



| | Electricity production | | Sources of electricity ^a | | | | | | | | | |
|--------------------------|------------------------|---------|-------------------------------------|------|------|------|-------|-------|------------|------|---------------|------|
| | billion kilowatt hours | | Coal | | Gas | | Oil | | Hydropower | | Nuclear power | |
| | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 |
| Afghanistan | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Albania | 3.2 | 5.1 | 0.0 | 0.0 | 0.0 | 0.0 | 10.9 | 1.8 | 89.1 | 98.2 | 0.0 | 0.0 |
| Algeria | 16.1 | 35.2 | 0.0 | 0.0 | 93.7 | 97.2 | 5.4 | 2.2 | 0.8 | 0.6 | 0.0 | 0.0 |
| Angola | 0.8 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13.8 | 9.9 | 86.2 | 90.1 | 0.0 | 0.0 |
| Argentina | 50.7 | 115.0 | 1.3 | 1.8 | 39.2 | 50.2 | 9.8 | 7.0 | 35.2 | 33.0 | 14.3 | 6.7 |
| Armenia | 10.4 | 5.9 | 0.0 | 0.0 | 16.4 | 24.8 | 68.6 | 0.0 | 15.0 | 30.7 | 0.0 | 44.4 |
| Australia | 154.3 | 251.3 | 77.1 | 79.2 | 10.6 | 12.2 | 2.7 | 0.9 | 9.2 | 6.2 | 0.0 | 0.0 |
| Austria | 49.3 | 60.7 | 14.2 | 13.7 | 15.7 | 17.6 | 3.8 | 2.7 | 63.9 | 57.4 | 0.0 | 0.0 |
| Azerbaijan | 23.2 | 23.6 | 0.0 | 0.0 | 0.0 | 63.5 | 97.0 | 25.9 | 3.0 | 10.7 | 0.0 | 0.0 |
| Bangladesh | 7.7 | 24.3 | 0.0 | 0.0 | 84.3 | 87.6 | 4.3 | 6.7 | 11.4 | 5.7 | 0.0 | 0.0 |
| Belarus | 39.5 | 31.8 | 0.0 | 0.0 | 58.1 | 95.0 | 41.8 | 4.6 | 0.1 | 0.1 | 0.0 | 0.0 |
| Belgium | 70.3 | 84.3 | 28.2 | 10.9 | 7.7 | 27.3 | 1.9 | 1.6 | 0.4 | 0.4 | 60.8 | 55.3 |
| Benin | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bolivia | 2.1 | 5.3 | 0.0 | 0.0 | 37.6 | 39.3 | 5.3 | 16.7 | 55.3 | 40.8 | 0.0 | 0.0 |
| Bosnia and Herzegovina | 14.6 | 13.3 | 71.8 | 54.9 | 0.0 | 0.0 | 7.3 | 1.2 | 20.9 | 43.9 | 0.0 | 0.0 |
| Botswana | 0.9 | 1.0 | 88.1 | 99.4 | 0.0 | 0.0 | 11.9 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| Brazil | 222.8 | 419.3 | 2.0 | 2.4 | 0.0 | 4.4 | 2.2 | 3.0 | 92.8 | 83.2 | 1.0 | 3.3 |
| Bulgaria | 42.1 | 45.5 | 50.3 | 42.2 | 7.6 | 4.7 | 2.9 | 0.8 | 4.5 | 9.3 | 34.8 | 42.8 |
| Burkina Faso | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Burundi | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cambodia | .. | 1.2 | .. | 0.0 | .. | 0.0 | .. | 95.7 | .. | 4.1 | .. | 0.0 |
| Cameroon | 2.7 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 5.9 | 98.5 | 94.1 | 0.0 | 0.0 |
| Canada | 481.9 | 612.5 | 17.1 | 17.1 | 2.0 | 5.5 | 3.4 | 1.5 | 61.6 | 58.0 | 15.1 | 16.0 |
| Central African Republic | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chad | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chile | 18.4 | 57.6 | 34.3 | 17.1 | 1.3 | 19.9 | 7.6 | 1.6 | 55.3 | 59.5 | 0.0 | 0.0 |
| China | 621.2 | 2,864.2 | 71.3 | 80.4 | 0.4 | 0.5 | 7.9 | 1.8 | 20.4 | 15.2 | 0.0 | 1.9 |
| Hong Kong, China | 28.9 | 38.6 | 98.3 | 68.9 | 0.0 | 30.8 | 1.7 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Colombia | 36.4 | 54.3 | 10.1 | 7.5 | 12.4 | 12.4 | 1.0 | 0.2 | 75.6 | 78.7 | 0.0 | 0.0 |
| Congo, Dem. Rep. | 5.7 | 7.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.3 | 99.6 | 99.7 | 0.0 | 0.0 |
| Congo, Rep. | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 | 17.9 | 0.6 | 0.0 | 99.4 | 82.1 | 0.0 | 0.0 |
| Costa Rica | 3.5 | 8.7 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 6.1 | 97.5 | 75.9 | 0.0 | 0.0 |
| Côte d'Ivoire | 2.0 | 5.5 | 0.0 | 0.0 | 0.0 | 72.7 | 33.3 | 0.0 | 66.7 | 27.3 | 0.0 | 0.0 |
| Croatia | 9.2 | 12.3 | 6.8 | 18.3 | 20.2 | 16.7 | 31.6 | 15.9 | 41.3 | 48.8 | 0.0 | 0.0 |
| Cuba | 15.0 | 16.5 | 0.0 | 0.0 | 0.2 | 0.0 | 91.5 | 96.7 | 0.6 | 0.6 | 0.0 | 0.0 |
| Czech Republic | 62.3 | 83.7 | 76.4 | 60.4 | 0.6 | 3.9 | 0.9 | 0.3 | 1.9 | 3.0 | 20.2 | 31.1 |
| Denmark | 26.0 | 45.7 | 90.7 | 53.9 | 2.7 | 20.6 | 3.4 | 3.5 | 0.1 | 0.1 | 0.0 | 0.0 |
| Dominican Republic | 3.7 | 14.2 | 1.2 | 13.4 | 0.0 | 9.1 | 88.6 | 67.3 | 9.4 | 10.0 | 0.0 | 0.0 |
| Ecuador | 6.3 | 15.4 | 0.0 | 0.0 | 0.0 | 9.6 | 21.5 | 44.1 | 78.5 | 46.3 | 0.0 | 0.0 |
| Egypt, Arab Rep. | 42.3 | 115.4 | 0.0 | 0.0 | 39.6 | 72.1 | 36.9 | 16.1 | 23.5 | 11.2 | 0.0 | 0.0 |
| El Salvador | 2.2 | 5.6 | 0.0 | 0.0 | 0.0 | 0.0 | 6.9 | 44.2 | 73.5 | 35.1 | 0.0 | 0.0 |
| Eritrea | 0.1 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 99.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Estonia | 17.4 | 9.7 | 85.8 | 90.2 | 5.9 | 8.0 | 8.3 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 |
| Ethiopia | 1.2 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 11.6 | 0.3 | 88.4 | 99.7 | 0.0 | 0.0 |
| Finland | 54.4 | 82.3 | 18.5 | 20.6 | 8.6 | 15.0 | 3.1 | 0.6 | 20.0 | 14.0 | 35.3 | 27.8 |
| France | 417.2 | 569.2 | 8.5 | 4.6 | 0.7 | 3.9 | 2.1 | 1.2 | 12.9 | 9.8 | 75.3 | 79.1 |
| Gabon | 1.0 | 1.7 | 0.0 | 0.0 | 16.4 | 15.3 | 11.2 | 29.5 | 72.1 | 54.8 | 0.0 | 0.0 |
| Gambia, The | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Georgia | 13.7 | 7.3 | 0.0 | 0.0 | 15.6 | 26.7 | 29.2 | 0.3 | 55.2 | 72.9 | 0.0 | 0.0 |
| Germany | 547.7 | 629.4 | 58.7 | 48.0 | 7.4 | 12.1 | 1.9 | 1.5 | 3.2 | 3.2 | 27.8 | 26.6 |
| Ghana | 5.7 | 8.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 33.3 | 100.0 | 66.7 | 0.0 | 0.0 |
| Greece | 34.8 | 60.2 | 72.4 | 53.6 | 0.3 | 17.6 | 22.3 | 16.0 | 5.1 | 9.7 | 0.0 | 0.0 |
| Guatemala | 2.3 | 7.9 | 0.0 | 13.6 | 0.0 | 0.0 | 9.0 | 25.3 | 76.0 | 48.3 | 0.0 | 0.0 |
| Guinea | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guinea-Bissau | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Haiti | 0.6 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 20.6 | 52.5 | 76.5 | 47.5 | 0.0 | 0.0 |

Sources of electricity

3.10

ENVIRONMENT

| | Electricity production | | Sources of electricity ^a | | | | | | | | | | |
|--------------------|------------------------|---------|-------------------------------------|------|------|------|-------|------|------------|-------|---------------|------|------|
| | billion kilowatt hours | | % of total | | | | | | | | | | |
| | 1990 | 2006 | Coal | | Gas | | Oil | | Hydropower | | Nuclear power | | |
| | | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 |
| Honduras | 2.3 | 6.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 | 56.1 | 98.3 | 43.2 | 0.0 | 0.0 | |
| Hungary | 28.4 | 35.9 | 30.5 | 19.8 | 15.7 | 36.7 | 4.8 | 1.5 | 0.6 | 0.5 | 48.3 | 37.5 | |
| India | 289.4 | 744.1 | 66.2 | 68.3 | 3.4 | 8.3 | 3.5 | 4.2 | 24.8 | 15.3 | 2.1 | 2.5 | |
| Indonesia | 33.3 | 133.1 | 31.5 | 44.1 | 2.3 | 14.6 | 42.7 | 29.1 | 20.2 | 7.2 | 0.0 | 0.0 | |
| Iran, Islamic Rep. | 59.1 | 201.0 | 0.0 | 0.0 | 52.5 | 73.7 | 37.3 | 17.2 | 10.3 | 9.1 | 0.0 | 0.0 | |
| Iraq | 24.0 | 31.9 | 0.0 | 0.0 | 0.0 | 0.0 | 89.2 | 98.5 | 10.8 | 1.5 | 0.0 | 0.0 | |
| Ireland | 14.2 | 27.7 | 41.6 | 21.3 | 27.7 | 52.3 | 10.0 | 9.8 | 4.9 | 2.6 | 0.0 | 0.0 | |
| Israel | 20.9 | 51.8 | 50.1 | 69.3 | 0.0 | 17.5 | 49.9 | 13.1 | 0.0 | 0.1 | 0.0 | 0.0 | |
| Italy | 213.1 | 307.7 | 16.8 | 16.4 | 18.6 | 51.4 | 48.2 | 14.9 | 14.8 | 12.0 | 0.0 | 0.0 | |
| Jamaica | 2.5 | 7.5 | 0.0 | 0.0 | 0.0 | 0.0 | 92.4 | 96.4 | 3.6 | 2.2 | 0.0 | 0.0 | |
| Japan | 835.5 | 1,090.5 | 14.0 | 27.4 | 20.0 | 23.3 | 18.5 | 8.5 | 10.7 | 7.9 | 24.2 | 27.8 | |
| Jordan | 3.6 | 11.6 | 0.0 | 0.0 | 11.9 | 70.4 | 87.8 | 29.2 | 0.3 | 0.4 | 0.0 | 0.0 | |
| Kazakhstan | 87.4 | 71.7 | 71.1 | 70.3 | 10.5 | 11.8 | 10.0 | 7.0 | 8.4 | 10.8 | 0.0 | 0.0 | |
| Kenya | 3.2 | 6.5 | 0.0 | 0.0 | 0.0 | 0.0 | 7.1 | 30.5 | 76.6 | 50.6 | 0.0 | 0.0 | |
| Korea, Dem. Rep. | 27.7 | 22.4 | 40.1 | 40.9 | 0.0 | 0.0 | 3.6 | 2.8 | 56.3 | 56.2 | 0.0 | 0.0 | |
| Korea, Rep. | 105.4 | 402.3 | 16.8 | 38.0 | 9.1 | 18.1 | 17.9 | 5.6 | 6.0 | 0.9 | 50.2 | 37.0 | |
| Kuwait | 18.5 | 47.6 | 0.0 | 0.0 | 45.7 | 27.5 | 54.3 | 72.5 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Kyrgyz Republic | 15.7 | 17.1 | 13.1 | 3.3 | 23.5 | 9.6 | 0.0 | 0.0 | 63.5 | 87.2 | 0.0 | 0.0 | |
| Lao PDR | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Latvia | 6.6 | 4.9 | 0.0 | 0.0 | 26.1 | 42.9 | 5.4 | 0.1 | 67.6 | 55.2 | 0.0 | 0.0 | |
| Lebanon | 1.5 | 9.3 | 0.0 | 0.0 | 0.0 | 0.0 | 66.7 | 92.5 | 33.3 | 7.5 | 0.0 | 0.0 | |
| Lesotho | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Liberia | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Libya | 10.2 | 24.0 | 0.0 | 0.0 | 0.0 | 40.9 | 100.0 | 59.1 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Lithuania | 28.4 | 12.1 | 0.0 | 0.0 | 23.8 | 20.4 | 14.6 | 1.7 | 1.5 | 3.3 | 60.0 | 71.6 | |
| Macedonia, FYR | 5.8 | 7.0 | 89.7 | 72.9 | 0.0 | 0.0 | 1.8 | 3.5 | 8.5 | 23.6 | 0.0 | 0.0 | |
| Madagascar | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Malawi | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Malaysia | 23.0 | 91.6 | 12.3 | 25.3 | 22.0 | 64.0 | 48.4 | 3.0 | 17.3 | 7.7 | 0.0 | 0.0 | |
| Mali | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Mauritania | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Mauritius | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Mexico | 124.1 | 249.6 | 6.3 | 12.7 | 11.6 | 45.5 | 56.7 | 21.6 | 18.9 | 12.2 | 2.4 | 4.4 | |
| Moldova | 16.2 | 3.8 | 30.8 | 0.0 | 42.3 | 97.5 | 25.4 | 0.0 | 1.6 | 2.0 | 0.0 | 0.0 | |
| Mongolia | 3.5 | 3.6 | 92.4 | 96.9 | 0.0 | 0.0 | 7.6 | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Morocco | 9.6 | 23.2 | 23.0 | 58.1 | 0.0 | 12.8 | 64.4 | 21.4 | 12.7 | 6.9 | 0.0 | 0.0 | |
| Mozambique | 0.5 | 14.7 | 13.9 | 0.0 | 0.0 | 0.1 | 23.6 | 0.1 | 62.6 | 99.9 | 0.0 | 0.0 | |
| Myanmar | 2.5 | 6.2 | 1.6 | 0.0 | 39.3 | 40.2 | 10.9 | 5.8 | 48.1 | 53.9 | 0.0 | 0.0 | |
| Namibia | 1.4 | 1.6 | 1.5 | 5.2 | 0.0 | 0.0 | 3.3 | 0.6 | 95.2 | 94.1 | 0.0 | 0.0 | |
| Nepal | 0.9 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 99.9 | 99.6 | 0.0 | 0.0 | |
| Netherlands | 71.9 | 98.4 | 38.3 | 26.9 | 50.9 | 57.6 | 4.3 | 2.1 | 0.1 | 0.1 | 4.9 | 3.5 | |
| New Zealand | 32.3 | 43.5 | 1.9 | 12.5 | 17.6 | 22.6 | 0.0 | 0.1 | 72.3 | 53.9 | 0.0 | 0.0 | |
| Nicaragua | 1.4 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 39.8 | 72.2 | 28.8 | 12.5 | 0.0 | 0.0 | |
| Niger | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Nigeria | 13.5 | 23.1 | 0.1 | 0.0 | 53.7 | 57.8 | 13.7 | 8.8 | 32.6 | 33.4 | 0.0 | 0.0 | |
| Norway | 121.6 | 121.3 | 0.1 | 0.1 | 0.0 | 0.4 | 0.0 | 0.0 | 99.6 | 98.5 | 0.0 | 0.0 | |
| Oman | 4.5 | 13.6 | 0.0 | 0.0 | 81.6 | 82.0 | 18.4 | 18.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Pakistan | 37.7 | 98.4 | 0.1 | 0.1 | 33.6 | 36.4 | 20.6 | 28.6 | 44.9 | 32.5 | 0.8 | 2.3 | |
| Panama | 2.7 | 6.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.7 | 38.9 | 83.2 | 59.8 | 0.0 | 0.0 | |
| Papua New Guinea | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Paraguay | 27.2 | 53.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 99.9 | 100.0 | 0.0 | 0.0 | |
| Peru | 13.8 | 27.4 | 0.0 | 3.0 | 1.7 | 9.5 | 21.5 | 8.4 | 75.8 | 78.5 | 0.0 | 0.0 | |
| Philippines | 25.2 | 56.7 | 7.7 | 27.0 | 0.0 | 28.8 | 46.7 | 8.2 | 24.0 | 17.5 | 0.0 | 0.0 | |
| Poland | 134.4 | 160.8 | 97.5 | 93.6 | 0.1 | 1.9 | 1.2 | 1.5 | 1.1 | 1.3 | 0.0 | 0.0 | |
| Portugal | 28.4 | 48.6 | 32.1 | 30.8 | 0.0 | 25.4 | 33.1 | 10.8 | 32.3 | 22.6 | 0.0 | 0.0 | |
| Puerto Rico | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |



| | Electricity production | | Sources of electricity ^a | | | | | | | | | |
|--------------------------------|------------------------|-------------------|-------------------------------------|---------------|------------------|---------------|------------------|--------------|-------------------|---------------|------------------|---------------|
| | billion kilowatt hours | | Coal | | Gas | | Oil | | Hydropower | | Nuclear power | |
| | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 | 1990 | 2006 |
| Romania | 64.3 | 62.7 | 28.8 | 40.3 | 35.1 | 18.9 | 18.4 | 2.6 | 17.7 | 29.3 | 0.0 | 9.0 |
| Russian Federation | 1,082.2 | 993.9 | 14.3 | 17.9 | 47.3 | 46.1 | 11.9 | 2.5 | 15.3 | 17.4 | 10.9 | 15.7 |
| Rwanda | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Saudi Arabia | 69.2 | 179.8 | 0.0 | 0.0 | 48.1 | 47.7 | 51.9 | 52.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Senegal | 0.9 | 2.4 | 0.0 | 0.0 | 2.3 | 1.9 | 93.0 | 85.1 | 0.0 | 9.6 | 0.0 | 0.0 |
| Serbia | 40.9 ^b | 36.5 | 69.1 ^b | 68.7 | 3.2 ^b | 0.3 | 4.6 ^b | 0.9 | 23.1 ^b | 30.1 | 0.0 ^b | 0.0 |
| Sierra Leone | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Singapore | 15.7 | 39.4 | 0.0 | 0.0 | 0.0 | 78.0 | 100.0 | 22.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Slovak Republic | 25.5 | 31.3 | 31.9 | 18.3 | 7.1 | 6.1 | 6.4 | 2.3 | 7.4 | 14.1 | 47.2 | 57.6 |
| Slovenia | 12.0 | 15.1 | 31.9 | 36.0 | 0.0 | 2.5 | 4.8 | 0.3 | 24.7 | 23.8 | 38.7 | 36.7 |
| Somalia | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| South Africa | 165.4 | 251.9 | 94.3 | 93.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 1.5 | 5.1 | 4.7 |
| Spain | 151.2 | 299.1 | 40.1 | 22.8 | 1.0 | 30.2 | 5.7 | 8.0 | 16.8 | 8.5 | 35.9 | 20.1 |
| Sri Lanka | 3.2 | 9.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 50.6 | 99.8 | 49.4 | 0.0 | 0.0 |
| Sudan | 1.5 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 36.8 | 67.5 | 63.2 | 32.5 | 0.0 | 0.0 |
| Swaziland | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Sweden | 146.0 | 143.3 | 1.1 | 1.1 | 0.3 | 0.4 | 0.9 | 1.2 | 49.7 | 43.1 | 46.7 | 46.7 |
| Switzerland | 55.0 | 62.1 | 0.1 | 0.0 | 0.6 | 1.3 | 0.7 | 0.3 | 54.2 | 49.8 | 43.0 | 44.8 |
| Syrian Arab Republic | 11.6 | 37.3 | 0.0 | 0.0 | 20.5 | 38.0 | 56.0 | 51.2 | 23.5 | 10.7 | 0.0 | 0.0 |
| Tajikistan | 18.1 | 16.9 | 0.0 | 0.0 | 9.1 | 2.3 | 0.0 | 0.0 | 90.9 | 97.7 | 0.0 | 0.0 |
| Tanzania | 1.6 | 2.8 | 0.0 | 3.8 | 0.0 | 43.8 | 4.9 | 0.6 | 95.1 | 51.7 | 0.0 | 0.0 |
| Thailand | 44.2 | 138.7 | 25.0 | 18.0 | 40.2 | 67.8 | 23.5 | 6.1 | 11.3 | 5.9 | 0.0 | 0.0 |
| Timor-Leste | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Togo | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 39.9 | 57.5 | 60.1 | 41.2 | 0.0 | 0.0 |
| Trinidad and Tobago | 3.6 | 7.0 | 0.0 | 0.0 | 99.0 | 99.4 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tunisia | 5.8 | 14.1 | 0.0 | 0.0 | 63.7 | 84.9 | 35.5 | 14.2 | 0.8 | 0.7 | 0.0 | 0.0 |
| Turkey | 57.5 | 176.3 | 35.1 | 26.5 | 17.7 | 45.8 | 6.9 | 2.5 | 40.2 | 25.1 | 0.0 | 0.0 |
| Turkmenistan | 14.6 | 13.7 | 0.0 | 0.0 | 95.2 | 100.0 | 0.0 | 0.0 | 4.8 | 0.0 | 0.0 | 0.0 |
| Uganda | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ukraine | 298.6 | 193.2 | 38.2 | 33.6 | 16.7 | 12.7 | 16.1 | 0.4 | 3.5 | 6.7 | 25.5 | 46.7 |
| United Arab Emirates | 17.1 | 66.8 | 0.0 | 0.0 | 96.3 | 98.0 | 3.7 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| United Kingdom | 317.8 | 394.5 | 65.0 | 38.5 | 1.6 | 35.8 | 10.9 | 1.3 | 1.6 | 1.2 | 20.7 | 19.1 |
| United States | 3,202.8 | 4,274.3 | 53.1 | 49.8 | 11.9 | 19.6 | 4.1 | 1.9 | 8.5 | 6.8 | 19.1 | 19.1 |
| Uruguay | 7.4 | 5.6 | 0.0 | 0.0 | 0.0 | 0.1 | 5.1 | 35.1 | 94.2 | 64.0 | 0.0 | 0.0 |
| Uzbekistan | 56.3 | 49.3 | 7.4 | 4.7 | 76.4 | 69.6 | 4.4 | 12.8 | 11.8 | 12.8 | 0.0 | 0.0 |
| Venezuela, RB | 59.3 | 110.4 | 0.0 | 0.0 | 26.2 | 13.4 | 11.5 | 14.6 | 62.3 | 72.0 | 0.0 | 0.0 |
| Vietnam | 8.7 | 56.5 | 23.1 | 17.2 | 0.1 | 37.0 | 15.0 | 4.1 | 61.8 | 41.8 | 0.0 | 0.0 |
| West Bank and Gaza | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Yemen, Rep. | 1.7 | 5.3 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Zambia | 8.0 | 9.4 | 0.5 | 0.2 | 0.0 | 0.0 | 0.3 | 0.4 | 99.2 | 99.4 | 0.0 | 0.0 |
| Zimbabwe | 9.4 | 9.8 | 53.3 | 43.0 | 0.0 | 0.0 | 0.0 | 0.2 | 46.7 | 56.8 | 0.0 | 0.0 |
| World | 11,845.0 t | 18,977.0 t | 37.3 w | 40.8 w | 14.6 w | 20.1 w | 10.3 w | 5.5 w | 18.0 w | 15.9 w | 17.0 w | 14.7 w |
| Low income | 261.0 | 449.1 | 9.4 | 5.8 | 29.0 | 30.2 | 7.3 | 12.4 | 41.9 | 38.8 | 0.1 | 0.5 |
| Middle income | 4,017.2 | 7,919.8 | 35.3 | 48.3 | 20.6 | 18.6 | 14.4 | 6.1 | 22.3 | 20.6 | 6.3 | 5.1 |
| Lower middle income | 1,705.1 | 4,921.3 | 47.0 | 61.2 | 10.6 | 11.9 | 15.9 | 6.0 | 20.7 | 16.3 | 4.8 | 3.4 |
| Upper middle income | 2,312.1 | 2,998.3 | 26.6 | 27.0 | 28.0 | 29.5 | 13.4 | 6.2 | 23.5 | 27.6 | 7.4 | 7.8 |
| Low & middle income | 4,278.5 | 8,376.6 | 33.7 | 45.9 | 21.1 | 19.2 | 14.0 | 6.4 | 23.5 | 21.5 | 5.9 | 4.8 |
| East Asia & Pacific | 794.1 | 3,394.2 | 61.1 | 72.1 | 3.4 | 6.7 | 12.5 | 3.3 | 21.5 | 15.0 | 0.0 | 1.6 |
| Europe & Central Asia | 2,085.5 | 1,966.8 | 27.7 | 29.4 | 34.3 | 35.5 | 13.0 | 2.8 | 13.9 | 17.4 | 10.8 | 14.4 |
| Latin America & Carib. | 606.2 | 1,192.1 | 3.8 | 5.2 | 9.2 | 19.3 | 18.9 | 12.5 | 63.7 | 57.3 | 2.1 | 2.7 |
| Middle East & N. Africa | 187.9 | 515.0 | 1.2 | 2.6 | 36.9 | 60.7 | 48.3 | 27.8 | 12.4 | 7.4 | 0.0 | 0.0 |
| South Asia | 341.7 | 886.2 | 56.1 | 57.4 | 8.5 | 13.5 | 5.3 | 7.5 | 27.4 | 17.4 | 1.9 | 2.4 |
| Sub-Saharan Africa | 260.2 | 416.8 | 62.2 | 57.8 | 2.8 | 4.6 | 1.9 | 3.2 | 15.9 | 18.0 | 3.2 | 2.8 |
| High income | 7,585.5 | 10,644.0 | 39.2 | 36.6 | 10.9 | 20.7 | 8.2 | 4.7 | 14.9 | 11.4 | 23.2 | 22.5 |
| Euro area | 1,693.6 | 2,324.4 | 33.7 | 24.6 | 8.6 | 21.2 | 9.5 | 5.0 | 11.1 | 9.1 | 35.6 | 33.3 |

a. Shares may not sum to 100 percent because some sources of generated electricity (such as wind, solar, and geothermal) are not shown. b. Includes Kosovo and Montenegro.

About the data

Use of energy is important in improving people's standard of living. But electricity generation also can damage the environment. Whether such damage occurs depends largely on how electricity is generated. For example, burning coal releases twice as much carbon dioxide—a major contributor to global warming—as does burning an equivalent amount of natural gas (see *About the data* for table 3.8). Nuclear energy does not generate carbon dioxide emissions, but it produces other dangerous waste products. The table provides information on electricity production by source.

The International Energy Agency (IEA) compiles data on energy inputs used to generate electricity. IEA data for countries that are not members of the Organisation for Economic Co-operation and Development (OECD) are based on national energy data adjusted to conform to annual questionnaires completed by OECD member governments. In addition, estimates are sometimes made to complete major aggregates from which key data are missing, and

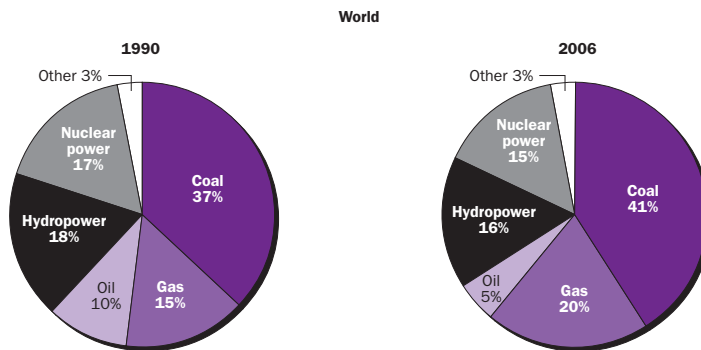
adjustments are made to compensate for differences in definitions. The IEA makes these estimates in consultation with national statistical offices, oil companies, electric utilities, and national energy experts. It occasionally revises its time series to reflect political changes. For example, the IEA has constructed historical energy statistics for countries of the former Soviet Union. In addition, energy statistics for other countries have undergone continuous changes in coverage or methodology in recent years as more detailed energy accounts have become available. Breaks in series are therefore unavoidable.

Definitions

- **Electricity production** is measured at the terminals of all alternator sets in a station. In addition to hydropower, coal, oil, gas, and nuclear power generation, it covers generation by geothermal, solar, wind, and tide and wave energy as well as that from combustible renewables and waste. Production includes the output of electric plants designed to produce electricity only, as well as that of combined heat and power plants.
- **Sources of electricity** are the inputs used to generate electricity: coal, gas, oil, hydropower, and nuclear power.
- **Coal** is all coal and brown coal, both primary (including hard coal and lignite-brown coal) and derived fuels (including peat, coke oven coke, gas coke, coke oven gas, and blast furnace gas). Peat is also included in this category.
- **Gas** is natural gas but not natural gas liquids.
- **Oil** is crude oil and petroleum products.
- **Hydropower** is electricity produced by hydroelectric power plants.
- **Nuclear power** is electricity produced by nuclear power plants.

Sources of electricity generation have shifted since 1990 . . .

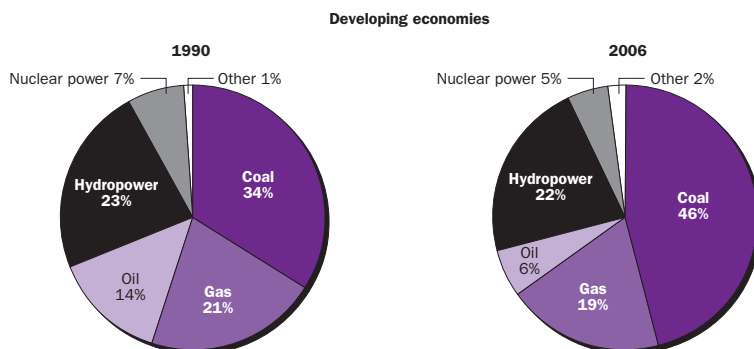
3.10a



Source: Table 3.10.

. . . with developing economies relying more on coal

3.10b



Source: Table 3.10.

Data sources

Data on electricity production are from the IEA's electronic files and its annual publications *Energy Statistics and Balances of Non-OECD Countries*, *Energy Statistics of OECD Countries*, and *Energy Balances of OECD Countries*.