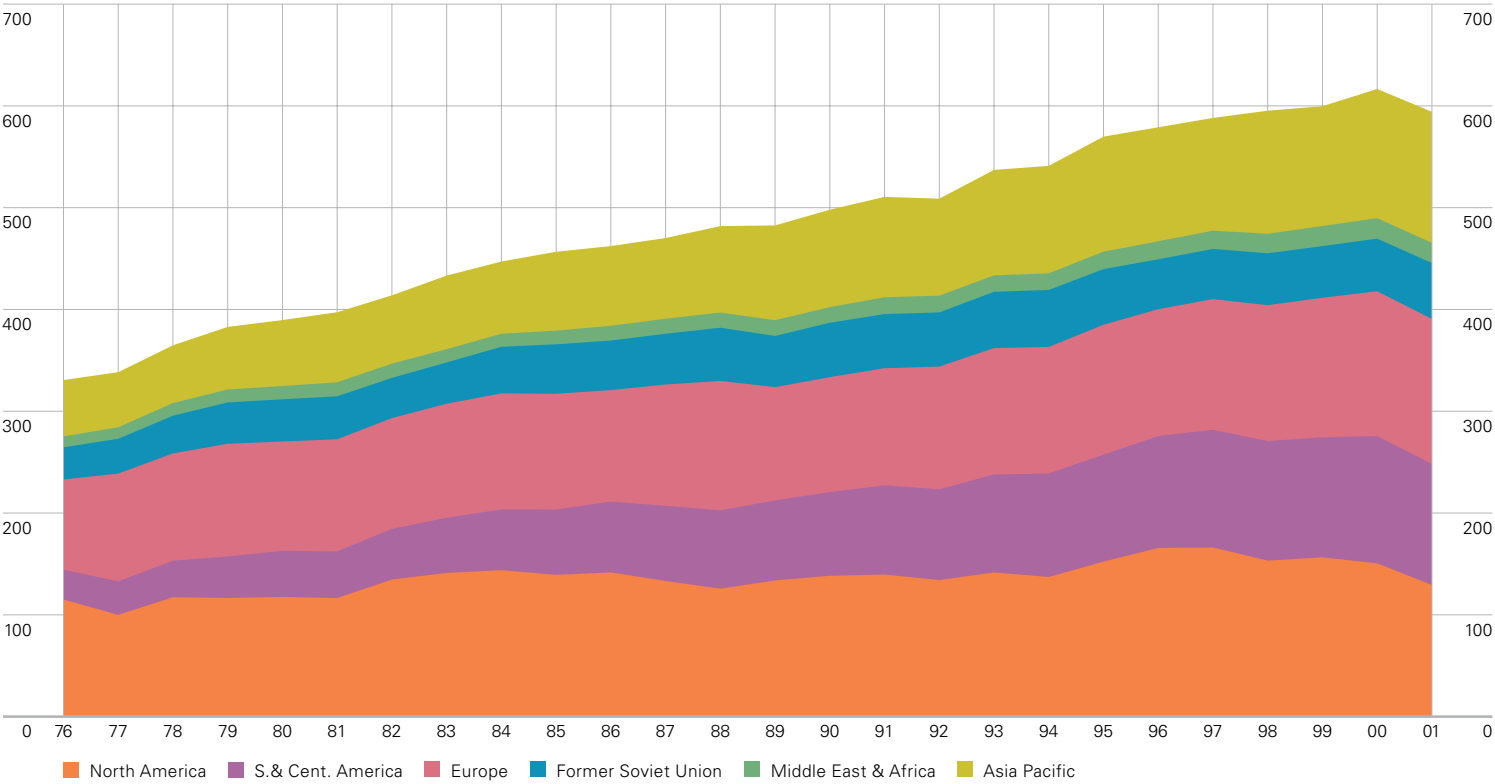


# hydroelectricity

## consumption by area

Million tonnes oil equivalent



Major falls in North American and Brazilian output resulted in a steep drop in hydroelectric generation during 2001, breaking a 10-year growth trend.

## hydroelectricity

## consumption\*

Million tonnes oil equivalent	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Change 2001 over 2000	2001 share of total
USA	65.1	56.9	63.2	58.7	70.5	78.7	81.1	72.9	71.6	62.4	48.3	-22.7%	8.1%
Canada	69.8	71.6	72.8	74.2	75.9	80.2	79.4	75.1	77.8	81.0	75.0	-7.4%	12.6%
Mexico	5.0	6.0	6.0	4.6	6.2	7.1	6.0	5.6	7.4	7.5	6.4	-14.1%	1.1%
<b>Total North America</b>	<b>139.9</b>	<b>134.5</b>	<b>142.0</b>	<b>137.5</b>	<b>152.6</b>	<b>166.0</b>	<b>166.5</b>	<b>153.6</b>	<b>156.8</b>	<b>150.9</b>	<b>129.7</b>	<b>-14.1%</b>	<b>21.8%</b>
Argentina	3.7	4.4	5.5	6.2	6.1	5.2	6.4	6.0	4.9	6.5	8.0	23.0%	1.3%
Brazil	49.3	50.5	53.2	54.9	57.5	60.1	63.1	66.0	66.3	69.6	61.4	-11.7%	10.3%
Chile	3.0	3.8	3.9	3.9	4.2	3.8	4.3	3.6	3.0	4.3	4.8	12.9%	0.8%
Colombia	6.3	5.1	6.3	7.3	7.3	8.0	7.1	6.9	7.6	6.9	7.1	2.6%	1.2%
Ecuador	1.2	1.2	1.3	1.5	1.2	1.4	1.5	1.5	1.6	1.7	1.6	-9.0%	0.3%
Peru	2.5	2.2	2.6	2.9	2.9	3.0	3.0	3.1	3.1	3.7	4.0	8.9%	0.7%
Venezuela	10.1	10.7	10.7	11.6	11.6	12.2	13.0	13.1	13.7	14.2	13.7	-3.9%	2.3%
Other S. & Cent. America	11.6	11.3	12.7	13.4	14.3	16.3	17.2	17.3	17.7	18.2	18.3	0.8%	3.1%
<b>Total S. &amp; Cent. America</b>	<b>87.7</b>	<b>89.2</b>	<b>96.2</b>	<b>101.7</b>	<b>105.1</b>	<b>110.0</b>	<b>115.6</b>	<b>117.5</b>	<b>117.9</b>	<b>125.1</b>	<b>118.9</b>	<b>-4.9%</b>	<b>20.0%</b>
Austria	7.4	8.2	8.6	8.4	8.7	8.1	8.4	8.8	9.4	9.9	9.8	-0.2%	1.7%
Belgium & Luxembourg	0.4	0.4	0.3	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.6	2.9%	0.1%
Bulgaria	0.6	0.5	0.4	0.3	0.5	0.7	0.7	0.8	0.7	0.7	0.8	6.7%	0.1%
Czech Republic	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.6	11.5%	0.1%
Denmark	†	†	†	†	†	†	†	†	†	†	†	-14.3%	♦
Finland	3.0	3.4	3.1	2.7	2.9	2.7	2.7	3.3	2.9	3.3	3.0	-8.1%	0.5%
France	13.9	16.4	15.4	18.3	17.2	15.9	15.3	14.9	17.4	16.4	18.1	10.8%	3.0%
Germany	4.2	4.8	4.9	5.1	5.5	4.9	4.7	4.8	5.3	5.9	5.8	-0.6%	1.0%
Greece	0.7	0.5	0.6	0.7	0.9	1.0	0.9	0.9	1.1	0.9	0.5	-45.5%	0.1%
Hungary	†	†	†	†	†	†	0.1	†	†	†	†	5.0%	♦
Iceland	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.3	1.4	1.4	1.5	3.5%	0.3%
Republic of Ireland	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	-23.5%	♦
Italy	10.3	10.4	10.1	10.8	9.5	10.7	10.6	10.7	11.7	11.5	12.5	8.2%	2.1%
Netherlands	†	†	†	†	†	†	†	†	†	†	†	-18.8%	♦
Norway	25.0	26.5	27.1	25.5	27.7	23.5	25.1	26.3	27.6	32.2	27.4	-14.9%	4.6%
Poland	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	0.9	1.0	2.5%	0.2%
Portugal	2.1	1.1	2.0	2.4	1.9	3.4	3.0	3.0	2.9	2.9	2.9	-0.9%	0.5%
Romania	3.2	2.6	2.9	3.0	3.8	3.6	4.0	4.3	4.1	3.3	3.4	1.0%	0.6%
Slovakia	0.4	0.5	0.9	1.0	1.2	1.0	1.0	1.0	1.1	1.1	1.1	-4.5%	0.2%
Spain	6.4	4.7	5.8	6.5	5.5	9.4	8.5	8.8	7.0	8.3	11.6	40.5%	2.0%
Sweden	14.4	16.9	17.1	13.4	15.3	11.7	15.6	16.7	16.2	17.8	17.9	0.8%	3.0%
Switzerland	7.6	7.7	8.3	9.0	8.1	6.7	8.0	7.8	9.3	8.7	9.7	11.7%	1.6%
Turkey	5.1	6.0	7.7	6.9	8.0	9.2	8.8	9.6	7.8	7.0	5.4	-22.3%	0.9%
United Kingdom	1.4	1.6	1.3	1.5	1.4	1.1	1.3	1.5	1.9	1.8	1.5	-17.5%	0.2%
Other Europe	6.6	5.9	5.3	5.8	6.3	7.8	6.4	6.6	7.1	6.8	7.1	4.1%	1.2%
<b>Total Europe</b>	<b>115.0</b>	<b>120.5</b>	<b>124.2</b>	<b>124.3</b>	<b>127.6</b>	<b>124.6</b>	<b>128.4</b>	<b>133.4</b>	<b>137.1</b>	<b>142.2</b>	<b>142.4</b>	<b>0.1%</b>	<b>23.9%</b>
Azerbaijan	0.4	0.4	0.5	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	-15.4%	♦
Belarus	†	†	†	†	†	†	†	†	†	†	†	-	♦
Kazakhstan	1.6	1.6	1.7	2.1	1.9	1.7	1.5	1.4	1.4	1.6	1.7	2.5%	0.3%
Lithuania	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	8.9%	♦
Russian Federation	38.0	39.1	39.6	39.8	40.1	34.9	35.6	35.9	36.4	37.4	39.8	6.4%	6.7%
Turkmenistan	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-
Ukraine	2.7	1.8	2.5	2.8	2.3	2.0	2.3	3.6	2.6	2.7	3.0	11.0%	0.5%
Uzbekistan	1.4	1.4	1.7	1.6	1.4	1.5	1.3	1.3	1.3	1.0	1.3	24.2%	0.2%
Other Former Soviet Union	8.8	8.6	9.2	9.1	8.4	8.4	8.0	8.2	8.6	8.6	8.6	0.1%	1.4%
<b>Total Former Soviet Union</b>	<b>53.2</b>	<b>53.2</b>	<b>55.3</b>	<b>56.0</b>	<b>54.7</b>	<b>49.0</b>	<b>49.3</b>	<b>51.0</b>	<b>50.8</b>	<b>51.7</b>	<b>54.9</b>	<b>5.7%</b>	<b>9.2%</b>
Iran	1.6	2.0	2.2	1.8	1.9	1.8	1.3	1.7	1.2	1.1	0.8	-30.4%	0.1%
Kuwait	-	-	-	-	-	-	-	-	-	-	-	-	-
Qatar	-	-	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East	0.5	0.7	0.6	0.8	0.9	1.1	1.1	1.1	0.7	0.8	0.7	-6.6%	0.1%
<b>Total Middle East</b>	<b>2.1</b>	<b>2.7</b>	<b>2.8</b>	<b>2.6</b>	<b>2.8</b>	<b>2.9</b>	<b>2.4</b>	<b>2.8</b>	<b>1.9</b>	<b>1.9</b>	<b>1.5</b>	<b>-20.5%</b>	<b>0.3%</b>
Algeria	0.2	0.1	0.3	0.1	0.2	0.1	0.1	0.2	†	†	†	33.3%	♦
Egypt	2.3	2.3	2.4	2.5	2.6	2.7	2.7	3.1	3.4	3.2	3.0	-6.5%	0.5%
South Africa	0.9	0.5	0.3	0.6	0.4	0.8	1.1	0.9	0.8	0.9	0.8	-7.2%	0.1%
Other Africa	11.0	10.9	10.3	10.5	11.1	11.2	11.6	12.2	13.6	14.1	14.5	2.8%	2.4%
<b>Total Africa</b>	<b>14.4</b>	<b>13.8</b>	<b>13.3</b>	<b>13.7</b>	<b>14.3</b>	<b>14.8</b>	<b>15.5</b>	<b>16.4</b>	<b>17.8</b>	<b>18.2</b>	<b>18.3</b>	<b>0.7%</b>	<b>3.1%</b>
Australia	3.7	3.5	3.9	3.7	3.5	3.6	3.5	3.8	4.0	3.7	3.9	4.3%	0.7%
Bangladesh	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	5.6%	♦
China	28.3	30.0	32.7	37.8	42.2	42.3	42.5	44.9	44.1	55.0	58.3	5.9%	9.8%
China Hong Kong SAR	-	-	-	-	-	-	-	-	-	-	-	-	-
India	16.7	15.9	16.0	18.2	17.2	15.6	15.9	18.9	18.6	17.4	16.1	-7.5%	2.7%
Indonesia	1.3	1.9	1.8	1.6	1.7	1.8	1.2	2.2	2.1	2.1	2.1	-	0.4%
Japan	23.4	20.0	23.8	17.4	19.9	19.7	21.2	23.6	21.0	20.7	20.4	-1.1%	3.4%
Malaysia	1.0	1.0	1.1	1.5	1.4	1.2	0.9	1.1	1.7	1.7	1.7	-	0.3%
New Zealand	5.1	4.7	5.3	5.8	6.2	5.8	5.3	5.5	5.3	5.5	5.0	-10.3%	0.8%
Pakistan	4.1	4.5	5.0	4.9	5.1	5.6	4.2	5.5	4.9	4.0	4.0	-0.6%	0.7%
Philippines	1.2	1.0	1.1	1.3	1.4	1.6	1.4	1.1	1.8	1.8	1.6	-9.3%	0.3%
Singapore	-	-	-	-	-	-	-	-	-	-	-	-	-
South Korea	1.1	1.1	1.4	0.9	1.2	1.2	1.2	1.4	1.4	1.3	0.9	-26.1%	0.2%
Taiwan	1.2	1.9	1.5	2.0	2.0	2.0	2.2	2.4	2.0	2.0	2.1	3.4%	0.3%
Thailand	1.0	1.0	0.8	1.0	1.5	1.7	1.6	1.2	0.8	1.4	1.4	4.6%	0.2%
Other Asia Pacific	10.3	8.6	9.1	9.3	9.6	9.7	9.5	9.1	9.8	10.1	11.1	10.0%	1.9%
<b>Total Asia Pacific</b>	<b>98.6</b>	<b>95.3</b>	<b>103.6</b>	<b>105.6</b>	<b>113.0</b>	<b>112.0</b>	<b>110.8</b>	<b>120.9</b>	<b>117.7</b>	<b>126.9</b>	<b>128.8</b>	<b>1.5%</b>	<b>21.7%</b>
<b>TOTAL WORLD</b>	<b>510.9</b>	<b>509.2</b>	<b>537.4</b>	<b>541.4</b>	<b>570.1</b>	<b>579.3</b>	<b>588.5</b>	<b>595.6</b>	<b>600.0</b>	<b>616.9</b>	<b>594.5</b>	<b>-3.7%</b>	<b>100.0%</b>
of which: European Union 15	64.4	68.6	69.4	70.5	69.5	69.6	71.7	74.3	76.5	79.6	84.4	6.4%	14.2%
OECD	277.8	275.3	292.0	280.5	300.4	308.8	315.0	309.6	313.7	313.5	291.0	-7.1%	49.0%
Former Soviet Union	53.2	53.2	55.3	56.0	54.7	49.0	49.3	51.0	50.8	51.7	54.9	5.7%	9.2%
Other EMEs	179.9	180.7	190.1	204.9	215.0	221.5	224.2	235.0	235.5	251.7	248.6	-1.3%	41.8%

\*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%.

**Note:** Hydroelectricity data expressed in terawatt-hours is available at [www.bp.com/centres/energy/](http://www.bp.com/centres/energy/)