 | 25 | 29 | 35 | 50 | 163 | 360 | 536 | 698 | 875 | 25.4% | 0.4% |
| Total Europe | 2335 | 3330 | 5371 | 10983 | 17523 | 30998 | 53286 | 70707 | 81505 | 89025 | 96893 | 8.8% | 42.0% |
| Australia | 61 | 70 | 83 | 105 | 188 | 571 | 1377 | 2415 | 3226 | 4130 | 5065 | 22.6% | 2.2% |
| Chile | – | – | – | – | – | – | – | – | 3 | 402 | 848 | 110.9% | 0.4% |
| China | 68 | 80 | 100 | 140 | 300 | 800 | 3500 | 6700 | 17690 | 28330 | 43480 | 53.5% | 18.9% |
| India | 18 | 30 | 31 | 71 | 136 | 177 | 481 | 1176 | 2320 | 3062 | 5062 | 65.3% | 2.2% |
| Israel | 1 | 1 | 2 | 3 | 25 | 70 | 190 | 237 | 481 | 681 | 881 | 29.4% | 0.4% |
| Japan | 1422 | 1709 | 1919 | 2144 | 2627 | 3618 | 4914 | 6701 | 13669 | 23409 | 35409 | 51.3% | 15.4% |
| Malaysia | – | 6 | 7 | 9 | 11 | 13 | 14 | 27 | 79 | 168 | 231 | 37.5% | 0.1% |
| South Africa | – | – | – | – | 12 | 40 | 68 | 75 | 122 | 920 | 1120 | 21.7% | 0.5% |
| South Korea | 14 | 36 | 81 | 357 | 524 | 650 | 729 | 959 | 1489 | 2398 | 3408 | 42.1% | 1.5% |
| Taiwan | – | – | 4 | 9 | 19 | 32 | 102 | 206 | 376 | 610 | 1010 | 65.6% | 0.4% |
| Thailand | 24 | 31 | 33 | 33 | 43 | 49 | 243 | 388 | 824 | 1299 | 1420 | 9.3% | 0.6% |
| Rest of World | 915 | 1043 | 1239 | 1565 | 1799 | 1977 | 2348 | 3019 | 3775 | 5164 | 7416 | 43.6% | 3.2% |
| Total Others | 2522 | 3005 | 3498 | 4436 | 5683 | 7997 | 13965 | 21902 | 44054 | 70572 | 105350 | 49.3% | 45.7% |
| Total World | 5083 | 6671 | 9370 | 16226 | 24514 | 41346 | 71810 | 100818 | 139048 | 179998 | 230606 | 28.1% | 100.0% |

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

Sources: IEA Photovoltaic Power Systems Programme, Solar Power Europe, EurObserver, Bloomberg New Energy Finance and national sources.

Solar PV generation capacity

Gigawatts, cumulative installed capacity



Source: includes data from IEA Photovoltaic Power Systems Programme, EPIA, EurObserver.

Renewable energy – wind

Cumulative installed wind turbine capacity*

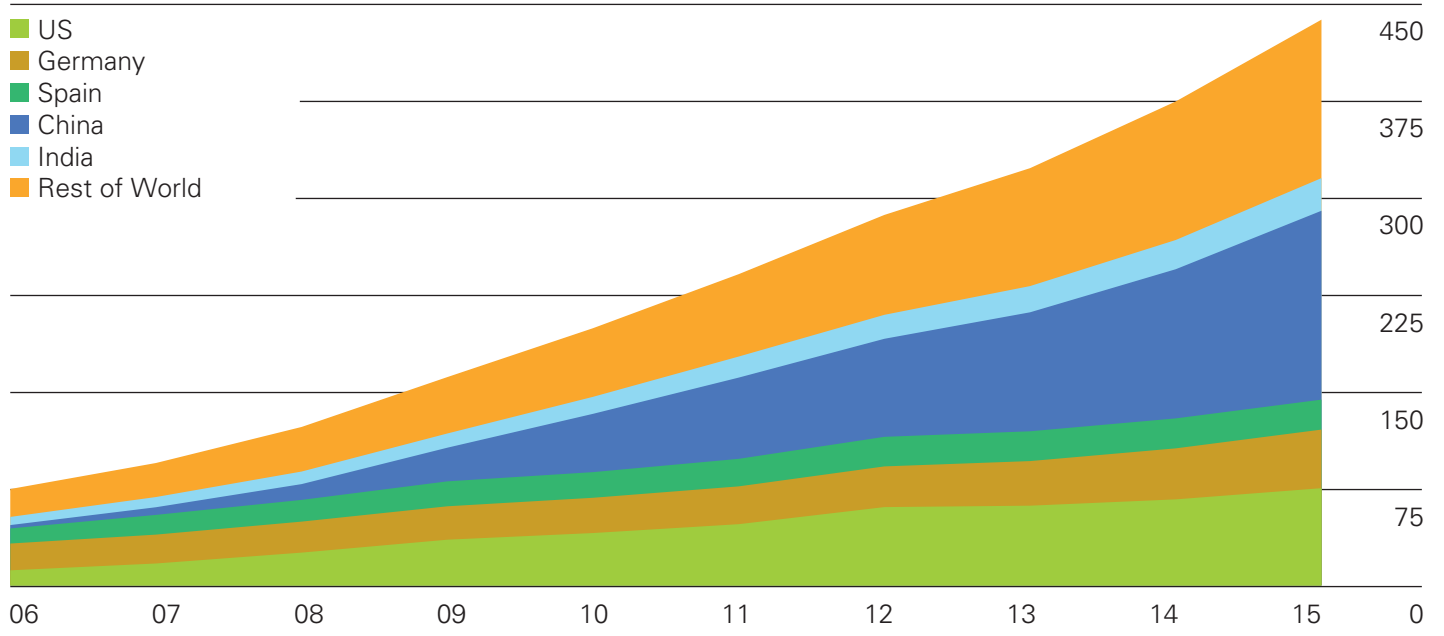
| Megawatts | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Change 2015 over 2014 | 2015 share of total |
|-------------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|---------------------|
| US | 9181 | 11635 | 16879 | 25237 | 35159 | 40274 | 47084 | 60208 | 61292 | 66146 | 74740 | 13.0% | 17.2% |
| Canada | 683 | 1459 | 1845 | 2371 | 3321 | 4011 | 5278 | 6214 | 7813 | 9684 | 11190 | 15.6% | 2.6% |
| Mexico | 3 | 86 | 86 | 332 | 453 | 769 | 1123 | 1512 | 1988 | 2510 | 3224 | 28.4% | 0.7% |
| Total North America | 9867 | 13180 | 18810 | 27940 | 38933 | 45054 | 53485 | 67934 | 71093 | 78340 | 89154 | 13.8% | 20.5% |
| Argentina | 31 | 31 | 31 | 33 | 33 | 33 | 112 | 166 | 242 | 295 | 303 | 2.7% | 0.1% |
| Brazil | 29 | 237 | 247 | 341 | 606 | 931 | 1431 | 2508 | 3466 | 5962 | 8715 | 46.2% | 2.0% |
| Costa Rica | 79 | 79 | 79 | 104 | 129 | 179 | 192 | 207 | 249 | 299 | 369 | 23.4% | 0.1% |
| Other S. & Cent. America | 54 | 56 | 79 | 153 | 321 | 463 | 930 | 1154 | 1663 | 2841 | 3662 | 28.9% | 0.8% |
| Total S. & Cent. America | 193 | 403 | 436 | 631 | 1089 | 1606 | 2665 | 4035 | 5620 | 9397 | 13049 | 38.9% | 3.0% |
| Austria | 820 | 966 | 983 | 997 | 997 | 1013 | 1082 | 1378 | 1661 | 2072 | 2395 | 15.6% | 0.6% |
| Belgium | 177 | 222 | 297 | 385 | 605 | 955 | 1147 | 1444 | 1720 | 1960 | 2230 | 13.8% | 0.5% |
| Bulgaria | – | – | 41 | 113 | 335 | 488 | 582 | 643 | 650 | 660 | 660 | – | 0.2% |
| Denmark | 3087 | 3101 | 3088 | 3159 | 3408 | 3805 | 3927 | 4137 | 4747 | 4778 | 4932 | 3.2% | 1.1% |
| Finland | 85 | 89 | 113 | 113 | 117 | 169 | 178 | 268 | 428 | 611 | 984 | 61.1% | 0.2% |
| France | 775 | 1585 | 2471 | 3671 | 4775 | 5940 | 6811 | 7583 | 8164 | 9337 | 10269 | 10.0% | 2.4% |
| Germany | 18375 | 20568 | 22183 | 23815 | 25662 | 27092 | 29045 | 31264 | 34271 | 39193 | 45018 | 14.9% | 10.4% |
| Greece | 603 | 749 | 850 | 997 | 1155 | 1323 | 1634 | 1749 | 1866 | 1980 | 2152 | 8.7% | 0.5% |
| Hungary | 17 | 60 | 65 | 162 | 229 | 323 | 357 | 357 | 357 | 357 | 357 | – | 0.1% |
| Ireland | 498 | 748 | 807 | 1015 | 1187 | 1449 | 1688 | 1812 | 2100 | 2322 | 2546 | 9.6% | 0.6% |
| Italy | 1713 | 2118 | 2721 | 3731 | 4845 | 5814 | 6936 | 8119 | 8561 | 8703 | 9126 | 4.9% | 2.1% |
| Netherlands | 1221 | 1557 | 1745 | 2222 | 2226 | 2241 | 2309 | 2552 | 2714 | 2876 | 3422 | 19.0% | 0.8% |
| Norway | 275 | 328 | 355 | 385 | 390 | 411 | 487 | 683 | 793 | 841 | 859 | 2.2% | 0.2% |
| Poland | 65 | 170 | 313 | 472 | 849 | 1231 | 1667 | 2547 | 3441 | 3885 | 5150 | 32.6% | 1.2% |
| Portugal | 1087 | 1716 | 2150 | 2829 | 3474 | 3837 | 4214 | 4363 | 4557 | 4683 | 4815 | 2.8% | 1.1% |
| Romania | – | 3 | 15 | 76 | 129 | 470 | 990 | 1913 | 2608 | 2962 | 2985 | 0.8% | 0.7% |
| Spain | 10013 | 11595 | 15155 | 16699 | 19160 | 19715 | 21160 | 22722 | 22898 | 23025 | 23025 | – | 5.3% |
| Sweden | 554 | 571 | 789 | 1024 | 1537 | 2141 | 2904 | 3750 | 4474 | 5524 | 6126 | 10.9% | 1.4% |
| Turkey | 20 | 50 | 147 | 364 | 792 | 1320 | 1729 | 2261 | 2760 | 3630 | 4503 | 24.1% | 1.0% |
| United Kingdom | 1336 | 1955 | 2477 | 3406 | 4422 | 5401 | 6467 | 8899 | 11214 | 12987 | 14191 | 9.3% | 3.3% |
| Other Europe & Eurasia | 160 | 246 | 324 | 338 | 565 | 885 | 1082 | 1557 | 1809 | 2078 | 2337 | 12.4% | 0.5% |
| Total Europe & Eurasia | 40882 | 48397 | 57089 | 65972 | 76859 | 86023 | 96397 | 110001 | 121793 | 134464 | 148082 | 10.1% | 34.1% |
| Iran | 21 | 48 | 74 | 84 | 92 | 90 | 91 | 91 | 131 | 131 | 131 | – | ♦ |
| Other Middle East | 9 | 9 | 9 | 9 | 9 | 11 | 13 | 19 | 19 | 26 | 143 | 450.0% | ♦ |
| Total Middle East | 30 | 57 | 83 | 93 | 101 | 101 | 104 | 110 | 150 | 157 | 274 | 74.5% | 0.1% |
| Egypt | 180 | 231 | 310 | 384 | 552 | 552 | 552 | 552 | 634 | 694 | 694 | – | 0.2% |
| Ethiopia | – | – | – | – | – | – | – | 52 | 171 | 171 | 324 | 89.5% | 0.1% |
| Morocco | 64 | 122 | 124 | 206 | 254 | 263 | 292 | 394 | 495 | 795 | 795 | – | 0.2% |
| South Africa | 3 | 3 | 3 | 8 | 8 | 10 | 10 | 10 | 10 | 570 | 1053 | 84.7% | 0.2% |
| Tunisia | 28 | 28 | 28 | 62 | 160 | 247 | 277 | 277 | 305 | 305 | 305 | – | 0.1% |
| Other Africa | 3 | 2 | 4 | 44 | 41 | 41 | 115 | 156 | 327 | 343 | 343 | – | 0.1% |
| Total Africa | 278 | 386 | 469 | 704 | 1015 | 1113 | 1246 | 1441 | 1942 | 2878 | 3514 | 22.1% | 0.8% |
| Australia | 717 | 796 | 972 | 1587 | 1886 | 2084 | 2476 | 2834 | 3489 | 4056 | 4436 | 9.4% | 1.0% |
| China | 1264 | 2588 | 5875 | 12121 | 25853 | 44781 | 62412 | 75324 | 91413 | 114609 | 145109 | 26.6% | 33.4% |
| India | 4430 | 6270 | 7845 | 9655 | 10926 | 13065 | 16179 | 18420 | 20150 | 22465 | 25088 | 11.7% | 5.8% |
| Japan | 1159 | 1457 | 1681 | 2033 | 2208 | 2429 | 2595 | 2673 | 2722 | 2840 | 3084 | 8.6% | 0.7% |
| New Zealand | 167 | 170 | 321 | 325 | 467 | 495 | 603 | 623 | 623 | 683 | 690 | 1.0% | 0.2% |
| Pakistan | – | – | – | – | – | – | – | 56 | 106 | 256 | 256 | – | 0.1% |
| Philippines | – | – | – | – | – | – | – | – | 66 | 216 | 216 | – | ♦ |
| South Korea | 89 | 194 | 235 | 311 | 311 | 342 | 370 | 446 | 506 | 553 | 778 | 40.7% | 0.2% |
| Taiwan | 24 | 102 | 186 | 250 | 374 | 476 | 523 | 571 | 614 | 633 | 647 | 2.2% | 0.1% |
| Thailand | – | – | – | – | – | 1 | 10 | 112 | 223 | 223 | 223 | – | 0.1% |
| Other Asia Pacific | 72 | 78 | 78 | 164 | 74 | 93 | 113 | 118 | 123 | 123 | 123 | – | ♦ |
| Total Asia Pacific | 7922 | 11655 | 17193 | 26446 | 42099 | 63766 | 85281 | 101177 | 120035 | 146657 | 180650 | 23.2% | 41.6% |
| Total World | 59171 | 74078 | 94080 | 121786 | 160096 | 197663 | 239177 | 284698 | 320633 | 371893 | 434722 | 16.9% | 100.0% |

*End of year.
♦Less than 0.05%.

Sources: Navigant Consulting, Global Wind Energy Council and national sources.

Wind capacity

Gigawatts, cumulative installed capacity



Source: includes data from Navigant Consulting and the Global Wind Energy Council.