

Ⓢ Renewable energy

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Statistical Review
of World Energy
2020 | 69th edition



Renewables consumption*

| Exajoules (input-equivalent) | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Growth rate per annum | | Share 2019 |
|-------------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|-----------------------|--------------|--------------|
| | | | | | | | | | | | | 2019 | 2008-18 | |
| Total North America | 2.66 | 3.06 | 3.43 | 3.71 | 4.16 | 4.48 | 4.84 | 5.47 | 5.92 | 6.22 | 6.70 | 7.6% | 10.3% | 23.1% |
| Canada | 0.18 | 0.22 | 0.25 | 0.28 | 0.29 | 0.30 | 0.44 | 0.49 | 0.49 | 0.50 | 0.52 | 4.0% | 13.5% | 1.8% |
| Mexico | 0.08 | 0.09 | 0.09 | 0.10 | 0.11 | 0.13 | 0.16 | 0.17 | 0.18 | 0.22 | 0.35 | 59.5% | 10.3% | 1.2% |
| US | 2.39 | 2.76 | 3.09 | 3.33 | 3.76 | 4.04 | 4.25 | 4.81 | 5.24 | 5.50 | 5.83 | 5.9% | 10.1% | 20.1% |
| Argentina | 0.02 | 0.04 | 0.05 | 0.07 | 0.07 | 0.08 | 0.08 | 0.08 | 0.09 | 0.10 | 0.14 | 38.3% | 19.8% | 0.5% |
| Brazil | 0.79 | 0.92 | 0.88 | 0.90 | 1.05 | 1.22 | 1.45 | 1.49 | 1.63 | 1.83 | 2.02 | 10.4% | 9.9% | 7.0% |
| Chile | 0.03 | 0.04 | 0.04 | 0.06 | 0.07 | 0.06 | 0.08 | 0.11 | 0.13 | 0.16 | 0.19 | 20.4% | 16.6% | 0.7% |
| Colombia | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 1.7% | 13.7% | 0.1% |
| Ecuador | † | † | † | † | † | † | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 26.9% | 11.1% | ♦ |
| Peru | 0.01 | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.05 | 0.05 | 10.6% | 18.6% | 0.2% |
| Trinidad & Tobago | † | † | † | † | † | † | † | † | † | † | † | -0.4% | -15.3% | ♦ |
| Venezuela | - | † | † | † | † | † | † | † | † | † | † | 1688.5% | - | ♦ |
| Other S. & Cent. America | 0.09 | 0.10 | 0.11 | 0.13 | 0.14 | 0.16 | 0.20 | 0.23 | 0.24 | 0.27 | 0.29 | 7.1% | 12.6% | 1.0% |
| Total S. & Cent. America | 0.96 | 1.13 | 1.11 | 1.19 | 1.37 | 1.57 | 1.87 | 1.97 | 2.15 | 2.44 | 2.73 | 11.9% | 10.9% | 9.4% |
| Austria | 0.08 | 0.08 | 0.08 | 0.09 | 0.10 | 0.11 | 0.12 | 0.12 | 0.14 | 0.13 | 0.14 | 8.4% | 5.4% | 0.5% |
| Belgium | 0.05 | 0.07 | 0.09 | 0.11 | 0.12 | 0.13 | 0.14 | 0.14 | 0.16 | 0.17 | 0.19 | 8.9% | 16.2% | 0.6% |
| Czech Republic | 0.03 | 0.04 | 0.06 | 0.07 | 0.07 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 2.7% | 14.7% | 0.3% |
| Finland | 0.09 | 0.11 | 0.12 | 0.12 | 0.13 | 0.14 | 0.14 | 0.14 | 0.16 | 0.18 | 0.18 | 0.8% | 5.4% | 0.6% |
| France | 0.22 | 0.24 | 0.28 | 0.33 | 0.35 | 0.38 | 0.44 | 0.46 | 0.49 | 0.54 | 0.61 | 13.9% | 10.9% | 2.1% |
| Germany | 0.83 | 0.91 | 1.11 | 1.25 | 1.31 | 1.43 | 1.66 | 1.64 | 1.88 | 1.97 | 2.12 | 7.5% | 9.3% | 7.3% |
| Greece | 0.03 | 0.03 | 0.04 | 0.06 | 0.08 | 0.08 | 0.09 | 0.09 | 0.10 | 0.10 | 0.11 | 10.0% | 14.4% | 0.4% |
| Hungary | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.05 | 14.4% | 3.8% | 0.2% |
| Italy | 0.24 | 0.30 | 0.40 | 0.53 | 0.60 | 0.61 | 0.63 | 0.65 | 0.67 | 0.64 | 0.64 | -1.4% | 13.2% | 2.2% |
| Netherlands | 0.12 | 0.11 | 0.13 | 0.13 | 0.13 | 0.12 | 0.14 | 0.14 | 0.17 | 0.19 | 0.23 | 17.7% | 6.7% | 0.8% |
| Norway | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.04 | 0.05 | 0.05 | 0.07 | 27.6% | 13.0% | 0.2% |
| Poland | 0.09 | 0.10 | 0.13 | 0.17 | 0.17 | 0.19 | 0.22 | 0.21 | 0.22 | 0.21 | 0.25 | 15.2% | 13.4% | 0.9% |
| Portugal | 0.10 | 0.13 | 0.13 | 0.14 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.18 | 8.0% | 7.4% | 0.6% |
| Romania | 0.01 | 0.01 | 0.02 | 0.03 | 0.05 | 0.07 | 0.09 | 0.09 | 0.10 | 0.09 | 0.10 | 8.2% | 34.1% | 0.3% |
| Spain | 0.46 | 0.57 | 0.59 | 0.70 | 0.72 | 0.69 | 0.67 | 0.66 | 0.68 | 0.70 | 0.75 | 7.3% | 6.3% | 2.6% |
| Sweden | 0.14 | 0.17 | 0.19 | 0.21 | 0.22 | 0.24 | 0.29 | 0.30 | 0.33 | 0.32 | 0.36 | 13.4% | 9.3% | 1.2% |
| Switzerland | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 7.0% | 12.9% | 0.2% |
| Turkey | 0.02 | 0.04 | 0.05 | 0.07 | 0.11 | 0.12 | 0.15 | 0.21 | 0.27 | 0.34 | 0.41 | 19.3% | 40.4% | 1.4% |
| Ukraine | † | † | † | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.05 | 92.4% | 23.5% | 0.2% |
| United Kingdom | 0.23 | 0.26 | 0.32 | 0.37 | 0.49 | 0.59 | 0.74 | 0.74 | 0.88 | 0.99 | 1.08 | 9.1% | 17.8% | 3.7% |
| Other Europe | 0.20 | 0.24 | 0.29 | 0.33 | 0.36 | 0.39 | 0.43 | 0.43 | 0.49 | 0.51 | 0.56 | 9.7% | 10.6% | 1.9% |
| Total Europe | 3.01 | 3.49 | 4.12 | 4.78 | 5.24 | 5.62 | 6.30 | 6.40 | 7.12 | 7.50 | 8.18 | 9.2% | 10.9% | 28.2% |
| Azerbaijan | † | † | - | - | † | † | † | † | † | † | † | 27.7% | - | ♦ |
| Belarus | † | † | † | † | † | † | † | † | † | † | † | 3.2% | 19.6% | ♦ |
| Kazakhstan | - | - | † | † | † | † | † | † | † | † | 0.01 | 47.3% | - | ♦ |
| Russian Federation | † | 0.01 | 0.01 | † | † | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 31.0% | 10.2% | 0.1% |
| Turkmenistan | - | † | † | † | † | † | † | † | † | † | † | -0.4% | - | ♦ |
| Uzbekistan | - | - | - | - | - | - | - | - | † | † | † | 132.5% | - | ♦ |
| Other CIS | † | † | † | † | † | † | † | † | † | † | † | 16.5% | 39.8% | ♦ |
| Total CIS | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.03 | 29.4% | 15.9% | 0.1% |
| Iran | † | † | † | † | † | † | † | † | † | † | † | 12.1% | 9.0% | ♦ |
| Iraq | - | - | - | - | † | † | † | † | † | † | † | -0.4% | - | ♦ |
| Israel | † | † | † | † | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.03 | 64.3% | 40.9% | 0.1% |
| Kuwait | - | - | - | - | † | † | † | † | † | † | † | 91.4% | - | ♦ |
| Oman | - | - | - | - | † | † | † | † | † | † | † | -0.4% | - | ♦ |
| Qatar | - | - | † | † | † | † | † | † | † | † | † | -0.4% | - | ♦ |
| Saudi Arabia | † | † | † | † | † | † | † | † | † | † | 0.02 | 365.6% | 89.2% | 0.1% |
| United Arab Emirates | † | † | † | † | † | † | † | † | 0.01 | 0.01 | 0.04 | 214.8% | - | 0.1% |
| Other Middle East | † | † | † | † | † | † | † | 0.01 | 0.02 | 0.03 | 0.03 | 8.9% | 68.3% | 0.1% |
| Total Middle East | † | † | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.04 | 0.05 | 0.07 | 0.12 | 77.1% | 38.8% | 0.4% |
| Algeria | - | † | † | † | † | † | † | † | † | 0.01 | 0.01 | 1.6% | - | ♦ |
| Egypt | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.03 | 0.06 | 82.0% | 13.6% | 0.2% |
| Morocco | † | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 | 0.04 | 0.06 | 30.6% | 31.2% | 0.2% |
| South Africa | † | † | † | 0.01 | 0.01 | 0.02 | 0.06 | 0.07 | 0.10 | 0.11 | 0.12 | 3.1% | 37.2% | 0.4% |
| Other Africa | 0.03 | 0.04 | 0.04 | 0.04 | 0.05 | 0.06 | 0.08 | 0.08 | 0.09 | 0.10 | 0.17 | 72.6% | 13.5% | 0.6% |
| Total Africa | 0.05 | 0.06 | 0.06 | 0.07 | 0.08 | 0.12 | 0.18 | 0.21 | 0.25 | 0.29 | 0.41 | 39.3% | 20.7% | 1.4% |
| Australia | 0.12 | 0.15 | 0.18 | 0.19 | 0.21 | 0.23 | 0.25 | 0.26 | 0.28 | 0.35 | 0.42 | 22.0% | 13.1% | 1.5% |
| Bangladesh | † | † | † | † | † | † | † | † | † | † | † | 39.0% | 32.1% | ♦ |
| China | 0.52 | 0.77 | 1.05 | 1.36 | 1.80 | 2.24 | 2.62 | 3.44 | 4.61 | 5.81 | 6.63 | 14.2% | 33.4% | 22.9% |
| China Hong Kong SAR | † | † | † | † | † | † | † | † | † | † | † | 13.4% | 64.1% | ♦ |
| India | 0.27 | 0.32 | 0.39 | 0.46 | 0.52 | 0.58 | 0.60 | 0.73 | 0.90 | 1.10 | 1.21 | 9.4% | 17.1% | 4.2% |
| Indonesia | 0.09 | 0.10 | 0.10 | 0.11 | 0.12 | 0.15 | 0.12 | 0.20 | 0.20 | 0.25 | 0.39 | 54.2% | 12.2% | 1.4% |
| Japan | 0.25 | 0.29 | 0.30 | 0.33 | 0.39 | 0.49 | 0.64 | 0.63 | 0.76 | 0.89 | 1.10 | 24.1% | 13.3% | 3.8% |
| Malaysia | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 12.5% | 11.5% | 0.1% |
| New Zealand | 0.07 | 0.08 | 0.08 | 0.08 | 0.08 | 0.09 | 0.10 | 0.10 | 0.10 | 0.09 | 0.10 | 2.4% | 5.5% | 0.3% |
| Pakistan | † | † | † | † | † | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 33.0% | 123.2% | 0.2% |
| Philippines | 0.11 | 0.10 | 0.10 | 0.11 | 0.11 | 0.11 | 0.13 | 0.15 | 0.14 | 0.15 | 0.15 | 2.7% | 3.4% | 0.5% |
| Singapore | † | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 5.5% | 5.0% | ♦ |
| South Korea | 0.03 | 0.05 | 0.05 | 0.05 | 0.07 | 0.09 | 0.12 | 0.15 | 0.19 | 0.24 | 0.29 | 19.3% | 27.2% | 1.0% |
| Sri Lanka | † | † | † | † | † | † | † | † | 0.01 | 0.01 | 0.01 | 7.0% | 47.0% | ♦ |
| Taiwan | 0.02 | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.06 | 0.07 | 24.9% | 9.6% | 0.2% |
| Thailand | 0.05 | 0.06 | 0.07 | 0.09 | 0.12 | 0.15 | 0.16 | 0.18 | 0.21 | 0.24 | 0.29 | 18.8% | 19.5% | 1.0% |
| Vietnam | † | † | † | † | † | † | † | † | † | † | † | 845.8% | 23.6% | 0.1% |
| Other Asia Pacific | † | † | † | † | † | † | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 30.6% | 25.3% | ♦ |
| Total Asia Pacific | 1.56 | 1.95 | 2.38 | 2.84 | 3.49 | 4.21 | 4.85 | 5.96 | 7.53 | 9.29 | 10.81 | 16.5% | 22.2% | 37.3% |
| Total World | 8.24 | 9.70 | 11.12 | 12.60 | 14.36 | 16.03 | 18.08 | | | | | | | |

Renewables: Renewable power generation*

| Terawatt-hours | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Growth rate per annum | | Share 2019 |
|-------------------------------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|-----------------------|--------------|--------------|
| | | | | | | | | | | | | 2019 | 2008-18 | |
| Canada | 15.7 | 19.3 | 21.0 | 23.1 | 23.7 | 24.7 | 39.8 | 45.6 | 45.9 | 47.1 | 49.3 | 4.7% | 14.8% | 1.8% |
| Mexico | 8.2 | 8.7 | 9.1 | 10.5 | 11.6 | 13.8 | 16.4 | 18.0 | 19.5 | 23.3 | 37.8 | 62.4% | 11.0% | 1.3% |
| US | 149.9 | 173.7 | 201.9 | 228.3 | 266.2 | 296.8 | 315.8 | 367.4 | 417.7 | 451.6 | 489.8 | 8.5% | 13.2% | 17.5% |
| Total North America | 173.7 | 201.7 | 231.9 | 261.9 | 301.5 | 335.3 | 372.1 | 431.0 | 483.2 | 522.0 | 576.9 | 10.5% | 13.2% | 20.6% |
| Argentina | 1.8 | 2.0 | 2.2 | 2.8 | 2.9 | 2.9 | 3.0 | 2.5 | 3.0 | 4.0 | 8.2 | 104.2% | 8.7% | 0.3% |
| Brazil | 24.1 | 34.1 | 35.3 | 40.8 | 47.6 | 59.3 | 71.6 | 84.9 | 96.1 | 106.3 | 117.7 | 10.7% | 17.6% | 4.2% |
| Chile | 3.5 | 3.7 | 4.7 | 6.4 | 7.4 | 6.9 | 9.0 | 11.7 | 15.0 | 17.9 | 21.6 | 20.9% | 17.3% | 0.8% |
| Colombia | 1.1 | 1.1 | 1.4 | 1.5 | 1.4 | 1.8 | 1.9 | 2.0 | 2.0 | 2.2 | 2.2 | 2.0% | 14.5% | 0.1% |
| Ecuador | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 | 0.5 | 0.5 | 0.7 | 29.4% | 10.0% | ♦ |
| Peru | 0.5 | 0.7 | 0.7 | 0.7 | 1.2 | 1.7 | 1.7 | 1.9 | 2.4 | 3.5 | 4.0 | 15.2% | 22.4% | 0.1% |
| Trinidad & Tobago | † | † | † | † | † | † | † | † | † | † | † | – | -14.8% | ♦ |
| Venezuela | – | † | † | † | † | † | † | † | † | † | 0.2 | 1695.2% | – | ♦ |
| Other S. & Cent. America | 8.1 | 9.1 | 9.6 | 11.7 | 13.1 | 15.7 | 19.7 | 22.4 | 23.8 | 27.5 | 29.6 | 7.7% | 14.2% | 1.1% |
| Total S. & Cent. America | 39.2 | 51.0 | 54.2 | 64.3 | 74.0 | 88.9 | 107.5 | 126.2 | 142.8 | 161.9 | 184.1 | 13.7% | 16.6% | 6.6% |
| Austria | 6.3 | 6.6 | 6.6 | 7.4 | 8.4 | 9.0 | 10.3 | 11.0 | 12.8 | 12.3 | 13.6 | 10.2% | 6.9% | 0.5% |
| Belgium | 5.1 | 6.2 | 8.2 | 10.1 | 11.3 | 12.0 | 14.2 | 14.0 | 15.6 | 16.8 | 18.6 | 10.5% | 15.4% | 0.7% |
| Czech Republic | 2.2 | 3.1 | 5.2 | 6.0 | 6.5 | 7.3 | 7.6 | 7.4 | 7.7 | 7.8 | 7.9 | 1.7% | 16.3% | 0.3% |
| Finland | 9.0 | 11.3 | 11.7 | 11.6 | 12.7 | 12.8 | 13.7 | 14.5 | 16.1 | 18.1 | 18.4 | 1.4% | 5.4% | 0.7% |
| France | 12.7 | 15.5 | 19.6 | 24.3 | 26.2 | 29.0 | 35.0 | 37.2 | 41.5 | 46.9 | 54.9 | 17.0% | 16.5% | 2.0% |
| Germany | 76.1 | 84.2 | 106.4 | 121.3 | 129.3 | 142.9 | 169.8 | 169.1 | 196.2 | 206.8 | 224.1 | 8.4% | 11.0% | 8.0% |
| Greece | 2.8 | 3.1 | 4.1 | 5.7 | 8.0 | 7.7 | 8.8 | 9.4 | 9.8 | 10.4 | 11.6 | 11.1% | 15.6% | 0.4% |
| Hungary | 2.7 | 2.8 | 2.5 | 2.4 | 2.6 | 2.8 | 3.0 | 3.0 | 3.3 | 3.5 | 4.3 | 20.9% | 5.1% | 0.2% |
| Italy | 20.1 | 25.8 | 37.1 | 50.3 | 59.2 | 62.1 | 63.4 | 65.6 | 67.7 | 65.6 | 67.6 | 3.0% | 14.8% | 2.4% |
| Netherlands | 10.7 | 11.1 | 12.3 | 12.4 | 12.1 | 11.6 | 13.6 | 14.6 | 17.4 | 18.8 | 22.3 | 18.4% | 7.2% | 0.8% |
| Norway | 1.2 | 1.2 | 1.6 | 1.9 | 2.3 | 2.5 | 2.8 | 2.4 | 3.1 | 4.2 | 5.9 | 41.9% | 12.2% | 0.2% |
| Poland | 6.3 | 8.0 | 10.8 | 14.8 | 14.6 | 17.7 | 20.9 | 20.7 | 21.6 | 19.6 | 23.1 | 17.6% | 16.0% | 0.8% |
| Portugal | 10.0 | 12.2 | 12.6 | 13.8 | 15.7 | 16.0 | 15.7 | 16.5 | 16.7 | 17.0 | 18.6 | 9.1% | 8.0% | 0.7% |
| Romania | † | 0.4 | 1.6 | 2.9 | 5.2 | 6.5 | 9.6 | 8.9 | 9.8 | 8.5 | 9.0 | 5.8% | 76.5% | 0.3% |
| Spain | 47.4 | 54.6 | 55.6 | 66.4 | 74.2 | 71.1 | 68.9 | 68.2 | 69.5 | 69.8 | 77.5 | 11.0% | 6.1% | 2.8% |
| Sweden | 14.0 | 15.7 | 17.6 | 19.4 | 21.3 | 22.0 | 27.1 | 27.1 | 29.9 | 28.9 | 33.6 | 16.1% | 8.9% | 1.2% |
| Switzerland | 1.3 | 1.4 | 1.6 | 1.9 | 2.2 | 2.6 | 2.8 | 3.2 | 3.7 | 3.9 | 4.1 | 6.9% | 11.7% | 0.1% |
| Turkey | 2.2 | 3.9 | 5.8 | 7.4 | 9.8 | 12.0 | 16.5 | 23.0 | 29.0 | 37.8 | 45.3 | 19.8% | 41.8% | 1.6% |
| Ukraine | 0.2 | 0.2 | 0.3 | 0.8 | 1.3 | 1.7 | 1.7 | 1.6 | 1.9 | 2.5 | 5.0 | 100.2% | 23.3% | 0.2% |
| United Kingdom | 20.0 | 22.6 | 29.5 | 35.9 | 48.5 | 58.6 | 77.1 | 77.6 | 92.9 | 104.5 | 113.4 | 8.5% | 20.1% | 4.0% |
| Other Europe | 20.0 | 23.6 | 28.8 | 32.0 | 35.3 | 39.3 | 43.0 | 43.4 | 50.6 | 52.4 | 57.9 | 10.5% | 11.0% | 2.1% |
| Total Europe | 270.3 | 313.6 | 379.5 | 448.7 | 506.8 | 547.2 | 625.3 | 638.4 | 716.7 | 756.3 | 836.6 | 10.6% | 12.2% | 29.8% |
| Azerbaijan | † | † | – | – | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 28.1% | – | ♦ |
| Belarus | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 | 0.3 | 4.3% | 25.4% | ♦ |
| Kazakhstan | – | – | † | † | † | † | 0.2 | 0.4 | 0.4 | 0.5 | 0.8 | 49.6% | – | ♦ |
| Russian Federation | 0.5 | 0.5 | 0.6 | 0.5 | 0.5 | 0.8 | 1.0 | 1.1 | 1.2 | 1.4 | 1.8 | 31.5% | 10.9% | 0.1% |
| Turkmenistan | – | † | † | † | † | † | † | † | † | † | † | – | – | ♦ |
| Uzbekistan | – | – | – | – | – | – | – | † | † | † | † | 133.3% | – | ♦ |
| Other CIS | † | † | † | † | † | † | † | † | † | 0.1 | 0.1 | 16.9% | 40.6% | ♦ |
| Total CIS | 0.6 | 0.6 | 0.7 | 0.6 | 0.7 | 1.0 | 1.4 | 1.8 | 2.1 | 2.5 | 3.3 | 31.1% | 16.8% | 0.1% |
| Iran | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.5 | 0.6 | 12.5% | 9.6% | ♦ |
| Iraq | – | – | – | – | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | – | – | ♦ |
| Israel | 0.1 | 0.1 | 0.3 | 0.5 | 0.5 | 0.9 | 1.2 | 1.7 | 1.7 | 1.7 | 2.9 | 65.9% | 59.8% | 0.1% |
| Kuwait | – | – | – | – | † | † | † | † | 0.1 | 0.1 | 0.2 | 92.2% | – | ♦ |
| Oman | – | – | – | – | † | † | † | † | † | † | † | – | – | ♦ |
| Qatar | – | – | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | – | – | ♦ |
| Saudi Arabia | † | † | † | † | † | † | 0.1 | 0.1 | 0.2 | 0.4 | 1.8 | 367.4% | 90.4% | 0.1% |
| United Arab Emirates | † | † | † | † | 0.1 | 0.3 | 0.3 | 0.3 | 0.8 | 1.3 | 4.2 | 216.0% | – | 0.1% |
| Other Middle East | † | † | † | † | † | 0.1 | 0.3 | 1.5 | 2.2 | 3.3 | 3.6 | 9.3% | 69.3% | 0.1% |
| Total Middle East | 0.3 | 0.4 | 0.7 | 0.9 | 1.1 | 1.8 | 2.5 | 4.1 | 5.5 | 7.5 | 13.3 | 78.0% | 41.7% | 0.5% |
| Algeria | – | † | † | † | † | 0.1 | 0.1 | 0.3 | 0.5 | 0.6 | 0.6 | 2.0% | – | ♦ |
| Egypt | 1.0 | 1.4 | 1.7 | 1.8 | 1.6 | 1.2 | 1.9 | 2.6 | 2.7 | 3.5 | 6.5 | 82.7% | 14.3% | 0.2% |
| Morocco | 0.4 | 0.7 | 0.7 | 0.7 | 1.2 | 1.9 | 2.5 | 3.4 | 3.5 | 4.8 | 6.3 | 31.1% | 32.0% | 0.2% |
| South Africa | 0.5 | 0.5 | 0.5 | 0.5 | 0.8 | 2.6 | 6.2 | 7.9 | 10.6 | 12.3 | 12.6 | 3.0% | 37.7% | 0.5% |
| Other Africa | 3.3 | 3.8 | 3.9 | 4.5 | 5.2 | 6.8 | 8.8 | 9.2 | 9.7 | 11.0 | 19.1 | 73.4% | 14.1% | 0.7% |
| Total Africa | 5.3 | 6.3 | 6.9 | 7.6 | 8.8 | 12.5 | 19.6 | 23.5 | 27.0 | 32.2 | 45.1 | 40.0% | 21.3% | 1.6% |
| Australia | 7.5 | 8.4 | 11.1 | 13.2 | 16.4 | 18.3 | 21.7 | 24.2 | 25.7 | 32.2 | 41.1 | 27.3% | 16.0% | 1.5% |
| Bangladesh | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 39.5% | 32.9% | ♦ |
| China | 48.8 | 75.0 | 104.3 | 136.8 | 183.8 | 229.5 | 279.1 | 369.5 | 502.0 | 636.4 | 732.3 | 15.1% | 36.6% | 26.1% |
| China Hong Kong SAR | † | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 10.8% | 62.0% | ♦ |
| India | 28.0 | 33.9 | 41.9 | 49.5 | 55.9 | 63.0 | 65.1 | 79.8 | 99.2 | 122.8 | 134.9 | 9.8% | 17.9% | 4.8% |
| Indonesia | 9.3 | 9.4 | 9.5 | 9.6 | 9.5 | 10.2 | 10.3 | 11.0 | 13.1 | 14.6 | 16.0 | 9.4% | 5.7% | 0.6% |
| Japan | 26.8 | 29.7 | 31.0 | 34.2 | 41.2 | 52.2 | 68.2 | 68.1 | 81.9 | 96.8 | 121.2 | 25.2% | 13.7% | 4.3% |
| Malaysia | 1.4 | 1.3 | 1.5 | 1.5 | 1.2 | 0.9 | 1.0 | 1.1 | 1.1 | 1.3 | 1.7 | 29.3% | 5.0% | 0.1% |
| New Zealand | 6.9 | 8.1 | 8.6 | 8.8 | 9.0 | 10.1 | 10.8 | 10.8 | 10.6 | 10.5 | 10.8 | 2.7% | 6.2% | 0.4% |
| Pakistan | † | † | † | 0.1 | 0.5 | 1.0 | 1.7 | 2.8 | 4.0 | 5.2 | 6.9 | 33.5% | 124.5% | 0.2% |
| Philippines | 10.4 | 10.0 | 10.1 | 10.5 | 9.9 | 10.7 | 12.3 | 13.9 | 13.6 | 13.9 | 14.3 | 2.4% | 2.6% | 0.5% |
| Singapore | 0.5 | 0.6 | 0.6 | 0.6 | 0.7 | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 1.0 | 5.9% | 5.6% | ♦ |
| South Korea | 2.6 | 3.3 | 3.7 | 4.2 | 5.7 | 7.7 | 11.0 | 14.0 | 19.0 | 23.9 | 29.2 | 22.2% | 31.7% | 1.0% |
| Sri Lanka | † | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 | 0.4 | 0.5 | 0.7 | 0.8 | 0.8 | 7.4% | 47.9% | ♦ |
| Taiwan | 2.5 | 2.9 | 3.4 | 3.4 | 3.8 | 4.0 | 4.3 | 4.5 | 5.3 | 6.4 | 8.0 | 25.3% | 10.2% | 0.3% |
| Thailand | 2.3 | 3.4 | 4.1 | 5.2 | 7.2 | 9.0 | 10.0 | 12.5 | 14.9 | 17.8 | 21.4 | 20.2% | 23.4% | 0.8% |
| Vietnam | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.3 | 0.4 | 0.5 | 4.7 | 849.3% | 24.3% | 0.2% |
| Other Asia Pacific | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.6 | 0.7 | 0.9 | 1.1 | 1.4 | 31.1% | 26.1% | 0.1% |
| Total Asia Pacific | 147.3 | 186.4 | 230.5 | 278.4 | 346.0 | 418.6 | 498.2 | 614.9 | 793.5 | 985.5 | 1146.2 | 16.3% | 23.6% | 40.9% |
| Total World | 636.7</ | | | | | | | | | | | | | |

Renewable energy: Generation by source*

| Terawatt-hours | | | | | | | | | 2019 Growth rate | | | |
|-------------------------------------|---------------|--------------|-------------------|---------------|---------------|--------------|-------------------|---------------|------------------|--------------|-------------------|----------------|
| | Wind | Solar | Other renewables† | 2018 Total | Wind | Solar | Other renewables‡ | 2019 Total | Wind | Solar | Other renewables‡ | Total |
| Canada | 33.2 | 3.9 | 10.0 | 47.1 | 34.2 | 4.3 | 10.8 | 49.3 | 3.0% | 11.9% | 7.7% | 4.7% |
| Mexico | 13.1 | 3.2 | 7.0 | 23.3 | 17.6 | 12.4 | 7.8 | 37.8 | 34.5% | 291.2% | 10.8% | 62.4% |
| US | 275.4 | 94.3 | 81.9 | 451.6 | 303.1 | 108.4 | 78.3 | 489.8 | 10.1% | 14.9% | -4.4% | 8.5% |
| Total North America | 321.7 | 101.3 | 98.9 | 522.0 | 354.9 | 125.1 | 96.9 | 576.9 | 10.3% | 23.5% | -2.1% | 10.5% |
| Argentina | 1.4 | 0.1 | 2.5 | 4.0 | 5.0 | 0.8 | 2.4 | 8.2 | 253.6% | 639.6% | -3.8% | 104.2% |
| Brazil | 48.5 | 3.5 | 54.4 | 106.3 | 55.8 | 5.6 | 56.3 | 117.7 | 15.2% | 60.7% | 3.4% | 10.7% |
| Chile | 3.6 | 5.1 | 9.2 | 17.9 | 5.3 | 6.3 | 10.0 | 21.6 | 47.7% | 23.1% | 9.1% | 20.9% |
| Colombia | 0.1 | † | 2.1 | 2.2 | 0.1 | 0.1 | 2.0 | 2.2 | 7.4% | 925.6% | -3.4% | 2.0% |
| Ecuador | 0.1 | † | 0.4 | 0.5 | 0.1 | 0.2 | 0.5 | 0.7 | 6.6% | 337.1% | 6.3% | 29.4% |
| Peru | 1.5 | 0.7 | 1.2 | 3.5 | 1.6 | 0.8 | 1.6 | 4.0 | 9.6% | 2.2% | 29.7% | 15.2% |
| Trinidad & Tobago | - | † | - | † | - | † | - | † | - | - | - | - |
| Venezuela | - | † | - | † | 0.1 | † | - | 0.2 | - | 33.0% | - | 1695.2% |
| Other S. & Cent. America | 10.6 | 3.2 | 13.6 | 27.5 | 11.1 | 3.9 | 14.6 | 29.6 | 4.2% | 19.9% | 7.4% | 7.7% |
| Total S. & Cent. America | 65.8 | 12.7 | 83.4 | 161.9 | 79.2 | 17.6 | 87.4 | 184.1 | 20.4% | 38.3% | 4.7% | 13.7% |
| Austria | 6.0 | 1.4 | 4.9 | 12.3 | 7.4 | 1.4 | 4.8 | 13.6 | 23.3% | -6.0% | -1.4% | 10.2% |
| Belgium | 7.5 | 3.9 | 5.5 | 16.8 | 9.5 | 3.9 | 5.1 | 18.6 | 27.7% | 1.1% | -6.3% | 10.5% |
| Czech Republic | 0.6 | 2.3 | 4.8 | 7.8 | 0.7 | 2.3 | 4.9 | 7.9 | 14.9% | -2.5% | 2.0% | 1.7% |
| Finland | 5.8 | 0.1 | 12.2 | 18.1 | 6.0 | 0.2 | 12.2 | 18.4 | 2.5% | 97.5% | 0.1% | 1.4% |
| France | 28.1 | 10.3 | 8.5 | 46.9 | 34.5 | 11.7 | 8.7 | 54.9 | 22.8% | 13.7% | 2.1% | 17.0% |
| Germany | 110.0 | 45.8 | 51.0 | 206.8 | 126.0 | 47.5 | 50.6 | 224.1 | 14.6% | 3.8% | -0.9% | 8.4% |
| Greece | 6.3 | 3.8 | 0.3 | 10.4 | 7.3 | 4.0 | 0.3 | 11.6 | 15.5% | 4.5% | 2.2% | 11.1% |
| Hungary | 0.6 | 0.6 | 2.3 | 3.5 | 0.7 | 1.4 | 2.1 | 4.3 | 19.6% | 123.2% | -6.4% | 20.9% |
| Italy | 17.7 | 22.7 | 25.3 | 65.6 | 20.1 | 24.3 | 23.2 | 67.6 | 13.2% | 7.4% | -8.0% | 3.0% |
| Netherlands | 10.6 | 3.7 | 4.6 | 18.8 | 11.5 | 5.2 | 5.6 | 22.3 | 8.5% | 40.5% | 23.7% | 18.4% |
| Norway | 3.9 | 0.1 | 0.2 | 4.2 | 5.5 | 0.1 | 0.3 | 5.9 | 42.8% | 32.2% | 27.6% | 41.9% |
| Poland | 12.8 | 0.3 | 6.5 | 19.6 | 15.0 | 0.7 | 7.3 | 23.1 | 17.5% | 137.7% | 12.2% | 17.6% |
| Portugal | 12.6 | 1.0 | 3.4 | 17.0 | 13.7 | 1.3 | 3.5 | 18.6 | 8.9% | 26.9% | 4.8% | 9.1% |
| Romania | 6.3 | 1.8 | 0.4 | 8.5 | 6.7 | 1.7 | 0.5 | 9.0 | 6.7% | -2.1% | 24.6% | 5.8% |
| Spain | 50.9 | 12.7 | 6.2 | 69.8 | 56.2 | 15.0 | 6.3 | 77.5 | 10.4% | 18.0% | 1.7% | 11.0% |
| Sweden | 16.6 | 0.4 | 11.9 | 28.9 | 19.9 | 0.6 | 13.1 | 33.6 | 19.6% | 50.1% | 10.1% | 16.1% |
| Switzerland | 0.1 | 1.9 | 1.8 | 3.9 | 0.1 | 2.3 | 1.8 | 4.1 | - | 16.3% | -2.7% | 6.9% |
| Turkey | 19.9 | 7.8 | 10.1 | 37.8 | 21.7 | 10.9 | 12.7 | 45.3 | 8.8% | 40.0% | 26.1% | 19.8% |
| Ukraine | 1.2 | 1.1 | 0.2 | 2.5 | 1.9 | 2.9 | 0.2 | 5.0 | 58.6% | 162.8% | 9.5% | 100.2% |
| United Kingdom | 56.9 | 12.9 | 34.8 | 104.5 | 64.1 | 12.7 | 36.6 | 113.4 | 12.7% | -1.4% | 5.1% | 8.5% |
| Other Europe | 0.6 | 0.3 | 0.2 | 1.1 | 1.5 | 0.3 | 0.2 | 2.0 | 138.7% | 13.9% | 16.1% | 86.6% |
| Total Europe | 402.8 | 138.6 | 215.0 | 756.3 | 461.6 | 154.7 | 220.3 | 836.6 | 14.6% | 11.6% | 2.5% | 10.6% |
| Azerbaijan | 0.1 | † | 0.1 | 0.2 | 0.1 | † | 0.1 | 0.3 | 63.8% | 11.6% | - | 28.1% |
| Belarus | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 | 0.1 | 0.1 | 0.3 | 7.4% | 1.5% | 4.5% | 4.3% |
| Kazakhstan | 0.4 | 0.1 | † | 0.5 | 0.5 | 0.3 | † | 0.8 | 28.7% | 105.8% | 110.6% | 49.6% |
| Russian Federation | 0.2 | 0.6 | 0.5 | 1.4 | 0.3 | 1.0 | 0.5 | 1.8 | 32.7% | 57.7% | -0.5% | 31.5% |
| Turkmenistan | - | † | - | † | - | † | - | † | - | - | - | - |
| Uzbekistan | - | † | - | † | - | † | - | † | - | 133.3% | - | 133.3% |
| Other CIS | † | † | † | 0.1 | † | † | † | 0.1 | 5.6% | 64.6% | - | 16.9% |
| Total CIS | 0.8 | 0.9 | 0.7 | 2.5 | 1.1 | 1.5 | 0.7 | 3.3 | 30.1% | 55.8% | 0.7% | 31.1% |
| Iran | 0.3 | 0.1 | † | 0.5 | 0.4 | 0.2 | † | 0.6 | 7.2% | 28.2% | - | 12.5% |
| Iraq | - | 0.1 | - | 0.1 | - | 0.1 | - | 0.1 | - | - | - | - |
| Israel | 0.1 | 1.6 | 0.1 | 1.7 | 0.1 | 2.7 | 0.1 | 2.9 | - | 72.8% | - | 65.9% |
| Kuwait | † | 0.1 | - | 0.1 | † | 0.1 | - | 0.2 | - | 116.7% | - | 92.2% |
| Oman | - | † | - | † | - | † | - | † | - | - | - | - |
| Qatar | - | † | 0.1 | 0.1 | - | † | 0.1 | 0.1 | - | - | - | - |
| Saudi Arabia | - | 0.4 | - | 0.4 | - | 1.8 | - | 1.8 | - | 367.4% | - | 367.4% |
| United Arab Emirates | † | 1.3 | † | 1.3 | † | 4.2 | † | 4.2 | - | 217.2% | - | 216.0% |
| Other Middle East | 0.7 | 2.6 | † | 3.3 | 0.7 | 2.9 | † | 3.6 | - | 11.9% | - | 9.3% |
| Total Middle East | 1.1 | 6.1 | 0.3 | 7.5 | 1.2 | 11.9 | 0.3 | 13.3 | 2.1% | 95.4% | - | 78.0% |
| Algeria | † | 0.6 | - | 0.6 | † | 0.6 | - | 0.6 | - | 2.0% | - | 2.0% |
| Egypt | 2.0 | 1.5 | - | 3.5 | 2.8 | 3.7 | - | 6.5 | 37.5% | 143.4% | - | 82.7% |
| Morocco | 3.8 | 1.0 | - | 4.8 | 4.7 | 1.6 | - | 6.3 | 22.4% | 66.4% | - | 31.1% |
| South Africa | 6.9 | 4.9 | 0.4 | 12.3 | 6.9 | 5.3 | 0.4 | 12.6 | 0.7% | 6.6% | - | 3.0% |
| Other Africa | 1.5 | 1.9 | 7.6 | 11.0 | 3.1 | 8.2 | 7.8 | 19.1 | 102.5% | 345.3% | 1.6% | 73.4% |
| Total Africa | 14.3 | 9.9 | 8.1 | 32.2 | 17.5 | 19.4 | 8.2 | 45.1 | 22.5% | 96.7% | 1.5% | 40.0% |
| Australia | 16.4 | 12.3 | 3.6 | 32.2 | 19.5 | 18.0 | 3.6 | 41.1 | 19.0% | 46.2% | 0.6% | 27.3% |
| Bangladesh | † | 0.3 | † | 0.3 | † | 0.4 | † | 0.4 | - | 41.2% | - | 39.5% |
| China | 365.8 | 176.9 | 93.7 | 636.4 | 405.7 | 223.8 | 102.8 | 732.3 | 10.9% | 26.5% | 9.7% | 15.1% |
| China Hong Kong SAR | † | † | 0.1 | 0.1 | † | † | 0.1 | 0.1 | -3.4% | -3.4% | 11.2% | 10.8% |
| India | 60.3 | 36.3 | 26.2 | 122.8 | 63.3 | 46.3 | 25.4 | 134.9 | 5.0% | 27.3% | -3.2% | 9.8% |
| Indonesia | 0.2 | † | 14.4 | 14.6 | 0.2 | 0.1 | 15.7 | 16.0 | - | 218.1% | 9.3% | 9.4% |
| Japan | 7.4 | 66.1 | 23.4 | 96.8 | 8.6 | 75.3 | 37.3 | 121.2 | 17.2% | 14.0% | 59.5% | 25.2% |
| Malaysia | - | 0.5 | 0.8 | 1.3 | - | 0.8 | 0.9 | 1.7 | - | 64.6% | 8.5% | 29.3% |
| New Zealand | 2.1 | 0.1 | 8.4 | 10.5 | 2.3 | 0.1 | 8.4 | 10.8 | 9.1% | 27.7% | 0.9% | 2.7% |
| Pakistan | 3.1 | 1.0 | 1.0 | 5.2 | 4.8 | 1.2 | 0.9 | 6.9 | 52.3% | 13.7% | -5.2% | 33.5% |
| Philippines | 1.2 | 1.2 | 11.5 | 13.9 | 1.2 | 1.3 | 11.8 | 14.3 | 1.9% | 6.6% | 2.0% | 2.4% |
| Singapore | - | 0.1 | 0.8 | 0.9 | - | 0.2 | 0.8 | 1.0 | - | 44.0% | -0.8% | 5.9% |
| South Korea | 2.6 | 9.7 | 11.7 | 23.9 | 2.8 | 12.1 | 14.3 | 29.2 | 6.6% | 25.6% | 22.9% | 22.2% |
| Sri Lanka | 0.4 | 0.3 | 0.1 | 0.8 | 0.4 | 0.4 | 0.1 | 0.8 | - | 16.2% | 6.5% | 7.4% |
| Taiwan | 1.7 | 2.7 | 2.0 | 6.4 | 1.9 | 4.1 | 2.0 | 8.0 | 11.0% | 51.3% | 1.3% | 25.3% |
| Thailand | 1.9 | 5.0 | 10.9 | 17.8 | 2.7 | 5.0 | 13.7 | 21.4 | 36.6% | 0.5% | 26.4% | 20.2% |
| Vietnam | 0.3 | 0.1 | 0.1 | 0.5 | 0.5 | 4.2 | 0.1 | 4.7 | 58.2% | 3583.7% | - | 849.3% |
| Other Asia Pacific | 0.4 | 0.5 | 0.2 | 1.1 | 0.5 | 0.7 | 0.2 | 1.4 | 43.5% | 32.0% | - | 31.1% |
| Total Asia Pacific | 463.7 | 313.2 | 208.6 | 985.5 | 514.3 | 393.9 | 238.0 | 1146.2 | 10.9% | 25.8% | 14.1% | 16.3% |
| Total World | 1270.2 | 582.8 | 615.0 | 2468.0 | 1429.6 | 724.1 | 651.8 | 2805.5 | 12.6% | 24.3% | 6.0% | 13.7% |
| of which: OECD | 745.4 | 329.9 | 367.0 | 1442.4 | 841.8 | 387.2 | 387.8 | 1616.8 | 12.9% | 17.4% | 5.7% | 12.1% |
| Non-OECD | 524.7 | 252.8 | 248.0 | 1025.6 | 587.9 | 336.9 | 264.0 | 1188.8 | 12.0% | 33.2% | 6.5% | 15.9% |
| European Union | 376.9 | 127.5 | 196.4 | 700.9 | 430.7 | 138.4 | 199.1 | 768.2 | 14.3% | 8.5% | 1.3% | 9.6% |

*Based on gross generation and not accounting for cross-border electricity supply.

†Includes electricity generated from: geothermal, biomass and other sources of renewable energy (not already itemized).

‡Less than 0.05%.

•Less than 0.05%.

A more extensive time series of renewables by source is available at [bp.com/statisticalreview](https://www.bp.com/statisticalreview).

Renewables: Biofuels production*

| Thousand barrels of oil equivalent per day | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Growth rate per annum | | Share 2019 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|--------------|---------------|
| | | | | | | | | | | | | 2019 | 2008-18 | |
| Canada | 14 | 16 | 19 | 20 | 19 | 21 | 22 | 23 | 25 | 25 | 29 | 14.4% | 9.4% | 1.6% |
| Mexico | – | † | † | † | † | † | † | † | † | † | † | – | – | ♦ |
| US | 445 | 526 | 585 | 557 | 582 | 617 | 634 | 673 | 696 | 717 | 697 | -2.7% | 6.2% | 37.9% |
| Total North America | 460 | 542 | 604 | 577 | 601 | 638 | 656 | 696 | 722 | 742 | 726 | -2.1% | 6.3% | 39.4% |
| Argentina | 19 | 32 | 42 | 43 | 38 | 49 | 38 | 53 | 58 | 51 | 46 | -9.9% | 16.1% | 2.5% |
| Brazil | 286 | 316 | 270 | 276 | 321 | 337 | 362 | 340 | 342 | 413 | 444 | 7.6% | 3.6% | 24.1% |
| Colombia | 5 | 8 | 10 | 11 | 12 | 12 | 12 | 12 | 11 | 14 | 13 | -4.6% | 18.7% | 0.7% |
| Other S. & Cent. America | 4 | 4 | 5 | 5 | 7 | 8 | 8 | 10 | 10 | 11 | 12 | 7.2% | 2.1% | 0.7% |
| Total S. & Cent. America | 315 | 360 | 327 | 335 | 378 | 406 | 421 | 415 | 422 | 489 | 516 | 5.4% | 4.6% | 28.0% |
| Austria | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 8 | 7 | 7 | 7 | -1.7% | 3.7% | 0.4% |
| Belgium | 3 | 7 | 8 | 8 | 8 | 11 | 7 | 7 | 8 | 8 | 9 | 7.9% | – | 0.5% |
| Finland | 4 | 6 | 4 | 5 | 6 | 7 | 8 | 2 | 6 | 5 | 6 | 4.9% | 12.8% | 0.3% |
| France | 44 | 43 | 42 | 49 | 48 | 51 | 53 | 49 | 52 | 58 | 51 | -13.1% | 4.1% | 2.7% |
| Germany | 47 | 59 | 58 | 54 | 58 | 65 | 60 | 60 | 62 | 64 | 64 | 0.6% | 3.1% | 3.5% |
| Italy | 14 | 15 | 11 | 6 | 9 | 10 | 10 | 10 | 12 | 13 | 14 | 12.2% | 0.8% | 0.8% |
| Netherlands | 5 | 7 | 13 | 24 | 28 | 34 | 36 | 29 | 37 | 36 | 35 | -1.8% | 37.8% | 1.9% |
| Poland | 8 | 8 | 8 | 12 | 13 | 14 | 15 | 17 | 17 | 17 | 18 | 5.5% | 12.1% | 1.0% |
| Portugal | 4 | 5 | 6 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 7 | 20.2% | 8.2% | 0.4% |
| Spain | 17 | 19 | 16 | 12 | 14 | 19 | 21 | 22 | 29 | 34 | 30 | -13.4% | 17.0% | 1.6% |
| Sweden | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 26.3% | 3.6% | 0.2% |
| United Kingdom | 4 | 5 | 3 | 6 | 9 | 7 | 6 | 10 | 14 | 13 | 11 | -14.9% | 9.2% | 0.6% |
| Other Europe | 20 | 20 | 22 | 26 | 28 | 28 | 32 | 33 | 35 | 39 | 40 | 2.5% | 8.9% | 2.2% |
| Total Europe | 180 | 205 | 201 | 218 | 237 | 262 | 265 | 257 | 289 | 304 | 296 | -2.6% | 7.6% | 16.1% |
| Total CIS | † | 1 | 1 | 1 | † | † | † | † | † | † | † | – | 12.1% | ♦ |
| Total Middle East | † | † | † | † | † | † | † | † | † | † | † | – | – | ♦ |
| Total Africa | 5 | 6 | 6 | 4 | 4 | 5 | 7 | 7 | 8 | 9 | 9 | 6.6% | 25.5% | 0.5% |
| Australia | 4 | 3 | 4 | 4 | 5 | 5 | 4 | 4 | 2 | 3 | 3 | 6.3% | -0.7% | 0.2% |
| China | 31 | 30 | 37 | 39 | 44 | 49 | 42 | 40 | 49 | 47 | 50 | 6.6% | 5.3% | 2.7% |
| India | 2 | 4 | 5 | 5 | 5 | 5 | 10 | 12 | 11 | 19 | 24 | 24.9% | 20.9% | 1.3% |
| Indonesia | 3 | 4 | 27 | 33 | 41 | 59 | 24 | 54 | 50 | 91 | 123 | 35.7% | 27.1% | 6.7% |
| South Korea | 4 | 6 | 5 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | -3.2% | 11.3% | 0.4% |
| Thailand | 12 | 16 | 17 | 24 | 30 | 34 | 36 | 31 | 37 | 40 | 43 | 8.1% | 14.9% | 2.3% |
| Other Asia Pacific | 8 | 8 | 16 | 22 | 28 | 34 | 36 | 34 | 33 | 35 | 43 | 21.6% | 17.0% | 2.3% |
| Total Asia Pacific | 65 | 69 | 111 | 133 | 160 | 193 | 161 | 183 | 191 | 243 | 294 | 21.0% | 14.6% | 15.9% |
| Total World | 1025 | 1183 | 1250 | 1268 | 1381 | 1505 | 1511 | 1560 | 1631 | 1787 | 1842 | 3.0% | 6.8% | 100.0% |
| of which: OECD | 646 | 755 | 811 | 803 | 846 | 908 | 929 | 961 | 1016 | 1052 | 1027 | -2.3% | 6.7% | 55.8% |
| Non-OECD | 378 | 428 | 439 | 465 | 535 | 597 | 581 | 599 | 615 | 736 | 814 | 10.6% | 7.1% | 44.2% |
| European Union | 179 | 204 | 199 | 216 | 235 | 260 | 262 | 254 | 285 | 299 | 291 | -2.8% | 7.6% | 15.8% |
| Biofuels production by fuel type | | | | | | | | | | | | | | |
| Biogasoline | | | | | | | | | | | | | | |
| Canada & Mexico | 13 | 15 | 17 | 17 | 17 | 17 | 17 | 17 | 18 | 19 | 22 | 11.9% | 8.2% | 1.9% |
| US | 417 | 507 | 531 | 502 | 506 | 545 | 564 | 585 | 607 | 613 | 601 | -2.0% | 5.7% | 52.6% |
| Brazil | 263 | 281 | 231 | 236 | 278 | 287 | 304 | 284 | 279 | 334 | 357 | 6.9% | 2.1% | 31.3% |
| Other S. & Cent. America | 6 | 7 | 9 | 10 | 13 | 16 | 18 | 21 | 22 | 24 | 24 | 1.0% | 8.0% | 2.1% |
| Europe | 31 | 36 | 41 | 47 | 53 | 53 | 58 | 54 | 57 | 59 | 57 | -3.7% | 8.7% | 4.9% |
| CIS | – | – | – | – | † | † | † | † | † | † | † | – | – | ♦ |
| Middle East | † | † | † | † | † | † | † | † | † | † | † | – | – | ♦ |
| Africa | 5 | 6 | 6 | 4 | 4 | 5 | 6 | 6 | 5 | 6 | 6 | 0.5% | 20.8% | 0.5% |
| Asia Pacific | 31 | 32 | 40 | 42 | 48 | 55 | 59 | 54 | 61 | 67 | 76 | 13.3% | 8.8% | 6.6% |
| Total World | 765 | 883 | 875 | 858 | 921 | 978 | 1027 | 1021 | 1050 | 1122 | 1143 | 1.8% | 4.8% | 100.0% |
| of which: OECD | 463 | 560 | 591 | 569 | 579 | 617 | 641 | 657 | 683 | 692 | 681 | -1.7% | 5.9% | 59.6% |
| Non-OECD | 302 | 323 | 283 | 290 | 342 | 361 | 386 | 363 | 367 | 430 | 462 | 7.5% | 3.3% | 40.4% |
| European Union | 30 | 36 | 41 | 47 | 51 | 52 | 57 | 53 | 56 | 57 | 55 | -3.8% | 8.6% | 4.8% |
| Biodiesel | | | | | | | | | | | | | | |
| Canada & Mexico | 2 | 2 | 2 | 2 | 2 | 4 | 5 | 6 | 7 | 6 | 7 | 22.0% | 15.7% | 1.0% |
| US | 29 | 19 | 54 | 55 | 76 | 71 | 70 | 87 | 89 | 104 | 96 | -7.2% | 10.6% | 13.8% |
| Brazil | 24 | 35 | 39 | 40 | 43 | 50 | 58 | 56 | 63 | 79 | 87 | 10.3% | 16.5% | 12.4% |
| Other S. & Cent. America | 22 | 37 | 48 | 49 | 43 | 53 | 40 | 54 | 57 | 52 | 47 | -9.8% | 15.8% | 6.8% |
| Europe | 149 | 168 | 160 | 171 | 184 | 209 | 207 | 204 | 232 | 246 | 240 | -2.4% | 7.4% | 34.3% |
| CIS | † | 1 | 1 | 1 | † | † | † | † | † | † | † | – | 12.1% | 0.1% |
| Middle East | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Africa | – | – | – | † | † | † | 1 | 2 | 2 | 3 | 3 | 19.5% | – | 0.5% |
| Asia Pacific | 34 | 37 | 71 | 91 | 111 | 138 | 102 | 130 | 130 | 176 | 218 | 24.0% | 18.0% | 31.2% |
| Total World | 260 | 300 | 375 | 409 | 460 | 526 | 483 | 539 | 581 | 665 | 699 | 5.1% | 11.6% | 100.0% |
| of which: OECD | 183 | 195 | 220 | 234 | 267 | 291 | 288 | 304 | 333 | 359 | 347 | -3.4% | 8.3% | 49.6% |
| Non-OECD | 77 | 105 | 155 | 175 | 193 | 236 | 195 | 235 | 248 | 306 | 352 | 15.0% | 17.6% | 50.4% |
| European Union | 148 | 168 | 159 | 169 | 183 | 209 | 205 | 202 | 229 | 242 | 236 | -2.6% | 7.3% | 33.7% |

Source: includes data from F.O. Licht; US Energy Information Administration (March 2020).

*Includes biogasoline (such as ethanol) and biodiesel. Volumes have been adjusted for energy content.

†Less than 0.5.

♦Less than 0.05%.

Annual changes and shares of total are calculated using thousand barrels a day oil equivalent figures.

Renewables: Biofuels consumption*

| Thousand barrels of oil equivalent per day | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Growth rate per annum | | Share 2019 |
|--|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|--------------|---------------|
| | | | | | | | | | | | | 2019 | 2008-18 | |
| Canada | 15 | 16 | 25 | 29 | 33 | 34 | 34 | 34 | 35 | 37 | 38 | 2.1% | 10.5% | 2.1% |
| Mexico | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 1.4% | 8.4% | 0.2% |
| US | 438 | 504 | 541 | 539 | 583 | 591 | 615 | 661 | 662 | 655 | 655 | -0.1% | 5.5% | 36.9% |
| Total North America | 456 | 522 | 567 | 570 | 618 | 629 | 651 | 699 | 701 | 696 | 696 | 0.1% | 5.7% | 39.2% |
| Argentina | - | 10 | 14 | 17 | 19 | 23 | 25 | 26 | 30 | 29 | 30 | 2.1% | n/a | 1.7% |
| Brazil | 253 | 269 | 246 | 232 | 273 | 301 | 357 | 324 | 341 | 395 | 437 | 10.6% | 5.6% | 24.6% |
| Colombia | † | † | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2.8% | 11.5% | ♦ |
| Other S. & Cent. America | 9 | 11 | 12 | 14 | 15 | 16 | 17 | 17 | 18 | 18 | 19 | 4.7% | 8.8% | 1.1% |
| Total S. & Cent. America | 262 | 290 | 272 | 264 | 308 | 340 | 399 | 368 | 389 | 443 | 486 | 9.8% | 6.4% | 27.4% |
| Austria | 10 | 10 | 10 | 10 | 8 | 10 | 12 | 10 | 9 | 9 | 10 | 1.4% | 1.9% | 0.5% |
| Belgium | 2 | 7 | 7 | 7 | 6 | 8 | 5 | 8 | 9 | 9 | 9 | ♦ | n/a | 0.5% |
| Finland | 2 | 2 | 4 | 4 | 4 | 8 | 8 | 3 | 7 | 6 | 6 | -1.4% | 15.8% | 0.3% |
| France | 45 | 44 | 44 | 48 | 49 | 53 | 53 | 53 | 54 | 53 | 56 | 4.5% | 2.3% | 3.1% |
| Germany | 51 | 52 | 54 | 57 | 51 | 54 | 50 | 50 | 51 | 54 | 54 | 0.1% | 0.4% | 3.0% |
| Italy | 21 | 26 | 25 | 28 | 24 | 20 | 25 | 25 | 25 | 26 | 15 | -42.6% | 7.2% | 0.8% |
| Netherlands | 7 | 4 | 6 | 6 | 6 | 7 | 6 | 5 | 8 | 12 | 14 | 15.8% | 8.0% | 0.8% |
| Poland | 12 | 12 | 13 | 14 | 14 | 13 | 12 | 8 | 11 | 17 | 18 | 6.7% | 7.6% | 1.0% |
| Portugal | 4 | 6 | 6 | 5 | 5 | 5 | 7 | 5 | 5 | 5 | 5 | -1.4% | 7.5% | 0.3% |
| Spain | 6 | 27 | 32 | 39 | 17 | 18 | 19 | 21 | 25 | 32 | 25 | -22.1% | 23.6% | 1.4% |
| Sweden | 6 | 9 | 11 | 12 | 12 | 16 | 19 | 25 | 28 | 27 | 28 | 3.3% | 15.8% | 1.6% |
| United Kingdom | 19 | 22 | 20 | 17 | 20 | 22 | 18 | 18 | 18 | 24 | 31 | 27.4% | 5.0% | 1.8% |
| Other Europe | 19 | 23 | 27 | 31 | 38 | 37 | 37 | 43 | 50 | 53 | 56 | 6.1% | 12.8% | 3.1% |
| Total Europe | 205 | 244 | 258 | 279 | 255 | 272 | 272 | 276 | 300 | 327 | 325 | -0.5% | 6.6% | 18.3% |
| Total CIS | † | 1 | 1 | 1 | † | † | † | † | † | † | † | 0.5% | 12.7% | ♦ |
| Total Middle East | † | † | † | † | † | † | † | † | † | † | † | 1.7% | -4.0% | ♦ |
| Total Africa | † | † | † | † | † | † | 1 | 1 | 1 | 1 | 2 | 19.1% | 59.1% | 0.1% |
| Australia | 20 | 31 | 33 | 29 | 28 | 26 | 24 | 20 | 23 | 26 | 25 | -2.3% | 6.3% | 1.4% |
| China | 29 | 29 | 34 | 39 | 46 | 61 | 36 | 42 | 43 | 50 | 44 | -10.4% | 6.5% | 2.5% |
| India | † | † | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 2 | -0.5% | 6.6% | 0.1% |
| Indonesia | 3 | 3 | 5 | 10 | 15 | 27 | 13 | 44 | 38 | 55 | 111 | 102.0% | 57.1% | 6.3% |
| South Korea | 5 | 7 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 13 | 13 | 0.7% | 14.4% | 0.7% |
| Thailand | 12 | 13 | 14 | 18 | 23 | 28 | 31 | 32 | 35 | 38 | 45 | 16.9% | 15.4% | 2.5% |
| Other Asia Pacific | 4 | 9 | 10 | 12 | 15 | 19 | 23 | 25 | 26 | 26 | 26 | 1.7% | 29.1% | 1.5% |
| Total Asia Pacific | 74 | 91 | 103 | 116 | 135 | 170 | 138 | 174 | 175 | 209 | 267 | 27.5% | 14.0% | 15.0% |
| Total World | 997 | 1148 | 1201 | 1229 | 1317 | 1412 | 1463 | 1518 | 1567 | 1676 | 1776 | 6.0% | 6.8% | 100.0% |
| of which: OECD | 683 | 805 | 864 | 883 | 905 | 934 | 957 | 1003 | 1032 | 1060 | 1056 | -0.4% | 6.1% | 59.4% |
| Non-OECD | 314 | 343 | 337 | 346 | 412 | 477 | 506 | 515 | 535 | 617 | 720 | 16.8% | 8.2% | 40.6% |
| European Union | 203 | 241 | 255 | 274 | 244 | 266 | 266 | 265 | 284 | 313 | 311 | -0.7% | 6.2% | 17.5% |
| Biofuels consumption by fuel type | | | | | | | | | | | | | | |
| Biogasoline | | | | | | | | | | | | | | |
| US | 420 | 490 | 491 | 489 | 503 | 512 | 531 | 545 | 552 | 549 | 554 | 0.8% | 4.1% | 49.4% |
| Canada & Mexico | 16 | 16 | 22 | 26 | 29 | 32 | 32 | 33 | 33 | 35 | 36 | 3.3% | 9.0% | 3.2% |
| Brazil | 230 | 234 | 208 | 191 | 230 | 251 | 299 | 268 | 277 | 316 | 349 | 10.5% | 4.0% | 31.1% |
| Other S. & Cent. America | 7 | 9 | 10 | 12 | 15 | 17 | 19 | 21 | 23 | 24 | 24 | 3.3% | 14.4% | 2.2% |
| Europe | 45 | 56 | 58 | 58 | 55 | 55 | 56 | 54 | 57 | 59 | 64 | 8.8% | 4.7% | 5.7% |
| CIS | - | - | - | - | - | - | - | - | - | - | - | n/a | n/a | - |
| Middle East | † | † | † | † | † | † | † | † | † | † | † | 1.7% | -4.0% | ♦ |
| Africa | † | † | † | † | † | † | † | † | † | † | † | 4.3% | 19.2% | ♦ |
| Asia Pacific | 48 | 61 | 66 | 66 | 73 | 77 | 77 | 86 | 95 | 94 | 94 | -0.2% | 9.8% | 8.4% |
| Total World | 766 | 867 | 857 | 843 | 905 | 945 | 1015 | 1007 | 1037 | 1077 | 1122 | 4.1% | 4.8% | 100.0% |
| of which: OECD | 502 | 596 | 606 | 604 | 616 | 627 | 646 | 657 | 670 | 673 | 682 | 1.3% | 4.5% | 60.8% |
| Non-OECD | 264 | 271 | 250 | 240 | 289 | 318 | 369 | 350 | 367 | 404 | 439 | 8.8% | 5.2% | 39.2% |
| European Union | 45 | 56 | 58 | 58 | 53 | 53 | 54 | 51 | 54 | 56 | 61 | 9.2% | 4.2% | 5.4% |
| Biodiesel | | | | | | | | | | | | | | |
| US | 18 | 15 | 49 | 50 | 80 | 79 | 83 | 116 | 111 | 106 | 101 | -4.5% | 20.1% | 15.4% |
| Canada & Mexico | 1 | 2 | 4 | 5 | 5 | 6 | 4 | 5 | 6 | 6 | 5 | -5.7% | 27.7% | 0.8% |
| Brazil | 23 | 35 | 38 | 40 | 43 | 50 | 58 | 56 | 63 | 79 | 87 | 11.0% | 16.9% | 13.3% |
| Other S. & Cent. America | 3 | 12 | 16 | 20 | 20 | 22 | 23 | 23 | 25 | 24 | 25 | 2.9% | 29.1% | 3.8% |
| Europe | 160 | 187 | 200 | 220 | 200 | 217 | 217 | 222 | 243 | 268 | 261 | -2.6% | 7.0% | 39.9% |
| CIS | † | 1 | 1 | 1 | † | † | † | † | † | † | † | 0.5% | 12.7% | 0.1% |
| Middle East | - | - | - | - | - | - | - | - | - | - | - | n/a | n/a | - |
| Africa | - | - | - | - | - | † | 1 | 1 | 1 | 1 | 1 | 20.0% | n/a | 0.2% |
| Asia Pacific | 26 | 30 | 36 | 49 | 63 | 93 | 61 | 89 | 80 | 115 | 173 | 50.1% | 19.4% | 26.4% |
| Total World | 231 | 281 | 344 | 386 | 412 | 467 | 448 | 511 | 530 | 599 | 655 | 9.2% | 12.1% | 100.0% |
| of which: OECD | 181 | 210 | 258 | 280 | 289 | 307 | 311 | 346 | 362 | 386 | 374 | -3.3% | 9.6% | 57.1% |
| Non-OECD | 50 | 72 | 86 | 106 | 122 | 159 | 137 | 165 | 168 | 213 | 281 | 31.9% | 19.3% | 42.9% |
| European Union | 158 | 185 | 197 | 216 | 191 | 213 | 212 | 214 | 230 | 257 | 250 | -2.8% | 6.7% | 38.1% |

*Includes biogasoline (such as ethanol) and biodiesel. Volumes have been adjusted for energy content.

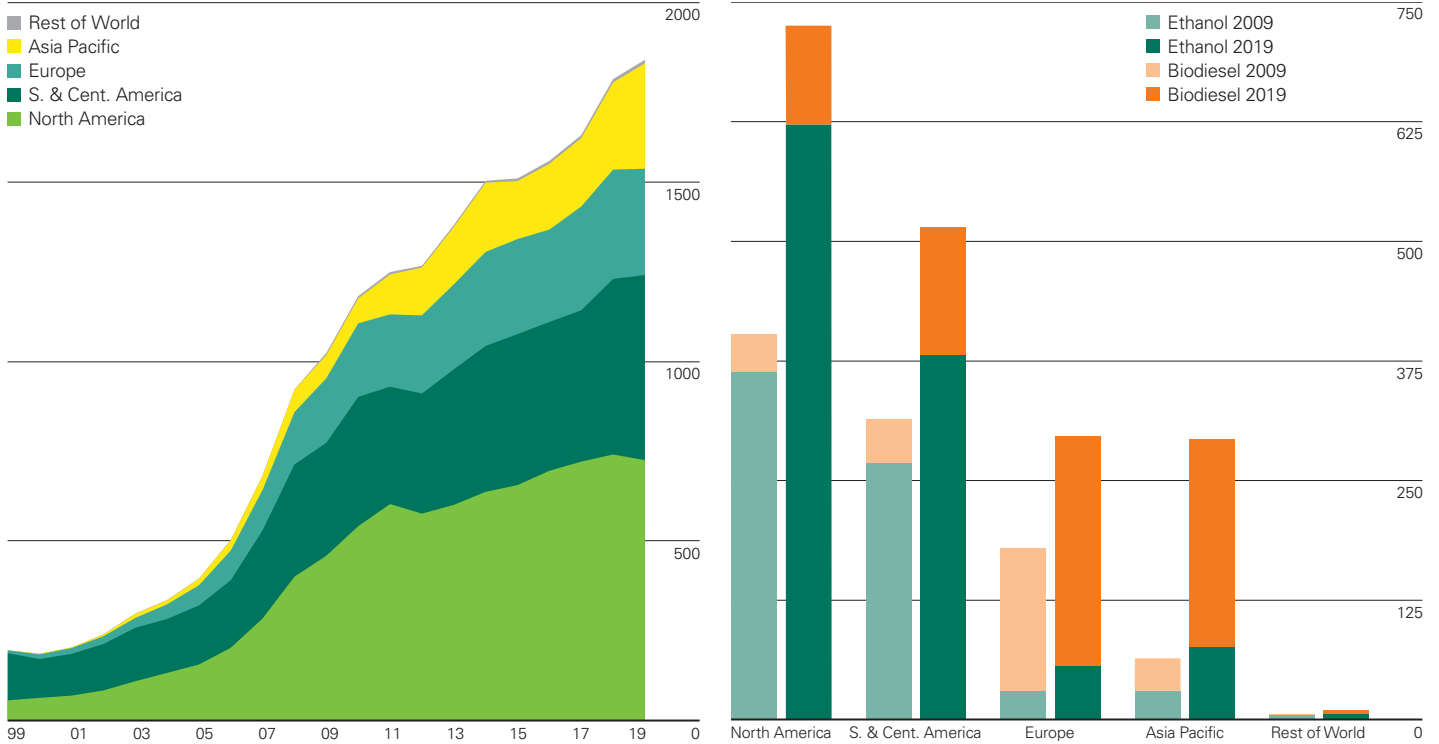
†Less than 0.5.

♦Less than 0.05%.

Annual changes and shares of total are calculated using thousand barrels of oil equivalent per day figures.

World biofuels production

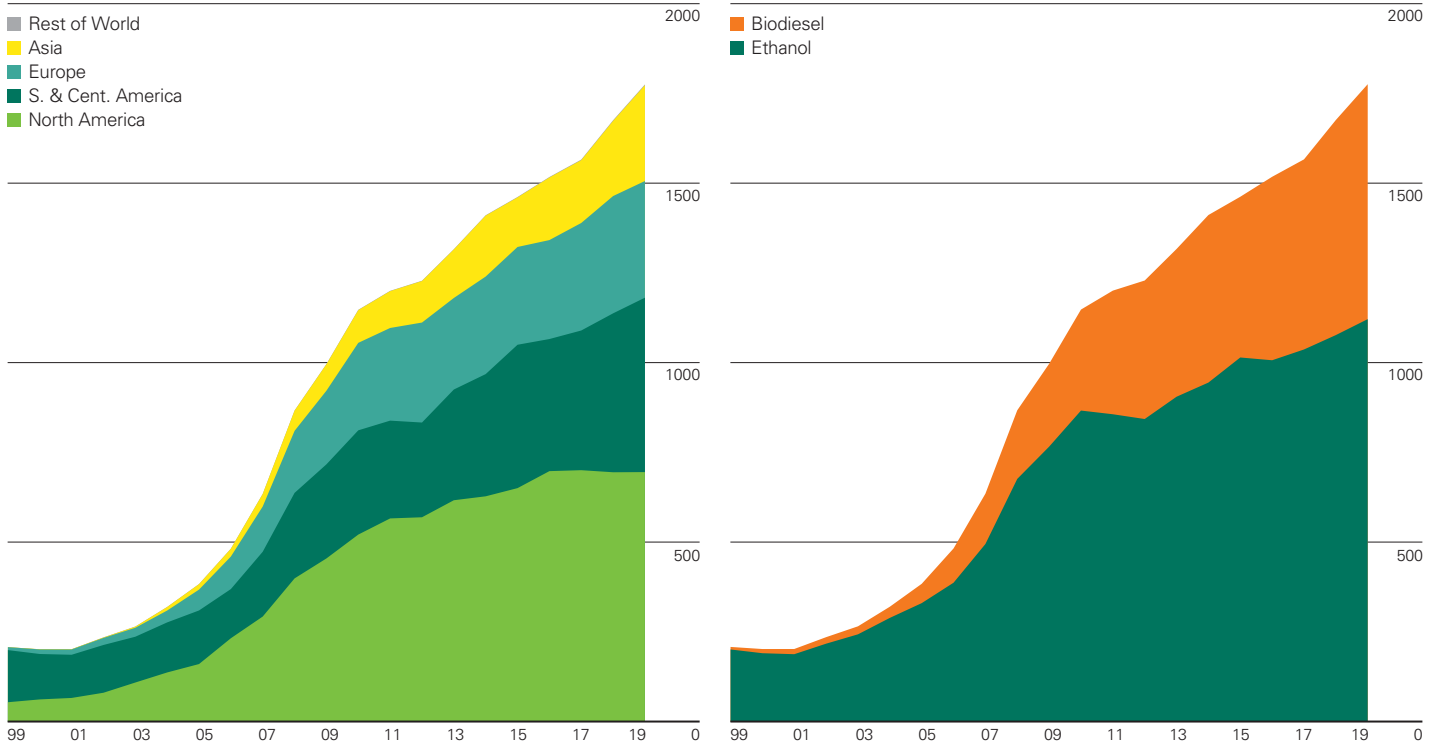
Thousand barrels of oil equivalent per day



Biofuels production growth averaged 3% (54,000 barrels of oil equivalent per day or boe/d, less than half the 10-year average). Growth was led by Brazil (31,000 boe/d) and Indonesia (32,000 boe/d) but US output declined by 19,000 boe/d. Growth was weighted towards biodiesel, which grew by 34,000 boe/d driven largely by Indonesia. Biodiesel is the dominant fuel in Europe and Asia Pacific (making up 81% and 74% of biofuels respectively in 2019), while ethanol is the main fuel in North America (86% of total) and S&C America (74%).

World biofuels consumption

Thousand barrels of oil equivalent per day



Biofuels consumption rose by 6% (100,000 boe/d). As with production, growth was driven mainly by Brazil (42,000 boe/d), most of which was ethanol and Indonesia (56,000 boe/d), which was largely biodiesel. At the global level, ethanol made up 63% of biofuels in 2019, but the share of biodiesel has risen continually. For example, biodiesel's share was 23% in 2009 but rose to 37% last year.

Appendices

- A1** Cumulative installed geothermal power capacity
- A2** Cumulative installed solar power
- A4** Cumulative installed wind capacity

Renewable energy – geothermal

Cumulative installed geothermal power capacity*

| Megawatts | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Growth rate per annum | | Share 2019 |
|-------------------------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------------|--------------|--------------|
| | | | | | | | | | | | | 2019 | 2008-18 | |
| Mexico | 965 | 965 | 887 | 824 | 823 | 813 | 906 | 926 | 926 | 951 | 936 | -1.6% | -0.1% | 6.7% |
| US | 2382 | 2405 | 2409 | 2592 | 2607 | 2514 | 2542 | 2517 | 2483 | 2541 | 2555 | 0.6% | 1.3% | 18.3% |
| Total North America | 3347 | 3370 | 3296 | 3416 | 3430 | 3327 | 3448 | 3443 | 3409 | 3491 | 3491 | 0.0% | 0.9% | 25.1% |
| Chile | – | – | – | – | – | – | – | – | 24 | 48 | 40 | -17.3% | – | 0.3% |
| Costa Rica | 166 | 166 | 218 | 218 | 218 | 218 | 217 | 207 | 207 | 207 | 262 | 26.6% | 2.2% | 1.9% |
| El Salvador | 204 | 204 | 151 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | – | – | 1.5% |
| Guatemala | 54 | 54 | 54 | 54 | 49 | 49 | 49 | 49 | 49 | 49 | 52 | 5.7% | – | 0.4% |
| Honduras | – | – | – | – | – | – | – | – | 35 | 35 | 35 | – | – | 0.3% |
| Nicaragua | 88 | 88 | 88 | 165 | 155 | 155 | 155 | 155 | 155 | 155 | 153 | -0.8% | 5.9% | 1.1% |
| Other S. and Cent. America | 15 | 15 | 15 | 15 | 15 | 12 | 15 | 15 | 15 | 15 | 15 | ♦ | -0.4% | 0.1% |
| Total S. & Cent. America | 527 | 527 | 525 | 656 | 641 | 637 | 640 | 629 | 689 | 713 | 761 | 6.8% | 3.1% | 5.5% |
| Croatia | – | – | – | – | – | – | – | – | – | 10 | 10 | – | – | 0.1% |
| France | 0 | 0 | 16 | 15 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | – | – | 0.1% |
| Germany | 8 | 8 | 8 | 12 | 24 | 29 | 29 | 33 | 32 | 36 | 42 | 16.7% | 28.2% | 0.3% |
| Iceland | 575 | 575 | 665 | 665 | 665 | 665 | 665 | 663 | 708 | 753 | 753 | – | 2.7% | 5.4% |
| Italy | 695 | 728 | 728 | 728 | 729 | 768 | 768 | 767 | 767 | 767 | 800 | 4.3% | 1.3% | 5.7% |
| Portugal | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 29 | 29 | 29 | – | 1.5% | 0.2% |
| Turkey | 77 | 94 | 114 | 162 | 311 | 405 | 624 | 821 | 1064 | 1283 | 1515 | 18.1% | 45.6% | 10.9% |
| Other Europe | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 4 | ♦ | 16.0% | ♦ |
| Total Europe | 1381 | 1431 | 1557 | 1608 | 1771 | 1909 | 2128 | 2325 | 2620 | 2898 | 3169 | 9.4% | 8.3% | 22.7% |
| Russian Federation | 81 | 81 | 81 | 81 | 79 | 78 | 78 | 78 | 74 | 74 | 74 | – | -0.8% | 0.5% |
| Total CIS | 81 | 81 | 81 | 81 | 79 | 78 | 78 | 78 | 78 | 78 | 74 | -5.1% | -0.3% | 0.5% |
| Ethiopia | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | – | – | 0.1% |
| Kenya | 163 | 198 | 198 | 206 | 206 | 366 | 619 | 663 | 673 | 663 | 823 | 24.1% | 17.9% | 5.9% |
| Total Africa | 170 | 205 | 205 | 213 | 213 | 373 | 626 | 670 | 680 | 670 | 830 | 23.9% | 17.4% | 6.0% |
| China | 25 | 24 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | – | 0.4% | 0.2% |
| Indonesia | 1189 | 1189 | 1226 | 1336 | 1344 | 1404 | 1439 | 1644 | 1809 | 1946 | 2131 | 9.5% | 6.3% | 15.3% |
| Japan | 535 | 537 | 537 | 512 | 512 | 508 | 516 | 526 | 481 | 482 | 525 | 8.9% | -1.0% | 3.8% |
| New Zealand | 633 | 731 | 731 | 731 | 813 | 924 | 941 | 941 | 941 | 965 | 965 | – | 5.0% | 6.9% |
| Philippines | 1847 | 1847 | 1847 | 1847 | 1847 | 1916 | 1916 | 1916 | 1916 | 1928 | 1928 | – | 0.4% | 13.8% |
| Papua New Guinea | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | – | – | 0.4% |
| Other Asia Pacific | † | † | † | † | † | † | † | † | † | † | 1 | 251.5% | -1.9% | ♦ |
| Total Asia Pacific | 4285 | 4384 | 4423 | 4508 | 4597 | 4834 | 4894 | 5109 | 5229 | 5403 | 5632 | 3.8% | 2.8% | 40.2% |
| Total World | 9791 | 9998 | 10088 | 10482 | 10731 | 11159 | 11814 | 12255 | 12704 | 13253 | 13931 | 5.1% | 3.6% | 100% |

*End of year.

†Less than 0.05.

♦Less than 0.05%.

Sources: Includes IRENA, BNEF, IHS.

Renewable energy – solar

Cumulative installed solar power*

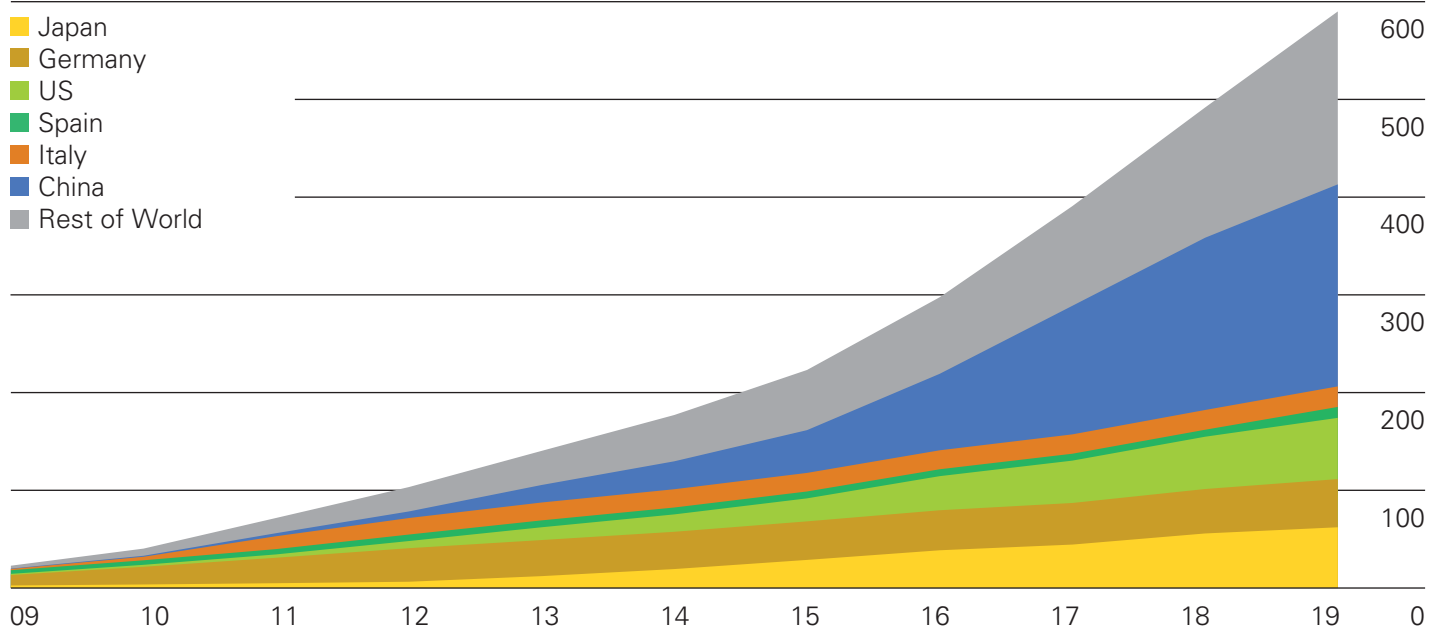
| Megawatts | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Growth rate per annum | | Share 2019 | |
|-------------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|---------------|---------------|---------------|
| | | | | | | | | | | | 2019 | 2008-18 | | |
| Canada | 95 | 221 | 497 | 766 | 1210 | 1843 | 2517 | 2661 | 2913 | 3100 | 3310 | 6.8% | 57.5% | 0.6% |
| Mexico | 25 | 29 | 39 | 60 | 82 | 116 | 173 | 389 | 674 | 2555 | 4440 | 73.8% | 63.3% | 0.8% |
| US | 1188 | 2040 | 3382 | 7328 | 13045 | 17651 | 23442 | 34716 | 43115 | 53184 | 62298 | 17.1% | 53.1% | 10.6% |
| Total North America | 1308 | 2290 | 3918 | 8154 | 14337 | 19610 | 26132 | 37766 | 46702 | 58839 | 70048 | 19.1% | 53.6% | 11.9% |
| Brazil | – | 1 | 1 | 2 | 5 | 16 | 27 | 84 | 1104 | 2078 | 2485 | 19.6% | – | 0.4% |
| Chile | – | – | – | 2 | 15 | 221 | 576 | 1125 | 1809 | 2137 | 2648 | 23.9% | – | 0.5% |
| Honduras | 4 | 4 | 5 | 5 | 5 | 5 | 393 | 414 | 454 | 485 | 511 | 5.4% | 65.2% | 0.1% |
| Other S. & Cent. America | 59 | 112 | 163 | 315 | 429 | 684 | 964 | 1190 | 1669 | 2419 | 3107 | 28.4% | 52.6% | 0.5% |
| Total S. & Cent. America | 62 | 117 | 169 | 324 | 455 | 926 | 1960 | 2814 | 5036 | 7119 | 8750 | 22.9% | 68.5% | 1.5% |
| Austria | 49 | 89 | 174 | 338 | 626 | 785 | 937 | 1096 | 1269 | 1438 | 1578 | 9.7% | 47.2% | 0.3% |
| Belgium | 386 | 1007 | 1979 | 2647 | 2902 | 3015 | 3132 | 3327 | 3616 | 3987 | 4531 | 13.6% | 51.6% | 0.8% |
| Bulgaria | 2 | 25 | 154 | 1013 | 1020 | 1026 | 1029 | 1028 | 1036 | 1033 | 1065 | 3.1% | – | 0.2% |
| Czech Republic | 465 | 1727 | 1913 | 2022 | 2064 | 2067 | 2075 | 2068 | 2070 | 2075 | 2070 | –0.2% | 48.4% | 0.4% |
| Denmark | 5 | 7 | 17 | 402 | 571 | 607 | 782 | 851 | 906 | 998 | 1079 | 8.1% | 78.7% | 0.2% |
| France | 277 | 1044 | 3004 | 4359 | 5277 | 6034 | 7138 | 7702 | 8610 | 9617 | 10571 | 9.9% | 61.4% | 1.8% |
| Germany | 10567 | 18007 | 25917 | 34077 | 36711 | 37900 | 39224 | 40679 | 42293 | 45181 | 48962 | 8.4% | 22.1% | 8.3% |
| Greece | 46 | 202 | 612 | 1536 | 2579 | 2596 | 2604 | 2604 | 2606 | 2652 | 2763 | 4.2% | 71.6% | 0.5% |
| Hungary | 1 | 2 | 4 | 12 | 35 | 89 | 172 | 235 | 344 | 726 | 1277 | 75.9% | 93.2% | 0.2% |
| Italy | 1264 | 3597 | 13136 | 16790 | 18190 | 18600 | 18907 | 19289 | 19688 | 20114 | 20906 | 3.9% | 45.2% | 3.6% |
| Netherlands | 69 | 90 | 149 | 369 | 746 | 1048 | 1515 | 2049 | 2903 | 4522 | 6725 | 48.7% | 54.3% | 1.1% |
| Poland | – | – | 1 | 1 | 2 | 27 | 108 | 187 | 287 | 562 | 1300 | 131.3% | – | 0.2% |
| Portugal | 115 | 134 | 172 | 238 | 296 | 415 | 447 | 513 | 579 | 667 | 828 | 24.0% | 27.5% | 0.1% |
| Romania | † | † | 1 | 41 | 761 | 1293 | 1326 | 1372 | 1374 | 1386 | 1386 | – | 159.5% | 0.2% |
| Spain | 3705 | 4605 | 5432 | 6569 | 6994 | 7001 | 7008 | 7017 | 7027 | 7068 | 11065 | 56.6% | 7.5% | 1.9% |
| Sweden | 9 | 11 | 12 | 24 | 43 | 60 | 104 | 153 | 402 | 492 | 644 | 30.9% | 51.0% | 0.1% |
| Switzerland | 79 | 125 | 223 | 437 | 756 | 1061 | 1394 | 1664 | 1906 | 2171 | 2524 | 16.3% | 46.1% | 0.4% |
| Turkey | 5 | 6 | 7 | 12 | 19 | 41 | 250 | 834 | 3422 | 5064 | 5996 | 18.4% | 105.9% | 1.0% |
| Ukraine | – | 3 | 188 | 372 | 748 | 819 | 841 | 955 | 1200 | 2003 | 5936 | 196.4% | – | 1.0% |
| United Kingdom | 27 | 95 | 1000 | 1753 | 2937 | 5528 | 9601 | 11930 | 12782 | 13118 | 13398 | 2.1% | 88.6% | 2.3% |
| Other Europe | 57 | 113 | 678 | 852 | 1055 | 1213 | 1323 | 1453 | 1708 | 1791 | 2064 | 15.2% | 44.0% | 0.4% |
| Total Europe | 17128 | 30888 | 54772 | 73862 | 84334 | 91227 | 99916 | 107006 | 116028 | 126663 | 146666 | 15.8% | 28.2% | 25.0% |
| Russian Federation | – | – | – | † | 1 | 5 | 61 | 76 | 275 | 535 | 1064 | 98.7% | – | 0.2% |
| Other CIS | † | † | 1 | 1 | 2 | 9 | 63 | 86 | 93 | 265 | 633 | 138.8% | 119.9% | 0.1% |
| Total CIS | † | † | 1 | 1 | 4 | 14 | 125 | 162 | 368 | 800 | 1697 | 112.0% | 145.7% | 0.3% |
| Israel | 31 | 76 | 196 | 243 | 426 | 676 | 772 | 872 | 975 | 1076 | 1438 | 33.6% | 61.3% | 0.2% |
| Jordan | – | – | – | † | † | † | 29 | 298 | 471 | 829 | 998 | 20.5% | – | 0.2% |
| United Arab Emirates | 10 | 11 | 13 | 14 | 130 | 134 | 135 | 142 | 355 | 594 | 1883 | 217.2% | – | 0.3% |
| Other Middle East | 2 | 4 | 6 | 18 | 61 | 95 | 168 | 277 | 480 | 813 | 1263 | 55.3% | 89.0% | 0.2% |
| Total Middle East | 42 | 91 | 215 | 275 | 618 | 905 | 1103 | 1589 | 2281 | 3312 | 5583 | 68.6% | 78.0% | 1.0% |
| Algeria | – | 25 | 25 | 25 | 25 | 26 | 74 | 244 | 425 | 448 | 448 | – | – | 0.1% |
| Egypt | 1 | 15 | 35 | 35 | 35 | 35 | 45 | 68 | 189 | 771 | 1668 | 116.3% | 96.5% | 0.3% |
| Morocco | 13 | 34 | 34 | 35 | 35 | 40 | 200 | 202 | 205 | 735 | 736 | – | 49.9% | 0.1% |
| South Africa | – | 2 | 6 | 11 | 262 | 1163 | 1352 | 2174 | 2486 | 2959 | 3061 | 3.4% | – | 0.5% |
| Other Africa | 50 | 74 | 100 | 150 | 209 | 288 | 386 | 514 | 746 | 1055 | 1324 | 25.5% | 38.8% | 0.2% |
| Total Africa | 65 | 150 | 200 | 257 | 566 | 1552 | 2056 | 3202 | 4052 | 5968 | 7236 | 21.3% | 60.2% | 1.2% |
| Australia | 332 | 1091 | 2473 | 3799 | 4568 | 5287 | 5946 | 6689 | 7354 | 11305 | 15930 | 40.9% | 63.1% | 2.7% |
| China | 415 | 1022 | 3108 | 6719 | 17759 | 28399 | 43549 | 77809 | 130822 | 175237 | 205493 | 17.3% | 92.3% | 35.0% |
| India | 28 | 39 | 65 | 566 | 926 | 3673 | 5593 | 9879 | 18152 | 27355 | 35060 | 28.2% | 101.3% | 6.0% |
| Japan | 2611 | 3599 | 4890 | 6430 | 12107 | 19334 | 28615 | 38438 | 44226 | 55500 | 61840 | 11.4% | 38.5% | 10.5% |
| Malaysia | 1 | 1 | 1 | 25 | 97 | 166 | 229 | 279 | 370 | 536 | 882 | 64.6% | 99.4% | 0.2% |
| Pakistan | 4 | 9 | 19 | 46 | 101 | 165 | 230 | 546 | 1018 | 1169 | 1329 | 13.7% | 100.7% | 0.2% |
| Philippines | 1 | 1 | 1 | 1 | 1 | 23 | 166 | 775 | 897 | 897 | 922 | 2.8% | 97.4% | 0.2% |
| South Korea | 524 | 650 | 730 | 1024 | 1555 | 2481 | 3615 | 4502 | 5835 | 7130 | 10505 | 47.3% | 34.9% | 1.8% |
| Taiwan | 10 | 22 | 118 | 223 | 392 | 620 | 842 | 1245 | 1768 | 2738 | 4150 | 51.5% | 85.7% | 0.7% |
| Thailand | 37 | 49 | 79 | 382 | 829 | 1304 | 1425 | 2451 | 2702 | 2967 | 2987 | 0.7% | 57.1% | 0.5% |
| Other Asia Pacific | 73 | 111 | 612 | 589 | 811 | 330 | 486 | 665 | 939 | 1205 | 7343 | 509.3% | 38.2% | 1.3% |
| Total Asia Pacific | 4034 | 6594 | 12095 | 19803 | 39145 | 61781 | 90696 | 143277 | 214084 | 286040 | 346441 | 21.1% | 58.1% | 59.1% |
| Total World | 22639 | 40129 | 71370 | 102676 | 139458 | 176015 | 221988 | 295816 | 388550 | 488741 | 586421 | 20.0% | 42.3% | 100.0% |

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

Sources: Includes IRENA, BNEF, IHS.

Solar PV generation capacity

Gigawatts, cumulative installed capacity



Source: includes data from BNEF, IHS, IRENA.

Renewable energy – wind

Cumulative installed wind capacity*

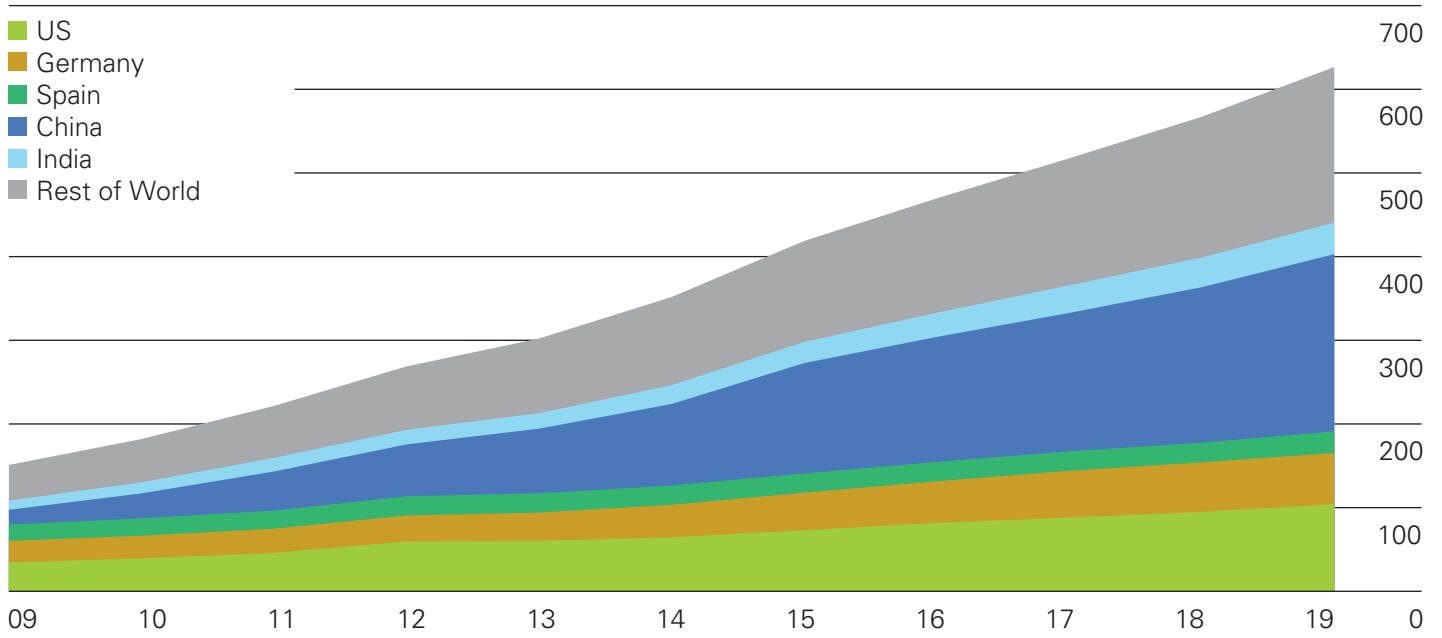
| Megawatts | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Growth rate per annum | | Share 2019 | |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|--------------|--------------|--------------|
| | | | | | | | | | | | 2019 | 2018-18 | | |
| Canada | 3282 | 3967 | 5265 | 6201 | 7801 | 9694 | 11214 | 11973 | 12403 | 12816 | 13413 | 4.7% | 18.6% | 2.2% |
| Mexico | 425 | 519 | 601 | 1815 | 2122 | 2569 | 3271 | 4051 | 4199 | 4875 | 6591 | 35.2% | 47.4% | 1.1% |
| US | 34296 | 39135 | 45676 | 59075 | 59973 | 64232 | 72573 | 81286 | 87597 | 94417 | 103584 | 9.7% | 14.4% | 16.6% |
| Total North America | 38003 | 43621 | 51542 | 67091 | 69896 | 76495 | 87058 | 97310 | 104199 | 112109 | 123588 | 10.2% | 15.3% | 19.8% |
| Argentina | 28 | 28 | 60 | 137 | 190 | 215 | 215 | 215 | 257 | 750 | 1609 | 114.6% | 39.0% | 0.3% |
| Brazil | 602 | 927 | 1426 | 1894 | 2202 | 4888 | 7633 | 10124 | 12294 | 14833 | 15364 | 3.6% | 43.6% | 2.5% |
| Chile | 163 | 163 | 184 | 202 | 301 | 736 | 910 | 1039 | 1305 | 1524 | 1620 | 6.3% | 54.2% | 0.3% |
| Costa Rica | 120 | 120 | 133 | 148 | 148 | 197 | 278 | 319 | 378 | 408 | 411 | 0.8% | 19.3% | 0.1% |
| Uruguay | 31 | 41 | 44 | 53 | 59 | 481 | 857 | 1212 | 1516 | 1516 | 1561 | 3.0% | 59.1% | 0.3% |
| Other S. & Cent. America | 164 | 211 | 351 | 638 | 719 | 964 | 1422 | 1597 | 1640 | 1848 | 2067 | 11.9% | 36.4% | 0.3% |
| Total S. & Cent. America | 1107 | 1489 | 2197 | 3071 | 3619 | 7481 | 11315 | 14506 | 17390 | 20878 | 22633 | 8.4% | 42.3% | 3.6% |
| Austria | 1001 | 1016 | 1106 | 1337 | 1675 | 2110 | 2489 | 2730 | 2887 | 3133 | 3159 | 0.8% | 12.2% | 0.5% |
| Belgium | 608 | 912 | 1069 | 1370 | 1780 | 1944 | 2176 | 2370 | 2797 | 3261 | 3780 | 15.9% | 26.0% | 0.6% |
| Bulgaria | 333 | 488 | 541 | 677 | 683 | 699 | 699 | 699 | 698 | 699 | 699 | 0.0% | 19.9% | 0.1% |
| Denmark | 3482 | 3802 | 3952 | 4162 | 4819 | 4887 | 5077 | 5246 | 5490 | 6121 | 6119 | -0.1% | 6.8% | 1.0% |
| Finland | 147 | 197 | 199 | 257 | 447 | 627 | 1005 | 1565 | 2044 | 2041 | 2282 | 11.8% | 30.5% | 0.4% |
| France | 4582 | 5912 | 6758 | 7607 | 8156 | 9201 | 10298 | 11567 | 13499 | 14900 | 16260 | 9.1% | 15.9% | 2.6% |
| Germany | 25732 | 26903 | 28712 | 30979 | 33477 | 38614 | 44580 | 49435 | 55580 | 58843 | 60822 | 3.4% | 9.9% | 9.8% |
| Greece | 1171 | 1298 | 1640 | 1753 | 1809 | 1978 | 2091 | 2370 | 2624 | 2877 | 3547 | 23.3% | 10.9% | 0.6% |
| Ireland | 1251 | 1390 | 1585 | 1704 | 2008 | 2283 | 2451 | 2786 | 3318 | 3676 | 4172 | 13.5% | 14.6% | 0.7% |
| Italy | 4879 | 5794 | 6918 | 8102 | 8542 | 8683 | 9137 | 9384 | 9737 | 10230 | 10758 | 5.2% | 11.2% | 1.7% |
| Netherlands | 2222 | 2237 | 2316 | 2433 | 2713 | 2865 | 3391 | 4257 | 4202 | 4393 | 4463 | 1.6% | 7.4% | 0.7% |
| Norway | 423 | 425 | 512 | 705 | 818 | 863 | 867 | 883 | 1207 | 1710 | 2444 | 42.9% | 15.8% | 0.4% |
| Poland | 709 | 1108 | 1800 | 2564 | 3429 | 3836 | 4886 | 5747 | 5759 | 5766 | 5917 | 2.6% | 27.1% | 1.0% |
| Portugal | 3326 | 3796 | 4256 | 4412 | 4610 | 4857 | 4937 | 5124 | 5124 | 5172 | 5233 | 1.2% | 6.1% | 0.8% |
| Romania | 15 | 389 | 988 | 1822 | 2773 | 3244 | 3130 | 3025 | 3030 | 3032 | 3040 | 0.3% | 89.8% | 0.5% |
| Spain | 19176 | 20693 | 21529 | 22789 | 22958 | 22925 | 22943 | 22990 | 23124 | 23405 | 25553 | 9.2% | 3.5% | 4.1% |
| Sweden | 1475 | 2017 | 2764 | 3606 | 4194 | 5088 | 5819 | 6435 | 6611 | 7300 | 8888 | 21.8% | 24.5% | 1.4% |
| Turkey | 792 | 1320 | 1729 | 2261 | 2760 | 3630 | 4503 | 5751 | 6516 | 7005 | 7591 | 8.4% | 34.4% | 1.2% |
| Ukraine | 86 | 88 | 146 | 248 | 362 | 514 | 514 | 526 | 553 | 621 | 1258 | 102.6% | 22.3% | 0.2% |
| United Kingdom | 4422 | 5421 | 6596 | 9030 | 11282 | 13074 | 14306 | 16126 | 19585 | 21770 | 24128 | 10.8% | 20.2% | 3.9% |
| Other Europe | 763 | 1030 | 1323 | 1625 | 1719 | 1892 | 2218 | 2472 | 2744 | 2918 | 3372 | 15.6% | 19.9% | 0.5% |
| Total Europe | 76596 | 86236 | 96439 | 109444 | 121014 | 133814 | 147516 | 161487 | 177129 | 188875 | 203483 | 7.7% | 11.4% | 32.7% |
| Russian Fed | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 52 | 102 | 96.3% | 17.9% | • |
| Other CIS | 5 | 5 | 3 | 4 | 9 | 58 | 82 | 137 | 152 | 212 | 374 | 76.6% | 55.3% | 0.1% |
| Total CIS | 15 | 15 | 13 | 14 | 19 | 68 | 93 | 148 | 163 | 264 | 476 | 80.5% | 35.5% | 0.1% |
| Iran | 92 | 95 | 98 | 106 | 108 | 149 | 153 | 191 | 259 | 282 | 302 | 7.2% | 16.2% | • |
| Jordan | 1 | 1 | 1 | 1 | 1 | 1 | 118 | 184 | 198 | 285 | 374 | 31.3% | 70.1% | 0.1% |
| Other Middle East | 7 | 7 | 7 | 8 | 10 | 12 | 14 | 35 | 48 | 48 | 48 | • | 20.6% | 0.0% |
| Total Middle East | 101 | 104 | 107 | 115 | 119 | 162 | 286 | 410 | 505 | 614 | 723 | 17.8% | 24.0% | 0.1% |
| Egypt | 435 | 550 | 550 | 550 | 550 | 550 | 750 | 750 | 750 | 1125 | 1375 | 22.2% | 11.2% | 0.2% |
| Morocco | 221 | 221 | 255 | 255 | 495 | 797 | 797 | 897 | 1017 | 1220 | 1220 | - | 26.7% | 0.2% |
| South Africa | 8 | 10 | 10 | 10 | 257 | 569 | 1079 | 1473 | 2094 | 2094 | 2094 | - | 73.6% | 0.3% |
| Tunisia | 53 | 53 | 53 | 173 | 200 | 233 | 240 | 245 | 245 | 245 | 245 | - | 29.1% | • |
| Other Africa | 7 | 12 | 109 | 122 | 222 | 234 | 438 | 448 | 454 | 764 | 814 | 6.5% | 63.1% | 0.1% |
| Total Africa | 724 | 846 | 977 | 1110 | 1724 | 2383 | 3304 | 3813 | 4560 | 5448 | 5748 | 5.5% | 26.1% | 0.9% |
| Australia | 1703 | 1864 | 2127 | 2561 | 3221 | 3797 | 4234 | 4327 | 4816 | 5818 | 7272 | 25.0% | 15.0% | 1.2% |
| China | 17599 | 29633 | 46355 | 61597 | 76731 | 96819 | 131048 | 148517 | 164374 | 184665 | 210478 | 14.0% | 36.2% | 33.8% |
| India | 10925 | 13184 | 16179 | 17300 | 18420 | 22465 | 25088 | 28700 | 32848 | 35288 | 37505 | 6.3% | 13.2% | 6.0% |
| Japan | 1997 | 2294 | 2419 | 2562 | 2646 | 2753 | 2808 | 3247 | 3483 | 3667 | 3786 | 3.2% | 7.6% | 0.6% |
| New Zealand | 497 | 524 | 524 | 623 | 623 | 682 | 689 | 689 | 689 | 689 | 689 | - | 7.9% | 0.1% |
| Pakistan | 6 | 6 | 6 | 56 | 106 | 206 | 308 | 591 | 789 | 1186 | 1236 | 4.2% | 69.7% | 0.2% |
| Philippines | 33 | 33 | 33 | 33 | 33 | 337 | 427 | 427 | 427 | 427 | 427 | - | 29.2% | 0.1% |
| South Korea | 351 | 382 | 425 | 464 | 576 | 612 | 847 | 1067 | 1215 | 1420 | 1512 | 6.5% | 16.7% | 0.2% |
| Taiwan | 374 | 476 | 523 | 571 | 614 | 637 | 647 | 682 | 692 | 713 | 845 | 18.5% | 11.0% | 0.1% |
| Thailand | 5 | 6 | 7 | 112 | 223 | 225 | 234 | 507 | 628 | 1103 | 1507 | 36.6% | 99.6% | 0.2% |
| Other Asia Pacific | 67 | 117 | 128 | 161 | 237 | 279 | 374 | 398 | 494 | 657 | 796 | 21.2% | 28.3% | 0.1% |
| Total Asia Pacific | 33557 | 48519 | 68726 | 86040 | 103430 | 128812 | 166704 | 189152 | 210456 | 235633 | 266053 | 12.9% | 26.3% | 42.7% |
| Total World | 150165 | 180924 | 220120 | 267097 | 300287 | 349671 | 416276 | 466827 | 514402 | 563820 | 622704 | 10.4% | 17.2% | 100% |

*End of year.
•Less than 0.05%.

Sources: IRENA, BNEF, IHS.

Wind generation capacity

Gigawatts, cumulative installed capacity



Source: includes data from BNEF, IHS, IRENA.