

## FINLAND

4. Electricity production and generation by source  
(TWh)

	1974	1980	1990	2000	2009	2010	2011	Average annual percent change	
								74-90	90-11
<b>Total gross production</b>	<b>27.63</b>	<b>40.75</b>	<b>54.38</b>	<b>69.97</b>	<b>72.06</b>	<b>80.67</b>	<b>73.48</b>	<b>4.3</b>	<b>1.4</b>
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
<b>Total generation<sup>(1)</sup></b>	<b>27.63</b>	<b>40.75</b>	<b>54.38</b>	<b>69.97</b>	<b>72.06</b>	<b>80.67</b>	<b>73.48</b>	<b>4.3</b>	<b>1.4</b>
<b><u>Main activity producers</u></b>									
Gross production	21.02	33.45	45.69	58.06	62.09	69.63	62.88	5.0	1.5
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	21.02	33.45	45.69	58.06	62.09	69.63	62.88	5.0	1.5
Nuclear	-	7.02	19.22	22.48	23.53	22.80	23.19	-	0.9
Hydro	12.63	10.22	10.86	13.60	11.79	12.06	11.50	-0.9	0.3
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	0.11	0.39	0.41	0.60	-	-
Coal	5.43	12.81	11.55 e	11.56	15.08	20.30	14.77	4.8	1.2
Oil	2.96	2.27	0.56	0.26	0.29	0.21	0.16	-9.9	-5.8
Natural gas	-	1.14	3.36	8.06	7.57	8.87	7.27	-	3.7
Biofuels & waste	-	-	0.15 e	1.98	3.45	4.97	5.40	-	18.7
<b><u>Autoproducers</u></b>									
Gross production	6.61	7.30	8.69	11.91	9.97	11.04	10.60	1.7	1.0
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	6.61	7.30	8.69	11.91	9.97	11.04	10.60	1.7	1.0
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	-	-	-	1.06	0.90	0.86	0.95	-	-
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	0.16	0.20	0.21	0.20	-	-
Coal	3.13	4.57	1.26 e	1.57	0.92	1.12	0.98	-5.5	-1.2
Oil	3.16	2.15	1.12	0.33	0.25	0.27	0.26	-6.3	-6.8
Natural gas	0.33	0.58	1.30	2.07	2.22	2.39	2.17	9.0	2.5
Biofuels & waste	-	-	5.01 e	6.72	5.49	6.20	6.05	-	0.9

Source: IEA/OECD *Energy Balances* and IEA/OECD *Energy Statistics of OECD Countries*.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

## FINLAND

**9. Electricity and heat produced for sale from combustible fuels  
in combined heat and power plants (CHP plants)**

	1980	1990	2000	2009	2010	2011	Average annual percent change 1990-2011
<b>Hard coal<sup>(1)</sup> and patent fuel</b>							
Fuel input (1000 t)	1089	2192	1906	2144	2085	1954	-0.5
Fuel input (TJ)	28010	55984	48589	54028	52355	48707	-0.7
Electricity production (GWh)	3334	5243	3954	4522	4453	4158	-1.1
CHP Heat production (TJ)	17585	32493	27340	30663	29465	27451	-0.8
<b>Brown coal</b>							
Fuel input (1000 t)	-	-	-	1	-	-	-
Fuel input (TJ)	-	-	3	19	11	2	-
Electricity production (GWh)	-	-	-	1	1	-	-
CHP Heat production (TJ)	-	-	1	10	3	1	-
<b>Peat</b>							
Fuel input (1000 t)	3138	2128	3464	4332	5126	4414	3.5
Fuel input (TJ)	26276	22880	35329	44184	52286	44974	3.3
Electricity production (GWh)	4159	1934 e	2878	3108	3652	3216	2.5
CHP Heat production (TJ)	6866	12492 e	19484	26383	31167	26251	3.6
<b>Coal manufactured gases<sup>(2)</sup></b>							
Fuel input (TJ)	-	-	379	610	617	469	-
Electricity production (GWh)	-	-	31	44	66	43	-
CHP Heat production (TJ)	-	-	189	333	268	234	-
<b>Petroleum products</b>							
Fuel input (1000 t)	595	197	150	102	97	65	-5.1
Fuel input (TJ)	24184	8000	6157	4208	4063	2674	-5.1
Electricity production (GWh)	3315	1348	489	316	353	288	-7.1
CHP Heat production (TJ)	7226	1896	2921	2418	2216	1125	-2.5
<b>Natural gas<sup>(2)</sup></b>							
Fuel input (TJ)	8880	32948	85665	84196	95744	78175	4.2
Electricity production (GWh)	1119	3692	9731	9623	11054	9247	4.5
CHP Heat production (TJ)	2303	13404	33189	32326	36536	28547	3.7
<b>Wood and other solid waste</b>							
Fuel input (TJ)	-	31344	63977	72013	91671	91200	5.2
Electricity production (GWh)	-	4667 e	7859	7526	9018	9018	3.2
CHP Heat production (TJ)	-	1275 e	23972	32994	43564	42557	18.2
<b>Industrial waste</b>							
Fuel input (TJ)	-	-	1137	753	600	744	-
Electricity production (GWh)	-	-	29	30	24	18	-
CHP Heat production (TJ)	-	-	408	485	384	524	-
<b>Municipal waste</b>							
Fuel input (TJ)	-	-	1431	5394	5181	5291	-
Electricity production (GWh)	-	-	136	361	326	311	-
CHP Heat production (TJ)	-	-	705	2966	2881	3007	-
<b>Biogases and liquid biofuels</b>							
Fuel input (TJ)	-	-	139	222	223	293	-
Electricity production (GWh)	-	-	22	31	38	49	-
CHP Heat production (TJ)	-	-	20	52	39	54	-
<b>Total combustible fuels<sup>(3)</sup></b>							
Electricity production (GWh)	11927	16884	25129	25562	28985	26348	2.1
CHP Heat production (TJ)	33980	61560	108229	128630	146523	129751	3.6

**Source:** IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases and natural gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

**Note:** Please refer to notes in the introductory information for data coverage.

## FRANCE

3. Summary electricity production and consumption <sup>(1)</sup>

(TWh)

	1973	1980	1990	2000	2005	2010	2011	2012e
<b>Gross production</b>	<b>182.5</b>	<b>258.0</b>	<b>420.7</b>	<b>540.7</b>	<b>576.2</b>	<b>569.2</b>	<b>562.0</b>	<b>561.2</b>
Nuclear	14.7	61.3	314.1	415.2	451.5	428.5	442.4	425.4
Hydro	47.7	70.2	57.3	71.8	56.5	67.1	49.9	62.5
<i>of which:</i>								
<i>pumped storage production</i>	<i>0.0</i>	<i>0.7</i>	<i>3.5</i>	<i>4.7</i>	<i>4.7</i>	<i>4.8</i>	<i>5.1</i>	<i>6.1</i>
Geothermal	-	-	-	-	-	-	-	-
Solar	-	-	-	0.0	0.0	0.6	2.1	4.1
Tide, wave, ocean	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5
Wind	-	-	-	0.1	1.0	9.9	12.2	14.9
Combustible fuels	119.5	126.0	48.8	53.1	66.7	62.4	54.9	53.8
<i>Coal</i>	<i>35.9</i>	<i>70.4</i>	<i>35.4</i>	<i>30.9 e</i>	<i>30.7</i>	<i>26.3 e</i>	<i>17.3</i>	<i>22.7</i>
<i>Oil</i>	<i>73.3</i>	<i>48.4</i>	<i>8.7</i>	<i>7.2 e</i>	<i>7.9</i>	<i>5.6</i>	<i>3.4</i>	<i>3.2</i>
<i>Natural gas</i>	<i>10.1</i>	<i>7.0</i>	<i>3.0</i>	<i>11.5 e</i>	<i>23.1</i>	<i>23.8</i>	<i>26.8</i>	<i>20.5</i>
<i>Biofuels &amp; waste</i>	<i>0.2 e</i>	<i>0.2 e</i>	<i>1.6 e</i>	<i>3.6</i>	<i>5.0</i>	<i>6.8</i>	<i>7.4</i>	<i>7.5</i>
Other (e.g. fuel cells)	-	-	-	-	-	-	-	-
- Own use by power plant	8.0	11.3	19.4	23.8	25.9	24.2	24.6	..
<b>Net production</b>	<b>174.5</b>	<b>246.7</b>	<b>401.3</b>	<b>516.9</b>	<b>550.3</b>	<b>545.0</b>	<b>537.3</b>	<b>..</b>
Nuclear	..	57.9	297.9	395.2	430.0	407.9	421.1	..
Hydro	..	69.3	56.6	70.9	55.9	66.8	49.7	..
Geothermal	..	-	-	-	-	-	-	..
Solar	..	-	-	0.0	0.0	0.6	2.1	..
Tide, wave, ocean	..	0.5	0.6	0.6	0.5	0.5	0.5	..
Wind	..	-	-	0.1	1.0	9.9	12.2	..
Combustible fuels	..	118.9	46.2 e	50.1	62.9	59.2 e	51.8	..
Other (e.g. fuel cells)	..	-	-	-	-	-	-	..
- Used for heat pumps	-	-	-	-	-	-	-	-
- Used for electric boilers	-	-	-	-	-	-	-	-
- Used for pumped storage	0.2	1.0	4.9	6.6	6.6	6.6	6.9	6.7
+ Imports	4.7	15.6	6.7	3.7	8.1	19.5	9.5	12.2
- Exports	7.5	12.4	52.1	73.2	68.4	50.2	65.9	56.7
<b>Electrical energy supplied</b>	<b>171.4</b>	<b>249.0</b>	<b>351.0</b>	<b>440.8</b>	<b>483.3</b>	<b>507.6</b>	<b>474.0</b>	<b>..</b>
- Transmission & distr. losses	11.4	17.3	27.7	30.4	32.2	35.4	29.1	..
- Statistical difference	-	-	-	-	0.0	0.5	-0.2	..
<b>Total consumption</b>	<b>160.0</b>	<b>231.7</b>	<b>323.3</b>	<b>410.4</b>	<b>451.1</b>	<b>471.8</b>	<b>445.1</b>	<b>..</b>
- Energy industry consumption <sup>(2)</sup>	11.4	22.5	21.0	25.5	28.3	27.7	25.4	..
<b>Final consumption</b>	<b>148.6</b>	<b>209.1</b>	<b>302.2</b>	<b>384.9</b>	<b>422.8</b>	<b>444.1</b>	<b>419.7</b>	<b>..</b>
Industry	84.0	95.4	114.7	134.7	139.5	117.4	117.9	..
Transport	6.4	6.9	8.9	11.7	12.2	12.5	12.4	..
Commercial & publ. serv.	26.9	43.6	79.4	104.0	120.8	145.4	132.8	..
Residential	30.2	61.5	96.9	128.7	144.5	162.5	148.6	..
Agriculture & fishing	1.1	1.5	2.1	2.7	3.4	3.5	3.3	..
Sector non specified	0.1	0.2	0.3	3.1	2.3 e	2.7	4.6	..

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

## FRANCE

4. Electricity production and generation by source  
(TWh)

	1974	1980	1990	2000	2009	2010	2011	Average annual percent change	
								74-90	90-11
<b>Total gross production</b>	<b>186.86</b>	<b>257.98</b>	<b>420.73</b>	<b>540.73</b>	<b>535.73</b>	<b>569.16</b>	<b>561.96</b>	<b>5.2</b>	<b>1.4</b>
- Hydro pumped storage	0.01	0.67	3.53	4.68	4.97	4.81	5.07	43.4	1.7
<b>Total generation<sup>(1)</sup></b>	<b>186.85</b>	<b>257.31</b>	<b>417.21</b>	<b>536.05</b>	<b>530.76</b>	<b>564.34</b>	<b>556.89</b>	<b>5.1</b>	<b>1.4</b>
<b>Main activity producers</b>									
Gross production	153.59	224.41	394.49	524.91	522.22	555.83	546.50	6.1	1.6
- Hydro pumped storage	0.01	0.67	3.53	4.68	4.97	4.81	5.07	43.4	1.7
Total generation <sup>(1)</sup>	153.58	223.74	390.97	520.23	517.25	551.02	541.43	6.0	1.6
Nuclear	14.70	61.25	314.08	415.16	409.74	428.52	442.38	21.1	1.6
Hydro	52.39	65.18	48.81	66.19	56.40	61.51	44.10	-0.4	-0.5
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	0.60	0.50	0.57	0.64	8.20	10.51	13.78	-0.3	16.4
Coal	16.46	50.28	22.28	28.35	22.99	25.17	16.33	1.9	-1.5
Oil	59.78	42.21	5.02	4.74	3.06	3.93	1.94	-14.3	-4.4
Natural gas	9.48	4.10	0.22	4.96	16.54	21.18	22.40	-21.0	24.7
Biofuels & waste	0.18	0.22	-	0.20	0.33	0.21	0.50	-	-
<b>Autoproducers</b>									
Gross production	33.27	33.57	26.24	15.82	13.50	13.33	15.46	-1.5	-2.5
- Hydro pumped storage	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	33.27	33.57	26.24	15.82	13.50	13.33	15.46	-1.5	-2.5
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	3.84	4.33	5.00	0.94	0.81	0.81	0.72	1.7	-8.8
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	0.02	0.39	0.58	1.04	-	-
Coal	19.04	20.10	13.15	2.51	1.03	1.15	0.98	-2.3	-11.6
Oil	9.23	6.23	3.65	2.43	1.76	1.64	1.50	-5.6	-4.2
Natural gas	1.16	2.91	2.81	6.56	3.96	2.58	4.36	5.7	2.1
Biofuels & waste	-	-	1.63	3.37	5.56	6.56	6.86	-	7.1

Source: IEA/OECD Energy Balances and IEA/OECD Energy Statistics of OECD Countries.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

## FRANCE

9. Electricity and heat produced for sale from combustible fuels  
in combined heat and power plants (CHP plants)

	1980	1990	2000	2009	2010	2011	Average annual percent change 1990-2011
<b>Hard coal<sup>(1)</sup> and patent fuel</b>							
Fuel input (1000 t)	..	-	833	638	558	549	-
Fuel input (TJ)	..	-	21669	17224	15932	14217	-
Electricity production (GWh)	..	-	1070	592	492	488	-
CHP Heat production (TJ)	..	-	15533	11552	10864	10899	-
<b>Brown coal</b>							
Fuel input (1000 t)	..	-	-	-	-	-	-
Fuel input (TJ)	..	-	-	-	-	-	-
Electricity production (GWh)	..	-	-	-	-	-	-
CHP Heat production (TJ)	..	-	-	-	-	-	-
<b>Peat</b>							
Fuel input (1000 t)	..	-	-	-	-	-	-
Fuel input (TJ)	..	-	-	-	-	-	-
Electricity production (GWh)	..	-	-	-	-	-	-
CHP Heat production (TJ)	..	-	-	-	-	-	-
<b>Coal manufactured gases<sup>(2)</sup></b>							
Fuel input (TJ)	..	-	3380	2546	1958	3428	-
Electricity production (GWh)	..	-	118	64	43	59	-
CHP Heat production (TJ)	..	-	2568	1382	1065 e	2476	-
<b>Petroleum products</b>							
Fuel input (1000 t)	..	-	1204	887	882	809	-
Fuel input (TJ)	..	-	61492	40091	43274	34897	-
Electricity production (GWh)	..	-	1724	998	848	826	-
CHP Heat production (TJ)	..	-	33897	27228 e	26637 e	23469	-
<b>Natural gas<sup>(2)</sup></b>							
Fuel input (TJ)	..	-	128689	146124	199509	186622	-
Electricity production (GWh)	..	-	10717	9929 e	13545	13640	-
CHP Heat production (TJ)	..	-	59480	61679 e	84262	92702	-
<b>Wood and other solid waste</b>							
Fuel input (TJ)	..	6780 e	5230 e	5151	7405	14611	3.7
Electricity production (GWh)	..	1116 e	812	860	1216	1582	1.7
CHP Heat production (TJ)	..	-	-	-	-	-	-
<b>Industrial waste</b>							
Fuel input (TJ)	..	-	-	-	-	-	-
Electricity production (GWh)	..	-	-	-	-	-	-
CHP Heat production (TJ)	..	-	-	-	-	-	-
<b>Municipal waste</b>							
Fuel input (TJ)	..	-	37964 e	27906	30488	31426	-
Electricity production (GWh)	..	-	1188	1494	1768	1620	-
CHP Heat production (TJ)	..	-	17814	17298	18372	16814	-
<b>Biogases and liquid biofuels</b>							
Fuel input (TJ)	..	291	287	1156	2150	2559	10.9
Electricity production (GWh)	..	41	54	167	296	396	11.4
CHP Heat production (TJ)	..	-	-	-	-	-	-
<b>Total combustible fuels<sup>(3)</sup></b>							
Electricity production (GWh)	..	1157	15683	14104	18208	18611	14.1
CHP Heat production (TJ)	..	-	129292	119139	141200	146360	-

Source: IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases and natural gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

## GERMANY

3. Summary electricity production and consumption <sup>(1)</sup>

	(TWh)							
	1973	1980	1990	2000	2005	2010	2011	2012e
<b>Gross production</b>	<b>375.9</b>	<b>467.6</b>	<b>550.0</b>	<b>576.5</b>	<b>620.6</b>	<b>628.9</b>	<b>608.7</b>	<b>617.6</b>
Nuclear	12.1	55.6	152.5	169.6	163.1	140.6	108.0	99.5
Hydro	16.8	20.3	19.8	26.0	26.7	27.4	23.5	28.1
<i>of which:</i>								
<i>pumped storage production</i>	1.6	1.2	2.4	4.2	7.1	6.9	6.2	6.7
Geothermal	-	-	-	-	-	0.0	0.0	0.0
Solar	-	-	0.0	0.1	1.3	11.7	19.3	28.0
Tide, wave, ocean	-	-	-	-	-	-	-	-
Wind	-	-	0.1	9.4	27.2	37.8	48.9	46.0
Combustible fuels	347.0	391.7	377.7	371.6 e	402.3 e	408.5 e	406.1	413.7
<i>Coal</i>	258.3	293.5	321.6	304.2 e	305.7 e	273.6 e	271.9	286.4
<i>Oil</i>	44.8	26.7	10.4	4.8	10.6	8.3	6.6	9.5
<i>Natural gas</i>	41.0	66.0	40.5	52.5	69.4	86.8	83.6	70.0
<i>Biofuels &amp; waste</i>	2.9	5.4	5.2	10.1 e	16.6 e	39.9	44.0	47.8
Other (e.g. fuel cells)	-	-	-	-	-	3.0	2.8	2.3
- Own use by power plant	26.1	31.0	41.4	38.1	39.0	33.4	35.8	..
<b>Net production</b>	<b>349.8</b>	<b>436.6</b>	<b>508.6</b>	<b>538.5</b>	<b>581.6</b>	<b>595.5</b>	<b>572.9</b>	<b>..</b>
Nuclear	..	52.5	144.4	160.7	154.6	132.9	102.2	..
Hydro	..	20.0	19.4	25.6	26.3	26.8	23.0	..
Geothermal	..	-	-	-	-	0.0	0.0	..
Solar	..	-	0.0	0.1	1.3	11.7	19.3	..
Tide, wave, ocean	..	-	-	-	-	-	-	..
Wind	..	-	0.1	9.4	27.2	37.8	48.9	..
Combustible fuels	..	364.1	344.7	342.8 e	372.1 e	383.6 e	376.8	..
Other (e.g. fuel cells)	..	-	-	-	-	2.7	2.6	..
- Used for heat pumps	-	-	-	-	-	-	-	-
- Used for electric boilers	-	-	-	-	-	-	-	-
- Used for pumped storage	3.8	3.7	5.0	6.0	9.5	8.6	7.8	8.1
+ Imports	19.7	23.4	31.7	45.1	56.9	43.0	51.0	46.3
- Exports	8.1	16.2	30.7	42.1	61.4	57.9	54.8	66.8
<b>Electrical energy supplied</b>	<b>357.6</b>	<b>440.0</b>	<b>504.5</b>	<b>535.5</b>	<b>567.5</b>	<b>572.0</b>	<b>561.3</b>	<b>..</b>
- Transmission & distr. losses	20.0	20.8	23.5	34.1	29.4	28.2	25.7	..
- Statistical difference	-	-	-	-	-	-0.1	-0.9	..
<b>Total consumption</b>	<b>337.6</b>	<b>419.2</b>	<b>481.0</b>	<b>501.4</b>	<b>538.1</b>	<b>543.8</b>	<b>536.5</b>	<b>..</b>
- Energy industry consumption <sup>(2)</sup>	24.7	27.3	25.9	18.0	17.2	14.9	15.0	..
<b>Final consumption</b>	<b>312.9</b>	<b>391.9</b>	<b>455.1</b>	<b>483.5</b>	<b>521.0</b>	<b>529.0</b>	<b>521.5</b>	<b>..</b>
Industry	178.3	199.5	216.5	211.6	231.3	225.4	230.7	..
Transport	9.9	12.0	13.7	15.9	16.2	16.7	16.6	..
Commercial & publ. serv.	40.1	58.2	80.7	117.9	123.9	136.2	128.7	..
Residential	78.6	115.0	137.1	130.5	141.3	141.7	136.6	..
Agriculture & fishing	6.1	7.1	7.2	7.5	8.3	9.0	9.0	..
Sector non specified	-	-	-	-	-	-	-	..

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

## GERMANY

4. Electricity production and generation by source  
(TWh)

	1974	1980	1990	2000	2009	2010	2011	Average annual percent change	
								74-90	90-11
<b>Total gross production</b>	<b>392.14</b>	<b>467.58</b>	<b>550.02</b>	<b>576.54</b>	<b>590.37</b>	<b>628.90</b>	<b>608.67</b>	<b>2.1</b>	<b>0.5</b>
- <i>Hydro pumped storage</i>	1.57	1.24	2.37	4.23	6.05	6.93	6.25	2.6	4.7
<b>Total generation<sup>(1)</sup></b>	<b>390.56</b>	<b>466.34</b>	<b>547.65</b>	<b>572.31</b>	<b>584.32</b>	<b>621.97</b>	<b>602.42</b>	<b>2.1</b>	<b>0.5</b>
<b><u>Main activity producers</u></b>									
Gross production	287.48	372.48	466.09	527.63	546.53	576.01	558.25	3.1	0.9
- <i>Hydro pumped storage</i>	1.57	1.24	2.37	4.23	6.05	6.93	6.25	2.6	4.7
Total generation <sup>(1)</sup>	285.90	371.24	463.72	523.40	540.48	569.08	552.01	3.1	0.8
Nuclear	14.46	54.50	151.37	169.61	134.93	140.56	107.97	15.8	-1.6
Hydro	15.24	16.78	15.39	21.73	18.30	20.05	16.94	0.1	0.5
Geothermal	-	-	-	-	0.02	0.03	0.02	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	0.05	9.41	45.86	50.10	68.93	-	41.2
Coal	187.58	228.71	262.70	279.61	245.98	254.30	254.07	2.1	-0.2
Oil	18.77	15.16	6.46	1.62	3.50	2.89	1.83	-6.4	-5.8
Natural gas	48.81	53.23	25.20	36.06	59.86	65.35	62.55	-4.0	4.4
Biofuels & waste	1.05	2.85	2.56	5.37	32.04	35.81	39.71	5.7	14.0
<b><u>Autoproducers</u></b>									
Gross production	104.66	95.10	83.93	48.91	43.84	52.89	50.41	-1.4	-2.4
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	104.66	95.10	83.93	48.91	43.84	52.89	50.41	-1.4	-2.4
Nuclear	-	1.09	1.10	-	-	-	-	-	-
Hydro	2.40	2.29	2.04	-	0.37	0.38	0.33	-1.0	-8.4
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	0.02	..	2.12	2.34	2.13	-	24.1
Coal	74.91	64.80	58.94	24.56	12.67	19.25	17.80	-1.5	-5.5
Oil	13.54	11.58	3.94	3.17	6.14	5.38	4.78	-7.4	0.9
Natural gas	11.88	12.76	15.26	16.44	19.03	21.48	21.08	1.6	1.6
Biofuels & waste	1.93	2.59	2.63	4.75	3.52	4.06	4.30	2.0	2.4

Source: IEA/OECD *Energy Balances* and IEA/OECD *Energy Statistics of OECD Countries*.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

## GERMANY

9. Electricity and heat produced for sale from combustible fuels  
in combined heat and power plants (CHP plants)

	1980	1990	2000	2009	2010	2011	Average annual percent change 1990-2011
<b>Hard coal and patent fuel</b>							
Fuel input (1000 t)	3079	3193	3021 e	7470	8211	7546	4.2
Fuel input (TJ)	89243	92936	80661 e	200753	215810	199557	3.7
Electricity production (GWh)	-	-	-	13299 e	15338	15163	-
CHP Heat production (TJ)	77668	83930	76711 e	103243	111999	99446	0.8
<b>Brown coal</b>							
Fuel input (1000 t)	18699	25962	9990 e	7717	8013	7862	-5.5
Fuel input (TJ)	158468	230295	97708 e	73480	77312	77195	-5.1
Electricity production (GWh)	-	-	-	4950	5444	6087	-
CHP Heat production (TJ)	137916	197450	85943 e	36242	36983	36238	-7.8
<b>Peat</b>							
Fuel input (1000 t)	-	-	-	-	-	-	-
Fuel input (TJ)	-	-	-	-	-	-	-
Electricity production (GWh)	-	-	-	-	-	-	-
CHP Heat production (TJ)	-	-	-	-	-	-	-
<b>Coal manufactured gases<sup>(1)</sup></b>							
Fuel input (TJ)	9203	7884	2877 e	3226	4557	2926	-4.6
Electricity production (GWh)	-	-	-	384	592	390	-
CHP Heat production (TJ)	8009	7120	2650 e	48	102	146	-16.9
<b>Petroleum products</b>							
Fuel input (1000 t)	2374	1165	461	543	498	442	-4.5
Fuel input (TJ)	86253	42409	21206 e	22212	20585	18100	-4.0
Electricity production (GWh)	-	-	-	2424	2254	2203	-
CHP Heat production (TJ)	75067	38299	20146 e	1831	1869	1152	-15.4
<b>Natural gas<sup>(1)</sup></b>							
Fuel input (TJ)	75387	119996	129240	506458	528670	505240	7.1
Electricity production (GWh)	-	-	-	47601	51357	51353	-
CHP Heat production (TJ)	59048	97534	66500 e	157198	161379	145447	1.9
<b>Wood and other solid waste</b>							
Fuel input (TJ)	-	-	-	37336	41481	50811	-
Electricity production (GWh)	-	-	-	2999	3209	4725	-
CHP Heat production (TJ)	-	-	-	8182	9692	12375	-
<b>Industrial waste</b>							
Fuel input (TJ)	-	-	-	10325	16071	16662	-
Electricity production (GWh)	-	-	-	444	672	880	-
CHP Heat production (TJ)	-	-	-	4039	5999	6916	-
<b>Municipal waste</b>							
Fuel input (TJ)	3195	21893	23295 e	68676	75104	72740	5.9
Electricity production (GWh)	-	-	-	2166	2428	3080	-
CHP Heat production (TJ)	2780	19771	19368 e	29796	30828	28406	1.7
<b>Biogases and liquid biofuels</b>							
Fuel input (TJ)	-	-	-	19519	21106	64511	-
Electricity production (GWh)	-	-	-	1633	1751	10146	-
CHP Heat production (TJ)	-	-	-	864	1142	1315	-
<b>Total combustible fuels<sup>(2)</sup></b>							
Electricity production (GWh)	-	-	-	75900 e	83045 e	94027	-
CHP Heat production (TJ)	360488	444104	271318	355285	366922	338396	-1.3

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases and natural gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.



## GREECE

3. Summary electricity production and consumption <sup>(1)</sup>

(TWh)

	1973	1980	1990	2000	2005	2010	2011	2012e
<b>Gross production</b>	<b>14.8</b>	<b>22.7</b>	<b>35.0</b>	<b>53.8</b>	<b>60.0</b>	<b>57.4</b>	<b>59.4</b>	<b>57.8</b>
Nuclear	-	-	-	-	-	-	-	-
Hydro	2.2	3.4	2.0	4.1	5.6	7.5	4.3	4.6
<i>of which:</i>								
<i>pumped storage production</i>	-	-	0.2	0.4	0.6	0.0	0.3	0.3
Geothermal	-	-	-	-	-	-	-	-
Solar	-	-	-	-	0.0	0.2	0.6	1.2
Tide, wave, ocean	-	-	-	-	-	-	-	-
Wind	-	-	0.0	0.5	1.3	2.7	3.3	3.3
Combustible fuels	12.6	19.2	33.0	49.3	53.1	47.0	51.2	48.8
<i>Coal</i>	5.3	10.2	25.2	34.3	35.5	30.8	31.1	32.1
<i>Oil</i>	7.3	9.1	7.7	8.9	9.2	6.1	5.9	4.4
<i>Natural gas</i>	-	-	0.1	5.9	8.2	9.8	13.9	12.0
<i>Biofuels &amp; waste</i>	-	-	-	0.2	0.2	0.3	0.3	0.3
Other (e.g. fuel cells)	-	-	-	-	-	-	-	-
- Own use by power plant	0.8	1.4	2.9	4.0	4.3	4.0	5.5	..
<b>Net production</b>	<b>14.0</b>	<b>21.3</b>	<b>32.1</b>	<b>49.9</b>	<b>55.7</b>	<b>53.4</b>	<b>53.9</b>	<b>..</b>
Nuclear	..	-	-	-	-	-	-	..
Hydro	..	3.4	2.0	4.1	5.6	7.5	4.3	..
Geothermal	..	-	-	-	-	-	-	..
Solar	..	-	-	-	0.0	0.2	0.6	..
Tide, wave, ocean	..	-	-	-	-	-	-	..
Wind	..	-	0.0	0.5	1.3	2.7	3.3	..
Combustible fuels	..	17.9	30.2	45.3	48.9	43.1	45.7	..
Other (e.g. fuel cells)	..	-	-	-	-	-	-	..
- Used for heat pumps	-	-	-	-	-	-	-	-
- Used for electric boilers	-	-	-	-	-	-	-	-
- Used for pumped storage	-	-	0.3	0.6	0.8	0.0	0.4	0.6
+ Imports	0.1	0.7	1.3	1.7	5.6	8.5	7.2	6.0
- Exports	0.0	0.0	0.6	1.7	1.8	2.8	3.9	4.2
<b>Electrical energy supplied</b>	<b>14.1</b>	<b>21.9</b>	<b>32.5</b>	<b>49.3</b>	<b>58.7</b>	<b>59.1</b>	<b>56.8</b>	<b>..</b>
- Transmission & distr. losses	1.0	1.6	2.9	4.3	5.6	3.8	2.8	..
- Statistical difference	-	-	-	-	-	-	-	..
<b>Total consumption</b>	<b>13.0</b>	<b>20.3</b>	<b>29.7</b>	<b>45.0</b>	<b>53.1</b>	<b>55.3</b>	<b>53.9</b>	<b>..</b>
- Energy industry consumption <sup>(2)</sup>	0.3	0.4	1.2	1.8	2.2	2.2	2.2	..
<b>Final consumption</b>	<b>12.7</b>	<b>19.9</b>	<b>28.5</b>	<b>43.2</b>	<b>50.9</b>	<b>53.1</b>	<b>51.8</b>	<b>..</b>
Industry	7.4	10.5	12.1	13.5	14.4	14.1	14.6	..
Transport	0.0	0.1	0.1	0.2	0.2	0.2	0.2	..
Commercial & publ. serv.	2.0	3.3	5.6	12.3	16.5	18.0	16.8	..
Residential	3.1	5.7	9.1	14.2	16.9	18.1	17.6	..
Agriculture & fishing	0.2	0.4	1.6	2.9	2.9	2.7	2.5	..
Sector non specified	-	-	-	-	-	-	-	..

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

## GREECE

4. Electricity production and generation by source  
(TWh)

	1974	1980	1990	2000	2009	2010	2011	Average annual percent change	
								74-90	90-11
<b>Total gross production</b>	<b>15.02</b>	<b>22.65</b>	<b>35.00</b>	<b>53.84</b>	<b>61.37</b>	<b>57.39</b>	<b>59.44</b>	<b>5.4</b>	<b>2.6</b>
- <i>Hydro pumped storage</i>	-	-	0.23	0.42	0.27	0.03	0.26	-	0.7
<b>Total generation<sup>(1)</sup></b>	<b>15.02</b>	<b>22.65</b>	<b>34.78</b>	<b>53.43</b>	<b>61.09</b>	<b>57.37</b>	<b>59.17</b>	<b>5.4</b>	<b>2.6</b>
<b><u>Main activity producers</u></b>									
Gross production	14.81	22.41	34.13	52.83	59.41	54.90	56.88	5.4	2.5
- <i>Hydro pumped storage</i>	-	-	0.23	0.42	0.27	0.03	0.26	-	0.7
Total generation <sup>(1)</sup>	14.81	22.41	33.90	52.41	59.14	54.88	56.62	5.3	2.5
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	2.35	3.41	1.77	3.69	5.37	7.46	4.01	-1.8	4.0
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	0.00	0.45	2.59	2.87	3.93	-	43.5
Coal	5.72	10.16	25.17	34.31	34.19	30.80	31.06	9.7	1.0
Oil	6.74	8.85	6.96	8.17	6.93	5.29	5.04	0.2	-1.5
Natural gas	-	-	-	5.79	9.86	8.29	12.39	-	-
Biofuels & waste	-	-	-	-	0.18	0.16	0.20	-	-
<b><u>Autoproducers</u></b>									
Gross production	0.21	0.24	0.88	1.01	1.96	2.49	2.55	9.3	5.2
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	0.21	0.24	0.88	1.01	1.96	2.49	2.55	9.3	5.2
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	-	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-	-	-
Oil	0.21	0.24	0.78	0.72	0.75	0.80	0.88	8.5	0.6
Natural gas	-	-	0.09	0.13	1.16	1.54	1.55	-	14.4
Biofuels & waste	-	-	-	0.16	0.05	0.16	0.12	-	-

Source: IEA/OECD *Energy Balances* and IEA/OECD *Energy Statistics of OECD Countries*.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

## GREECE

9. Electricity and heat produced for sale from combustible fuels  
in combined heat and power plants (CHP plants)

	1980	1990	2000	2009	2010	2011	Average annual percent change 1990-2011
<b>Hard coal and patent fuel</b>							
Fuel input (1000 t)	-	-	-	20	4	-	-
Fuel input (TJ)	-	-	-	459	110	-	-
Electricity production (GWh)	-	-	-	39	10	-	-
CHP Heat production (TJ)	-	-	-	11	-	-	-
<b>Brown coal</b>							
Fuel input (1000 t)	-	-	4053	13726	16037	17098	-
Fuel input (TJ)	-	-	21849	74076	90802	91577	-
Electricity production (GWh)	-	-	2342	7315	8308	8718	-
CHP Heat production (TJ)	-	-	1174	2012	1905	2213	-
<b>Peat</b>							
Fuel input (1000 t)	-	-	-	-	-	-	-
Fuel input (TJ)	-	-	-	-	-	-	-
Electricity production (GWh)	-	-	-	-	-	-	-
CHP Heat production (TJ)	-	-	-	-	-	-	-
<b>Coal manufactured gases<sup>(1)</sup></b>							
Fuel input (TJ)	-	-	-	-	-	-	-
Electricity production (GWh)	-	-	-	-	-	-	-
CHP Heat production (TJ)	-	-	-	-	-	-	-
<b>Petroleum products</b>							
Fuel input (1000 t)	26	138	93	208	220	246	2.8
Fuel input (TJ)	1114	5546	4152	9938	10362	11694	3.6
Electricity production (GWh)	244	783	719	775	855	937	0.9
CHP Heat production (TJ)	-	-	-	27	36	43	-
<b>Natural gas<sup>(1)</sup></b>							
Fuel input (TJ)	-	840	1415	7611	7592	7846	11.2
Electricity production (GWh)	-	92	132	1159	1539	1551	14.4
CHP Heat production (TJ)	-	-	-	-	-	-	-
<b>Wood and other solid waste</b>							
Fuel input (TJ)	-	-	-	-	-	-	-
Electricity production (GWh)	-	-	-	-	-	-	-
CHP Heat production (TJ)	-	-	-	-	-	-	-
<b>Industrial waste</b>							
Fuel input (TJ)	-	-	2662	169	1341	1175	-
Electricity production (GWh)	-	-	163	19	129	113	-
CHP Heat production (TJ)	-	-	-	-	-	-	-
<b>Municipal waste</b>							
Fuel input (TJ)	-	-	-	-	-	-	-
Electricity production (GWh)	-	-	-	-	-	-	-
CHP Heat production (TJ)	-	-	-	-	-	-	-
<b>Biogases and liquid biofuels</b>							
Fuel input (TJ)	-	-	-	351	286	1788	-
Electricity production (GWh)	-	-	-	34	29	169	-
CHP Heat production (TJ)	-	-	-	-	-	-	-
<b>Total combustible fuels<sup>(2)</sup></b>							
Electricity production (GWh)	244	875	3356	9341	10870	11488	13.0
CHP Heat production (TJ)	-	-	1174	2050	1941	2256	-

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases and natural gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

## HUNGARY

3. Summary electricity production and consumption <sup>(1)</sup>

(TWh)

	1973	1980	1990	2000	2005	2010	2011	2012e
<b>Gross production</b>	<b>17.6</b>	<b>23.9</b>	<b>28.4</b>	<b>35.2</b>	<b>35.8</b>	<b>37.4</b>	<b>36.0</b>	<b>34.4</b>
Nuclear	-	-	13.7	14.2	13.8	15.8	15.7	15.8
Hydro	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
<i>of which:</i>								
<i>pumped storage production</i>	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	-
Solar	-	-	-	-	-	0.0	0.0	0.0
Tide, wave, ocean	-	-	-	-	-	-	-	-
Wind	-	-	-	-	0.0	0.5	0.6	0.8
Combustible fuels	17.5	23.8	14.5	20.8 e	21.7	20.9	19.4	17.6
<i>Coal</i>	<i>11.6</i>	<i>12.0</i>	<i>8.7</i>	<i>9.7</i>	<i>7.1</i>	<i>6.4</i>	<i>6.6</i>	<i>6.5</i>
<i>Oil</i>	<i>3.0</i>	<i>3.3</i>	<i>1.4</i>	<i>4.4</i>	<i>0.5 e</i>	<i>0.5</i>	<i>0.1</i>	<i>0.2</i>
<i>Natural gas</i>	<i>2.9</i>	<i>8.4</i>	<i>4.5</i>	<i>6.6</i>	<i>12.4</i>	<i>11.6</i>	<i>10.7</i>	<i>9.2</i>
<i>Biofuels &amp; waste</i>	<i>-</i>	<i>-</i>	<i>0.0</i>	<i>0.1</i>	<i>1.7</i>	<i>2.4</i>	<i>2.0</i>	<i>1.8</i>
Other (e.g. fuel cells)	-	-	-	-	-	-	-	-
- Own use by power plant	1.8	2.0	2.5	2.9	2.5	2.8	2.5	..
<b>Net production</b>	<b>15.9</b>	<b>21.9</b>	<b>25.9</b>	<b>32.3</b>	<b>33.2</b>	<b>34.6</b>	<b>33.5</b>	<b>..</b>
Nuclear	..	-	12.9	13.0	12.8	14.8	14.7	..
Hydro	..	0.1	0.2	0.2	0.2	0.2	0.2	..
Geothermal	..	-	-	-	-	-	-	..
Solar	..	-	-	-	-	0.0	0.0	..
Tide, wave, ocean	..	-	-	-	-	-	-	..
Wind	..	-	-	-	0.0	0.5	0.6	..
Combustible fuels	..	21.8	12.8	19.1 e	20.2	19.1	18.0	..
Other (e.g. fuel cells)	..	-	-	-	-	-	-	..
- Used for heat pumps	-	-	-	-	-	-	-	-
- Used for electric boilers	-	-	-	-	-	-	-	-
- Used for pumped storage	-	-	-	-	-	-	-	-
+ Imports	5.7	10.2	13.3	9.5	15.6	9.9	14.7	17.0
- Exports	1.1	2.8	2.2	6.1	9.4	4.7	8.0	9.0
<b>Electrical energy supplied</b>	<b>20.5</b>	<b>29.3</b>	<b>37.0</b>	<b>35.7</b>	<b>39.4</b>	<b>39.8</b>	<b>40.1</b>	<b>..</b>
- Transmission & distr. losses	1.9	2.4	4.0	4.8	3.9	3.8	3.8	..
- Statistical difference	-	-	-	-	-	-	0.0	..
<b>Total consumption</b>	<b>18.6</b>	<b>26.9</b>	<b>33.0</b>	<b>30.9</b>	<b>35.5</b>	<b>36.0</b>	<b>36.4</b>	<b>..</b>
- Energy industry consumption <sup>(2)</sup>	1.1	1.4	1.4	1.4	3.2	1.8	1.8	..
<b>Final consumption</b>	<b>17.6</b>	<b>25.6</b>	<b>31.6</b>	<b>29.4</b>	<b>32.3</b>	<b>34.2</b>	<b>34.5</b>	<b>..</b>
Industry	10.7	13.8	13.8	8.8	9.3	9.8	9.9	..
Transport	0.8	1.1	1.2	1.0	1.1	1.1	1.1	..
Commercial & publ. serv.	2.3	2.6	5.5	8.9	9.9	11.4	11.5	..
Residential	2.6	5.0	9.2	9.8	11.1	11.2	11.3	..
Agriculture & fishing	1.0	1.6	1.9	1.0	0.9	0.8	0.8	..
Sector non specified	0.2	1.5	-	-	-	-	-	..

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

## HUNGARY

4. Electricity production and generation by source  
(TWh)

	1974	1980	1990	2000	2009	2010	2011	Average annual percent change	
								74-90	90-11
<b>Total gross production</b>	<b>18.99</b>	<b>23.88</b>	<b>28.44</b>	<b>35.19</b>	<b>35.91</b>	<b>37.37</b>	<b>35.98</b>	<b>2.6</b>	<b>1.1</b>
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
<b>Total generation<sup>(1)</sup></b>	<b>18.99</b>	<b>23.88</b>	<b>28.44</b>	<b>35.19</b>	<b>35.91</b>	<b>37.37</b>	<b>35.98</b>	<b>2.6</b>	<b>1.1</b>
<b><u>Main activity producers</u></b>									
Gross production	17.92	22.66	27.46	34.69	35.56	36.95	35.32	2.7	1.2
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	17.92	22.66	27.46	34.69	35.56	36.95	35.32	2.7	1.2
Nuclear	-	-	13.73	14.18	15.43	15.76	15.69	-	0.6
Hydro	0.08	0.11	0.18	0.18	0.23	0.19	0.22	5.0	1.1
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	-	0.33	0.53	0.63	-	-
Coal	11.15	11.60	8.54	9.71	6.42	6.35	6.57	-1.7	-1.2
Oil	3.82	2.97	1.03	4.34	0.62	0.48	0.14	-7.9	-8.9
Natural gas	2.86	7.98	3.96	6.18	10.18	11.29	10.24	2.0	4.6
Biofuels & waste	-	-	0.03	0.11	2.35	2.35	1.83	-	20.9
<b><u>Autoproducers</u></b>									
Gross production	1.07	1.21	0.97	0.50	0.35	0.43	0.66	-0.6	-1.8
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	1.07	1.21	0.97	0.50	0.35	0.43	0.66	-0.6	-1.8
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	-	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	-	0.00	0.00	0.00	-	-
Coal	0.67	0.44	0.13	-	-	-	-	-9.6	-
Oil	0.25	0.35	0.33	0.07	0.01	0.01	-	1.7	-
Natural gas	0.15	0.43	0.51	0.42	0.24	0.31	0.50	7.9	-0.2
Biofuels & waste	-	-	-	0.01	0.10	0.10	0.16	-	-

Source: IEA/OECD *Energy Balances* and IEA/OECD *Energy Statistics of OECD Countries*.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

## HUNGARY

9. Electricity and heat produced for sale from combustible fuels  
in combined heat and power plants (CHP plants)

	1980	1990	2000	2009	2010	2011	Average annual percent change 1990-2011
<b>Hard coal and patent fuel</b>							
Fuel input (1000 t)	-	-	-	60	66	23	-
Fuel input (TJ)	-	-	-	1452	1619	558	-
Electricity production (GWh)	-	-	-	31	31	12	-
CHP Heat production (TJ)	-	-	-	899	1026	393	-
<b>Brown coal</b>							
Fuel input (1000 t)	2430	2551	2586	279	141	174	-12.0
Fuel input (TJ)	22077	22237	27324	3344	1627	2375	-10.1
Electricity production (GWh)	713	688	1300	278	87	63	-10.8
CHP Heat production (TJ)	13014	13888	15193	1641	1083	1614	-9.7
<b>Peat</b>							
Fuel input (1000 t)	-	-	-	-	-	-	-
Fuel input (TJ)	-	-	-	-	-	-	-
Electricity production (GWh)	-	-	-	-	-	-	-
CHP Heat production (TJ)	-	-	-	-	-	-	-
<b>Coal manufactured gases<sup>(1)</sup></b>							
Fuel input (TJ)	842	1013	5541	2790	4029	4400	7.2
Electricity production (GWh)	72	98	117	55	78	90	-0.4
CHP Heat production (TJ)	329	395	3545	1662	2127	2247	8.6
<b>Petroleum products</b>							
Fuel input (1000 t)	361	219	145	68	3	4	-17.4
Fuel input (TJ)	14533	8793	5604	2781	78	130	-18.2
Electricity production (GWh)	658	501	255	134	6	7	-18.4
CHP Heat production (TJ)	8301	4910	4014	1731	38	81	-17.8
<b>Natural gas<sup>(1)</sup></b>							
Fuel input (TJ)	25948	35818	55915	72297	74161	71199	3.3
Electricity production (GWh)	916	1321	2982	6479	6853	6851	8.2
CHP Heat production (TJ)	14221	20002	27052	30097	29590	22786	0.6
<b>Wood and other solid waste</b>							
Fuel input (TJ)	-	-	133	2982	3423	3315	-
Electricity production (GWh)	-	-	10	117	134	131	-
CHP Heat production (TJ)	-	-	75	1019	2201	2173	-
<b>Industrial waste</b>							
Fuel input (TJ)	-	-	-	-	87	420	-
Electricity production (GWh)	-	-	-	-	4	2	-
CHP Heat production (TJ)	-	-	-	-	-	102	-
<b>Municipal waste</b>							
Fuel input (TJ)	-	988	2436	3304	3144	3260	5.8
Electricity production (GWh)	-	34	110	168	158	158	7.6
CHP Heat production (TJ)	-	318	815	1056	1076	742	4.1
<b>Biogases and liquid biofuels</b>							
Fuel input (TJ)	-	-	-	528	749	1005	-
Electricity production (GWh)	-	-	-	94	108	122	-
CHP Heat production (TJ)	-	-	-	11	110	253	-
<b>Total combustible fuels<sup>(2)</sup></b>							
Electricity production (GWh)	2359	2642	4774	7356	7459	7436	5.1
CHP Heat production (TJ)	35865	39513	50694	38116	37251	30391	-1.2

Source: IEA/OECD Electricity Statistics.

(1) Coal manufactured gases and natural gas are expressed on a gross calorific value basis.

(2) Includes non-specified combustible fuels not shown in this table.

Note: Please refer to notes in the introductory information for data coverage.

## ICELAND

3. Summary electricity production and consumption <sup>(1)</sup>

(TWh)

	1973	1980	1990	2000	2005	2010	2011	2012e
<b>Gross production</b>	<b>2.3</b>	<b>3.2</b>	<b>4.5</b>	<b>7.7</b>	<b>8.7</b>	<b>17.1</b>	<b>17.2</b>	<b>17.5</b>
Nuclear	-	-	-	-	-	-	-	-
Hydro	2.2	3.1	4.2	6.4	7.0	12.6	12.5	12.3
<i>of which:</i>								
<i>pumped storage production</i>	-	-	-	-	-	-	-	-
Geothermal	0.0	0.1	0.3	1.3	1.7	4.5	4.7	5.2
Solar	-	-	-	-	-	-	-	-
Tide, wave, ocean	-	-	-	-	-	-	-	-
Wind	-	-	-	-	-	-	-	-
Combustible fuels	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Coal</i>	-	-	-	-	-	-	-	-
<i>Oil</i>	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Natural gas</i>	-	-	-	-	-	-	-	-
<i>Biofuels &amp; waste</i>	-	-	-	-	0.0	-	-	-
Other (e.g. fuel cells)	-	-	-	-	-	-	-	-
- Own use by power plant	0.0	0.0	0.1	0.1	0.2	0.3	0.4	..
<b>Net production</b>	<b>2.3</b>	<b>3.2</b>	<b>4.5</b>	<b>7.6</b>	<b>8.5</b>	<b>16.7</b>	<b>16.9</b>	<b>..</b>
Nuclear	..	-	-	-	-	-	-	..
Hydro	..	3.1	4.2	6.3	6.9	12.5	12.4	..
Geothermal	..	0.1	0.3	1.3	1.6	4.2	4.5	..
Solar	..	-	-	-	-	-	-	..
Tide, wave, ocean	..	-	-	-	-	-	-	..
Wind	..	-	-	-	-	-	-	..
Combustible fuels	..	0.0	0.0	0.0	0.0	0.0	0.0	..
Other (e.g. fuel cells)	..	-	-	-	-	-	-	..
- Used for heat pumps	-	-	-	-	-	-	-	-
- Used for electric boilers	-	-	0.1	0.2	0.2	0.2	0.2	0.2
- Used for pumped storage	-	-	-	-	-	-	-	-
+ Imports	-	-	-	-	-	-	-	-
- Exports	-	-	-	-	-	-	-	-
<b>Electrical energy supplied</b>	<b>2.3</b>	<b>3.2</b>	<b>4.3</b>	<b>7.4</b>	<b>8.3</b>	<b>16.6</b>	<b>16.7</b>	<b>..</b>
- Transmission & distr. losses	0.2	0.3	0.4	0.3	0.4	0.7	0.5	..
- Statistical difference	-	-	-	-	-	-	-	..
<b>Total consumption</b>	<b>2.1</b>	<b>2.9</b>	<b>3.9</b>	<b>7.1</b>	<b>8.0</b>	<b>15.9</b>	<b>16.2</b>	<b>..</b>
- Energy industry consumption <sup>(2)</sup>	-	-	0.0	0.2	0.2	0.2	0.1	..
<b>Final consumption</b>	<b>2.1</b>	<b>2.9</b>	<b>3.9</b>	<b>6.9</b>	<b>7.8</b>	<b>15.7</b>	<b>16.0</b>	<b>..</b>
Industry	1.5	2.0	2.6	5.2	5.9	13.5	13.9	..
Transport	-	-	-	-	-	-	-	..
Commercial & publ. serv.	0.1	0.2	0.5	0.8	0.9	1.0	1.0	..
Residential	0.4	0.6	0.6	0.6	0.7	0.9	0.9	..
Agriculture & fishing	-	-	0.2	0.2	0.2	0.3	0.3	..
Sector non specified	0.1	0.1	0.1	0.1	0.1	-	0.0	..

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

## ICELAND

4. Electricity production and generation by source  
(TWh)

	1974	1980	1990	2000	2009	2010	2011	Average annual percent change	
								74-90	90-11
<b>Total gross production</b>	<b>2.37</b>	<b>3.18</b>	<b>4.51</b>	<b>7.68</b>	<b>16.83</b>	<b>17.06</b>	<b>17.21</b>	<b>4.1</b>	<b>6.6</b>
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
<b>Total generation<sup>(1)</sup></b>	<b>2.37</b>	<b>3.18</b>	<b>4.51</b>	<b>7.68</b>	<b>16.83</b>	<b>17.06</b>	<b>17.21</b>	<b>4.1</b>	<b>6.6</b>
<b><u>Main activity producers</u></b>									
Gross production	2.36	3.17	4.51	7.68	16.83	17.06	17.21	4.1	6.6
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	2.36	3.17	4.51	7.68	16.83	17.06	17.21	4.1	6.6
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	2.28	3.08	4.20	6.35	12.28	12.59	12.51	3.9	5.3
Geothermal	0.01	0.05	0.30	1.32	4.55	4.47	4.70	25.4	14.0
Solar, wind, tide <sup>(2)</sup>	-	-	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-	-	-
Oil	0.07	0.05	0.01	0.00	0.00	0.00	0.00	-15.4	-4.3
Natural gas	-	-	-	-	-	-	-	-	-
Biofuels & waste	-	-	-	-	-	-	-	-	-
<b><u>Autoproducers</u></b>									
Gross production	0.01	0.01	0.01	0.01	-	-	-	-	-
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	0.01	0.01	0.01	0.01	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	0.00	0.00	0.00	0.00	-	-	-	-	-
Geothermal	-	0.01	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-	-	-
Oil	0.00	0.00	0.00	0.00	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-	-	-
Biofuels & waste	-	-	-	-	-	-	-	-	-

Source: IEA/OECD *Energy Balances* and IEA/OECD *Energy Statistics of OECD Countries*.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

**Note:** Please refer to definitions in the introductory information.



**ICELAND**  
**10. Heat produced for sale from combustible fuels**  
**in heat plants**

	1980	1990	2000	2009	2010	2011	Average annual percent change 1990-2011
<b>Hard coal<sup>(1)</sup> and patent fuel</b>							
Fuel input (1000 t)	-	-	-	-	-	-	-
Fuel input (TJ)	-	-	-	-	-	-	-
Heat production (TJ)	-	-	-	-	-	-	-
<b>Brown coal</b>							
Fuel input (1000 t)	-	-	-	-	-	-	-
Fuel input (TJ)	-	-	-	-	-	-	-
Heat production (TJ)	-	-	-	-	-	-	-
<b>Peat</b>							
Fuel input (1000 t)	-	-	-	-	-	-	-
Fuel input (TJ)	-	-	-	-	-	-	-
Heat production (TJ)	-	-	-	-	-	-	-
<b>Coal manufactured gases<sup>(2)</sup></b>							
Fuel input (TJ)	-	-	-	-	-	-	-
Heat production (TJ)	-	-	-	-	-	-	-
<b>Petroleum products</b>							
Fuel input (1000 t)	-	-	-	-	-	-	-
Fuel input (TJ)	-	-	22	24	11	-	-
Heat production (TJ)	-	-	20	23	11	-	-
<b>Natural gas<sup>(2)</sup></b>							
Fuel input (TJ)	-	-	-	-	-	-	-
Heat production (TJ)	-	-	-	-	-	-	-
<b>Wood and other solid waste</b>							
Fuel input (TJ)	-	-	-	-	-	-	-
Heat production (TJ)	-	-	-	-	-	-	-
<b>Industrial waste</b>							
Fuel input (TJ)	-	-	-	-	-	-	-
Heat production (TJ)	-	-	-	-	-	-	-
<b>Municipal waste</b>							
Fuel input (TJ)	-	-	56	33	36	-	-
Heat production (TJ)	-	-	45	25	28	-	-
<b>Biogases and liquid biofuels</b>							
Fuel input (TJ)	-	-	-	-	-	-	-
Heat production (TJ)	-	-	-	-	-	-	-
<b>Total combustible fuels<sup>(3)</sup></b>							
Heat production (TJ)	-	-	65	48	39	-	-

**Source:** IEA/OECD Electricity Statistics.

(1) Includes sub-bituminous coal.

(2) Coal manufactured gases and natural gas are expressed on a gross calorific value basis.

(3) Includes non-specified combustible fuels not shown in this table.

**Note:** Please refer to notes in the introductory information for data coverage.

## IRELAND

3. Summary electricity production and consumption <sup>(1)</sup>

(TWh)

	1973	1980	1990	2000	2005	2010	2011	2012e
<b>Gross production</b>	<b>7.3</b>	<b>10.9</b>	<b>14.5</b>	<b>24.0</b>	<b>26.0</b>	<b>28.6</b>	<b>27.7</b>	<b>27.7</b>
Nuclear	-	-	-	-	-	-	-	-
Hydro	0.6	1.2	1.0	1.2	1.0	0.8	0.7	1.0
<i>of which:</i>								
<i>pumped storage production</i>	-	0.3	0.3	0.3	0.3	0.2	-	0.2
Geothermal	-	-	-	-	-	-	-	-
Solar	-	-	-	-	-	-	-	-
Tide, wave, ocean	-	-	-	-	-	-	-	-
Wind	-	-	-	0.2	1.1	2.8	4.4	4.0
Combustible fuels	6.7	9.7	13.5	22.6	23.9	25.0	22.6	22.7
<i>Coal</i>	1.8	1.7	8.2	8.6	8.8	6.4	6.9	8.1
<i>Oil</i>	4.9	6.4	1.4 e	4.6 e	3.3	0.6	0.4	0.4
<i>Natural gas</i>	-	1.6	3.9	9.3	11.6	17.7	14.9	13.7
<i>Biofuels &amp; waste</i>	-	-	-	0.1	0.1	0.3	0.3	0.5
Other (e.g. fuel cells)	-	-	-	-	-	-	-	-
- Own use by power plant	0.4	0.6	0.9	1.3	1.2	1.2	1.3	..
<b>Net production</b>	<b>7.0</b>	<b>10.3</b>	<b>13.7</b>	<b>22.7</b>	<b>24.8</b>	<b>27.5</b>	<b>26.4</b>	<b>..</b>
Nuclear	..	-	-	-	-	-	-	..
Hydro	..	1.1	1.0	1.1	1.0	0.8	0.7	..
Geothermal	..	-	-	-	-	-	-	..
Solar	..	-	-	-	-	-	-	..
Tide, wave, ocean	..	-	-	-	-	-	-	..
Wind	..	-	-	0.2	1.1	2.8	4.4	..
Combustible fuels	..	9.2	12.7	21.3	22.7	23.9	21.3	..
Other (e.g. fuel cells)	..	-	-	-	-	-	-	..
- Used for heat pumps	-	-	-	-	-	-	-	-
- Used for electric boilers	-	-	-	-	-	-	-	-
- Used for pumped storage	-	0.5	0.4	0.4	0.5	0.3	0.0	0.3
+ Imports	0.1	-	-	0.2	2.0	0.8	0.7	0.8
- Exports	0.0	-	-	0.1	0.0	0.3	0.2	0.4
<b>Electrical energy supplied</b>	<b>7.0</b>	<b>9.8</b>	<b>13.2</b>	<b>22.3</b>	<b>26.3</b>	<b>27.6</b>	<b>26.9</b>	<b>..</b>
- Transmission & distr. losses	0.8	1.1	1.3	2.0	2.0	2.1	2.1	..
- Statistical difference	-	-	-	-0.1	-0.3	-0.1	-0.3	..
<b>Total consumption</b>	<b>6.2</b>	<b>8.7</b>	<b>12.0</b>	<b>20.4</b>	<b>24.5</b>	<b>25.6</b>	<b>25.1</b>	<b>..</b>
- Energy industry consumption <sup>(2)</sup>	0.1	0.1	0.1	0.1	0.2	0.2	0.2	..
<b>Final consumption</b>	<b>6.2</b>	<b>8.6</b>	<b>11.9</b>	<b>20.3</b>	<b>24.4</b>	<b>25.4</b>	<b>24.9</b>	<b>..</b>
Industry	2.2	3.2	4.5	7.7	7.7	9.1	9.5	..
Transport	-	-	0.0	0.0	0.1	0.0	0.0	..
Commercial & publ. serv.	1.4	1.8	2.8	5.6	8.5	7.2	6.5	..
Residential	2.6	3.6	4.1	6.4	7.5	8.5	8.3	..
Agriculture & fishing	-	-	0.4	0.6	0.6	0.6	0.6	..
Sector non specified	-	-	-	-	-	-	-	..

**Source:** IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

**Note:** Please refer to definitions in the introductory information.

## IRELAND

4. Electricity production and generation by source  
(TWh)

	1974	1980	1990	2000	2009	2010	2011	Average annual percent change	
								74-90	90-11
<b>Total gross production</b>	<b>7.86</b>	<b>10.88</b>	<b>14.52</b>	<b>23.98</b>	<b>28.31</b>	<b>28.61</b>	<b>27.66</b>	<b>3.9</b>	<b>3.1</b>
- <i>Hydro pumped storage</i>	0.22	0.32	0.29	0.30	0.36	0.18	-	1.5	-
<b>Total generation<sup>(1)</sup></b>	<b>7.63</b>	<b>10.57</b>	<b>14.23</b>	<b>23.67</b>	<b>27.96</b>	<b>28.44</b>	<b>27.66</b>	<b>4.0</b>	<b>3.2</b>
<b><u>Main activity producers</u></b>									
Gross production	7.68	10.74	14.30	23.40	26.48	26.66	25.51	4.0	2.8
- <i>Hydro pumped storage</i>	0.22	0.32	0.29	0.30	0.36	0.18	-	1.5	-
Total generation <sup>(1)</sup>	7.45	10.42	14.02	23.09	26.13	26.48	25.51	4.0	2.9
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	0.79	0.84	0.70	0.85	0.90	0.60	0.71	-0.7	0.1
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	0.24	2.96	2.82	4.38	-	-
Coal	1.80	1.70	8.08	8.54	6.60	6.35	6.90	9.8	-0.8
Oil	4.87	6.27	1.41	4.59	0.89	0.56	0.20	-7.5	-8.8
Natural gas	-	1.61	3.83	8.79	14.56	15.88	13.02	-	6.0
Biofuels & waste	-	-	-	0.10	0.22	0.28	0.30	-	-
<b><u>Autoproducers</u></b>									
Gross production	0.18	0.15	0.21	0.58	1.83	1.96	2.15	1.0	11.7
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	0.18	0.15	0.21	0.58	1.83	1.96	2.15	1.0	11.7
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	-	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	-	-	-	-	-	-
Coal	0.04	0.04	0.08	0.05	0.04	0.04	0.03	4.9	-5.5
Oil	0.14	0.11	0.02	0.05	0.03	0.05	0.22	-10.8	11.2
Natural gas	-	-	0.11	0.48	1.74	1.83	1.87	-	14.6
Biofuels & waste	-	-	-	-	0.03	0.04	0.04	-	-

Source: IEA/OECD *Energy Balances* and IEA/OECD *Energy Statistics of OECD Countries*.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

**IRELAND**  
**11. Final consumption of energy by source**  
**(Mtoe)**

	1973	1980	1990	2000	2009	2010	2011	Average annual percent change	
								73-90	90-11
<b>TFC<sup>(1)</sup></b>	<b>5.11</b>	<b>6.34</b>	<b>7.54</b>	<b>10.63</b>	<b>11.35</b>	<b>11.34</b>	<b>10.44</b>	<b>2.3</b>	<b>1.6</b>
Geothermal	-	-	-	-	-	-	-	-	-
Solar thermal	-	-	0.00	0.00	0.00	0.01	0.01	-	27.6
Coal	1.03	1.36	1.68	0.66	0.63	0.60	0.55	2.9	-5.2
Oil	3.55	3.90	3.73	6.52	6.79	6.64	5.88	0.3	2.2
Natural gas	-	0.35	1.00	1.58	1.48	1.61	1.55	-	2.1
Biofuels & waste	-	-	0.11	0.12	0.27	0.30	0.31	-	5.1
Electricity	0.53	0.74	1.02	1.74	2.17	2.19	2.14	3.9	3.6
Heat	-	-	-	-	-	-	-	-	-
<i>of which:</i>									
<b>Total industry</b>	<b>1.70</b>	<b>2.17</b>	<b>1.73</b>	<b>2.49</b>	<b>2.08</b>	<b>2.13</b>	<b>2.26</b>	<b>0.1</b>	<b>1.3</b>
Geothermal	-	-	-	-	-	-	-	-	-
Solar thermal	-	-	-	-	-	-	-	-	-
Coal	0.07	0.12	0.24	0.10	0.11	0.11	0.10	7.7	-4.3
Oil	1.44	1.43	0.68	1.15	0.65	0.61	0.56	-4.3	-0.9
Natural gas	-	0.35	0.36	0.47	0.43	0.47	0.62	-	2.7
Biofuels & waste	-	-	0.06	0.10	0.15	0.16	0.16	-	4.7
Electricity	0.19	0.28	0.39	0.66	0.74	0.78	0.82	4.3	3.6
Heat	-	-	-	-	-	-	-	-	-
<b>Transport</b>	<b>1.13</b>	<b>1.54</b>	<b>1.64</b>	<b>3.44</b>	<b>4.12</b>	<b>3.92</b>	<b>3.61</b>	<b>2.2</b>	<b>3.8</b>
Geothermal	-	-	-	-	-	-	-	-	-
Solar thermal	-	-	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-	-	-
Oil	1.13	1.54	1.64	3.43	4.03	3.82	3.50	2.2	3.7
Natural gas	-	-	-	-	-	-	-	-	-
Biofuels & waste	-	-	-	-	0.08	0.09	0.10	-	-
Electricity	-	-	0.00	0.00	0.00	0.00	0.00	-	5.0
Heat	-	-	-	-	-	-	-	-	-
<b>Comm. &amp; public serv.</b>	<b>0.25</b>	<b>0.58</b>	<b>0.98</b>	<b>1.36</b>	<b>1.61</b>	<b>1.52</b>	<b>1.32</b>	<b>8.4</b>	<b>1.5</b>
Geothermal	-	-	-	-	-	-	-	-	-
Solar thermal	-	-	-	-	0.00	0.00	0.00	-	-
Coal	-	0.07	0.02	0.00	-	-	-	-	-
Oil	0.13	0.35	0.63	0.58	0.48	0.44	0.38	9.6	-2.4
Natural gas	-	-	0.09	0.29	0.43	0.44	0.36	-	6.7
Biofuels & waste	-	-	-	-	0.02	0.02	0.02	-	-
Electricity	0.12	0.15	0.24	0.48	0.68	0.62	0.56	4.3	4.1
Heat	-	-	-	-	-	-	-	-	-

**Source:** IEA/OECD *Energy Balances of OECD Countries*.

(1) Total final energy consumption (TFC) includes non-energy use but excludes use in transformation and energy industries.

**Note:** Please refer to notes in the introductory information for data coverage.

## ISRAEL

3. Summary electricity production and consumption <sup>(1)</sup>

(TWh)

	1973	1980	1990	2000	2005	2010	2011	2012e
<b>Gross production</b>	<b>8.7</b>	<b>12.4</b>	<b>20.9</b>	<b>42.7</b>	<b>48.6</b>	<b>58.6</b>	<b>59.6</b>	<b>60.7</b>
Nuclear	-	-	-	-	-	-	-	-
Hydro	-	-	0.0	0.0	0.0	0.0	0.0	0.0
<i>of which:</i>								
<i>pumped storage production</i>	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	-
Solar	-	-	-	-	-	0.1	0.2	0.2
Tide, wave, ocean	-	-	-	-	-	-	-	-
Wind	-	-	-	-	0.0	0.0	0.0	0.0
Combustible fuels	8.7	12.4	20.9	42.6	48.6	58.4	59.3	60.4
<i>Coal</i>	-	-	10.5	29.4	36.3	34.3	35.2	42.5
<i>Oil</i>	8.7	12.4	10.4 e	13.3 e	6.7	2.1	4.4	5.2
<i>Natural gas</i>	-	-	-	0.0	5.6	22.0	19.7	12.7
<i>Biofuels &amp; waste</i>	-	-	-	-	-	0.0	0.0	0.0
Other (e.g. fuel cells)	-	-	-	-	-	0.0	0.1	0.1
- Own use by power plant	0.6	0.8	1.3	2.1	4.1	4.9 e	5.0 e	..
<b>Net production</b>	<b>8.1</b>	<b>11.6</b>	<b>19.6</b>	<b>40.6</b>	<b>44.5</b>	<b>53.7 e</b>	<b>54.7 e</b>	<b>..</b>
Nuclear	..	-	-	-	-	-	-	..
Hydro	..	-	0.0	0.0	0.0	0.0	0.0	..
Geothermal	..	-	-	-	-	-	-	..
Solar	..	-	-	-	-	0.1	0.2	..
Tide, wave, ocean	..	-	-	-	-	-	-	..
Wind	..	-	-	-	0.0	0.0	0.0	..
Combustible fuels	..	11.6	19.6	40.5	44.5	53.6 e	54.4 e	..
Other (e.g. fuel cells)	..	-	-	-	-	0.0	0.1	..
- Used for heat pumps	-	-	-	-	-	-	-	-
- Used for electric boilers	-	-	-	-	-	-	-	-
- Used for pumped storage	-	-	-	-	-	-	-	-
+ Imports	-	-	-	-	-	-	-	-
- Exports	0.1	0.2	0.5	1.5	1.7	4.0	4.2	4.2
<b>Electrical energy supplied</b>	<b>8.1</b>	<b>11.5</b>	<b>19.2</b>	<b>39.1</b>	<b>42.8</b>	<b>49.7 e</b>	<b>50.5 e</b>	<b>..</b>
- Transmission & distr. losses	0.5	0.5	1.0	1.4	1.4	1.6 e	1.6 e	..
- Statistical difference	-0.0	-	-	-0.9	-1.0	-1.0	-0.7	..
<b>Total consumption</b>	<b>7.6</b>	<b>11.0</b>	<b>18.2</b>	<b>38.6</b>	<b>42.5</b>	<b>49.1</b>	<b>49.5</b>	<b>..</b>
- Energy industry consumption <sup>(2)</sup>	-	-	-	-	-	0.4	0.6	..
<b>Final consumption</b>	<b>7.6</b>	<b>11.0</b>	<b>18.2</b>	<b>38.6</b>	<b>42.5</b>	<b>48.7</b>	<b>49.0</b>	<b>..</b>
Industry	2.3	3.5	5.3	10.4	11.8	12.5	12.0	..
Transport	-	-	-	-	-	-	-	..
Commercial & publ. serv.	-	3.1	5.1	11.8	13.1	17.0	17.1	..
Residential	2.2	3.0	5.3	11.6	13.7	15.3	15.9	..
Agriculture & fishing	0.3	0.5	0.9	1.6	1.7	1.7	1.8	..
Sector non specified	2.8	0.9	1.5	3.2	2.2	2.3	2.2	..

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.

## ISRAEL

4. Electricity production and generation by source  
(TWh)

	1974	1980	1990	2000	2009	2010	2011	Average annual percent change	
								74-90	90-11
<b>Total gross production</b>	<b>9.16</b>	<b>12.40</b>	<b>20.90</b>	<b>42.66</b>	<b>55.01</b>	<b>58.57</b>	<b>59.65</b>	<b>5.3</b>	<b>5.1</b>
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
<b>Total generation<sup>(1)</sup></b>	<b>9.16</b>	<b>12.40</b>	<b>20.90</b>	<b>42.66</b>	<b>55.01</b>	<b>58.57</b>	<b>59.65</b>	<b>5.3</b>	<b>5.1</b>
<b><u>Main activity producers</u></b>									
Gross production	8.94	12.18	20.27	42.15	53.19	56.87	57.85	5.2	5.1
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	8.94	12.18	20.27	42.15	53.19	56.87	57.85	5.2	5.1
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	-	-	0.00	0.03	0.02	0.03	0.02	-	10.2
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	-	0.02	0.03	0.01	-	-
Coal	-	-	10.47	29.30	34.35	34.24	35.15	-	5.9
Oil	8.94	12.18	9.80	12.81	1.62	1.44	3.89	0.6	-4.3
Natural gas	-	-	-	0.01	17.19	21.13	18.78	-	-
Biofuels & waste	-	-	-	-	-	-	-	-	-
<b><u>Autoproducers</u></b>									
Gross production	0.22	0.22	0.63	0.51	1.82	1.70	1.79	6.9	5.1
- <i>Hydro pumped storage</i>	-	-	-	-	-	-	-	-	-
Total generation <sup>(1)</sup>	0.22	0.22	0.63	0.51	1.82	1.70	1.79	6.9	5.1
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	-	-	-	-	0.00	0.00	0.01	-	-
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	-	0.28 e	0.08	0.27	-	-
Coal	-	-	-	0.06	0.05	0.05	0.05	-	-
Oil	0.22	0.22	0.63	0.46	0.61	0.71	0.47	6.9	-1.4
Natural gas	-	-	-	-	0.83	0.83	0.97	-	-
Biofuels & waste	-	-	-	-	0.04	0.04	0.04	-	-

Source: IEA/OECD *Energy Balances* and IEA/OECD *Energy Statistics of OECD Countries*.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.

## ISRAEL

## 11. Final consumption of energy by source (continued)

(Mtoe)

	1973	1980	1990	2000	2009	2010	2011	Average annual percent change	
								73-90	90-11
<b>Residential</b>	<b>0.29</b>	<b>0.39</b>	<b>1.32</b>	<b>2.43</b>	<b>3.33</b>	<b>3.39</b>	<b>3.47</b>	<b>9.3</b>	<b>4.7</b>
Geothermal	-	-	-	-	-	-	-	-	-
Solar thermal	-	-	0.36	0.60	1.04	1.12	1.10	-	5.5
Coal	-	-	-	-	-	-	-	-	-
Oil	0.10	0.13	0.50	0.83	0.98	0.95	1.00	10.0	3.3
Natural gas	-	0.00	0.00	-	-	-	-	-	-
Biofuels & waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	1.8
Electricity	0.19	0.26	0.46	0.99	1.30	1.32	1.37	5.4	5.4
Heat	-	-	-	-	-	-	-	-	-
<b>Agriculture &amp; fishing</b>	<b>0.02</b>	<b>0.04</b>	<b>0.08</b>	<b>0.14</b>	<b>0.15</b>	<b>0.14</b>	<b>0.15</b>	<b>7.4</b>	<b>3.0</b>
Geothermal	-	-	-	-	-	-	-	-	-
Solar thermal	-	-	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-	-	-
Oil	-	-	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-	-	-
Biofuels & waste	-	-	-	-	-	-	-	-	-
Electricity	0.02	0.04	0.08	0.14	0.15	0.14	0.15	7.4	3.0
Heat	-	-	-	-	-	-	-	-	-
<b>Other</b>	<b>0.78</b>	<b>0.56</b>	<b>0.74</b>	<b>1.86</b>	<b>2.37</b>	<b>2.33</b>	<b>2.32</b>	<b>-0.3</b>	<b>5.6</b>
Geothermal	-	-	-	-	-	-	-	-	-
Solar thermal	-	-	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-	-	-
Oil	0.53	0.48	0.61	1.58	2.15	2.13	2.13	0.8	6.1
Natural gas	-	-	-	-	-	-	-	-	-
Biofuels & waste	-	-	-	0.00	0.01	0.01	0.00	-	-
Electricity	0.24	0.08	0.13	0.27	0.21	0.20	0.19	-3.7	1.8
Heat	-	-	-	-	-	-	-	-	-
<b>Non-energy use<sup>(1)</sup></b>	<b>0.28</b>	<b>0.65</b>	<b>0.74</b>	<b>1.81</b>	<b>1.34</b>	<b>1.39</b>	<b>1.55</b>	<b>5.92</b>	<b>3.61</b>

Source: IEA/OECD Energy Balances of OECD Countries.

(1) Refers to use of refined petroleum products, natural gas or coal for non energy purposes. This includes use of products such as white spirit, paraffin waxes, lubricants and bitumen, or transformations such as coal for graphite electrodes, as well as oil and natural gas used as petrochemical feedstocks.

**Note:** Please refer to notes in the introductory information for data coverage.

## ITALY

3. Summary electricity production and consumption <sup>(1)</sup>

(TWh)

	1973	1980	1990	2000	2005	2010	2011	2012e
<b>Gross production</b>	<b>145.5</b>	<b>185.7</b>	<b>216.6</b>	<b>276.6</b>	<b>303.7</b>	<b>302.1</b>	<b>302.6</b>	<b>296.3</b>
Nuclear	3.1	2.2	-	-	-	-	-	-
Hydro	39.1	47.5	35.1	50.9	42.9	54.4	47.8	43.8
<i>of which:</i>								
<i>pumped storage production</i>	1.6	2.3	3.5	6.7	6.9	3.3	1.9	1.9
Geothermal	2.5	2.7	3.2	4.7	5.3	5.4	5.7	5.6
Solar	-	-	0.0 e	0.0 e	0.0	1.9	10.8	18.9
Tide, wave, ocean	-	-	-	-	-	-	-	-
Wind	-	-	0.0	0.6	2.3	9.1	9.9	13.2
Combustible fuels	100.8	133.4	178.3	219.7	252.0	230.5	227.7	214.0
<i>Coal</i>	5.2	18.3	35.8	30.5	49.4	44.4	50.1	47.1
<i>Oil</i>	89.7	104.6	102.7	85.9	47.1	21.7	19.9	18.7
<i>Natural gas</i>	4.5	9.2	39.7	101.4	149.3	152.7	144.5	135.8
<i>Biofuels &amp; waste</i>	1.4	1.3	0.1	1.9 e	6.2	11.6	13.1	12.3
Other (e.g. fuel cells)	-	-	-	0.8	1.1	0.8	0.8	0.8
- Own use by power plant	6.4	8.3	11.5	13.3	13.1	11.3	11.1	..
<b>Net production</b>	<b>139.1</b>	<b>177.4</b>	<b>205.1</b>	<b>263.3</b>	<b>290.6</b>	<b>290.7</b>	<b>291.4</b>	<b>..</b>
Nuclear	..	2.1	-	-	-	-	-	..
Hydro	..	47.2	34.6	50.2	42.4	53.8	47.2	..
Geothermal	..	2.6	3.1	4.4	5.0	5.0	5.3	..
Solar	..	-	0.0 e	0.0 e	0.0	1.9	10.7	..
Tide, wave, ocean	..	-	-	-	-	-	-	..
Wind	..	-	0.0	0.6	2.3	9.0	9.8	..
Combustible fuels	..	125.5	167.4	207.3	239.8	220.2	217.7	..
Other (e.g. fuel cells)	..	-	-	0.7	1.1	0.7	0.8	..
- Used for heat pumps	-	-	-	-	-	-	-	-
- Used for electric boilers	-	-	-	-	-	-	-	-
- Used for pumped storage	2.3	3.2	4.8	9.1	9.3	4.5	2.5	2.6
+ Imports	3.2	8.1	35.6	44.8	50.3	46.0	47.5	45.4
- Exports	2.4	2.0	0.9	0.5	1.1	1.8	1.8	2.3
<b>Electrical energy supplied</b>	<b>137.7</b>	<b>180.3</b>	<b>234.9</b>	<b>298.5</b>	<b>330.5</b>	<b>330.5</b>	<b>334.6</b>	<b>..</b>
- Transmission & distr. losses	11.8	16.6	16.2	19.2	20.6	20.6	20.8	..
- Statistical difference	-	-	-	-	-	0.0	-0.0	..
<b>Total consumption</b>	<b>125.8</b>	<b>163.6</b>	<b>218.8</b>	<b>279.3</b>	<b>309.8</b>	<b>309.9</b>	<b>313.8</b>	<b>..</b>
- Energy industry consumption <sup>(2)</sup>	2.8	3.9	4.2	6.3	9.0	10.6	12.0	..
<b>Final consumption</b>	<b>123.1</b>	<b>159.8</b>	<b>214.6</b>	<b>273.0</b>	<b>300.9</b>	<b>299.3</b>	<b>301.8</b>	<b>..</b>
Industry	77.1	94.0	110.9	141.8	144.8	127.9	128.1	..
Transport	3.8	4.8	6.7	8.5	9.9	10.7	10.8	..
Commercial & publ. serv.	14.5	20.5	40.0	56.6	73.9	85.6	86.9	..
Residential	26.3	37.8	52.7	61.1	67.0	69.6	70.1	..
Agriculture & fishing	1.3	2.6	4.2	4.9	5.4	5.6	5.9	..
Sector non specified	-	-	-	-	-	-	-	..

Source: IEA/OECD Electricity Statistics.

(1) Electricity generation from main activity producer power plants and autoproducers.

(2) Energy industry consumption = electricity consumed by transformation industries for heating, traction and lighting purposes; excludes own use by power plant and electricity used for heat pumps, electric boilers and pumped storage.

Note: Please refer to definitions in the introductory information.



## ITALY

4. Electricity production and generation by source  
(TWh)

	1974	1980	1990	2000	2009	2010	2011	Average annual percent change	
								74-90	90-11
<b>Total gross production</b>	<b>148.91</b>	<b>185.74</b>	<b>216.60</b>	<b>276.64</b>	<b>292.64</b>	<b>302.06</b>	<b>302.58</b>	<b>2.4</b>	<b>1.6</b>
- <i>Hydro pumped storage</i>	1.55	2.27	3.45	6.70	4.31	3.29	1.93	5.1	-2.7
<b>Total generation<sup>(1)</sup></b>	<b>147.35</b>	<b>183.47</b>	<b>213.15</b>	<b>269.95</b>	<b>288.34</b>	<b>298.77</b>	<b>300.65</b>	<b>2.3</b>	<b>1.7</b>
<b><u>Main activity producers</u></b>									
Gross production	117.77	153.67	190.33	276.64	272.37	278.20	279.02	3.0	1.8
- <i>Hydro pumped storage</i>	1.55	2.27	3.43	6.70	4.31	3.29	1.93	5.1	-2.7
Total generation <sup>(1)</sup>	116.22	151.40	186.90	269.95	268.06	274.91	277.09	3.0	1.9
Nuclear	3.41	2.21	-	-	-	-	-	-	-
Hydro	30.35	37.27	25.90	44.21	48.25	50.19	44.96	-1.0	2.7
Geothermal	2.50	2.67	3.22	4.71	5.34	5.38	5.65	1.6	2.7
Solar, wind, tide <sup>(2)</sup>	-	-	0.01	1.37 e	7.44	11.29	20.95	-	47.5
Coal	3.85	14.49	32.02	30.52	43.41	44.42	50.13	14.2	2.2
Oil	74.56	87.93	93.54	85.88	21.17	17.11	15.61	1.4	-8.2
Natural gas	1.49	6.74	32.14	101.36	134.05	135.86	127.33	21.2	6.8
Biofuels & waste	0.06	0.09	0.08	1.91	8.41	10.66	12.46	1.4	27.6
<b><u>Autoproducers</u></b>									
Gross production	31.13	32.07	26.27	..	20.28	23.87	23.56	-1.1	-0.5
- <i>Hydro pumped storage</i>	-	-	0.03	..	..	..	..	-	..
Total generation <sup>(1)</sup>	31.13	32.07	26.25	..	20.28	23.87	23.56	-1.1	-0.5
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	7.44	7.97	5.72	..	0.89	0.93	0.87	-1.6	-8.6
Geothermal	-	-	-	-	-	-	-	-	-
Solar, wind, tide <sup>(2)</sup>	-	-	-	..	0.39	0.52	0.51	-	-
Coal	2.77	3.76	3.74	..	0.01	0.02	0.01	1.9	-23.6
Oil	16.70	16.66	9.18	-	4.85	4.60	4.27	-3.7	-3.6
Natural gas	2.53	2.48	7.57	..	13.22	16.88	17.22	7.1	4.0
Biofuels & waste	1.69	1.20	0.03	..	0.92	0.92	0.68	-22.6	16.4

Source: IEA/OECD *Energy Balances* and IEA/OECD *Energy Statistics of OECD Countries*.

(1) Electricity generated = gross production - amount of electricity produced in pumped storage plants.

(2) Includes wave, ocean and other sources (e.g. fuel cells, from chemical heat).

Note: Please refer to definitions in the introductory information.