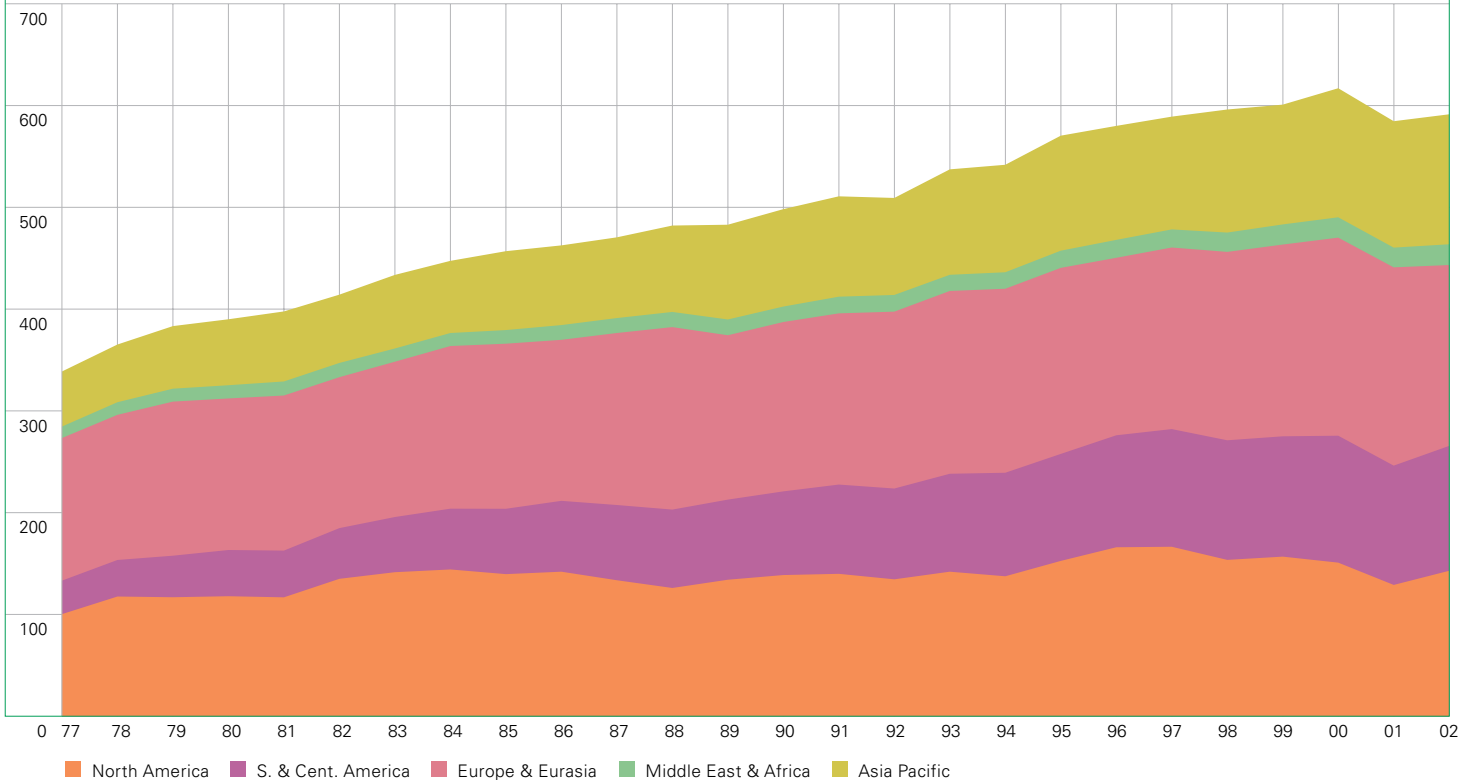


# Hydroelectricity

## Consumption by area

Million tonnes oil equivalent



In 2002, global hydroelectric output achieved only a partial rebound from a very weak 2001. Strong recoveries in North and South America were partially offset by falling output in Europe & Eurasia.

# Hydroelectricity

## Consumption\*

Million tonnes oil equivalent	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Change 2002 over 2001	2002 share of total
USA	56.9	63.2	58.7	70.4	78.7	80.6	72.9	71.7	61.7	47.6	<b>58.2</b>	22.4%	9.8%
Canada	71.6	72.8	74.2	75.9	80.2	79.4	75.1	77.8	81.0	75.0	<b>78.6</b>	4.8%	13.3%
Mexico	6.0	6.0	4.6	6.2	7.1	6.0	5.6	7.4	7.5	6.4	<b>5.6</b>	-12.6%	1.0%
<b>Total North America</b>	<b>134.5</b>	<b>142.0</b>	<b>137.5</b>	<b>152.5</b>	<b>166.0</b>	<b>166.0</b>	<b>153.6</b>	<b>156.9</b>	<b>150.2</b>	<b>129.0</b>	<b>142.4</b>	<b>10.4%</b>	<b>24.1%</b>
Argentina	4.4	5.5	6.2	6.1	5.2	6.4	6.0	4.9	6.5	8.4	<b>7.6</b>	-10.0%	1.3%
Brazil	50.5	53.2	54.9	57.5	60.1	63.1	66.0	66.3	69.0	60.7	<b>64.4</b>	6.1%	10.9%
Chile	3.8	3.9	3.9	4.2	3.8	4.3	3.6	3.1	4.3	4.9	<b>5.2</b>	5.3%	0.9%
Colombia	5.1	6.3	7.3	7.3	8.0	7.1	6.9	7.6	6.9	7.1	<b>7.6</b>	7.0%	1.3%
Ecuador	1.2	1.3	1.5	1.2	1.4	1.5	1.5	1.6	1.7	1.6	<b>1.7</b>	7.2%	0.3%
Peru	2.2	2.6	2.9	2.9	3.0	3.0	3.1	3.3	3.7	4.0	<b>4.1</b>	2.3%	0.7%
Venezuela	10.7	10.7	11.6	11.6	12.2	13.0	13.1	13.7	14.2	13.7	<b>14.0</b>	2.3%	2.4%
Other S. & Cent. America	11.3	12.7	13.4	14.3	16.3	17.2	17.3	17.7	18.4	16.8	<b>18.1</b>	7.4%	3.1%
<b>Total S. &amp; Cent. America</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>118.2</b>	<b>124.7</b>	<b>117.2</b>	<b>122.7</b>	<b>4.6%</b>	<b>20.7%</b>
Austria	8.2	8.6	8.4	8.7	8.1	8.4	8.8	9.4	9.9	9.5	<b>8.9</b>	-5.9%	1.5%
Azerbaijan	0.4	0.5	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	<b>0.5</b>	55.4%	0.1%
Belarus	†	†	†	†	†	†	†	†	†	†	<b>†</b>	-	♦
Belgium & Luxembourg	0.4	0.3	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.6	<b>0.5</b>	-6.9%	0.1%
Bulgaria	0.5	0.4	0.3	0.5	0.7	0.7	0.8	0.7	0.6	0.4	<b>0.5</b>	27.2%	0.1%
Czech Republic	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.6	<b>0.6</b>	15.4%	0.1%
Denmark	†	†	†	†	†	†	†	†	†	†	<b>†</b>	16.7%	♦
Finland	3.4	3.1	2.7	2.9	2.7	2.7	3.3	2.9	3.3	3.1	<b>2.5</b>	-18.1%	0.4%
France	16.4	15.4	18.3	17.2	15.9	15.3	14.9	17.4	16.3	17.9	<b>15.0</b>	-16.3%	2.5%
Germany	4.8	4.9	5.1	5.5	4.9	4.7	4.8	5.3	5.9	5.8	<b>5.9</b>	1.6%	1.0%
Greece	0.5	0.6	0.7	0.9	1.0	0.9	0.9	1.1	0.9	0.6	<b>0.8</b>	26.6%	0.1%
Hungary	†	†	†	†	†	0.1	†	†	†	†	<b>†</b>	4.8%	♦
Iceland	1.0	1.0	1.0	1.1	1.1	1.2	1.3	1.4	1.4	1.5	<b>1.6</b>	6.0%	0.3%
Republic of Ireland	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	<b>0.3</b>	37.5%	♦
Italy	10.4	10.1	10.8	9.5	10.7	10.6	10.7	11.7	11.5	12.2	<b>10.9</b>	-10.9%	1.8%
Kazakhstan	1.6	1.7	2.1	1.9	1.7	1.5	1.4	1.4	1.7	1.8	<b>2.0</b>	10.0%	0.3%
Lithuania	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	<b>0.2</b>	11.3%	♦
Netherlands	†	†	†	†	†	†	†	†	†	†	<b>†</b>	3.8%	♦
Norway	26.5	27.1	25.5	27.7	23.5	25.1	26.3	27.6	32.2	27.4	<b>29.4</b>	7.2%	5.0%
Poland	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	0.9	1.0	<b>0.9</b>	-7.6%	0.1%
Portugal	1.1	2.0	2.4	1.9	3.4	3.0	3.0	1.7	2.7	3.3	<b>1.5</b>	-54.7%	0.2%
Romania	2.6	2.9	3.0	3.8	3.6	4.0	4.3	4.1	3.3	3.4	<b>3.6</b>	7.8%	0.6%
Russian Federation	39.1	39.6	39.8	40.1	34.9	35.6	35.9	36.4	37.4	39.8	<b>37.2</b>	-6.6%	6.3%
Slovakia	0.5	0.9	1.0	1.2	1.0	1.0	1.0	1.1	1.1	1.2	<b>1.2</b>	3.4%	0.2%
Spain	4.7	5.8	6.5	5.5	9.4	8.5	8.8	7.0	8.3	9.9	<b>6.1</b>	-38.6%	1.0%
Sweden	16.9	17.1	13.4	15.3	11.7	15.6	16.7	16.2	17.8	17.9	<b>15.1</b>	-15.8%	2.5%
Switzerland	7.7	8.3	9.0	8.1	6.7	8.0	7.8	9.3	8.7	9.7	<b>8.3</b>	-13.6%	1.4%
Turkey	6.0	7.7	6.9	8.0	9.2	8.8	9.6	7.8	7.0	5.4	<b>5.0</b>	-8.9%	0.8%
Turkmenistan	0.2	-	-	-	-	-	-	-	-	-	<b>-</b>	-	-
Ukraine	1.8	2.5	2.8	2.3	2.0	2.3	3.6	3.3	2.6	2.7	<b>2.2</b>	-20.3%	0.4%
United Kingdom	1.6	1.3	1.5	1.4	1.1	1.3	1.5	1.9	1.8	1.5	<b>1.7</b>	15.4%	0.3%
Uzbekistan	1.4	1.7	1.6	1.4	1.5	1.3	1.3	1.3	1.3	1.2	<b>1.6</b>	36.1%	0.3%
Other Europe & Eurasia	14.6	14.6	15.4	15.2	17.0	15.1	15.5	16.7	16.2	15.8	<b>14.9</b>	-5.5%	2.5%
<b>Total Europe &amp; Eurasia</b>	<b>173.8</b>	<b>179.6</b>	<b>180.8</b>	<b>182.8</b>	<b>174.4</b>	<b>178.4</b>	<b>185.1</b>	<b>188.4</b>	<b>194.6</b>	<b>194.9</b>	<b>178.9</b>	<b>-8.1%</b>	<b>30.2%</b>
Iran	2.0	2.2	1.8	1.9	1.8	1.3	1.7	1.2	1.1	0.8	<b>1.1</b>	38.5%	0.2%
Kuwait	-	-	-	-	-	-	-	-	-	-	<b>-</b>	-	-
Qatar	-	-	-	-	-	-	-	-	-	-	<b>-</b>	-	-
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	<b>-</b>	-	-
United Arab Emirates	-	-	-	-	-	-	-	-	-	-	<b>-</b>	-	-
Other Middle East	0.7	0.6	0.8	0.9	1.1	1.1	1.1	0.7	0.8	0.7	<b>0.8</b>	14.2%	0.1%
<b>Total Middle East</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>1.9</b>	<b>27.0%</b>	<b>0.3%</b>
Algeria	†	0.1	†	†	†	†	†	†	†	†	<b>†</b>	-	♦
Egypt	2.3	2.4	2.5	2.6	2.7	2.7	3.1	3.4	3.2	3.0	<b>3.1</b>	3.3%	0.5%
South Africa	0.5	0.3	0.6	0.4	0.8	1.1	0.9	0.8	0.9	0.8	<b>0.9</b>	12.2%	0.2%
Other Africa	10.9	10.3	10.5	11.1	11.2	11.6	12.2	13.7	14.0	14.1	<b>14.5</b>	3.2%	2.5%
<b>Total Africa</b>	<b>13.7</b>	<b>13.1</b>	<b>13.6</b>	<b>14.1</b>	<b>14.7</b>	<b>15.4</b>	<b>16.2</b>	<b>17.9</b>	<b>18.1</b>	<b>17.9</b>	<b>18.5</b>	<b>3.7%</b>	<b>3.1%</b>
Australia	3.5	3.9	3.7	3.5	3.6	3.5	3.8	4.0	3.7	3.8	<b>3.8</b>	1.3%	0.6%
Bangladesh	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	<b>0.2</b>	-	♦
China	30.0	32.7	37.8	42.2	42.3	42.5	44.9	44.1	55.0	53.7	<b>55.8</b>	3.8%	9.4%
China Hong Kong SAR	-	-	-	-	-	-	-	-	-	-	<b>-</b>	-	-
India	15.9	16.0	18.2	17.2	15.6	15.9	18.9	18.6	17.4	16.3	<b>16.9</b>	3.4%	2.8%
Indonesia	1.9	1.8	1.6	1.7	1.8	1.2	2.2	2.1	2.1	2.1	<b>2.1</b>	-	0.4%
Japan	20.0	23.8	17.4	19.9	19.7	21.2	23.6	21.0	20.7	20.4	<b>20.5</b>	0.4%	3.5%
Malaysia	1.0	1.1	1.5	1.4	1.2	0.9	1.1	1.7	1.6	1.7	<b>1.7</b>	-	0.3%
New Zealand	4.7	5.3	5.8	6.2	5.8	5.3	5.5	5.3	5.5	4.8	<b>5.4</b>	11.4%	0.9%
Pakistan	4.5	5.0	4.9	5.1	5.6	4.2	5.5	4.9	4.0	4.1	<b>4.6</b>	10.7%	0.8%
Philippines	1.0	1.1	1.3	1.4	1.6	1.4	1.1	1.8	1.8	1.6	<b>1.6</b>	-0.3%	0.3%
Singapore	-	-	-	-	-	-	-	-	-	-	<b>-</b>	-	-
South Korea	1.1	1.4	0.9	1.2	1.2	1.2	1.4	1.4	1.3	0.9	<b>1.2</b>	28.0%	0.2%
Taiwan	1.9	1.5	2.0	2.0	2.0	2.2	2.4	2.0	2.0	2.1	<b>1.4</b>	-30.8%	0.2%
Thailand	1.0	0.8	1.0	1.5	1.7	1.6	1.2	0.8	1.4	1.4	<b>1.6</b>	15.1%	0.3%
Other Asia Pacific	8.6	9.1	9.3	9.6	9.7	9.5	9.1	9.8	10.1	11.1	<b>10.9</b>	-1.8%	1.8%
<b>Total Asia Pacific</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>126.8</b>	<b>124.2</b>	<b>127.7</b>	<b>2.7%</b>	<b>21.6%</b>
<b>TOTAL WORLD</b>	<b>509.2</b>	<b>537.3</b>	<b>541.8</b>	<b>570.3</b>	<b>580.0</b>	<b>588.6</b>	<b>596.1</b>	<b>601.0</b>	<b>616.3</b>	<b>584.7</b>	<b>592.1</b>	<b>1.3%</b>	<b>100.0%</b>
of which: European Union 15	68.6	69.4	70.5	69.5	69.6	71.7	74.3	75.3	79.3	82.5	<b>69.2</b>	-16.1%	11.7%
OECD	275.3	292.0	280.5	300.3	308.8	314.5	309.6	312.6	312.5	288.2	<b>289.5</b>	0.5%	48.9%
Former Soviet Union	53.1	55.4	56.0	54.6	48.9	49.3	51.1	51.5	52.1	54.1	<b>52.0</b>	-3.9%	8.8%
Other EMEs	180.6	190.2	205.2	215.5	222.4	224.6	235.4	236.9	251.8	242.5	<b>250.6</b>	3.3%	42.3%

\*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).