

## II. Results of the energy supply and demand forecast for Asia and the World

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Table 1 Population

(Unit: millions of people)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	2,434 (55.0)	3,547 (55.3)	3,744 (55.0)	4,108 (54.5)	4,429 (53.9)	1.5	1.1	0.9	0.8	0.9
China	987 (22.3)	1,308 (20.4)	1,346 (19.8)	1,415 (18.8)	1,452 (17.7)	1.1	0.6	0.5	0.3	0.4
India	687 (15.5)	1,095 (17.1)	1,177 (17.3)	1,331 (17.6)	1,492 (18.1)	1.9	1.5	1.2	1.2	1.2
Japan	117 (2.6)	128 (2.0)	127 (1.9)	124 (1.6)	117 (1.4)	0.4	-0.1	-0.3	-0.5	-0.3
South Korea	38 (0.9)	48 (0.8)	49 (0.7)	50 (0.7)	49 (0.6)	1.0	0.3	0.1	-0.2	0.0
Taiwan	18 (0.4)	23 (0.4)	23 (0.3)	23 (0.3)	23 (0.3)	1.0	0.3	0.1	-0.2	0.0
Indonesia	148 (3.4)	221 (3.4)	234 (3.4)	255 (3.4)	271 (3.3)	1.6	1.2	0.9	0.6	0.8
Malaysia	14 (0.3)	25 (0.4)	28 (0.4)	32 (0.4)	35 (0.4)	2.5	1.7	1.4	1.0	1.3
Philippines	48 (1.1)	83 (1.3)	91 (1.3)	107 (1.4)	120 (1.5)	2.2	1.9	1.6	1.2	1.5
Thailand	46 (1.0)	64 (1.0)	66 (1.0)	69 (0.9)	70 (0.9)	1.3	0.6	0.4	0.2	0.4
Vietnam	54 (1.2)	83 (1.3)	89 (1.3)	99 (1.3)	108 (1.3)	1.8	1.3	1.1	0.8	1.1
Singapore	2 (0.1)	4 (0.1)	5 (0.1)	5 (0.1)	5 (0.1)	2.4	1.2	0.8	0.5	0.8
Asia(exc. Japan)	2,317 (52.4)	3,419 (53.3)	3,616 (53.2)	3,984 (52.8)	4,312 (52.4)	1.6	1.1	1.0	0.8	0.9
North America	252 (5.7)	329 (5.1)	345 (5.1)	375 (5.0)	401 (4.9)	1.1	1.0	0.8	0.7	0.8
Central and South America	357 (8.1)	551 (8.6)	586 (8.6)	651 (8.6)	704 (8.6)	1.7	1.3	1.1	0.8	1.0
OECD Europe	472 (10.7)	535 (8.3)	546 (8.0)	560 (7.4)	567 (6.9)	0.5	0.4	0.3	0.1	0.2
Non-OECD Europe	322 (7.3)	340 (5.3)	337 (5.0)	331 (4.4)	320 (3.9)	0.2	-0.2	-0.2	-0.3	-0.2
Africa	476 (10.8)	902 (14.1)	1,010 (14.9)	1,243 (16.5)	1,486 (18.1)	2.6	2.3	2.1	1.8	2.0
Middle East	93 (2.1)	188 (2.9)	207 (3.0)	247 (3.3)	284 (3.5)	2.9	2.0	1.8	1.4	1.7
Oceania	18 (0.4)	24 (0.4)	26 (0.4)	28 (0.4)	30 (0.4)	1.3	1.0	0.9	0.7	0.9
OECD country total	964 (21.8)	1,168 (18.2)	1,202 (17.7)	1,256 (16.6)	1,291 (15.7)	0.8	0.6	0.4	0.3	0.4
Non-OECD country total	3,461 (78.2)	5,248 (81.8)	5,599 (82.3)	6,288 (83.4)	6,930 (84.3)	1.7	1.3	1.2	1.0	1.1
World total	4,425 (100.0)	6,416 (100.0)	6,801 (100.0)	7,544 (100.0)	8,221 (100.0)	1.5	1.2	1.0	0.9	1.0

Source: Based on data from "Population Estimates and Projections: The 2006 Revision" (United Nation) and "World Development Indicators" (World Bank)

Note: Figures in parentheses indicate percentage shares of totals.

Table 2 GDP

(Unit: billions of US dollars at 2000 value)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	<b>3,843</b> (21.3)	<b>10,310</b> (27.8)	<b>13,235</b> (30.0)	<b>19,314</b> (32.0)	<b>26,856</b> (33.6)	4.0	5.1	3.9	3.4	3.9
China	<b>183</b> (1.0)	<b>1,890</b> (5.1)	<b>3,086</b> (7.0)	<b>5,542</b> (9.2)	<b>8,594</b> (10.8)	9.8	10.3	6.0	4.5	6.2
India	<b>156</b> (0.9)	<b>655</b> (1.8)	<b>961</b> (2.2)	<b>1,721</b> (2.9)	<b>2,884</b> (3.6)	5.9	8.0	6.0	5.3	6.1
Japan	<b>2,793</b> (15.5)	<b>4,993</b> (13.5)	<b>5,601</b> (12.7)	<b>6,501</b> (10.8)	<b>7,288</b> (9.1)	2.4	2.3	1.5	1.1	1.5
South Korea	<b>123</b> (0.7)	<b>638</b> (1.7)	<b>802</b> (1.8)	<b>1,132</b> (1.9)	<b>1,501</b> (1.9)	6.8	4.7	3.5	2.9	3.5
Taiwan	<b>75</b> (0.4)	<b>363</b> (1.0)	<b>450</b> (1.0)	<b>647</b> (1.1)	<b>837</b> (1.0)	6.5	4.4	3.7	2.6	3.4
Indonesia	<b>59</b> (0.3)	<b>208</b> (0.6)	<b>277</b> (0.6)	<b>431</b> (0.7)	<b>638</b> (0.8)	5.2	6.0	4.5	4.0	4.6
Malaysia	<b>25</b> (0.1)	<b>112</b> (0.3)	<b>146</b> (0.3)	<b>225</b> (0.4)	<b>339</b> (0.4)	6.1	5.4	4.4	4.2	4.5
Philippines	<b>48</b> (0.3)	<b>94</b> (0.3)	<b>123</b> (0.3)	<b>196</b> (0.3)	<b>290</b> (0.4)	2.8	5.5	4.7	4.0	4.6
Thailand	<b>37</b> (0.2)	<b>157</b> (0.4)	<b>199</b> (0.4)	<b>318</b> (0.5)	<b>498</b> (0.6)	5.9	4.8	4.8	4.6	4.7
Vietnam	<b>9</b> (0.0)	<b>45</b> (0.1)	<b>63</b> (0.1)	<b>118</b> (0.2)	<b>211</b> (0.3)	6.7	7.0	6.5	6.0	6.4
Singapore	<b>22</b> (0.1)	<b>112</b> (0.3)	<b>141</b> (0.3)	<b>203</b> (0.3)	<b>299</b> (0.4)	6.8	4.7	3.7	3.9	4.0
Asia(exc. Japan)	<b>1,050</b> (5.8)	<b>5,317</b> (14.3)	<b>7,634</b> (17.3)	<b>12,813</b> (21.2)	<b>19,568</b> (24.5)	6.7	7.5	5.3	4.3	5.3
North America	<b>5,536</b> (30.7)	<b>11,856</b> (32.0)	<b>13,583</b> (30.7)	<b>18,018</b> (29.9)	<b>23,501</b> (29.4)	3.1	2.8	2.9	2.7	2.8
Central and South America	<b>1,287</b> (7.1)	<b>2,177</b> (5.9)	<b>2,576</b> (5.8)	<b>3,554</b> (5.9)	<b>4,768</b> (6.0)	2.1	3.4	3.3	3.0	3.2
OECD Europe	<b>5,601</b> (31.1)	<b>9,647</b> (26.0)	<b>10,887</b> (24.6)	<b>13,603</b> (22.6)	<b>16,773</b> (21.0)	2.2	2.4	2.3	2.1	2.2
Non-OECD Europe	<b>580</b> (3.2)	<b>684</b> (1.8)	<b>960</b> (2.2)	<b>1,638</b> (2.7)	<b>2,170</b> (2.7)	0.7	7.0	5.5	2.9	4.7
Africa	<b>351</b> (1.9)	<b>709</b> (1.9)	<b>869</b> (2.0)	<b>1,282</b> (2.1)	<b>1,841</b> (2.3)	2.9	4.2	4.0	3.7	3.9
Middle East	<b>582</b> (3.2)	<b>1,152</b> (3.1)	<b>1,458</b> (3.3)	<b>2,088</b> (3.5)	<b>2,923</b> (3.7)	2.8	4.8	3.7	3.4	3.8
Oceania	<b>242</b> (1.3)	<b>531</b> (1.4)	<b>616</b> (1.4)	<b>814</b> (1.3)	<b>1,055</b> (1.3)	3.2	3.0	2.8	2.6	2.8
OECD country total	<b>14,641</b> (81.2)	<b>28,301</b> (76.4)	<b>32,252</b> (73.0)	<b>41,155</b> (68.2)	<b>51,578</b> (64.6)	2.7	2.6	2.5	2.3	2.4
Non-OECD country total	<b>3,382</b> (18.8)	<b>8,765</b> (23.6)	<b>11,932</b> (27.0)	<b>19,155</b> (31.8)	<b>28,309</b> (35.4)	3.9	6.4	4.8	4.0	4.8
World total	<b>18,023</b> (100.0)	<b>37,066</b> (100.0)	<b>44,184</b> (100.0)	<b>60,311</b> (100.0)	<b>79,887</b> (100.0)	2.9	3.6	3.2	2.9	3.1

Source: Based on data from "World Development Indicators" (World Bank) and other sources; forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate percentage shares of totals.

Table 3 Primary energy consumption (by region)

(Unit: Mtoe)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	1,060 (16.4)	3,205 (31.1)	3,910 (33.9)	5,140 (36.8)	6,502 (39.5)	4.5	4.1	2.8	2.4	2.9
China	419 (6.5)	1,494 (14.5)	1,919 (16.7)	2,522 (18.0)	3,128 (19.0)	5.2	5.1	2.8	2.2	3.0
India	92 (1.4)	379 (3.7)	486 (4.2)	753 (5.4)	1,096 (6.6)	5.8	5.1	4.5	3.8	4.3
Japan	347 (5.4)	530 (5.1)	535 (4.6)	542 (3.9)	529 (3.2)	1.7	0.2	0.1	-0.2	-0.0
South Korea	41 (0.6)	214 (2.1)	244 (2.1)	285 (2.0)	306 (1.9)	6.8	2.7	1.6	0.7	1.5
Taiwan	28 (0.4)	105 (1.0)	116 (1.0)	135 (1.0)	155 (0.9)	5.3	2.1	1.6	1.4	1.6
Indonesia	26 (0.4)	128 (1.2)	160 (1.4)	237 (1.7)	336 (2.0)	6.5	4.5	4.0	3.5	3.9
Malaysia	11 (0.2)	58 (0.6)	74 (0.6)	98 (0.7)	127 (0.8)	7.0	4.8	2.9	2.5	3.1
Philippines	13 (0.2)	34 (0.3)	41 (0.4)	61 (0.4)	87 (0.5)	3.8	3.9	4.1	3.6	3.9
Thailand	12 (0.2)	84 (0.8)	105 (0.9)	155 (1.1)	226 (1.4)	8.0	4.6	4.0	3.9	4.1
Vietnam	4 (0.1)	27 (0.3)	37 (0.3)	63 (0.5)	104 (0.6)	7.7	6.3	5.4	5.1	5.5
Singapore	6 (0.1)	30 (0.3)	34 (0.3)	41 (0.3)	51 (0.3)	6.6	2.3	2.1	2.2	2.2
Asia(exc. Japan)	714 (11.1)	2,675 (25.9)	3,375 (29.3)	4,598 (32.9)	5,973 (36.2)	5.4	4.8	3.1	2.7	3.3
North America	2,005 (31.1)	2,612 (25.3)	2,706 (23.5)	3,040 (21.8)	3,379 (20.5)	1.1	0.7	1.2	1.1	1.0
Central and South America	321 (5.0)	595 (5.8)	674 (5.9)	853 (6.1)	1,051 (6.4)	2.5	2.5	2.4	2.1	2.3
OECD Europe	1,508 (23.4)	1,876 (18.2)	1,947 (16.9)	2,109 (15.1)	2,265 (13.7)	0.9	0.8	0.8	0.7	0.8
Non-OECD Europe	1,210 (18.8)	1,067 (10.3)	1,175 (10.2)	1,375 (9.8)	1,470 (8.9)	-0.5	1.9	1.6	0.7	1.3
Africa	133 (2.1)	319 (3.1)	355 (3.1)	458 (3.3)	561 (3.4)	3.6	2.2	2.6	2.1	2.3
Middle East	132 (2.0)	502 (4.9)	603 (5.2)	827 (5.9)	1,049 (6.4)	5.5	3.7	3.2	2.4	3.0
Oceania	80 (1.2)	139 (1.3)	153 (1.3)	177 (1.3)	203 (1.2)	2.3	1.9	1.5	1.4	1.5
OECD country total	4,077 (63.2)	5,548 (53.8)	5,775 (50.1)	6,391 (45.7)	6,971 (42.3)	1.2	0.8	1.0	0.9	0.9
Non-OECD country total	2,371 (36.8)	4,767 (46.2)	5,749 (49.9)	7,587 (54.3)	9,509 (57.7)	2.8	3.8	2.8	2.3	2.8
World total	6,448 (100.0)	10,315 (100.0)	11,523 (100.0)	13,978 (100.0)	16,480 (100.0)	1.9	2.2	1.9	1.7	1.9

Source: Based on data from "Energy Balances of OECD Countries" (IEA) and "Energy Balances of Non-OECD Countries" (IEA);

forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate percentage shares of totals.

Table 4 Primary energy consumption (Coal)

(Unit: Mtoe)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	473 (26.7)	1,583 (54.8)	1,919 (58.6)	2,320 (60.9)	2,714 (61.7)	4.9	3.9	1.9	1.6	2.2
China	313 (17.6)	1,088 (37.6)	1,352 (41.3)	1,563 (41.1)	1,715 (39.0)	5.1	4.4	1.5	0.9	1.8
India	52 (2.9)	208 (7.2)	251 (7.7)	355 (9.3)	484 (11.0)	5.7	3.9	3.5	3.1	3.4
Japan	60 (3.4)	112 (3.9)	100 (3.1)	100 (2.6)	95 (2.2)	2.6	-2.2	0.0	-0.5	-0.6
South Korea	13 (0.8)	49 (1.7)	58 (1.8)	58 (1.5)	60 (1.4)	5.3	3.1	0.1	0.3	0.8
Taiwan	4 (0.2)	39 (1.3)	43 (1.3)	56 (1.5)	68 (1.5)	9.6	2.2	2.6	2.0	2.3
Indonesia	0 (0.0)	25 (0.9)	35 (1.1)	51 (1.3)	73 (1.7)	22.3	6.6	3.9	3.6	4.3
Malaysia	0 (0.0)	6 (0.2)	8 (0.2)	13 (0.3)	19 (0.4)	22.0	6.8	4.6	4.2	4.9
Philippines	0 (0.0)	6 (0.2)	7 (0.2)	16 (0.4)	27 (0.6)	11.9	4.2	7.8	5.5	6.1
Thailand	0 (0.0)	11 (0.4)	15 (0.4)	29 (0.8)	59 (1.4)	13.5	5.3	7.3	7.3	6.9
Vietnam	2 (0.1)	8 (0.3)	11 (0.3)	21 (0.5)	36 (0.8)	5.2	6.9	6.3	5.5	6.1
Singapore	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	-	-	-	-	-
Asia(exc. Japan)	414 (23.3)	1,471 (50.9)	1,819 (55.5)	2,219 (58.3)	2,619 (59.5)	5.2	4.3	2.0	1.7	2.3
North America	397 (22.4)	584 (20.2)	577 (17.6)	678 (17.8)	875 (19.9)	1.5	-0.2	1.6	2.6	1.6
Central and South America	14 (0.8)	32 (1.1)	40 (1.2)	53 (1.4)	67 (1.5)	3.5	4.8	2.8	2.4	3.0
OECD Europe	460 (25.9)	320 (11.1)	325 (9.9)	312 (8.2)	313 (7.1)	-1.4	0.3	-0.4	0.0	-0.1
Non-OECD Europe	349 (19.7)	204 (7.1)	243 (7.4)	262 (6.9)	241 (5.5)	-2.1	3.5	0.8	-0.8	0.7
Africa	51 (2.9)	102 (3.5)	104 (3.2)	107 (2.8)	105 (2.4)	2.8	0.4	0.3	-0.2	0.1
Middle East	1 (0.1)	9 (0.3)	10 (0.3)	13 (0.3)	17 (0.4)	8.7	2.6	2.7	2.7	2.7
Oceania	28 (1.6)	56 (1.9)	58 (1.8)	62 (1.6)	65 (1.5)	2.8	0.5	0.7	0.5	0.6
OECD country total	961 (54.2)	1,130 (39.1)	1,126 (34.4)	1,220 (32.0)	1,420 (32.3)	0.7	-0.1	0.8	1.5	0.9
Non-OECD country total	814 (45.8)	1,760 (60.9)	2,150 (65.6)	2,588 (68.0)	2,978 (67.7)	3.1	4.1	1.9	1.4	2.1
World total	1,775 (100.0)	2,890 (100.0)	3,276 (100.0)	3,807 (100.0)	4,398 (100.0)	2.0	2.5	1.5	1.5	1.7

Source: Based on data from "Energy Balances of OECD Countries" (IEA) and "Energy Balances of Non-OECD Countries" (IEA); forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate percentage shares of totals.

Table 5 Primary energy consumption (Oil)

(Unit: Mtoe)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	487 (16.3)	1,074 (28.0)	1,254 (30.4)	1,629 (33.3)	2,045 (36.2)	3.2	3.1	2.7	2.3	2.6
China	89 (3.0)	318 (8.3)	411 (9.9)	587 (12.0)	758 (13.4)	5.2	5.2	3.6	2.6	3.5
India	34 (1.1)	129 (3.4)	172 (4.2)	267 (5.4)	379 (6.7)	5.5	6.0	4.5	3.6	4.4
Japan	236 (7.9)	252 (6.6)	241 (5.8)	223 (4.5)	204 (3.6)	0.3	-0.9	-0.8	-0.9	-0.8
South Korea	27 (0.9)	96 (2.5)	104 (2.5)	114 (2.3)	117 (2.1)	5.2	1.6	0.9	0.3	0.8
Taiwan	21 (0.7)	46 (1.2)	47 (1.1)	54 (1.1)	63 (1.1)	3.3	0.3	1.5	1.5	1.3
Indonesia	21 (0.7)	66 (1.7)	80 (1.9)	109 (2.2)	143 (2.5)	4.7	3.9	3.2	2.8	3.2
Malaysia	8 (0.3)	27 (0.7)	31 (0.8)	41 (0.8)	50 (0.9)	4.7	3.4	2.7	1.9	2.5
Philippines	11 (0.4)	16 (0.4)	19 (0.5)	26 (0.5)	37 (0.6)	1.5	3.3	3.4	3.5	3.4
Thailand	12 (0.4)	46 (1.2)	53 (1.3)	68 (1.4)	96 (1.7)	5.7	3.0	2.6	3.5	3.0
Vietnam	2 (0.1)	12 (0.3)	17 (0.4)	28 (0.6)	41 (0.7)	7.9	6.8	4.8	4.0	4.9
Singapore	6 (0.2)	24 (0.6)	27 (0.6)	32 (0.7)	39 (0.7)	5.7	1.9	1.9	2.1	2.0
Asia(exc. Japan)	251 (8.4)	822 (21.5)	1,013 (24.5)	1,407 (28.7)	1,841 (32.6)	4.9	4.3	3.3	2.7	3.3
North America	893 (29.9)	1,050 (27.4)	1,079 (26.1)	1,202 (24.5)	1,308 (23.2)	0.7	0.5	1.1	0.9	0.9
Central and South America	228 (7.6)	331 (8.6)	353 (8.5)	409 (8.3)	459 (8.1)	1.5	1.3	1.5	1.2	1.3
OECD Europe	704 (23.6)	702 (18.3)	694 (16.8)	713 (14.6)	736 (13.0)	-0.0	-0.2	0.3	0.3	0.2
Non-OECD Europe	472 (15.8)	221 (5.8)	233 (5.6)	270 (5.5)	285 (5.0)	-3.0	1.1	1.5	0.5	1.0
Africa	64 (2.2)	132 (3.4)	144 (3.5)	179 (3.7)	210 (3.7)	2.9	1.7	2.2	1.6	1.9
Middle East	100 (3.4)	275 (7.2)	325 (7.9)	441 (9.0)	541 (9.6)	4.1	3.4	3.1	2.1	2.7
Oceania	35 (1.2)	45 (1.2)	48 (1.2)	57 (1.2)	65 (1.2)	1.0	1.5	1.7	1.4	1.5
OECD country total	1,961 (65.7)	2,249 (58.7)	2,272 (55.0)	2,434 (49.7)	2,572 (45.5)	0.5	0.2	0.7	0.6	0.5
Non-OECD country total	1,022 (34.3)	1,580 (41.3)	1,857 (45.0)	2,466 (50.3)	3,077 (54.5)	1.8	3.3	2.9	2.2	2.7
World total	2,984 (100.0)	3,829 (100.0)	4,129 (100.0)	4,900 (100.0)	5,649 (100.0)	1.0	1.5	1.7	1.4	1.6

Source: Based on data from "Energy Balances of OECD Countries" (IEA) and "Energy Balances of Non-OECD Countries" (IEA);

forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate percentage shares of totals.

Table 6 Primary energy consumption (Gas)

(Unit: Mtoe)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	52 (4.2)	313 (13.3)	410 (15.2)	650 (18.6)	1,057 (24.0)	7.4	5.5	4.7	5.0	5.0
China	12 (1.0)	40 (1.7)	60 (2.2)	144 (4.1)	355 (8.1)	5.0	8.5	9.1	9.4	9.1
India	1 (0.1)	29 (1.2)	41 (1.5)	81 (2.3)	146 (3.3)	13.6	7.5	6.9	6.1	6.7
Japan	21 (1.7)	71 (3.0)	75 (2.8)	81 (2.3)	83 (1.9)	4.9	1.3	0.7	0.3	0.6
South Korea	0 (0.0)	27 (1.2)	37 (1.4)	47 (1.4)	55 (1.3)	-	6.4	2.4	1.5	2.9
Taiwan	2 (0.1)	9 (0.4)	9 (0.3)	11 (0.3)	14 (0.3)	7.0	1.8	1.5	2.2	1.8
Indonesia	5 (0.4)	31 (1.3)	38 (1.4)	62 (1.8)	97 (2.2)	7.6	4.1	5.2	4.5	4.7
Malaysia	2 (0.2)	26 (1.1)	33 (1.2)	43 (1.2)	55 (1.3)	10.2	5.4	2.6	2.5	3.1
Philippines	0 (0.0)	3 (0.1)	4 (0.2)	7 (0.2)	11 (0.3)	-	9.6	5.7	4.6	6.0
Thailand	0 (0.0)	26 (1.1)	36 (1.3)	55 (1.6)	67 (1.5)	-	6.7	4.3	2.0	3.9
Vietnam	0 (0.0)	5 (0.2)	6 (0.2)	11 (0.3)	19 (0.4)	-	4.6	5.6	5.9	5.5
Singapore	0 (0.0)	6 (0.3)	7 (0.3)	9 (0.3)	12 (0.3)	-	3.9	2.6	2.6	2.9
Asia(exc. Japan)	31 (2.5)	243 (10.3)	334 (12.4)	569 (16.3)	974 (22.1)	8.6	6.6	5.5	5.5	5.7
North America	522 (42.3)	590 (25.0)	618 (22.9)	689 (19.7)	690 (15.7)	0.5	0.9	1.1	0.0	0.6
Central and South America	51 (4.1)	145 (6.1)	180 (6.7)	265 (7.6)	370 (8.4)	4.3	4.4	3.9	3.4	3.8
OECD Europe	207 (16.8)	453 (19.2)	505 (18.7)	611 (17.5)	720 (16.4)	3.2	2.2	1.9	1.7	1.9
Non-OECD Europe	352 (28.5)	545 (23.1)	593 (22.0)	715 (20.5)	803 (18.3)	1.8	1.7	1.9	1.2	1.6
Africa	12 (1.0)	73 (3.1)	94 (3.5)	156 (4.5)	227 (5.2)	7.4	5.3	5.1	3.8	4.6
Middle East	29 (2.4)	216 (9.1)	265 (9.8)	364 (10.4)	482 (11.0)	8.3	4.1	3.2	2.9	3.3
Oceania	8 (0.7)	26 (1.1)	33 (1.2)	41 (1.2)	49 (1.1)	4.7	4.5	2.2	1.9	2.5
OECD country total	778 (63.1)	1,211 (51.3)	1,322 (49.0)	1,546 (44.3)	1,705 (38.8)	1.8	1.8	1.6	1.0	1.4
Non-OECD country total	456 (36.9)	1,150 (48.7)	1,376 (51.0)	1,945 (55.7)	2,693 (61.2)	3.8	3.6	3.5	3.3	3.5
World total	1,234 (100.0)	2,362 (100.0)	2,698 (100.0)	3,491 (100.0)	4,397 (100.0)	2.6	2.7	2.6	2.3	2.5

Source: Based on data from "Energy Balances of OECD Countries" (IEA) and "Energy Balances of Non-OECD Countries" (IEA); forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate percentage shares of totals.

Table 7 Final energy consumption (by region)

(Unit: Mtoe)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	756 (16.2)	1,975 (28.8)	2,432 (31.6)	3,233 (34.5)	4,135 (37.4)	3.9	4.2	2.9	2.5	3.0
China	312 (6.7)	890 (13.0)	1,167 (15.2)	1,560 (16.7)	1,954 (17.7)	4.3	5.6	2.9	2.3	3.2
India	62 (1.3)	199 (2.9)	268 (3.5)	424 (4.5)	630 (5.7)	4.8	6.1	4.7	4.0	4.7
Japan	233 (5.0)	351 (5.1)	348 (4.5)	344 (3.7)	333 (3.0)	1.7	-0.2	-0.1	-0.3	-0.2
South Korea	31 (0.7)	146 (2.1)	165 (2.1)	192 (2.1)	208 (1.9)	6.3	2.5	1.5	0.8	1.4
Taiwan	19 (0.4)	64 (0.9)	70 (0.9)	84 (0.9)	99 (0.9)	4.9	2.1	1.7	1.6	1.8
Indonesia	21 (0.4)	84 (1.2)	108 (1.4)	165 (1.8)	242 (2.2)	5.8	5.1	4.4	3.9	4.3
Malaysia	6 (0.1)	38 (0.5)	45 (0.6)	63 (0.7)	83 (0.8)	7.3	3.8	3.3	2.9	3.2
Philippines	8 (0.2)	19 (0.3)	24 (0.3)	38 (0.4)	56 (0.5)	3.7	4.7	4.5	4.0	4.3
Thailand	9 (0.2)	55 (0.8)	72 (0.9)	110 (1.2)	158 (1.4)	7.4	5.4	4.3	3.7	4.3
Vietnam	3 (0.1)	22 (0.3)	30 (0.4)	51 (0.5)	82 (0.7)	7.8	6.4	5.4	4.9	5.4
Singapore	3 (0.1)	16 (0.2)	18 (0.2)	23 (0.2)	30 (0.3)	6.8	2.7	2.5	2.6	2.6
Asia(exc. Japan)	523 (11.2)	1,624 (23.7)	2,084 (27.1)	2,889 (30.8)	3,802 (34.4)	4.6	5.1	3.3	2.8	3.5
North America	1,476 (31.6)	1,799 (26.2)	1,880 (24.4)	2,121 (22.6)	2,355 (21.3)	0.8	0.9	1.2	1.1	1.1
Central and South America	232 (5.0)	431 (6.3)	496 (6.4)	625 (6.7)	766 (6.9)	2.5	2.8	2.3	2.1	2.3
OECD Europe	1,102 (23.6)	1,359 (19.8)	1,410 (18.3)	1,528 (16.3)	1,636 (14.8)	0.8	0.7	0.8	0.7	0.7
Non-OECD Europe	858 (18.4)	683 (10.0)	762 (9.9)	895 (9.6)	961 (8.7)	-0.9	2.2	1.6	0.7	1.4
Africa	95 (2.0)	194 (2.8)	220 (2.9)	287 (3.1)	358 (3.2)	2.9	2.6	2.7	2.2	2.5
Middle East	91 (1.9)	330 (4.8)	403 (5.2)	563 (6.0)	716 (6.5)	5.3	4.1	3.4	2.4	3.1
Oceania	55 (1.2)	89 (1.3)	98 (1.3)	114 (1.2)	130 (1.2)	2.0	1.9	1.5	1.3	1.5
OECD country total	2,964 (63.6)	3,853 (56.2)	4,020 (52.2)	4,444 (47.4)	4,833 (43.7)	1.1	0.9	1.0	0.8	0.9
Non-OECD country total	1,699 (36.4)	3,008 (43.8)	3,680 (47.8)	4,921 (52.6)	6,224 (56.3)	2.3	4.1	2.9	2.4	3.0
World total	4,663 (100.0)	6,861 (100.0)	7,701 (100.0)	9,365 (100.0)	11,057 (100.0)	1.6	2.3	2.0	1.7	1.9

Source: Based on data from "Energy Balances of OECD Countries" (IEA) and "Energy Balances of Non-OECD Countries" (IEA);

forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate percentage shares of totals.

Table 8 Final energy consumption (Industry)

(Unit: Mtoe)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	398 (20.8)	976 (39.9)	1,200 (42.9)	1,482 (44.5)	1,751 (45.4)	3.7	4.2	2.1	1.7	2.4
China	188 (9.8)	518 (21.2)	667 (23.9)	786 (23.6)	844 (21.9)	4.1	5.2	1.6	0.7	2.0
India	30 (1.6)	90 (3.7)	116 (4.1)	168 (5.0)	236 (6.1)	4.5	5.1	3.8	3.4	3.9
Japan	111 (5.8)	127 (5.2)	127 (4.5)	123 (3.7)	118 (3.1)	0.6	-0.0	-0.3	-0.4	-0.3
South Korea	13 (0.7)	70 (2.8)	76 (2.7)	84 (2.5)	89 (2.3)	7.0	1.8	1.0	0.6	1.0
Taiwan	12 (0.6)	34 (1.4)	38 (1.4)	46 (1.4)	56 (1.4)	4.4	2.1	1.9	2.0	2.0
Indonesia	8 (0.4)	39 (1.6)	48 (1.7)	75 (2.2)	112 (2.9)	6.6	4.6	4.4	4.2	4.4
Malaysia	3 (0.2)	16 (0.7)	20 (0.7)	28 (0.8)	39 (1.0)	7.2	4.4	3.3	3.3	3.5
Philippines	3 (0.2)	4 (0.2)	6 (0.2)	9 (0.3)	12 (0.3)	1.5	6.8	4.0	2.8	4.1
Thailand	3 (0.1)	21 (0.9)	30 (1.1)	54 (1.6)	86 (2.2)	8.7	6.7	6.1	4.8	5.7
Vietnam	2 (0.1)	9 (0.4)	12 (0.4)	20 (0.6)	33 (0.9)	7.5	4.7	5.6	5.1	5.2
Singapore	0 (0.0)	8 (0.3)	10 (0.3)	13 (0.4)	16 (0.4)	11.9	3.2	2.7	2.7	2.8
Asia(exc. Japan)	287 (15.0)	849 (34.7)	1,073 (38.4)	1,359 (40.8)	1,633 (42.4)	4.4	4.8	2.4	1.9	2.7
North America	507 (26.6)	456 (18.6)	477 (17.0)	532 (16.0)	585 (15.2)	-0.4	0.9	1.1	1.0	1.0
Central and South America	85 (4.4)	151 (6.2)	174 (6.2)	228 (6.8)	293 (7.6)	2.3	2.9	2.7	2.5	2.7
OECD Europe	415 (21.7)	410 (16.7)	420 (15.0)	441 (13.2)	464 (12.0)	-0.0	0.5	0.5	0.5	0.5
Non-OECD Europe	409 (21.4)	246 (10.1)	280 (10.0)	316 (9.5)	332 (8.6)	-2.0	2.6	1.2	0.5	1.2
Africa	41 (2.1)	63 (2.6)	69 (2.5)	89 (2.7)	113 (2.9)	1.8	1.9	2.5	2.5	2.4
Middle East	34 (1.8)	115 (4.7)	145 (5.2)	205 (6.2)	277 (7.2)	5.0	4.8	3.5	3.0	3.6
Oceania	21 (1.1)	30 (1.2)	33 (1.2)	37 (1.1)	40 (1.0)	1.3	2.0	1.1	0.9	1.2
OECD country total	1,092 (57.2)	1,127 (46.1)	1,172 (41.9)	1,264 (38.0)	1,351 (35.0)	0.1	0.8	0.8	0.7	0.7
Non-OECD country total	817 (42.8)	1,320 (53.9)	1,625 (58.1)	2,065 (62.0)	2,503 (65.0)	1.9	4.3	2.4	1.9	2.6
World total	1,909 (100.0)	2,447 (100.0)	2,797 (100.0)	3,329 (100.0)	3,854 (100.0)	1.0	2.7	1.8	1.5	1.8

Source: Based on data from "Energy Balances of OECD Countries" (IEA) and "Energy Balances of Non-OECD Countries" (IEA);

forecast figures prepared by the IEEJ.

Note: Including petrochemical feedstocks and figures in parentheses indicate percentage shares of totals.

Table 9 Final energy consumption (Transportation)

(Unit: Mtoe)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	128 (11.3)	401 (20.0)	502 (22.2)	718 (25.5)	968 (29.0)	4.7	4.6	3.7	3.0	3.6
China	25 (2.2)	114 (5.7)	163 (7.2)	271 (9.6)	396 (11.9)	6.3	7.3	5.2	3.9	5.1
India	13 (1.2)	37 (1.8)	56 (2.5)	97 (3.5)	147 (4.4)	4.1	8.6	5.7	4.2	5.7
Japan	55 (4.9)	93 (4.6)	90 (4.0)	85 (3.0)	77 (2.3)	2.1	-0.6	-0.6	-0.9	-0.7
South Korea	5 (0.4)	32 (1.6)	37 (1.6)	45 (1.6)	50 (1.5)	7.6	3.1	2.0	0.9	1.8
Taiwan	3 (0.3)	15 (0.7)	17 (0.7)	19 (0.7)	21 (0.6)	6.1	2.0	1.2	0.9	1.3
Indonesia	6 (0.5)	26 (1.3)	35 (1.6)	53 (1.9)	75 (2.2)	5.9	6.5	4.2	3.4	4.4
Malaysia	2 (0.2)	15 (0.8)	18 (0.8)	24 (0.9)	30 (0.9)	7.6	3.1	3.2	2.1	2.7
Philippines	2 (0.2)	10 (0.5)	12 (0.5)	19 (0.7)	29 (0.9)	6.9	3.8	4.5	4.2	4.3
Thailand	4 (0.4)	22 (1.1)	28 (1.2)	35 (1.3)	41 (1.2)	7.1	4.6	2.5	1.6	2.6
Vietnam	1 (0.1)	7 (0.4)	11 (0.5)	18 (0.6)	30 (0.9)	10.0	8.4	5.3	5.2	5.9
Singapore	2 (0.2)	5 (0.3)	6 (0.3)	7 (0.3)	9 (0.3)	4.4	1.8	2.0	2.0	1.9
Asia(exc. Japan)	73 (6.4)	308 (15.3)	412 (18.2)	634 (22.5)	891 (26.7)	5.9	5.9	4.4	3.5	4.3
North America	478 (42.1)	705 (35.1)	748 (33.1)	863 (30.6)	969 (29.0)	1.6	1.2	1.4	1.2	1.3
Central and South America	90 (7.9)	170 (8.5)	196 (8.7)	236 (8.4)	273 (8.2)	2.6	2.8	1.9	1.5	1.9
OECD Europe	228 (20.0)	385 (19.2)	411 (18.2)	474 (16.8)	522 (15.6)	2.1	1.3	1.4	1.0	1.2
Non-OECD Europe	129 (11.4)	140 (6.9)	156 (6.9)	201 (7.1)	220 (6.6)	0.3	2.3	2.5	0.9	1.8
Africa	31 (2.8)	67 (3.3)	80 (3.6)	101 (3.6)	113 (3.4)	3.1	3.7	2.3	1.1	2.1
Middle East	32 (2.8)	107 (5.3)	127 (5.6)	182 (6.4)	219 (6.6)	5.0	3.5	3.7	1.9	2.9
Oceania	20 (1.8)	36 (1.8)	39 (1.7)	47 (1.6)	54 (1.6)	2.3	1.6	1.8	1.5	1.7
OECD country total	811 (71.4)	1,299 (64.6)	1,378 (61.0)	1,576 (55.9)	1,747 (52.3)	1.9	1.2	1.4	1.0	1.2
Non-OECD country total	325 (28.6)	713 (35.4)	882 (39.0)	1,244 (44.1)	1,591 (47.7)	3.2	4.3	3.5	2.5	3.3
World total	1,136 (100.0)	2,011 (100.0)	2,259 (100.0)	2,820 (100.0)	3,338 (100.0)	2.3	2.4	2.2	1.7	2.0

Source: Based on data from "Energy Balances of OECD Countries" (IEA) and "Energy Balances of Non-OECD Countries" (IEA);

forecast figures prepared by the IEEJ/

Note: Figures in parentheses indicate percentage shares of totals.

Table 10 Final energy consumption (Residential/Commercial)

(Unit: Mtoe)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	<b>208</b> (14.2)	<b>516</b> (23.8)	<b>638</b> (26.7)	<b>917</b> (31.5)	<b>1,273</b> (36.3)	3.7	4.3	3.7	3.3	3.7
China	<b>92</b> (6.3)	<b>208</b> (9.6)	<b>282</b> (11.8)	<b>441</b> (15.2)	<b>644</b> (18.4)	3.3	6.3	4.6	3.9	4.6
India	<b>17</b> (1.1)	<b>58</b> (2.7)	<b>78</b> (3.3)	<b>127</b> (4.4)	<b>198</b> (5.6)	5.2	5.8	5.1	4.5	5.0
Japan	<b>59</b> (4.0)	<b>121</b> (5.6)	<b>121</b> (5.1)	<b>127</b> (4.4)	<b>129</b> (3.7)	2.9	0.0	0.5	0.2	0.3
South Korea	<b>13</b> (0.9)	<b>42</b> (1.9)	<b>49</b> (2.1)	<b>60</b> (2.1)	<b>67</b> (1.9)	4.8	3.2	2.1	1.0	1.9
Taiwan	<b>4</b> (0.2)	<b>13</b> (0.6)	<b>14</b> (0.6)	<b>17</b> (0.6)	<b>20</b> (0.6)	5.2	2.1	1.9	1.5	1.8
Indonesia	<b>6</b> (0.4)	<b>19</b> (0.9)	<b>23</b> (1.0)	<b>36</b> (1.2)	<b>54</b> (1.5)	4.4	4.3	4.7	4.0	4.4
Malaysia	<b>1</b> (0.1)	<b>5</b> (0.2)	<b>6</b> (0.3)	<b>9</b> (0.3)	<b>13</b> (0.4)	7.6	3.9	3.7	3.7	3.7
Philippines	<b>3</b> (0.2)	<b>5</b> (0.2)	<b>6</b> (0.2)	<b>9</b> (0.3)	<b>15</b> (0.4)	2.1	4.8	4.9	4.7	4.8
Thailand	<b>2</b> (0.2)	<b>11</b> (0.5)	<b>14</b> (0.6)	<b>20</b> (0.7)	<b>29</b> (0.8)	6.2	4.9	3.8	4.1	4.2
Vietnam	<b>1</b> (0.1)	<b>5</b> (0.3)	<b>7</b> (0.3)	<b>12</b> (0.4)	<b>18</b> (0.5)	6.2	6.3	4.9	4.1	4.8
Singapore	<b>0</b> (0.0)	<b>2</b> (0.1)	<b>2</b> (0.1)	<b>3</b> (0.1)	<b>4</b> (0.1)	6.4	3.0	3.6	3.8	3.6
Asia(exc. Japan)	<b>150</b> (10.2)	<b>395</b> (18.2)	<b>516</b> (21.7)	<b>790</b> (27.2)	<b>1,144</b> (32.6)	3.9	5.5	4.3	3.8	4.4
North America	<b>447</b> (30.5)	<b>569</b> (26.2)	<b>578</b> (24.2)	<b>642</b> (22.1)	<b>715</b> (20.4)	1.0	0.3	1.1	1.1	0.9
Central and South America	<b>49</b> (3.3)	<b>99</b> (4.6)	<b>113</b> (4.8)	<b>146</b> (5.0)	<b>182</b> (5.2)	2.9	2.8	2.6	2.2	2.5
OECD Europe	<b>429</b> (29.3)	<b>529</b> (24.4)	<b>543</b> (22.8)	<b>575</b> (19.8)	<b>608</b> (17.3)	0.8	0.5	0.6	0.6	0.6
Non-OECD Europe	<b>278</b> (19.0)	<b>279</b> (12.9)	<b>305</b> (12.8)	<b>350</b> (12.0)	<b>376</b> (10.7)	0.0	1.8	1.4	0.7	1.2
Africa	<b>20</b> (1.4)	<b>57</b> (2.6)	<b>63</b> (2.7)	<b>88</b> (3.0)	<b>119</b> (3.4)	4.3	2.0	3.3	3.1	3.0
Middle East	<b>22</b> (1.5)	<b>98</b> (4.5)	<b>120</b> (5.0)	<b>162</b> (5.6)	<b>203</b> (5.8)	6.2	4.1	3.0	2.3	2.9
Oceania	<b>12</b> (0.8)	<b>21</b> (1.0)	<b>24</b> (1.0)	<b>28</b> (1.0)	<b>33</b> (0.9)	2.5	2.4	1.7	1.6	1.8
OECD country total	<b>975</b> (66.6)	<b>1,307</b> (60.3)	<b>1,342</b> (56.3)	<b>1,465</b> (50.4)	<b>1,589</b> (45.3)	1.2	0.5	0.9	0.8	0.8
Non-OECD country total	<b>489</b> (33.4)	<b>861</b> (39.7)	<b>1,043</b> (43.7)	<b>1,444</b> (49.6)	<b>1,919</b> (54.7)	2.3	3.9	3.3	2.9	3.3
World total	<b>1,464</b> (100.0)	<b>2,168</b> (100.0)	<b>2,385</b> (100.0)	<b>2,908</b> (100.0)	<b>3,509</b> (100.0)	1.6	1.9	2.0	1.9	1.9

Source: Based on data from "Energy Balances of OECD Countries" (IEA) and "Energy Balances of Non-OECD Countries" (IEA);

forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate percentage shares of totals.

Table 11 Final energy consumption (Electricity)

(Unit: TWh)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	1,023 (15.2)	4,614 (30.7)	6,020 (34.1)	8,614 (37.1)	11,671 (39.6)	6.2	5.5	3.6	3.1	3.8
China	248 (3.7)	1,993 (13.3)	2,829 (16.0)	4,099 (17.7)	5,338 (18.1)	8.7	7.3	3.8	2.7	4.0
India	90 (1.3)	478 (3.2)	662 (3.8)	1,199 (5.2)	2,045 (6.9)	6.9	6.7	6.1	5.5	6.0
Japan	513 (7.6)	984 (6.6)	1,055 (6.0)	1,147 (4.9)	1,194 (4.1)	2.6	1.4	0.8	0.4	0.8
South Korea	33 (0.5)	357 (2.4)	424 (2.4)	501 (2.2)	541 (1.8)	10.0	3.5	1.7	0.8	1.7
Taiwan	37 (0.5)	199 (1.3)	227 (1.3)	276 (1.2)	331 (1.1)	7.0	2.7	2.0	1.8	2.1
Indonesia	6 (0.1)	107 (0.7)	154 (0.9)	276 (1.2)	442 (1.5)	12.0	7.6	6.0	4.8	5.8
Malaysia	9 (0.1)	81 (0.5)	112 (0.6)	174 (0.8)	263 (0.9)	9.3	6.7	4.6	4.2	4.8
Philippines	17 (0.3)	45 (0.3)	60 (0.3)	106 (0.5)	173 (0.6)	4.0	5.7	5.9	5.0	5.5
Thailand	13 (0.2)	121 (0.8)	166 (0.9)	287 (1.2)	488 (1.7)	9.3	6.5	5.6	5.4	5.7
Vietnam	3 (0.0)	46 (0.3)	63 (0.4)	115 (0.5)	201 (0.7)	12.0	6.3	6.2	5.8	6.1
Singapore	6 (0.1)	32 (0.2)	39 (0.2)	57 (0.2)	83 (0.3)	7.3	4.1	3.7	3.8	3.8
Asia(exc. Japan)	510 (7.6)	3,630 (24.2)	4,965 (28.1)	7,467 (32.2)	10,476 (35.6)	8.2	6.5	4.2	3.4	4.3
North America	2,329 (34.5)	4,231 (28.2)	4,547 (25.8)	5,473 (23.6)	6,491 (22.0)	2.4	1.4	1.9	1.7	1.7
Central and South America	305 (4.5)	911 (6.1)	1,095 (6.2)	1,541 (6.6)	2,062 (7.0)	4.5	3.7	3.5	3.0	3.3
OECD Europe	1,709 (25.3)	2,958 (19.7)	3,199 (18.1)	3,758 (16.2)	4,370 (14.8)	2.2	1.6	1.6	1.5	1.6
Non-OECD Europe	1,051 (15.6)	1,101 (7.3)	1,326 (7.5)	1,739 (7.5)	2,016 (6.8)	0.2	3.8	2.7	1.5	2.4
Africa	158 (2.3)	457 (3.0)	549 (3.1)	815 (3.5)	1,160 (3.9)	4.3	3.7	4.0	3.6	3.8
Middle East	75 (1.1)	501 (3.3)	645 (3.7)	953 (4.1)	1,292 (4.4)	7.9	5.2	4.0	3.1	3.9
Oceania	99 (1.5)	244 (1.6)	276 (1.6)	327 (1.4)	379 (1.3)	3.7	2.6	1.7	1.5	1.8
OECD country total	4,739 (70.2)	8,952 (59.6)	9,721 (55.1)	11,538 (49.7)	13,442 (45.7)	2.6	1.7	1.7	1.5	1.6
Non-OECD country total	2,009 (29.8)	6,066 (40.4)	7,935 (44.9)	11,681 (50.3)	15,998 (54.3)	4.5	5.5	3.9	3.2	4.0
World total	6,749 (100.0)	15,018 (100.0)	17,657 (100.0)	23,219 (100.0)	29,441 (100.0)	3.3	3.3	2.8	2.4	2.7

Source: Based on data from "Energy Balances of OECD Countries" (IEA) and "Energy Balances of Non-OECD Countries" (IEA);

forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate percentage shares of totals.

Table 12 Nuclear capacity

(Unit: GW)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	18 (12.3)	82 (21.3)	100 (24.7)	160 (33.0)	193 (36.8)	6.2	4.1	4.8	1.9	3.5
China	0 (0.0)	7 (1.8)	16 (4.0)	40 (8.2)	50 (9.5)	–	18.1	9.6	2.3	8.2
India	1 (0.6)	3 (0.7)	7 (1.7)	20 (4.1)	33 (6.3)	4.8	19.3	11.6	5.2	10.4
Japan	15 (10.3)	46 (11.9)	50 (12.4)	63 (13.0)	66 (12.7)	4.5	1.9	2.3	0.6	1.5
South Korea	1 (0.4)	17 (4.3)	19 (4.7)	27 (5.6)	30 (5.7)	14.3	2.4	3.8	0.9	2.4
Taiwan	1 (0.9)	5 (1.3)	8 (1.9)	7 (1.3)	5 (0.9)	5.7	8.5	-1.7	-3.6	-0.5
Indonesia	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.4)	4 (0.8)	–	–	–	7.2	–
Malaysia	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	–	–	–	–	–
Philippines	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	–	–	–	–	–
Thailand	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	–	–	–	–	–
Vietnam	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.4)	–	–	–	–	–
Singapore	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	–	–	–	–	–
Asia(exc. Japan)	3 (2.0)	36 (9.4)	50 (12.3)	97 (20.0)	126 (24.1)	10.7	6.6	6.9	2.6	5.1
North America	62 (42.5)	116 (30.2)	118 (29.3)	127 (26.1)	129 (24.6)	2.5	0.3	0.7	0.2	0.4
Central and South America	0 (0.2)	4 (1.1)	6 (1.4)	6 (1.3)	7 (1.4)	10.8	5.3	1.2	1.5	2.1
OECD Europe	49 (33.7)	138 (35.9)	132 (32.6)	130 (26.7)	125 (23.9)	4.2	-1.0	-0.1	-0.4	-0.4
Non-OECD Europe	17 (11.4)	43 (11.1)	46 (11.4)	57 (11.7)	64 (12.3)	3.8	1.6	2.1	1.2	1.7
Africa	0 (0.0)	2 (0.5)	2 (0.5)	3 (0.7)	3 (0.6)	–	1.7	5.1	0.0	2.4
Middle East	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.4)	2 (0.4)	–	–	–	0.0	–
Oceania	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	–	–	–	–	–
OECD country total	127 (86.5)	322 (83.6)	327 (80.9)	353 (72.8)	355 (67.8)	3.8	0.3	0.8	0.1	0.4
Non-OECD country total	20 (13.5)	63 (16.4)	77 (19.1)	132 (27.2)	169 (32.2)	4.7	4.1	5.6	2.5	4.0
World total	146 (100.0)	385 (100.0)	404 (100.0)	485 (100.0)	524 (100.0)	3.9	0.9	1.9	0.8	1.2

Source: "World Nuclear Power Plants 2006" (Japan Atomic Industrial Forum, Inc.) and other sources; forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate percentage shares of totals.

Table 13 Biofuel

(Unit: Mtoe)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	0 (0.0)	0.1 (0.6)	5.0 (10.9)	16 (18.1)	24 (20.4)	—	113.3	12.1	4.4	23.9
China	0 (0.0)	0 (0.0)	2.1 (4.6)	10 (11.8)	17 (14.4)	—	—	17.0	5.2	—
India	0 (0.0)	0.1 (0.5)	0.4 (0.8)	1.3 (1.5)	2.2 (1.9)	—	29.0	13.7	5.2	13.1
Japan	0 (0.0)	0 (0.0)	0.2 (0.4)	0.9 (1.1)	0.8 (0.7)	—	—	17.0	-1.1	—
South Korea	0 (0.0)	0.0 (0.1)	0.5 (1.1)	0.7 (0.8)	0.7 (0.6)	—	117.2	2.7	1.2	18.6
Taiwan	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	—	—	—	—	—
Indonesia	0 (0.0)	0 (0.0)	0.7 (1.5)	1.0 (1.2)	1.5 (1.2)	—	—	4.3	3.4	—
Malaysia	0 (0.0)	0 (0.0)	0.3 (0.6)	0.4 (0.4)	0.5 (0.4)	—	—	2.8	1.8	—
Philippines	0 (0.0)	0 (0.0)	0.2 (0.4)	0.3 (0.3)	0.4 (0.3)	—	—	4.7	3.2	—
Thailand	0 (0.0)	0 (0.0)	0.7 (1.5)	0.9 (1.0)	1.0 (0.9)	—	—	2.5	1.6	—
Vietnam	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	—	—	—	—	—
Singapore	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	—	—	—	—	—
Asia(exc. Japan)	0 (0.0)	0.1 (0.6)	4.8 (10.5)	15 (17.1)	23 (19.7)	—	111.7	11.8	4.6	23.7
North America	0 (0.0)	8.4 (42.0)	16 (35.5)	27 (30.9)	44 (37.5)	—	14.3	5.0	5.2	6.9
Central and South America	2.0 (100.0)	7.6 (38.1)	10 (20.8)	13 (15.4)	16 (13.3)	5.6	4.8	3.3	1.7	2.9
OECD Europe	0 (0.0)	3.9 (19.3)	15 (32.2)	30 (35.2)	34 (28.5)	—	30.9	7.4	1.0	9.0
Non-OECD Europe	0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	—	-2.7	0.0	0.0	-0.6
Africa	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	—	—	—	—	—
Middle East	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	—	—	—	—	—
Oceania	0 (0.0)	0.0 (0.1)	0.2 (0.5)	0.3 (0.4)	0.3 (0.3)	—	84.5	2.7	0.1	14.3
OECD country total	0 (0.0)	12 (61.4)	32 (69.8)	59 (68.3)	80 (67.6)	—	21.2	6.2	3.1	7.8
Non-OECD country total	2.0 (100.0)	7.7 (38.6)	14 (30.2)	27 (31.7)	38 (32.4)	5.6	12.5	7.0	3.4	6.6
World total	2.0 (100.0)	20 (100.0)	46 (100.0)	86 (100.0)	118 (100.0)	9.7	18.2	6.5	3.2	7.3

Source: Based on data from "Energy Balances of OECD Countries" (IEA) and "Energy Balances of Non-OECD Countries" (IEA); forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate percentage shares of totals.

Table 14 GDP per capita

(Unit: US dollars at 2000 value/person)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	1,579	2,907	3,535	4,702	6,064	2.5	4.0	2.9	2.6	3.0
China	185	1,445	2,293	3,916	5,917	8.6	9.7	5.5	4.2	5.8
India	227	598	816	1,293	1,933	4.0	6.4	4.7	4.1	4.8
Japan	23,917	39,075	43,957	52,529	62,209	2.0	2.4	1.8	1.7	1.9
South Korea	3,221	13,210	16,331	22,803	30,726	5.8	4.3	3.4	3.0	3.4
Taiwan	4,271	16,020	19,593	27,921	36,904	5.4	4.1	3.6	2.8	3.4
Indonesia	397	942	1,188	1,693	2,352	3.5	4.8	3.6	3.3	3.7
Malaysia	1,848	4,437	5,306	7,117	9,739	3.6	3.6	3.0	3.2	3.2
Philippines	989	1,136	1,350	1,837	2,416	0.6	3.5	3.1	2.8	3.1
Thailand	804	2,447	3,003	4,598	7,081	4.5	4.2	4.4	4.4	4.3
Vietnam	164	538	706	1,185	1,953	4.9	5.6	5.3	5.1	5.3
Singapore	9,056	25,845	30,650	40,581	56,482	4.3	3.5	2.8	3.4	3.2
Asia(exc. Japan)	453	1,555	2,111	3,216	4,538	5.1	6.3	4.3	3.5	4.4
North America	21,985	36,068	39,386	48,017	58,586	2.0	1.8	2.0	2.0	2.0
Central and South America	3,604	3,952	4,395	5,455	6,769	0.4	2.1	2.2	2.2	2.2
OECD Europe	11,870	18,020	19,940	24,290	29,589	1.7	2.0	2.0	2.0	2.0
Non-OECD Europe	1,799	2,015	2,848	4,954	6,778	0.5	7.2	5.7	3.2	5.0
Africa	737	786	861	1,031	1,239	0.3	1.8	1.8	1.9	1.8
Middle East	6,261	6,121	7,032	8,435	10,296	-0.1	2.8	1.8	2.0	2.1
Oceania	13,570	21,740	23,990	29,003	34,915	1.9	2.0	1.9	1.9	1.9
OECD country total	15,187	24,238	26,830	32,768	39,955	1.9	2.1	2.0	2.0	2.0
Non-OECD country total	977	1,670	2,131	3,046	4,085	2.2	5.0	3.6	3.0	3.6
World total	4,073	5,777	6,497	7,994	9,717	1.4	2.4	2.1	2.0	2.1

Source: Based on data from "World Development Indicators" (World Bank) and other sources; forecast figures prepared by the IEEJ.

forecast figures prepared by the IEEJ

Table 15 Primary energy consumption per capita

(Unit: toe/person)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	<b>0.44</b>	<b>0.90</b>	<b>1.04</b>	<b>1.25</b>	<b>1.47</b>	3.0	2.9	1.8	1.6	2.0
China	<b>0.42</b>	<b>1.14</b>	<b>1.43</b>	<b>1.78</b>	<b>2.15</b>	4.0	4.5	2.3	1.9	2.6
India	<b>0.13</b>	<b>0.35</b>	<b>0.41</b>	<b>0.57</b>	<b>0.73</b>	3.9	3.6	3.2	2.6	3.0
Japan	<b>2.97</b>	<b>4.15</b>	<b>4.20</b>	<b>4.38</b>	<b>4.52</b>	1.4	0.2	0.4	0.3	0.3
South Korea	<b>1.09</b>	<b>4.43</b>	<b>4.96</b>	<b>5.74</b>	<b>6.27</b>	5.8	2.3	1.5	0.9	1.4
Taiwan	<b>1.62</b>	<b>4.62</b>	<b>5.05</b>	<b>5.84</b>	<b>6.84</b>	4.3	1.8	1.5	1.6	1.6
Indonesia	<b>0.18</b>	<b>0.58</b>	<b>0.69</b>	<b>0.93</b>	<b>1.24</b>	4.9	3.4	3.1	2.9	3.1
Malaysia	<b>0.78</b>	<b>2.31</b>	<b>2.68</b>	<b>3.11</b>	<b>3.63</b>	4.4	3.0	1.5	1.6	1.8
Philippines	<b>0.28</b>	<b>0.41</b>	<b>0.45</b>	<b>0.57</b>	<b>0.72</b>	1.5	1.9	2.5	2.4	2.3
Thailand	<b>0.26</b>	<b>1.30</b>	<b>1.58</b>	<b>2.24</b>	<b>3.22</b>	6.6	4.0	3.5	3.7	3.7
Vietnam	<b>0.08</b>	<b>0.33</b>	<b>0.42</b>	<b>0.63</b>	<b>0.97</b>	5.9	5.0	4.2	4.3	4.4
Singapore	<b>2.51</b>	<b>6.93</b>	<b>7.33</b>	<b>8.28</b>	<b>9.73</b>	4.1	1.1	1.2	1.6	1.4
Asia(exc. Japan)	<b>0.31</b>	<b>0.78</b>	<b>0.93</b>	<b>1.15</b>	<b>1.39</b>	3.8	3.6	2.1	1.8	2.3
North America	<b>7.96</b>	<b>7.95</b>	<b>7.85</b>	<b>8.10</b>	<b>8.42</b>	-0.0	-0.3	0.3	0.4	0.2
Central and South America	<b>0.90</b>	<b>1.08</b>	<b>1.15</b>	<b>1.31</b>	<b>1.49</b>	0.7	1.3	1.3	1.3	1.3
OECD Europe	<b>3.19</b>	<b>3.50</b>	<b>3.57</b>	<b>3.77</b>	<b>4.00</b>	0.4	0.4	0.5	0.6	0.5
Non-OECD Europe	<b>3.75</b>	<b>3.14</b>	<b>3.49</b>	<b>4.16</b>	<b>4.59</b>	-0.7	2.1	1.8	1.0	1.5
Africa	<b>0.28</b>	<b>0.35</b>	<b>0.35</b>	<b>0.37</b>	<b>0.38</b>	0.9	-0.1	0.5	0.3	0.3
Middle East	<b>1.42</b>	<b>2.67</b>	<b>2.91</b>	<b>3.34</b>	<b>3.69</b>	2.6	1.7	1.4	1.0	1.3
Oceania	<b>4.47</b>	<b>5.68</b>	<b>5.96</b>	<b>6.32</b>	<b>6.72</b>	1.0	0.9	0.6	0.6	0.7
OECD country total	<b>4.23</b>	<b>4.75</b>	<b>4.80</b>	<b>5.09</b>	<b>5.40</b>	0.5	0.2	0.6	0.6	0.5
Non-OECD country total	<b>0.69</b>	<b>0.91</b>	<b>1.03</b>	<b>1.21</b>	<b>1.37</b>	1.1	2.5	1.6	1.3	1.7
World total	<b>1.46</b>	<b>1.61</b>	<b>1.69</b>	<b>1.85</b>	<b>2.00</b>	0.4	1.1	0.9	0.8	0.9

Table 16 Primary energy consumption per unit of GDP

(Unit: toe/millions of US dollars at 2000 value)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	<b>276</b>	<b>311</b>	<b>295</b>	<b>266</b>	<b>242</b>	0.5	-1.0	-1.0	-0.9	-1.0
China	<b>2288</b>	<b>790</b>	<b>622</b>	<b>455</b>	<b>364</b>	-4.2	-4.7	-3.1	-2.2	-3.1
India	<b>591</b>	<b>579</b>	<b>506</b>	<b>437</b>	<b>380</b>	-0.1	-2.7	-1.4	-1.4	-1.7
Japan	<b>124</b>	<b>106</b>	<b>96</b>	<b>83</b>	<b>73</b>	-0.6	-2.1	-1.4	-1.4	-1.5
South Korea	<b>337</b>	<b>335</b>	<b>304</b>	<b>252</b>	<b>204</b>	-0.0	-1.9	-1.9	-2.1	-2.0
Taiwan	<b>378</b>	<b>289</b>	<b>258</b>	<b>209</b>	<b>185</b>	-1.1	-2.2	-2.1	-1.2	-1.8
Indonesia	<b>448</b>	<b>618</b>	<b>578</b>	<b>551</b>	<b>526</b>	1.3	-1.3	-0.5	-0.5	-0.6
Malaysia	<b>423</b>	<b>520</b>	<b>505</b>	<b>437</b>	<b>373</b>	0.8	-0.6	-1.4	-1.6	-1.3
Philippines	<b>281</b>	<b>358</b>	<b>331</b>	<b>311</b>	<b>300</b>	1.0	-1.6	-0.6	-0.4	-0.7
Thailand	<b>326</b>	<b>532</b>	<b>527</b>	<b>487</b>	<b>455</b>	2.0	-0.2	-0.8	-0.7	-0.6
Vietnam	<b>484</b>	<b>611</b>	<b>593</b>	<b>536</b>	<b>494</b>	0.9	-0.6	-1.0	-0.8	-0.8
Singapore	<b>277</b>	<b>268</b>	<b>239</b>	<b>204</b>	<b>172</b>	-0.1	-2.3	-1.6	-1.7	-1.8
Asia(exc. Japan)	<b>679</b>	<b>503</b>	<b>442</b>	<b>359</b>	<b>305</b>	-1.2	-2.6	-2.1	-1.6	-2.0
North America	<b>362</b>	<b>220</b>	<b>199</b>	<b>169</b>	<b>144</b>	-2.0	-2.0	-1.6	-1.6	-1.7
Central and South America	<b>250</b>	<b>273</b>	<b>262</b>	<b>240</b>	<b>220</b>	0.4	-0.9	-0.9	-0.8	-0.9
OECD Europe	<b>269</b>	<b>194</b>	<b>179</b>	<b>155</b>	<b>135</b>	-1.3	-1.7	-1.4	-1.4	-1.4
Non-OECD Europe	<b>2086</b>	<b>1559</b>	<b>1225</b>	<b>839</b>	<b>678</b>	-1.2	-4.7	-3.7	-2.1	-3.3
Africa	<b>378</b>	<b>449</b>	<b>409</b>	<b>357</b>	<b>305</b>	0.7	-1.9	-1.3	-1.6	-1.5
Middle East	<b>226</b>	<b>436</b>	<b>413</b>	<b>396</b>	<b>359</b>	2.7	-1.1	-0.4	-1.0	-0.8
Oceania	<b>329</b>	<b>261</b>	<b>248</b>	<b>218</b>	<b>192</b>	-0.9	-1.0	-1.3	-1.2	-1.2
OECD country total	<b>278</b>	<b>196</b>	<b>179</b>	<b>155</b>	<b>135</b>	-1.4	-1.8	-1.4	-1.4	-1.5
Non-OECD country total	<b>701</b>	<b>544</b>	<b>482</b>	<b>396</b>	<b>336</b>	-1.0	-2.4	-1.9	-1.6	-1.9
World total	<b>358</b>	<b>278</b>	<b>261</b>	<b>232</b>	<b>206</b>	-1.0	-1.3	-1.2	-1.2	-1.2

Table 17 CO<sub>2</sub> emissions

(Unit: Mt-C)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	922 (18.4)	2,704 (35.8)	3,233 (38.7)	4,078 (40.8)	5,028 (42.8)	4.4	3.6	2.3	2.1	2.5
China	420 (8.4)	1,467 (19.4)	1,812 (21.7)	2,225 (22.2)	2,647 (22.6)	5.1	4.3	2.1	1.8	2.4
India	82 (1.6)	329 (4.4)	409 (4.9)	601 (6.0)	843 (7.2)	5.7	4.4	3.9	3.4	3.8
Japan	255 (5.1)	342 (4.5)	325 (3.9)	315 (3.2)	297 (2.5)	1.2	-1.0	-0.3	-0.6	-0.6
South Korea	34 (0.7)	125 (1.7)	145 (1.7)	159 (1.6)	168 (1.4)	5.3	3.1	0.9	0.6	1.2
Taiwan	21 (0.4)	76 (1.0)	79 (0.9)	96 (1.0)	113 (1.0)	5.3	0.9	2.0	1.6	1.6
Indonesia	21 (0.4)	98 (1.3)	124 (1.5)	179 (1.8)	251 (2.1)	6.4	4.7	3.8	3.4	3.8
Malaysia	8 (0.2)	44 (0.6)	56 (0.7)	75 (0.8)	97 (0.8)	7.0	4.7	3.0	2.6	3.2
Philippines	9 (0.2)	21 (0.3)	26 (0.3)	43 (0.4)	67 (0.6)	3.4	4.2	5.1	4.4	4.7
Thailand	10 (0.2)	66 (0.9)	81 (1.0)	117 (1.2)	160 (1.4)	7.8	4.2	3.7	3.2	3.6
Vietnam	4 (0.1)	22 (0.3)	30 (0.4)	52 (0.5)	85 (0.7)	7.1	6.6	5.6	4.9	5.5
Singapore	5 (0.1)	18 (0.2)	20 (0.2)	24 (0.2)	30 (0.3)	5.5	2.0	1.9	2.1	2.0
Asia(exc. Japan)	667 (13.3)	2,362 (31.3)	2,908 (34.8)	3,763 (37.6)	4,731 (40.3)	5.2	4.2	2.6	2.3	2.8
North America	1,456 (29.0)	1,814 (24.0)	1,841 (22.0)	2,088 (20.9)	2,385 (20.3)	0.9	0.3	1.3	1.3	1.1
Central and South America	228 (4.5)	387 (5.1)	435 (5.2)	545 (5.4)	663 (5.6)	2.1	2.4	2.3	2.0	2.2
OECD Europe	1,168 (23.2)	1,160 (15.4)	1,189 (14.2)	1,255 (12.5)	1,342 (11.4)	-0.0	0.5	0.5	0.7	0.6
Non-OECD Europe	972 (19.3)	743 (9.8)	824 (9.8)	949 (9.5)	991 (8.4)	-1.1	2.1	1.4	0.4	1.2
Africa	115 (2.3)	261 (3.5)	286 (3.4)	357 (3.6)	423 (3.6)	3.3	1.9	2.2	1.7	1.9
Middle East	100 (2.0)	362 (4.8)	434 (5.2)	592 (5.9)	748 (6.4)	5.3	3.7	3.2	2.4	2.9
Oceania	64 (1.3)	113 (1.5)	122 (1.5)	139 (1.4)	155 (1.3)	2.3	1.5	1.3	1.1	1.3
OECD country total	3,046 (60.6)	3,676 (48.7)	3,752 (44.9)	4,118 (41.2)	4,541 (38.7)	0.8	0.4	0.9	1.0	0.8
Non-OECD country total	1,979 (39.4)	3,867 (51.3)	4,611 (55.1)	5,884 (58.8)	7,193 (61.3)	2.7	3.6	2.5	2.0	2.5
World total	5,025 (100.0)	7,543 (100.0)	8,363 (100.0)	10,002 (100.0)	11,734 (100.0)	1.6	2.1	1.8	1.6	1.8

Source: Based on data from "Energy Balances of OECD Countries" (IEA) and "Energy Balances of Non-OECD Countries" (IEA);

forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate percentage shares of totals.

Table 18 The number of automobiles

(Unit: millions of vehicles)

	Actual		Forecast			AAGR(%)				
	1980	2005	2010	2020	2030	2005 /1980	2010 /2005	2020 /2010	2030 /2020	2030 /2005
Asia	48 (19.8)	177 (50.0)	219 (58.4)	349 (85.0)	533 (120.3)	5.3	4.3	4.8	4.3	4.5
China	2 (1.8)	32 (24.3)	46 (33.9)	116 (82.3)	233 (160.1)	12.2	7.5	9.8	7.2	8.3
India	2 (2.4)	15 (14.0)	24 (20.6)	50 (37.8)	86 (57.6)	9.3	9.7	7.5	5.5	7.2
Japan	38 (324.2)	74 (580.8)	77 (601.0)	79 (637.2)	78 (663.1)	2.7	0.6	0.3	-0.2	0.2
South Korea	1 (13.6)	15 (318.8)	19 (391.5)	25 (506.0)	28 (579.9)	14.5	4.5	2.7	1.2	2.5
Taiwan	0 (27.3)	7 (294.4)	8 (335.4)	9 (367.4)	9 (392.9)	11.1	2.9	1.0	0.4	1.2
Indonesia	1 (8.7)	7 (33.0)	10 (43.1)	16 (62.7)	24 (86.8)	7.1	6.7	4.7	4.0	4.8
Malaysia	1 (65.2)	8 (309.9)	9 (339.2)	12 (388.4)	14 (411.4)	9.1	3.6	2.8	1.6	2.4
Philippines	1 (17.7)	3 (34.7)	5 (49.7)	8 (77.6)	13 (111.1)	5.0	9.5	6.2	4.9	6.3
Thailand	1 (19.0)	10 (152.8)	12 (186.4)	17 (252.3)	22 (306.9)	10.1	4.7	3.5	2.2	3.2
Vietnam	0 (4.0)	1 (9.9)	1 (15.8)	3 (33.0)	7 (60.7)	5.6	11.2	8.8	7.2	8.6
Singapore	0 (102.7)	1 (154.1)	1 (145.3)	1 (146.0)	1 (147.6)	4.0	0.0	0.9	0.7	0.6
Asia(exc. Japan)	10 (4.5)	103 (30.2)	142 (39.3)	270 (67.8)	455 (105.5)	9.6	6.6	6.6	5.4	6.1
North America	169 (671.5)	262 (797.8)	281 (815.8)	320 (853.7)	355 (884.4)	1.8	1.4	1.3	1.0	1.2
Central and South America	28 (79.7)	71 (128.4)	84 (143.7)	115 (176.4)	155 (220.7)	3.7	3.6	3.2	3.1	3.2
OECD Europe	128 (270.6)	265 (495.2)	292 (534.8)	343 (611.7)	379 (668.6)	3.0	2.0	1.6	1.0	1.4
Non-OECD Europe	22 (67.9)	64 (187.1)	95 (281.7)	178 (537.6)	205 (640.1)	4.4	8.4	6.5	1.4	4.8
Africa	10 (20.5)	21 (23.7)	25 (24.4)	35 (28.2)	50 (33.6)	3.2	2.9	3.6	3.6	3.4
Middle East	6 (62.0)	21 (113.9)	29 (139.3)	46 (185.8)	59 (208.2)	5.4	6.2	4.8	2.5	4.1
Oceania	9 (495.3)	17 (682.6)	19 (722.5)	22 (791.8)	26 (858.5)	2.6	2.2	1.8	1.6	1.8
OECD country total	350 (362.7)	655 (561.0)	714 (593.6)	827 (658.7)	918 (711.1)	2.5	1.7	1.5	1.0	1.4
Non-OECD country total	70 (20.3)	243 (46.4)	330 (58.9)	581 (92.3)	844 (121.8)	5.1	6.2	5.8	3.8	5.1
World total	420 (94.9)	899 (140.0)	1,043 (153.4)	1,408 (186.6)	1,762 (214.3)	3.1	3.0	3.0	2.3	2.7

Source: "World motor vehicle statistics" (Japan Automobile Manufacturers Association, Inc.) and other sources;

forecast figures prepared by the IEEJ.

Note: Figures in parentheses indicate automobile ownership volume per 1,000 population. (vehicles per 1,000 population)

# World

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	6,448	7,890	10,315	11,523	13,978	16,480	100	100	100	1.9	2.2	1.9	1.7	1.7	1.9
Coal	1,775	2,215	2,890	3,276	3,807	4,398	28	28	27	2.0	2.5	1.5	1.5	1.7	1.7
Oil	2,984	3,108	3,829	4,129	4,900	5,649	46	37	34	1.0	1.5	1.7	1.4	1.6	1.6
Natural gas	1,234	1,673	2,362	2,698	3,491	4,397	19	23	27	2.6	2.7	2.6	2.3	2.5	2.5
Nuclear	186	526	722	764	910	997	2.9	7.0	6.0	5.6	1.1	1.8	0.9	1.3	
Hydro	145	185	251	293	343	386	2.3	2.4	2.3	2.2	3.1	1.6	1.2	1.7	
Geothermal	13	34	45	53	70	89	0.2	0.4	0.5	5.1	3.2	2.8	2.5	2.7	
Other renewables	111	150	215	311	457	564	1.7	2.1	3.4	2.7	7.6	3.9	2.1	3.9	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	4,663	5,490	6,861	7,701	9,365	11,057	100	100	100	1.6	2.3	2.0	1.7	1.9	
Industry*	1,909	1,928	2,447	2,797	3,329	3,854	41	36	35	1.0	2.7	1.8	1.5	1.8	
Transportation	1,136	1,466	2,011	2,259	2,820	3,338	24	29	30	2.3	2.4	2.2	1.7	2.0	
Residential/Commercial	1,464	1,933	2,168	2,385	2,908	3,509	31	32	32	1.6	1.9	2.0	1.9	1.9	
Non-energy, etc.*	154	163	234	259	308	356	3.3	3.4	3.2	1.7	2.1	1.7	1.5	1.7	
Energy Source															
Total	4,663	5,490	6,861	7,701	9,365	11,057	100	100	100	1.6	2.3	2.0	1.7	1.9	
Coal	696	761	659	746	800	825	15	9.6	7.5	-0.2	2.5	0.7	0.3	0.9	
Oil	2,332	2,504	3,259	3,588	4,346	5,081	50	47	46	1.3	1.9	1.9	1.6	1.8	
Natural gas	828	950	1,233	1,376	1,667	1,989	18	18	18	1.6	2.2	1.9	1.8	1.9	
Electricity	580	833	1,292	1,518	1,997	2,532	12	19	23	3.3	3.3	2.8	2.4	2.7	
Heat	121	342	269	286	316	345	2.6	3.9	3.1	3.3	1.2	1.0	0.9	1.0	
Renewables	106	98	145	181	234	277	2.3	2.1	2.5	1.3	4.5	2.6	1.7	2.6	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	8,207	11,800	18,223	21,321	27,991	35,435	100	100	100	3.2	3.2	2.8	2.4	2.7	
Coal	3,115	4,426	7,347	8,564	10,942	13,976	38	40	39	3.5	3.1	2.5	2.5	2.6	
Oil	1,637	1,334	1,200	1,203	1,405	1,614	20	6.6	4.6	-1.2	0.1	1.6	1.4	1.2	
Natural gas	995	1,715	3,597	4,587	7,125	10,160	12	20	29	5.3	5.0	4.5	3.6	4.2	
Nuclear	713	2,013	2,768	2,930	3,492	3,825	8.7	15	11	5.6	1.1	1.8	0.9	1.3	
Hydro	1,689	2,148	2,922	3,401	3,990	4,483	21	16	13	2.2	3.1	1.6	1.2	1.7	
Geothermal	14	36	58	68	88	111	0.2	0.3	0.3	5.9	3.3	2.6	2.4	2.6	
Other renewables	45	129	337	568	948	1,266	0.5	1.8	3.6	8.4	11.0	5.3	2.9	5.4	

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
GDP (billions of US dollars at 2000 value)	18,023	24,321	37,066	44,184	60,311	79,887	2.9	3.6	3.2	2.9	3.1			
Population (millions of people)	4,425	5,247	6,416	6,801	7,544	8,221	1.5	1.2	1.0	0.9	1.0			
CO <sub>2</sub> emissions (Mt-C)	5,025	5,864	7,543	8,363	10,002	11,734	1.6	2.1	1.8	1.6	1.8			
GDP per capita (US dollars at 2000 value/pers.)	4,073	4,635	5,777	6,497	7,994	9,717	1.4	2.4	2.1	2.0	2.1			
Primary energy consumption per capita	1.46	1.50	1.61	1.69	1.85	2.00	0.4	1.1	0.9	0.8	0.9			
Primary energy consumption per unit of GDP*	358	324	278	261	232	206	-1.0	-1.3	-1.2	-1.2	-1.2			
CO <sub>2</sub> emissions per unit of GDP**	279	241	203	189	166	147	-1.3	-1.4	-1.3	-1.2	-1.3			
Primary energy consumption per unit of primary energy cons.	0.78	0.74	0.73	0.73	0.72	0.71	-0.3	-0.2	-0.1	0.0	-0.1			
Automobile ownership volume (millions of vehicles)	420	584	899	1,043	1,408	1,762	3.1	3.0	3.0	2.3	2.7			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	95	111	140	153	187	214	1.6	1.8	2.0	1.4	1.7			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# Asia

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
<b>Total</b>	<b>1,060</b>	<b>1,665</b>	<b>3,205</b>	<b>3,910</b>	<b>5,140</b>	<b>6,502</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>4.5</b>	<b>4.1</b>	<b>2.8</b>	<b>2.4</b>	<b>2.9</b>
Coal	473	798	1,583	1,919	2,320	2,714	45	49	42	4.9	3.9	1.9	1.6	2.2
Oil	487	626	1,074	1,254	1,629	2,045	46	34	31	3.2	3.1	2.7	2.3	2.6
Natural gas	52	118	313	410	650	1,057	4.9	9.8	16	7.4	5.5	4.7	5.0	5.0
Nuclear	25	77	147	188	295	373	2.4	4.6	5.7	7.3	5.0	4.6	2.4	3.8
Hydro	20	32	60	82	107	122	1.9	1.9	1.9	4.5	6.4	2.6	1.4	2.9
Geothermal	2.6	7.2	18	19	23	28	0.2	0.5	0.4	8.0	1.6	2.0	1.7	1.8
Other renewables	0	6.9	9.9	39	115	164	0	0.3	2.5	-	31.5	11.6	3.6	11.9

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
<b>Total</b>	<b>756</b>	<b>1,136</b>	<b>1,975</b>	<b>2,432</b>	<b>3,233</b>	<b>4,135</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>3.9</b>	<b>4.2</b>	<b>2.9</b>	<b>2.5</b>	<b>3.0</b>
Industry*	398	555	976	1,200	1,482	1,751	53	49	42	3.7	4.2	2.1	1.7	2.4
Transportation	128	205	401	502	718	968	17	20	23	4.7	4.6	3.7	3.0	3.6
Residential/Commercial	208	333	516	638	917	1,273	28	26	31	3.7	4.3	3.7	3.3	3.7
Non-energy, etc.	21	44	82	93	116	144	2.8	4.2	3.5	5.5	2.4	2.2	2.2	2.3
<b>Energy Source</b>														
<b>Total</b>	<b>756</b>	<b>1,136</b>	<b>1,975</b>	<b>2,432</b>	<b>3,233</b>	<b>4,135</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>3.9</b>	<b>4.2</b>	<b>2.9</b>	<b>2.5</b>	<b>3.0</b>
Coal	303	432	497	580	630	652	40	25	16	2.0	3.2	0.8	0.3	1.1
Oil	332	480	893	1,079	1,453	1,865	44	45	45	4.0	3.9	3.0	2.5	3.0
Natural gas	25	48	135	180	293	462	3.3	6.9	11	7.0	5.8	5.0	4.6	5.0
Electricity	88	158	397	518	741	1,004	12	20	24	6.2	5.5	3.6	3.1	3.8
Heat	7.5	13	49	65	94	123	1.0	2.5	3.0	7.8	5.9	3.8	2.8	3.8
Renewables	0	3.4	4.5	9.5	20	29	0	0.2	0.7	-	15.9	7.9	3.6	7.7

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
<b>Total</b>	<b>1,195</b>	<b>2,215</b>	<b>5,611</b>	<b>7,246</b>	<b>10,337</b>	<b>13,943</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>6.4</b>	<b>5.2</b>	<b>3.6</b>	<b>3.0</b>	<b>3.7</b>
Coal	302	863	3,185	4,122	5,631	7,352	25	57	53	9.9	5.3	3.2	2.7	3.4
Oil	470	431	385	357	387	443	39	6.9	3.2	-0.8	-1.5	0.8	1.4	0.6
Natural gas	90	235	722	977	1,626	2,787	7.6	13	20	8.7	6.3	5.2	5.5	5.6
Nuclear	97	294	564	721	1,133	1,431	8.1	10	10	7.3	5.0	4.6	2.4	3.8
Hydro	233	373	699	955	1,238	1,421	19	12	10	4.5	6.4	2.6	1.4	2.9
Geothermal	3.0	8.3	20	21	26	29	0.2	0.4	0.2	7.9	1.6	1.8	1.3	1.6
Other renewables	0	11	38	91	295	480	0	0.7	3.4	-	19.0	12.4	5.0	10.6

Energy and economic indicators							AAGR(%)								
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
GDP (billions of US dollars at 2000 value)	3,843	6,056	10,310	13,235	19,314	26,856	4.0	5.1	3.9	3.4	3.9				
Population (millions of people)	2,434	2,904	3,547	3,744	4,108	4,429	1.5	1.1	0.9	0.8	0.9				
CO <sub>2</sub> emissions (Mt-C)	922	1,411	2,704	3,233	4,078	5,028	4.4	3.6	2.3	2.1	2.5				
GDP per capita (US dollars at 2000 value/pers.)	1,579	2,086	2,907	3,535	4,702	6,064	2.5	4.0	2.9	2.6	3.0				
Primary energy consumption per capita	0.44	0.57	0.90	1.04	1.25	1.47	3.0	2.9	1.8	1.6	2.0				
Primary energy consumption per unit of GDP*	276	275	311	295	266	242	0.5	-1.0	-1.0	-0.9	-1.0				
CO <sub>2</sub> emissions per unit of GDP**	240	233	262	244	211	187	0.4	-1.4	-1.4	-1.2	-1.3				
Primary energy consumption per unit of primary energy cons.	0.87	0.85	0.84	0.83	0.79	0.77	-0.1	-0.4	-0.4	-0.3	-0.3				
Automobile ownership volume (millions of vehicles)	48	86	177	219	349	533	5.3	4.3	4.8	4.3	4.5				
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	20	30	50	58	85	120	3.8	3.1	3.8	3.5	3.6				

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# China

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030	
<b>Total</b>	<b>419</b>	<b>663</b>	<b>1,494</b>	<b>1,919</b>	<b>2,522</b>	<b>3,128</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>5.2</b>	<b>5.1</b>	<b>2.8</b>	<b>2.2</b>	<b>3.0</b>	
Coal	313	529	1,088	1,352	1,563	1,715	75	73	55	5.1	4.4	1.5	0.9	1.8	
Oil	89	110	318	411	587	758	21	21	24	5.2	5.2	3.6	2.6	3.5	
Natural gas	12	13	40	60	144	355	2.9	2.7	11	5.0	8.5	9.1	9.4	9.1	
Nuclear	0	0	14	21	66	91	0	0.9	2.9	-	8.7	12.1	3.3	7.8	
Hydro	5.0	11	34	52	70	76	1.2	2.3	2.4	8.0	8.8	3.0	0.9	3.3	
Geothermal	0	0.2	-0.5	-0.5	-0.2	0.2	0	0	0	-	-2.8	-6.9	-	-196.9	
Other renewables	0	0	0	24	92	131	0	0	4.2	-	-	14.6	3.6	-	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030	
<b>Total</b>	<b>312</b>	<b>463</b>	<b>890</b>	<b>1,167</b>	<b>1,560</b>	<b>1,954</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>4.3</b>	<b>5.6</b>	<b>2.9</b>	<b>2.3</b>	<b>3.2</b>	
Industry*	188	259	518	667	786	844	60	58	43	4.1	5.2	1.6	0.7	2.0	
Transportation	25	37	114	163	271	396	7.9	13	20	6.3	7.3	5.2	3.9	5.1	
Residential/Commercial	92	142	208	282	441	644	29	23	33	3.3	6.3	4.6	3.9	4.6	
Non-energy, etc.*	8.3	24	50	54	63	70	2.7	5.6	3.6	7.4	1.7	1.5	1.1	1.4	
<b>Energy Source</b>															
<b>Total</b>	<b>312</b>	<b>463</b>	<b>890</b>	<b>1,167</b>	<b>1,560</b>	<b>1,954</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>4.3</b>	<b>5.6</b>	<b>2.9</b>	<b>2.3</b>	<b>3.2</b>	
Coal	217	315	373	442	456	433	70	42	22	2.2	3.5	0.3	-0.5	0.6	
Oil	60	83	270	371	555	743	19	30	38	6.2	6.5	4.1	3.0	4.1	
Natural gas	6.8	9.7	32	50	99	186	2.2	3.6	9.5	6.4	9.3	7.2	6.5	7.3	
Electricity	21	41	171	243	352	459	6.8	19	23	8.7	7.3	3.8	2.7	4.0	
Heat	7.4	13	43	59	87	116	2.4	4.9	5.9	7.3	6.2	4.0	2.9	4.0	
Renewables	0	0	0	2.1	10	17	0	0	0.9	-	-	17.0	5.2	-	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030	
<b>Total</b>	<b>301</b>	<b>621</b>	<b>2,495</b>	<b>3,474</b>	<b>4,970</b>	<b>6,421</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>8.8</b>	<b>6.8</b>	<b>3.6</b>	<b>2.6</b>	<b>3.9</b>	
Coal	164	443	1,972	2,656	3,473	4,195	55	79	65	10.5	6.1	2.7	1.9	3.1	
Oil	78	49	61	59	57	56	26	2.4	0.9	-1.0	-0.5	-0.4	-0.2	-0.3	
Natural gas	0.7	2.8	12	33	182	648	0.2	0.5	10	12.1	22.6	18.6	13.5	17.3	
Nuclear	0	0	53	80	252	350	0	2.1	5.5	-	8.7	12.1	3.3	7.8	
Hydro	58	127	397	606	811	884	19	16	14	8.0	8.8	3.0	0.9	3.3	
Geothermal	0	0	0	0.1	0.4	0.9	0	0	0	-	-	15.8	9.8	-	
Other renewables	0	0	2.5	40	195	287	0	0.1	4.5	-	73.8	17.2	4.0	20.9	

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
GDP (billions of US dollars at 2000 value)	183	445	1,890	3,086	5,542	8,594	9.8	10.3	6.0	4.5	6.2			
Population (millions of people)	987	1,143	1,308	1,346	1,415	1,452	1.1	0.6	0.5	0.3	0.4			
CO <sub>2</sub> emissions (Mt-C)	420	671	1,467	1,812	2,225	2,647	5.1	4.3	2.1	1.8	2.4			
GDP per capita (US dollars at 2000 value/pers.)	185	389	1,445	2,293	3,916	5,917	8.6	9.7	5.5	4.2	5.8			
Primary energy consumption per capita	0.42	0.58	1.14	1.43	1.78	2.15	4.0	4.5	2.3	1.9	2.6			
Primary energy consumption per unit of GDP*	2,288	1,491	790	622	455	364	-4.2	-4.7	-3.1	-2.2	-3.1			
CO <sub>2</sub> emissions per unit of GDP**	2,294	1,510	776	587	401	308	-4.2	-5.4	-3.7	-2.6	-3.6			
Primary energy consumption per unit of primary energy cons.	1.00	1.01	0.98	0.94	0.88	0.85	-0.1	-0.8	-0.7	-0.4	-0.6			
Automobile ownership volume (millions of vehicles)	1.8	5.5	32	46	116	233	12.2	7.5	9.8	7.2	8.3			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	1.8	4.8	24	34	82	160	11.0	6.9	9.3	6.9	7.8			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# India

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	92	186	379	486	753	1,096	100	100	100	5.8	5.1	4.5	3.8	4.3	
Coal	52	106	208	251	355	484	57	55	44	5.7	3.9	3.5	3.1	3.4	
Oil	34	63	129	172	267	379	37	34	35	5.5	6.0	4.5	3.6	4.4	
Natural gas	1.2	9.8	29	41	81	146	1.3	7.6	13	13.6	7.5	6.9	6.1	6.7	
Nuclear	0.8	1.6	4.5	9.6	31	56	0.8	1.2	5.1	7.3	16.3	12.6	6.0	10.6	
Hydro	4.0	6.2	8.6	10	14	21	4.3	2.3	1.9	3.1	3.3	3.6	3.9	3.7	
Geothermal	0	0.1	0.1	0.1	0.1	0.1	0	0	0	-216.5	0.0	0.0	0.0	0.0	
Other renewables	0	0	0.6	1.3	4.1	8.7	0	0.2	0.8	-	16.3	11.8	7.8	11.1	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	62	117	199	268	424	630	100	100	100	4.8	6.1	4.7	4.0	4.7	
Industry*	30	60	90	116	168	236	48	45	37	4.5	5.1	3.8	3.4	3.9	
Transportation	13	20	37	56	97	147	22	19	23	4.1	8.6	5.7	4.2	5.7	
Residential/Commercial	17	33	58	78	127	198	27	29	31	5.2	5.8	5.1	4.5	5.0	
Non-energy, etc.	2.2	3.6	13	19	32	50	3.6	6.7	7.9	7.4	7.1	5.3	4.7	5.4	
Energy Source															
Total	62	117	199	268	424	630	100	100	100	4.8	6.1	4.7	4.0	4.7	
Coal	27	41	38	43	53	63	44	19	9.9	1.3	2.9	2.0	1.7	2.0	
Oil	26	52	106	150	239	345	42	53	55	5.7	7.1	4.8	3.8	4.8	
Natural gas	0.7	5.6	14	18	28	44	1.1	7.0	6.9	12.8	4.8	4.8	4.5	4.7	
Electricity	7.7	18	41	57	103	176	12	21	28	6.9	6.7	6.1	5.5	6.0	
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-	
Renewables	0	0	0.1	0.4	1.3	2.2	0	0.1	0.4	-	29.0	13.7	5.2	13.1	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	119	289	699	951	1,659	2,720	100	100	100	7.3	6.4	5.7	5.1	5.6	
Coal	61	192	480	649	1,044	1,604	52	69	59	8.6	6.2	4.9	4.4	4.9	
Oil	7.6	10	31	31	39	50	6.4	4.5	1.8	5.8	-0.1	2.4	2.4	1.9	
Natural gas	0.6	10.0	62	101	241	495	0.5	8.9	18	20.2	10.1	9.1	7.5	8.6	
Nuclear	3.0	6.1	17	37	120	216	2.5	2.5	7.9	7.3	16.3	12.6	6.0	10.6	
Hydro	47	72	100	117	167	246	39	14	9.0	3.1	3.3	3.6	3.9	3.7	
Geothermal	0	0	0	0	0	0	0	0	0	-	-	-	-	-	
Other renewables	0	0	8.1	16	47	109	0	1.2	4.0	-	14.3	11.6	8.7	11.0	

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
GDP (billions of US dollars at 2000 value)	156	274	655	961	1,721	2,884	5.9	8.0	6.0	5.3	6.1			
Population (millions of people)	687	850	1,095	1,177	1,331	1,492	1.9	1.5	1.2	1.2	1.2			
CO <sub>2</sub> emissions (Mt-C)	82	167	329	409	601	843	5.7	4.4	3.9	3.4	3.8			
GDP per capita (US dollars at 2000 value/pers.)	227	322	598	816	1,293	1,933	4.0	6.4	4.7	4.1	4.8			
Primary energy consumption per capita	0.13	0.22	0.35	0.41	0.57	0.73	3.9	3.6	3.2	2.6	3.0			
Primary energy consumption per unit of GDP*	591	681	579	506	437	380	-0.1	-2.7	-1.4	-1.4	-1.7			
CO <sub>2</sub> emissions per unit of GDP**	523	611	503	426	349	292	-0.2	-3.3	-2.0	-1.8	-2.1			
Primary energy consumption per unit of primary energy cons.	0.89	0.90	0.87	0.84	0.80	0.77	-0.1	-0.6	-0.5	-0.4	-0.5			
Automobile ownership volume (millions of vehicles)	1.7	4.3	15	24	50	86	9.3	9.7	7.5	5.5	7.2			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	2.4	5.1	14	21	38	58	7.3	8.1	6.2	4.3	5.8			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# Japan

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
Total	347	444	530	535	542	529	100	100	100	1.7	0.2	0.1	-0.2	0.0
Coal	60	77	112	100	100	95	17	21	18	2.6	-2.2	0.0	-0.5	-0.6
Oil	236	255	252	241	223	204	68	47	38	0.3	-0.9	-0.8	-0.9	-0.8
Natural gas	21	44	71	75	81	83	6.2	13	16	4.9	1.3	0.7	0.3	0.6
Nuclear	22	53	79	101	118	126	6.2	15	24	5.4	4.9	1.6	0.7	1.9
Hydro	7.6	7.7	6.7	7.6	7.6	7.6	2.2	1.3	1.4	-0.5	2.4	0.0	0.1	0.5
Geothermal	0.8	1.6	3.0	3.2	3.2	3.2	0.2	0.6	0.6	5.6	1.1	0.0	0.0	0.2
Other renewables	0	6.1	7.0	7.8	9.4	10	0	1.3	2.0	-	2.1	1.9	1.0	1.6

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
Total	233	304	351	348	344	333	100	100	100	1.7	-0.2	-0.1	-0.3	-0.2
Industry*	111	126	127	127	123	118	47	36	35	0.6	0.0	-0.3	-0.4	-0.3
Transportation	55	77	93	90	85	77	24	27	23	2.1	-0.6	-0.6	-0.9	-0.7
Residential/Commercial	59	91	121	121	127	129	25	35	39	2.9	0.0	0.5	0.2	0.3
Non-energy, etc.*	8.3	11	9.6	9.4	9.1	9.0	3.5	2.7	2.7	0.6	-0.5	-0.2	-0.1	-0.3
Energy Source														
Total	233	304	351	348	344	333	100	100	100	1.7	-0.2	-0.1	-0.3	-0.2
Coal	21	32	26	23	21	19	9.2	7.4	5.6	0.8	-2.4	-0.9	-1.1	-1.3
Oil	158	190	208	201	187	172	68	59	52	1.1	-0.7	-0.7	-0.9	-0.8
Natural gas	9.7	14	28	29	32	36	4.2	8.0	11	4.3	0.7	1.1	0.9	1.0
Electricity	44	65	85	91	99	103	19	24	31	2.6	1.4	0.8	0.4	0.8
Heat	0.1	0.2	0.6	0.6	0.6	0.6	0	0.2	0.2	7.5	-0.9	0.0	0.0	-0.2
Renewables	0	2.7	2.6	2.8	3.4	3.3	0	0.8	1.0	-	1.0	2.2	-0.5	0.9

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
Total	573	837	1,094	1,141	1,236	1,283	100	100	100	2.6	0.8	0.8	0.4	0.6
Coal	55	117	309	267	293	291	9.6	28	23	7.2	-2.9	0.9	-0.1	-0.2
Oil	265	250	146	115	93	76	46	13	5.9	-2.4	-4.6	-2.1	-2.0	-2.6
Natural gas	81	166	231	254	271	291	14	21	23	4.3	1.9	0.6	0.7	0.9
Nuclear	83	202	305	386	452	484	14	28	38	5.4	4.9	1.6	0.7	1.9
Hydro	88	89	78	88	88	89	15	7.1	6.9	-0.5	2.4	0.0	0.1	0.5
Geothermal	0.9	1.7	3.2	3.4	3.4	3.4	0.2	0.3	0.3	5.2	1.1	0.0	0.0	0.2
Other renewables	0	11	21	26	36	49	0	1.9	3.8	-	4.4	3.2	3.0	3.3

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
GDP (billions of US dollars at 2000 value)	2,793	4,111	4,993	5,601	6,501	7,288	2.4	2.3	1.5	1.1	1.5			
Population (millions of people)	117	124	128	127	124	117	0.4	-0.1	-0.3	-0.5	-0.3			
CO <sub>2</sub> emissions (Mt-C)	255	295	342	325	315	297	1.2	-1.0	-0.3	-0.6	-0.6			
GDP per capita (US dollars at 2000 value/pers)	23,917	33,280	39,075	43,957	52,529	62,209	2.0	2.4	1.8	1.7	1.9			
Primary energy consumption per capita	2.97	3.60	4.15	4.20	4.38	4.52	1.4	0.2	0.4	0.3	0.3			
Primary energy consumption per unit of GDP*	124	108	106	96	83	73	-0.6	-2.1	-1.4	-1.4	-1.5			
CO <sub>2</sub> emissions per unit of GDP**	91	72	68	58	49	41	-1.1	-3.3	-1.8	-1.7	-2.1			
Primary energy consumption per unit of primary energy cons	0.74	0.66	0.64	0.61	0.58	0.56	-0.5	-1.2	-0.4	-0.4	-0.6			
Automobile ownership volume (millions of vehicles)	38	58	74	77	79	78	2.7	0.6	0.3	-0.2	0.2			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	324	467	581	601	637	663	2.4	0.7	0.6	0.4	0.5			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## South Korea

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	41	93	214	244	285	306	100	100	100	6.8	2.7	1.6	0.7	1.5
Coal	13	26	49	58	58	60	33	23	20	5.3	3.1	0.1	0.3	0.8
Oil	27	50	96	104	114	117	65	45	38	5.2	1.6	0.9	0.3	0.8
Natural gas	0	2.7	27	37	47	55	0	13	18	-	6.4	2.4	1.5	2.9
Nuclear	0.9	14	38	40	59	65	2.2	18	21	16.1	1.1	3.9	0.9	2.1
Hydro	0.2	0.5	0.3	0.4	0.5	0.5	0.4	0.1	0.1	2.5	7.0	0.3	0.0	1.5
Geothermal	0	0	0	0	0.1	0.1	0	0	0	-	18.9	8.0	4.4	8.6
Other renewables	0	0.7	2.2	3.9	6.4	9.0	0	1.0	2.9	-	12.0	5.1	3.5	5.8

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	31	65	146	165	192	208	100	100	100	6.3	2.5	1.5	0.8	1.4
Industry*	13	25	70	76	84	89	41	48	43	7.0	1.8	1.0	0.6	1.0
Transportation	5.1	15	32	37	45	50	16	22	24	7.6	3.1	2.0	0.9	1.8
Residential/Commercial	13	24	42	49	60	67	42	29	32	4.8	3.2	2.1	1.0	1.9
Non-energy, etc.*	0.3	0.9	2.7	2.7	2.9	3.1	1.0	1.8	1.5	8.8	0.4	0.7	0.6	0.6
Energy Source														
Total	31	65	146	165	192	208	100	100	100	6.3	2.5	1.5	0.8	1.4
Coal	9.7	12	8.1	7.2	6.0	5.0	31	5.5	2.4	-0.8	-2.1	-1.9	-1.7	-1.9
Oil	19	44	85	91	101	105	60	58	51	6.2	1.4	1.1	0.4	0.9
Natural gas	0	0.7	16	22	33	41	0	11	20	-	6.9	4.0	2.2	3.8
Electricity	2.8	8.1	31	36	43	47	9.0	21	22	10.0	3.5	1.7	0.8	1.7
Heat	0	0	4.5	5.3	6.3	6.9	0	3.1	3.3	-	3.1	1.9	0.9	1.7
Renewables	0	0.7	1.8	2.4	2.8	3.1	0	1.2	1.5	-	5.9	1.4	1.3	2.3

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	37	105	388	462	548	592	100	100	100	9.8	3.6	1.7	0.8	1.7
Coal	2.5	18	149	194	212	236	6.7	38	40	17.8	5.4	0.9	1.1	1.9
Oil	29	19	26	23	18	13	79	6.7	2.1	-0.5	-2.1	-2.5	-3.5	-2.8
Natural gas	0	9.6	62	84	85	87	0	16	15	-	6.3	0.1	0.3	1.4
Nuclear	3.5	53	147	155	226	249	9.3	38	42	16.1	1.1	3.9	0.9	2.1
Hydro	2.0	6.4	3.7	5.2	5.3	5.3	5.3	0.9	0.9	2.5	7.0	0.3	0.0	1.5
Geothermal	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Other renewables	0	0	0.4	0.9	1.5	2.0	0	0.1	0.3	-	16.4	5.1	2.9	6.3

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
GDP (billions of US dollars at 2000 value)	123	284	638	802	1,132	1,501	6.8	4.7	3.5	2.9	3.5			
Population (millions of people)	38	43	48	49	50	49	1.0	0.3	0.1	-0.2	0.0			
CO <sub>2</sub> emissions (Mt-C)	34	65	125	145	159	168	5.3	3.1	0.9	0.6	1.2			
GDP per capita (US dollars at 2000 value/pers.)	3,221	6,615	13,210	16,331	22,803	30,726	5.8	4.3	3.4	3.0	3.4			
Primary energy consumption per capita	1.09	2.18	4.43	4.96	5.74	6.27	5.8	2.3	1.5	0.9	1.4			
Primary energy consumption per unit of GDP*	337	329	335	304	252	204	0.0	-1.9	-1.9	-2.1	-2.0			
CO <sub>2</sub> emissions per unit of GDP**	281	231	196	181	140	112	-1.4	-1.5	-2.6	-2.2	-2.2			
Primary energy consumption per unit of primary energy cons.	0.83	0.70	0.58	0.60	0.56	0.55	-1.4	0.4	-0.7	-0.2	-0.3			
Automobile ownership volume (millions of vehicles)	0.5	3.4	15	19	25	28	14.5	4.5	2.7	1.2	2.5			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	14	79	319	392	506	580	13.4	4.2	2.6	1.4	2.4			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# Taiwan

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
<b>Total</b>	<b>28</b>	<b>48</b>	<b>105</b>	<b>116</b>	<b>135</b>	<b>155</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>5.3</b>	<b>2.1</b>	<b>1.6</b>	<b>1.4</b>	<b>1.6</b>
Coal	3.9	11	39	43	56	68	14	37	44	9.6	2.2	2.6	2.0	2.3
Oil	21	26	46	47	54	63	72	44	41	3.3	0.3	1.5	1.5	1.3
Natural gas	1.6	1.7	8.6	9.4	11	14	5.6	8.2	8.7	7.0	1.8	1.5	2.2	1.8
Nuclear	2.1	8.6	10	16	13	9.1	7.5	9.9	5.9	6.5	8.5	-1.7	-3.6	-0.5
Hydro	0.3	0.7	0.7	0.7	0.7	0.7	0.9	0.6	0.5	4.1	0.9	0.2	0.0	0.3
Geothermal	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Other renewables	0	0	0	0.2	0.5	0.6	0	0	0.4	-	-	8.5	2.0	-

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	Sector	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020
<b>Total</b>	<b>19</b>	<b>31</b>	<b>64</b>	<b>70</b>	<b>84</b>	<b>99</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>4.9</b>	<b>2.1</b>	<b>1.7</b>	<b>1.6</b>	<b>1.8</b>
Industry*	12	17	34	38	46	56	61	54	57	4.4	2.1	1.9	2.0	2.0
Transportation	3.4	7.5	15	17	19	21	18	24	21	6.1	2.0	1.2	0.9	1.3
Residential/Commercial	3.6	6.3	13	14	17	20	19	20	20	5.2	2.1	1.9	1.5	1.8
Non-energy, etc.*	0.4	0.9	1.6	1.8	2.1	2.5	2.2	2.6	2.6	5.5	2.1	1.7	1.6	1.8
<b>Energy Source</b>														
<b>Total</b>	<b>19</b>	<b>31</b>	<b>64</b>	<b>70</b>	<b>84</b>	<b>99</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>4.9</b>	<b>2.1</b>	<b>1.7</b>	<b>1.6</b>	<b>1.8</b>
Coal	2.2	4.0	6.8	6.8	7.5	8.3	11	11	8.4	4.6	0.1	1.0	1.0	0.8
Oil	12	20	38	42	50	59	65	60	59	4.6	2.1	1.7	1.6	1.8
Natural gas	1.4	0.9	1.8	1.9	2.3	2.7	7.1	2.9	2.7	1.2	1.0	1.7	1.7	1.5
Electricity	3.2	6.5	17	20	24	28	17	27	29	7.0	2.7	2.0	1.8	2.1
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Renewables	0	0	0	0	0	0	0	0	0	-	-	-	-	-

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
<b>Total</b>	<b>43</b>	<b>90</b>	<b>227</b>	<b>260</b>	<b>315</b>	<b>375</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>6.9</b>	<b>2.7</b>	<b>1.9</b>	<b>1.8</b>	<b>2.0</b>
Coal	6.0	26	122	139	197	259	14	54	69	12.9	2.6	3.6	2.7	3.0
Oil	26	22	15	7.5	5.8	6.0	60	6.6	1.6	-2.1	-13.0	-2.4	0.3	-3.6
Natural gas	0	1.1	39	42	50	64	0	17	17	-	1.3	1.7	2.6	2.0
Nuclear	8.2	33	40	60	51	35	19	18	9.3	6.5	8.5	-1.7	-3.6	-0.5
Hydro	2.9	8.2	7.9	8.3	8.4	8.4	6.9	3.5	2.3	4.1	0.9	0.2	0.0	0.3
Geothermal	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Other renewables	0	0	2.9	2.9	3.0	3.0	0	1.3	0.8	-	0.0	0.1	0.1	0.1

Energy and economic indicators							AAGR(%)								
	1980	1990	2005	2010	2020	2030	1980	2005	2020	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030	2030
GDP (billions of US dollars at 2000 value)	75	161	363	450	647	837	6.5	4.4	3.7	2.6	3.4				
Population (millions of people)	18	20	23	23	23	23	1.0	0.3	0.1	-0.2	0.0				
CO <sub>2</sub> emissions (Mt-C)	21	32	76	79	96	113	5.3	0.9	2.0	1.6	1.6				
GDP per capita (US dollars at 2000 value/pers.)	4,271	7,981	16,020	19,593	27,921	36,904	5.4	4.1	3.6	2.8	3.4				
Primary energy consumption per capita	1.62	2.38	4.62	5.05	5.84	6.84	4.3	1.8	1.5	1.6	1.6				
Primary energy consumption per unit of GDP*	378	298	289	258	209	185	-1.1	-2.2	-2.1	-1.2	-1.8				
CO <sub>2</sub> emissions per unit of GDP**	277	197	209	176	149	135	-1.1	-3.3	-1.7	-1.0	-1.7				
Primary energy consumption per unit of primary energy cons.	0.73	0.66	0.72	0.68	0.71	0.73	0.0	-1.1	0.4	0.3	0.0				
Automobile ownership volume (millions of vehicles)	0.5	2.8	6.7	7.7	8.5	8.9	11.1	2.9	1.0	0.4	1.2				
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	27	137	294	335	367	393	10.0	2.6	0.9	0.7	1.2				

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# Indonesia

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
<b>Total</b>	<b>26</b>	<b>58</b>	<b>128</b>	<b>160</b>	<b>237</b>	<b>336</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>6.5</b>	<b>4.5</b>	<b>4.0</b>	<b>3.5</b>	<b>3.9</b>
Coal	0.2	3.9	25	35	51	73	0.6	20	22	22.3	6.6	3.9	3.6	4.3
Oil	21	34	66	80	109	143	80	51	43	4.7	3.9	3.2	2.8	3.2
Natural gas	4.9	19	31	38	62	97	19	24	29	7.6	4.1	5.2	4.5	4.7
Nuclear	0	0	0	0	3.7	7.3	0	0	2.2	-	-	-	7.2	-
Hydro	0.2	0.6	0.9	1.5	1.8	2.2	0.7	0.7	0.7	6.4	10.8	1.6	2.2	3.6
Geothermal	0	0.9	5.7	6.0	8.6	11	0	4.4	3.3	-	1.2	3.6	2.7	2.7
Other renewables	0	0	0	0.7	1.0	1.5	0	0	0.4	-	-	4.3	3.4	-

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	Sector	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020
<b>Total</b>	<b>21</b>	<b>37</b>	<b>84</b>	<b>108</b>	<b>165</b>	<b>242</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>5.8</b>	<b>5.1</b>	<b>4.4</b>	<b>3.9</b>	<b>4.3</b>
Industry*	7.8	17	39	48	75	112	38	46	46	6.6	4.6	4.4	4.2	4.4
Transportation	6.2	11	26	35	53	75	30	31	31	5.9	6.5	4.2	3.4	4.4
Residential/Commercial	6.4	8.9	19	23	36	54	31	22	22	4.4	4.3	4.7	4.0	4.4
Non-energy, etc.	0.3	0.8	1.0	1.0	1.0	1.0	1.2	1.2	0.4	5.7	0.0	0.0	0.0	0.0
<b>Energy Source</b>														
<b>Total</b>	<b>21</b>	<b>37</b>	<b>84</b>	<b>108</b>	<b>165</b>	<b>242</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>5.8</b>	<b>5.1</b>	<b>4.4</b>	<b>3.9</b>	<b>4.3</b>
Coal	0.1	0.6	9.6	13	20	31	0.7	11	13	18.2	5.6	4.7	4.6	4.8
Oil	18	28	52	66	95	130	85	62	54	4.5	4.6	3.8	3.2	3.7
Natural gas	2.4	6.6	13	15	25	41	11	15	17	7.0	4.0	5.1	4.9	4.8
Electricity	0.5	2.3	9.2	13	24	38	2.6	11	16	12.0	7.6	6.0	4.8	5.8
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Renewables	0	0	0	0.7	1.0	1.5	0	0	0.6	-	-	4.3	3.4	-

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
<b>Total</b>	<b>8.1</b>	<b>33</b>	<b>127</b>	<b>182</b>	<b>325</b>	<b>519</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>11.7</b>	<b>7.4</b>	<b>6.0</b>	<b>4.8</b>	<b>5.8</b>
Coal	0	11	52	77	120	177	0	41	34	-	8.3	4.5	4.0	5.1
Oil	5.8	14	41	41	41	41	72	32	7.8	8.1	0.0	0.0	0.0	0.0
Natural gas	0	0.8	18	39	120	234	0	14	45	47.8	17.4	11.9	6.9	10.9
Nuclear	0	0	0	0	14	28	0	0	5.4	-	-	-	7.2	-
Hydro	2.3	6.7	11	18	21	26	28	8.4	5.0	6.4	10.8	1.6	2.2	3.6
Geothermal	0	1.1	6.6	7.0	10.0	13	0	5.2	2.5	-	1.2	3.6	2.7	2.7
Other renewables	0	0	0	0	0	0	0	0	0	-	-	-	-	-

Energy and economic indicators							AAGR(%)								
	1980	1990	2005	2010	2020	2030	1980	2005	2020	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030	2030
GDP (billions of US dollars at 2000 value)	59	109	208	277	431	638	5.2	6.0	4.5	4.0	4.6				
Population (millions of people)	148	178	221	234	255	271	1.6	1.2	0.9	0.6	0.8				
CO <sub>2</sub> emissions (Mt-C)	21	42	98	124	179	251	6.4	4.7	3.8	3.4	3.8				
GDP per capita (US dollars at 2000 value/pers.)	397	612	942	1,188	1,693	2,352	3.5	4.8	3.6	3.3	3.7				
Primary energy consumption per capita	0.18	0.33	0.58	0.69	0.93	1.24	4.9	3.4	3.1	2.9	3.1				
Primary energy consumption per unit of GDP*	448	533	618	578	551	526	1.3	-1.3	-0.5	-0.5	-0.6				
CO <sub>2</sub> emissions per unit of GDP**	352	381	473	446	416	394	1.2	-1.2	-0.7	-0.6	-0.7				
Primary energy consumption per unit of primary energy cons.	0.79	0.72	0.77	0.77	0.76	0.75	-0.1	0.1	-0.2	-0.1	-0.1				
Automobile ownership volume (millions of vehicles)	1.3	2.8	7.3	10	16	24	7.1	6.7	4.7	4.0	4.8				
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	8.7	16	33	43	63	87	5.5	5.5	3.8	3.3	3.9				

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# Malaysia

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-2005	2005-2010	2010-2020	2020-2030	2005-2030
<b>Total</b>	<b>11</b>	<b>21</b>	<b>58</b>	<b>74</b>	<b>98</b>	<b>127</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>7.0</b>	<b>4.8</b>	<b>2.9</b>	<b>2.5</b>	<b>3.1</b>
Coal	0	1.0	5.9	8.1	13	19	0.4	10	15	22.0	6.8	4.6	4.2	4.9
Oil	8.4	13	27	31	41	50	78	45	39	4.7	3.4	2.7	1.9	2.5
Natural gas	2.2	6.8	26	33	43	55	21	44	44	10.2	5.4	2.6	2.5	3.1
Nuclear	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.1	0.3	0.5	0.6	1.0	1.7	1.1	0.9	1.3	5.9	5.0	5.0	5.0	5.0
Geothermal	0	0	0	0	0	0	0.1	0	0	-100.0	-	-	-	-
Other renewables	0	0	0	0.4	0.6	0.8	0	0	0.6	-	-	5.0	3.0	-

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-2005	2005-2010	2010-2020	2020-2030	2005-2030
<b>Sector</b>														
<b>Total</b>	<b>6.4</b>	<b>13</b>	<b>38</b>	<b>45</b>	<b>63</b>	<b>83</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>7.3</b>	<b>3.8</b>	<b>3.3</b>	<b>2.9</b>	<b>3.2</b>
Industry*	2.9	5.8	16	20	28	39	45	44	47	7.2	4.4	3.3	3.3	3.5
Transportation	2.5	5.5	15	18	24	30	38	41	36	7.6	3.1	3.2	2.1	2.7
Residential/Commercial	0.8	1.7	5.2	6.3	9.1	13	13	14	16	7.6	3.9	3.7	3.7	3.7
Non-energy, etc.*	0.3	0.2	0.6	0.6	0.8	1.0	4.2	1.7	1.2	3.4	0.2	1.9	2.3	1.7
<b>Energy Source</b>														
<b>Total</b>	<b>6.4</b>	<b>13</b>	<b>38</b>	<b>45</b>	<b>63</b>	<b>83</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>7.3</b>	<b>3.8</b>	<b>3.3</b>	<b>2.9</b>	<b>3.2</b>
Coal	0	0.4	1.1	1.4	1.9	2.6	0.6	3.1	3.2	14.3	4.1	3.1	3.2	3.4
Oil	5.6	10	23	26	33	40	87	61	48	5.8	2.5	2.5	1.8	2.2
Natural gas	0	1.1	6.4	7.9	12	17	0.5	17	21	23.2	4.1	4.2	4.0	4.1
Electricity	0.7	1.7	6.9	9.6	15	23	12	18	27	9.3	6.7	4.6	4.2	4.8
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Renewables	0	0	0	0.3	0.4	0.5	0	0	0.6	-	-	2.8	1.8	-

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-2005	2005-2010	2010-2020	2020-2030	2005-2030
<b>Total</b>	<b>10</b>	<b>23</b>	<b>87</b>	<b>118</b>	<b>179</b>	<b>260</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>9.0</b>	<b>6.2</b>	<b>4.2</b>	<b>3.8</b>	<b>4.5</b>
Coal	0	2.8	23	35	59	94	0	26	36	-	8.7	5.4	4.8	5.8
Oil	8.5	11	2.5	0.3	0.2	0.1	85	2.9	0	-4.8	-33.3	-6.7	-3.2	-11.5
Natural gas	0.1	5.1	56	74	105	142	1.2	64	55	27.9	5.9	3.5	3.1	3.8
Nuclear	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Hydro	1.4	4.0	5.8	7.4	12	20	14	6.6	7.5	5.9	5.0	5.0	5.0	5.0
Geothermal	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Other renewables	0	0	0	0.8	2.3	3.8	0	0	1.4	-	-	11.6	5.2	-

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-2005	2005-2010	2010-2020	2020-2030	2005-2030
GDP (billions of US dollars at 2000 value)	25	45	112	146	225	339	6.1	5.4	4.4	4.2	4.5			
Population (millions of people)	14	18	25	28	32	35	2.5	1.7	1.4	1.0	1.3			
CO <sub>2</sub> emissions (Mt-C)	8.3	16	44	56	75	97	7.0	4.7	3.0	2.6	3.2			
GDP per capita (US dollars at 2000 value/pers.)	1,848	2,547	4,437	5,306	7,117	9,739	3.6	3.6	3.0	3.2	3.2			
Primary energy consumption per capita	0.78	1.19	2.31	2.68	3.11	3.63	4.4	3.0	1.5	1.6	1.8			
Primary energy consumption per unit of GDP*	423	466	520	505	437	373	0.8	-0.6	-1.4	-1.6	-1.3			
CO <sub>2</sub> emissions per unit of GDP**	325	356	396	382	334	286	0.8	-0.7	-1.4	-1.5	-1.3			
Primary energy consumption per unit of primary energy cons.	0.77	0.76	0.76	0.76	0.76	0.77	0.0	-0.1	0.1	0.0	0.0			
Automobile ownership volume (millions of vehicles)	0.9	2.4	7.9	9.4	12	14	9.1	3.6	2.8	1.6	2.4			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	65	133	310	339	388	411	6.4	1.8	1.4	0.6	1.1			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# Philippines

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030	
Total	13	19	34	41	61	87	100	100	100	3.8	3.9	4.1	3.6	3.9	
Coal	0.4	1.3	6.1	7.5	16	27	2.7	18	31	11.9	4.2	7.8	5.5	6.1	
Oil	11	12	16	19	26	37	82	47	42	1.5	3.3	3.4	3.5	3.4	
Natural gas	0	0	2.7	4.2	7.4	11	0	7.9	13	-	9.6	5.7	4.6	6.0	
Nuclear	0	0	0	0	0	0	0	0	0	-	-	-	-	-	
Hydro	0.3	0.5	0.7	1.0	1.3	1.5	2.3	2.1	1.7	3.5	5.9	3.0	1.3	2.9	
Geothermal	1.8	4.7	8.5	9.4	10	10	13	25	12	6.4	1.9	0.9	0.0	0.7	
Other renewables	0	0	0	0.2	0.3	0.4	0	0	0.5	-	143.2	5.0	3.3	23.4	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030	
Total	7.9	9.5	19	24	38	56	100	100	100	3.7	4.7	4.5	4.0	4.3	
Industry*	3.0	3.1	4.4	6.1	8.9	12	38	23	21	1.5	6.8	4.0	2.8	4.1	
Transportation	1.9	2.7	10	12	19	29	25	53	52	6.9	3.8	4.5	4.2	4.3	
Residential/Commercial	2.7	3.5	4.5	5.7	9.2	15	34	23	26	2.1	4.8	4.9	4.7	4.8	
Non-energy, etc.*	0.2	0.2	0.2	0.2	0.2	0.2	3.2	1.2	0.4	-0.4	-4.4	0.3	1.0	-0.4	
Energy Source															
Total	7.9	9.5	19	24	38	56	100	100	100	3.7	4.7	4.5	4.0	4.3	
Coal	0.2	0.4	1.3	1.8	2.5	3.2	2.6	6.8	5.8	7.7	6.3	3.5	2.5	3.6	
Oil	6.2	7.3	14	17	24	35	79	73	63	3.3	3.2	3.9	3.8	3.7	
Natural gas	0	0	0	0.6	1.3	1.9	0	0	3.5	-	-	7.7	3.8	-	
Electricity	1.5	1.8	3.9	5.1	9.1	15	19	20	27	4.0	5.7	5.9	5.0	5.5	
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-	
Renewables	0	0	0	0.2	0.3	0.4	0	0	0.7	-	-	4.7	3.2	-	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030	
Total	18	25	57	74	132	215	100	100	100	4.7	5.6	5.9	5.0	5.5	
Coal	0.2	1.9	15	24	60	114	1.0	27	53	19.4	9.5	9.7	6.6	8.4	
Oil	12	12	6.1	5.2	3.4	1.6	68	11	0.8	-2.7	-3.1	-4.1	-7.1	-5.1	
Natural gas	0	0	17	23	41	69	0	30	32	-	6.3	6.0	5.4	5.8	
Nuclear	0	0	0	0	0	0	0	0	0	-	-	-	-	-	
Hydro	3.5	6.1	8.4	11	15	17	20	15	8.0	3.5	5.9	3.0	1.3	2.9	
Geothermal	2.1	5.5	9.9	11	12	12	12	18	5.5	6.4	1.9	0.9	0.0	0.7	
Other renewables	0	0	0	0.3	0.5	0.8	0	0	0.4	-	67.1	7.9	3.9	16.0	

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
GDP (billions of US dollars at 2000 value)	48	56	94	123	196	290	2.8	5.5	4.7	4.0	4.6			
Population (millions of people)	48	61	83	91	107	120	2.2	1.9	1.6	1.2	1.5			
CO <sub>2</sub> emissions (Mt-C)	9.3	11	21	26	43	67	3.4	4.2	5.1	4.4	4.7			
GDP per capita (US dollars at 2000 value/pers.)	989	920	1,136	1,350	1,837	2,416	0.6	3.5	3.1	2.8	3.1			
Primary energy consumption per capita	0.28	0.30	0.41	0.45	0.57	0.72	1.5	1.9	2.5	2.4	2.3			
Primary energy consumption per unit of GDP*	281	329	358	331	311	300	1.0	-1.6	-0.6	-0.4	-0.7			
CO <sub>2</sub> emissions per unit of GDP**	195	200	227	213	222	231	0.6	-1.3	0.4	0.4	0.1			
Primary energy consumption per unit of primary energy cons.	0.69	0.61	0.63	0.64	0.71	0.77	-0.3	0.3	1.0	0.8	0.8			
Automobile ownership volume (millions of vehicles)	0.9	1.2	2.9	4.5	8.3	13	5.0	9.5	6.2	4.9	6.3			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	18	20	35	50	78	111	2.7	7.5	4.6	3.6	4.8			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# Thailand

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	12	29	84	105	155	226	100	100	100	8.0	4.6	4.0	3.9	4.1
Coal	0.5	3.8	11	15	29	59	3.9	13	26	13.5	5.3	7.3	7.3	6.9
Oil	12	20	46	53	68	96	95	55	42	5.7	3.0	2.6	3.5	3.0
Natural gas	0	5.1	26	36	55	67	0	31	29	-	6.7	4.3	2.0	3.9
Nuclear	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.1	0.4	0.5	0.5	0.5	0.5	0.9	0.6	0.2	6.3	0.8	0.0	0.0	0.2
Geothermal	0.1	0.1	0.3	0.3	0.8	2.0	0.5	0.4	0.9	6.7	-2.1	10.3	9.9	7.5
Other renewables	0	0	0	0.7	1.0	1.7	0	0	0.8	-	-	3.3	6.2	-

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	Sector	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020
Total	9.2	22	55	72	110	158	100	100	100	7.4	5.4	4.3	3.7	4.3
Industry*	2.7	6.0	21	30	54	86	29	39	54	8.7	6.7	6.1	4.8	5.7
Transportation	4.0	11	22	28	35	41	43	40	26	7.1	4.6	2.5	1.6	2.6
Residential/Commercial	2.4	4.5	11	14	20	29	26	19	19	6.2	4.9	3.8	4.1	4.2
Non-energy, etc.	0.2	0.2	1.1	1.1	1.1	1.1	1.7	2.0	0.7	8.0	0.0	0.0	0.0	0.0
Energy Source														
Total	9.2	22	55	72	110	158	100	100	100	7.4	5.4	4.3	3.7	4.3
Coal	0.1	1.3	6.6	9.6	16	23	1.0	12	14	18.6	7.6	5.5	3.4	5.1
Oil	8.0	17	36	44	60	81	87	66	51	6.2	3.8	3.2	3.0	3.2
Natural gas	0	0.2	1.9	3.5	7.8	11	0	3.4	7.2	-	13.7	8.3	3.9	7.5
Electricity	1.1	3.3	10	14	25	42	12	19	27	9.3	6.5	5.6	5.4	5.7
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Renewables	0	0	0	0.7	0.9	1.0	0	0	0.6	-	-	2.5	1.6	-

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2005	2010	2020	2030	2030
Total	14	44	132	181	308	516	100	100	100	9.3	6.5	5.5	5.3	5.6
Coal	1.4	11	20	22	63	191	9.8	15	37	11.2	1.8	11.2	11.7	9.5
Oil	12	10	8.7	3.8	1.8	2.0	81	6.6	0.4	-1.2	-15.3	-7.3	1.2	-5.7
Natural gas	0	18	94	145	228	291	0	71	56	-	9.0	4.6	2.5	4.6
Nuclear	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Hydro	1.3	5.0	6.0	6.0	6.0	6.0	8.8	4.6	1.2	6.4	0.0	0.0	0.0	0.0
Geothermal	0	0	0	0	0	0	0	0	0	-	0.0	0.0	0.0	0.0
Other renewables	0	0	3.1	4.5	9.8	26	0	2.3	5.0	-	8.0	8.0	10.2	8.9

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2005	2010	2020	2030	2030
GDP (billions of US dollars at 2000 value)	37	79	157	199	318	498	5.9	4.8	4.8	4.6	4.7			
Population (millions of people)	46	55	64	66	69	70	1.3	0.6	0.4	0.2	0.4			
CO <sub>2</sub> emissions (Mt-C)	10	24	66	81	117	160	7.8	4.2	3.7	3.2	3.6			
GDP per capita (US dollars at 2000 value/pers.)	804	1,452	2,447	3,003	4,598	7,081	4.5	4.2	4.4	4.4	4.3			
Primary energy consumption per capita	0.26	0.53	1.30	1.58	2.24	3.22	6.6	4.0	3.5	3.7	3.7			
Primary energy consumption per unit of GDP*	326	368	532	527	487	455	2.0	-0.2	-0.8	-0.7	-0.6			
CO <sub>2</sub> emissions per unit of GDP**	269	300	420	407	367	322	1.8	-0.6	-1.0	-1.3	-1.1			
Primary energy consumption per unit of primary energy cons.	0.82	0.81	0.79	0.77	0.75	0.71	-0.2	-0.4	-0.3	-0.6	-0.4			
Automobile ownership volume (millions of vehicles)	0.9	2.8	9.8	12	17	22	10.1	4.7	3.5	2.2	3.2			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	19	52	152	186	252	307	8.7	4.1	3.1	2.0	2.8			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# Vietnam

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	4.2	5.4	27	37	63	104	100	100	100	7.7	6.3	5.4	5.1	5.5
Coal	2.3	2.2	8.1	11	21	36	54	30	34	5.2	6.9	6.3	5.5	6.1
Oil	1.8	2.7	12	17	28	41	43	46	39	7.9	6.8	4.8	4.0	4.9
Natural gas	0	0	4.9	6.2	11	19	0	18	18	-	4.6	5.6	5.9	5.5
Nuclear	0	0	0	0	0	3.7	0	0	3.5	-	-	-	-	-
Hydro	0.1	0.5	1.8	2.4	3.8	5.2	3.0	6.7	4.9	11.3	5.0	5.0	3.0	4.2
Geothermal	0	0	0	0	0	0	0	0	0	-	-	0.0	0.0	-
Other renewables	0	0	0	0	0	0	0	0	0	-	-	0.0	0.0	-

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	Sector	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020
Total	3.4	4.2	22	30	51	82	100	100	100	7.8	6.4	5.4	4.9	5.4
Industry*	1.5	1.7	9.2	12	20	33	45	42	41	7.5	4.7	5.6	5.1	5.2
Transportation	0.6	1.4	7.1	11	18	30	19	32	36	10.0	8.4	5.3	5.2	5.9
Residential/Commercial	1.2	1.1	5.4	7.4	12	18	35	25	22	6.2	6.3	4.9	4.1	4.8
Non-energy, etc.*	0	0	0.3	0.4	0.7	1.0	1.3	1.4	1.3	8.1	6.3	5.1	4.5	5.1
Energy Source														
Total	3.4	4.2	22	30	51	82	100	100	100	7.8	6.4	5.4	4.9	5.4
Coal	1.5	1.3	6.0	7.5	11	17	44	27	20	5.7	4.5	4.2	4.0	4.2
Oil	1.7	2.4	12	17	27	40	49	54	49	8.2	7.0	4.8	4.0	4.9
Natural gas	0	0	0.1	0.4	2.5	7.6	0	0.5	9.3	-	30.0	20.8	12.0	18.9
Electricity	0.2	0.5	4.0	5.4	9.9	17	6.8	18	21	12.0	6.3	6.2	5.8	6.1
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Renewables	0	0	0	0	0	0	0	0	0	-	-	-	-	-

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	3.6	8.7	53	73	132	231	100	100	100	11.4	6.4	6.2	5.7	6.0
Coal	1.4	2.0	8.9	17	45	94	40	17	41	7.6	13.5	10.3	7.7	9.9
Oil	0.7	1.3	2.5	2.8	3.7	4.8	18	4.6	2.1	5.5	2.7	2.7	2.7	2.7
Natural gas	0	0	21	26	39	58	0	39	25	-	4.5	4.3	4.0	4.2
Nuclear	0	0	0	0	0	14	0	0	6.1	-	-	-	-	-
Hydro	1.5	5.4	21	27	45	60	42	40	26	11.3	5.0	5.0	3.0	4.2
Geothermal	0	0	0	0	0	0	0	0	0	-	-	0.0	0.0	-
Other renewables	0	0	0	0.1	0.1	0.1	0	0	0.1	-	-	0.0	0.0	-

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2010	2020	2030	2005	2010	2020
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
GDP (billions of US dollars at 2000 value)	8.8	15	45	63	118	211	6.7	7.0	6.5	6.0	6.4			
Population (millions of people)	54	66	83	89	99	108	1.8	1.3	1.1	0.8	1.1			
CO <sub>2</sub> emissions (Mt-C)	4.0	4.7	22	30	52	85	7.1	6.6	5.6	4.9	5.5			
GDP per capita (US dollars at 2000 value/pers.)	164	227	538	706	1,185	1,953	4.9	5.6	5.3	5.1	5.3			
Primary energy consumption per capita	0.08	0.08	0.33	0.42	0.63	0.97	5.9	5.0	4.2	4.3	4.4			
Primary energy consumption per unit of GDP*	484	361	611	593	536	494	0.9	-0.6	-1.0	-0.8	-0.8			
CO <sub>2</sub> emissions per unit of GDP**	451	311	494	485	444	401	0.4	-0.4	-0.9	-1.0	-0.8			
Primary energy consumption per unit of primary energy cons.	0.93	0.86	0.81	0.82	0.83	0.81	-0.6	0.2	0.1	-0.2	0.0			
Automobile ownership volume (millions of vehicles)	0.2	0.2	0.8	1.4	3.3	6.6	5.6	11.2	8.8	7.2	8.6			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	4.0	3.6	9.9	16	33	61	3.7	9.8	7.6	6.3	7.5			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# North America

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	2,005	2,137	2,612	2,706	3,040	3,379	100	100	100	1.1	0.7	1.2	1.1	1.0
Coal	397	483	584	577	678	875	20	22	26	1.5	-0.2	1.6	2.6	1.6
Oil	893	848	1,050	1,079	1,202	1,308	45	40	39	0.7	0.5	1.1	0.9	0.9
Natural gas	522	494	590	618	689	690	26	23	20	0.5	0.9	1.1	0.0	0.6
Nuclear	80	179	235	240	256	261	4.0	9.0	7.7	4.4	0.4	0.7	0.2	0.4
Hydro	46	49	55	60	62	62	2.3	2.1	1.8	0.7	2.0	0.3	0.0	0.5
Geothermal	4.6	14	8.7	10	12	13	0.2	0.3	0.4	2.6	3.7	1.3	1.3	1.8
Other renewables	62	71	90	121	141	169	3.1	3.4	5.0	1.5	6.1	1.6	1.8	2.6

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	1,476	1,467	1,799	1,880	2,121	2,355	100	100	100	0.8	0.9	1.2	1.1	1.1
Industry*	507	413	456	477	532	585	34	25	25	-0.4	0.9	1.1	1.0	1.0
Transportation	478	546	705	748	863	969	32	39	41	1.6	1.2	1.4	1.2	1.3
Residential/Commercial	447	458	569	578	642	715	30	32	30	1.0	0.3	1.1	1.1	0.9
Non-energy, etc.*	44	50	69	77	84	87	3.0	3.8	3.7	1.8	2.2	0.9	0.3	0.9
Energy Source														
Total	1,476	1,467	1,799	1,880	2,121	2,355	100	100	100	0.8	0.9	1.2	1.1	1.1
Coal	60	57	34	34	38	42	4.1	1.9	1.8	-2.3	0.1	1.1	1.0	0.8
Oil	778	768	959	994	1,116	1,223	53	53	52	0.8	0.7	1.2	0.9	1.0
Natural gas	374	346	373	379	399	414	25	21	18	0.0	0.3	0.5	0.4	0.4
Electricity	200	262	364	391	471	558	14	20	24	2.4	1.4	1.9	1.7	1.7
Heat	1.0	2.8	4.1	4.2	4.6	5.0	0.1	0.2	0.2	5.7	0.5	0.9	0.9	0.8
Renewables	62	30	64	77	92	112	4.2	3.5	4.8	0.1	3.7	1.8	2.0	2.3

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	2,801	3,685	4,896	5,234	6,256	7,381	100	100	100	2.3	1.3	1.8	1.7	1.7
Coal	1,303	1,782	2,260	2,288	2,857	3,942	47	46	53	2.2	0.2	2.2	3.3	2.2
Oil	277	147	161	140	155	173	9.9	3.3	2.3	-2.2	-2.8	1.1	1.1	0.3
Natural gas	380	391	819	974	1,300	1,270	14	17	17	3.1	3.5	2.9	-0.2	1.8
Nuclear	304	685	903	919	984	1,002	11	18	14	4.4	0.4	0.7	0.2	0.4
Hydro	530	570	636	701	722	723	19	13	9.8	0.7	2.0	0.3	0.0	0.5
Geothermal	5.4	16	17	20	23	26	0.2	0.3	0.4	4.7	3.5	1.3	1.3	1.8
Other renewables	1.8	94	101	193	216	244	0.1	2.1	3.3	17.6	13.9	1.1	1.2	3.6

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
GDP (billions of US dollars at 2000 value)	5,536	7,591	11,856	13,583	18,018	23,501	3.1	2.8	2.9	2.7	2.8			
Population (millions of people)	252	277	329	345	375	401	1.1	1.0	0.8	0.7	0.8			
CO <sub>2</sub> emissions (Mt-C)	1,456	1,495	1,814	1,841	2,088	2,385	0.9	0.3	1.3	1.3	1.1			
GDP per capita (US dollars at 2000 value/pers)	21,985	27,362	36,068	39,386	48,017	58,586	2.0	1.8	2.0	2.0	2.0			
Primary energy consumption per capita	7.96	7.70	7.95	7.85	8.10	8.42	0.0	-0.3	0.3	0.4	0.2			
Primary energy consumption per unit of GDP*	362	282	220	199	169	144	-2.0	-2.0	-1.6	-1.6	-1.7			
CO <sub>2</sub> emissions per unit of GDP**	263	197	153	136	116	101	-2.1	-2.4	-1.6	-1.3	-1.6			
Primary energy consumption per unit of primary energy cons	0.73	0.70	0.69	0.68	0.69	0.71	-0.2	-0.4	0.1	0.3	0.1			
Automobile ownership volume (millions of vehicles)	169	205	262	281	320	355	1.8	1.4	1.3	1.0	1.2			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	672	740	798	816	854	884	0.7	0.4	0.5	0.4	0.4			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## Central and South America

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	2030
										2005	2010	2020	2030	2030	
<b>Total</b>	<b>321</b>	<b>395</b>	<b>595</b>	<b>674</b>	<b>853</b>	<b>1,051</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>2.5</b>	<b>2.5</b>	<b>2.4</b>	<b>2.1</b>	<b>2.3</b>	
Coal	14	21	32	40	53	67	4.2	5.3	6.4	3.5	4.8	2.8	2.4	3.0	
Oil	228	242	331	353	409	459	71	56	44	1.5	1.3	1.5	1.2	1.3	
Natural gas	51	77	145	180	265	370	16	24	35	4.3	4.4	3.9	3.4	3.8	
Nuclear	0.6	3.2	7.2	8.7	9.0	10	0.2	1.2	1.0	10.4	3.9	0.4	1.2	1.4	
Hydro	19	33	56	63	79	97	5.8	9.3	9.2	4.4	2.6	2.2	2.0	2.2	
Geothermal	1.2	5.0	8.6	10	14	19	0.4	1.4	1.8	8.4	3.4	3.3	3.3	3.3	
Other renewables	8.8	14	16	19	23	28	2.7	2.7	2.6	2.4	3.1	2.2	1.7	2.2	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	2030
<b>Sector</b>															
<b>Total</b>	<b>232</b>	<b>290</b>	<b>431</b>	<b>496</b>	<b>625</b>	<b>766</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>2.5</b>	<b>2.8</b>	<b>2.3</b>	<b>2.1</b>	<b>2.3</b>	
Industry*	85	105	151	174	228	293	37	35	38	2.3	2.9	2.7	2.5	2.7	
Transportation	90	108	170	196	236	273	39	40	36	2.6	2.8	1.9	1.5	1.9	
Residential/Commercial	49	69	99	113	146	182	21	23	24	2.9	2.8	2.6	2.2	2.5	
Non-energy, etc.*	8.4	7.9	11	12	15	18	3.6	2.6	2.3	1.1	2.1	1.8	1.7	1.8	
<b>Energy Source</b>															
<b>Total</b>	<b>232</b>	<b>290</b>	<b>431</b>	<b>496</b>	<b>625</b>	<b>766</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>2.5</b>	<b>2.8</b>	<b>2.3</b>	<b>2.1</b>	<b>2.3</b>	
Coal	6.2	8.5	12	13	17	22	2.7	2.7	2.9	2.6	2.7	2.6	2.6	2.6	
Oil	162	185	254	288	344	400	70	59	52	1.8	2.5	1.8	1.5	1.8	
Natural gas	28	40	71	84	110	143	12	17	19	3.8	3.2	2.8	2.6	2.8	
Electricity	26	43	78	94	132	177	11	18	23	4.5	3.7	3.5	3.0	3.3	
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-	
Renewables	8.8	14	15	17	20	23	3.8	3.4	3.0	2.1	2.6	2.0	1.1	1.7	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	2030
<b>Total</b>	<b>364</b>	<b>613</b>	<b>1,137</b>	<b>1,368</b>	<b>1,936</b>	<b>2,619</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>4.7</b>	<b>3.8</b>	<b>3.5</b>	<b>3.1</b>	<b>3.4</b>	
Coal	7.5	23	61	78	108	145	2.1	5.3	5.5	8.7	5.2	3.3	3.0	3.5	
Oil	97	121	164	170	214	228	27	14	8.7	2.1	0.8	2.3	0.6	1.3	
Natural gas	35	59	209	315	610	1,008	9.7	18	38	7.4	8.6	6.8	5.2	6.5	
Nuclear	2.3	12	28	33	35	39	0.6	2.4	1.5	10.4	3.9	0.4	1.2	1.4	
Hydro	218	388	647	736	919	1,125	60	57	43	4.4	2.6	2.2	2.0	2.2	
Geothermal	1.4	5.9	9.8	12	16	22	0.4	0.9	0.9	8.1	3.5	3.3	3.4	3.4	
Other renewables	4.3	6.6	22	23	34	52	1.2	2.0	2.0	6.9	0.8	4.0	4.3	3.5	

Energy and economic indicators							AAGR(%)								
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	2030
GDP (billions of US dollars at 2000 value)	1,287	1,449	2,177	2,576	3,554	4,768	2.1	3.4	3.3	3.0	3.2				
Population (millions of people)	357	437	551	586	651	704	1.7	1.3	1.1	0.8	1.0				
CO <sub>2</sub> emissions (Mt-C)	228	261	387	435	545	663	2.1	2.4	2.3	2.0	2.2				
GDP per capita (US dollars at 2000 value/pers.)	3,604	3,316	3,952	4,395	5,455	6,769	0.4	2.1	2.2	2.2	2.2				
Primary energy consumption per capita	0.90	0.90	1.08	1.15	1.31	1.49	0.7	1.3	1.3	1.3	1.3				
Primary energy consumption per unit of GDP*	250	273	273	262	240	220	0.4	-0.9	-0.9	-0.8	-0.9				
CO <sub>2</sub> emissions per unit of GDP**	177	180	178	169	153	139	0.0	-1.0	-1.0	-1.0	-1.0				
Primary energy consumption per unit of primary energy cons.	0.71	0.66	0.65	0.64	0.64	0.63	-0.4	-0.2	-0.1	-0.1	-0.1				
Automobile ownership volume (millions of vehicles)	28	38	71	84	115	155	3.7	3.6	3.2	3.1	3.2				
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	80	88	128	144	176	221	1.9	2.3	2.1	2.3	2.2				

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## OECD Europe

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
<b>Total</b>	<b>1,508</b>	<b>1,625</b>	<b>1,876</b>	<b>1,947</b>	<b>2,109</b>	<b>2,265</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>0.9</b>	<b>0.8</b>	<b>0.8</b>	<b>0.7</b>	<b>0.8</b>
Coal	460	438	320	325	312	313	31	17	14	-1.4	0.3	-0.4	0.0	-0.1
Oil	704	627	702	694	713	736	47	37	33	0.0	-0.2	0.3	0.3	0.2
Natural gas	207	258	453	505	611	720	14	24	32	3.2	2.2	1.9	1.7	1.9
Nuclear	60	204	256	244	241	231	4.0	14	10	6.0	-0.9	-0.1	-0.4	-0.4
Hydro	36	38	42	44	50	56	2.4	2.2	2.5	0.6	1.2	1.2	1.1	1.2
Geothermal	4.4	6.7	10	12	18	22	0.3	0.6	1.0	3.6	3.0	4.0	2.3	3.1
Other renewables	36	53	92	123	164	185	2.4	4.9	8.2	3.9	6.0	2.9	1.2	2.8

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
<b>Total</b>	<b>1,102</b>	<b>1,148</b>	<b>1,359</b>	<b>1,410</b>	<b>1,528</b>	<b>1,636</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>0.8</b>	<b>0.7</b>	<b>0.8</b>	<b>0.7</b>	<b>0.7</b>
Industry*	415	389	410	420	441	464	38	30	28	0.0	0.5	0.5	0.5	0.5
Transportation	228	295	385	411	474	522	21	28	32	2.1	1.3	1.4	1.0	1.2
Residential/Commercial	429	433	529	543	575	608	39	39	37	0.8	0.5	0.6	0.6	0.6
Non-energy, etc.*	31	31	35	36	39	42	2.8	2.6	2.6	0.5	0.6	0.9	0.7	0.7
<b>Energy Source</b>														
<b>Total</b>	<b>1,102</b>	<b>1,148</b>	<b>1,359</b>	<b>1,410</b>	<b>1,528</b>	<b>1,636</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>0.8</b>	<b>0.7</b>	<b>0.8</b>	<b>0.7</b>	<b>0.7</b>
Coal	151	122	53	50	42	36	14	3.9	2.2	-4.1	-1.1	-1.8	-1.5	-1.5
Oil	571	549	631	630	655	682	52	46	42	0.4	0.0	0.4	0.4	0.3
Natural gas	168	204	296	312	341	363	15	22	22	2.3	1.1	0.9	0.6	0.8
Electricity	147	190	254	275	323	376	13	19	23	2.2	1.6	1.6	1.5	1.6
Heat	35	37	67	68	70	71	3.1	4.9	4.3	2.7	0.4	0.2	0.1	0.2
Renewables	31	46	57	73	95	106	2.8	4.2	6.5	2.5	5.0	2.7	1.1	2.5

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
<b>Total</b>	<b>2,049</b>	<b>2,632</b>	<b>3,485</b>	<b>3,755</b>	<b>4,398</b>	<b>5,102</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>2.1</b>	<b>1.5</b>	<b>1.6</b>	<b>1.5</b>	<b>1.5</b>
Coal	887	1,016	989	1,031	1,050	1,132	43	28	22	0.4	0.8	0.2	0.8	0.5
Oil	364	203	135	127	127	127	18	3.9	2.5	-3.9	-1.1	0.0	0.0	-0.2
Natural gas	138	167	721	890	1,319	1,836	6.7	21	36	6.8	4.3	4.0	3.4	3.8
Nuclear	230	782	981	936	923	888	11	28	17	6.0	-0.9	-0.1	-0.4	-0.4
Hydro	416	443	486	516	583	651	20	14	13	0.6	1.2	1.2	1.1	1.2
Geothermal	2.7	3.6	7.1	9.0	16	21	0.1	0.2	0.4	3.9	4.7	5.7	2.8	4.3
Other renewables	11	17	166	244	379	447	0.6	4.8	8.8	11.3	8.0	4.5	1.7	4.0

Energy and economic indicators										AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
GDP (billions of US dollars at 2000 value)	5,601	7,128	9,647	10,887	13,603	16,773	2.2	2.4	2.3	2.1	2.2			
Population (millions of people)	472	496	535	546	560	567	0.5	0.4	0.3	0.1	0.2			
CO <sub>2</sub> emissions (Mt-C)	1,168	1,107	1,160	1,189	1,255	1,342	0.0	0.5	0.5	0.7	0.6			
GDP per capita (US dollars at 2000 value/pers)	11,870	14,369	18,020	19,940	24,290	29,589	1.7	2.0	2.0	2.0	2.0			
Primary energy consumption per capita	3.19	3.28	3.50	3.57	3.77	4.00	0.4	0.4	0.5	0.6	0.5			
Primary energy consumption per unit of GDP*	269	228	194	179	155	135	-1.3	-1.7	-1.4	-1.4	-1.4			
CO <sub>2</sub> emissions per unit of GDP**	209	155	120	109	92	80	-2.2	-1.9	-1.7	-1.4	-1.6			
Primary energy consumption per unit of primary energy cons	0.77	0.68	0.62	0.61	0.60	0.59	-0.9	-0.2	-0.3	0.0	-0.2			
Automobile ownership volume (millions of vehicles)	128	185	265	292	343	379	3.0	2.0	1.6	1.0	1.4			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	271	373	495	535	612	669	2.4	1.6	1.4	0.9	1.2			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## Non-OECD Europe

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
<b>Total</b>	<b>1,210</b>	<b>1,538</b>	<b>1,067</b>	<b>1,175</b>	<b>1,375</b>	<b>1,470</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>-0.5</b>	<b>1.9</b>	<b>1.6</b>	<b>0.7</b>	<b>1.3</b>
Coal	349	362	204	243	262	241	29	19	16	-2.1	3.5	0.8	-0.8	0.7
Oil	472	489	221	233	270	285	39	21	19	-3.0	1.1	1.5	0.5	1.0
Natural gas	352	604	545	593	715	803	29	51	55	1.8	1.7	1.9	1.2	1.6
Nuclear	21	61	74	80	99	111	1.7	6.9	7.6	5.2	1.6	2.2	1.2	1.7
Hydro	18	23	26	28	30	29	1.4	2.4	2.0	1.6	1.5	0.6	-0.2	0.4
Geothermal	-1.3	-1.5	-2.7	-1.9	-1.2	0.6	-0.1	-0.3	0	2.9	-7.3	-4.0	-	-193.9
Other renewables	0	0	0.1	0.1	0.2	0.3	0	0	0	-	17.1	4.2	4.4	6.7

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
<b>Total</b>	<b>858</b>	<b>1,093</b>	<b>683</b>	<b>762</b>	<b>895</b>	<b>961</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>-0.9</b>	<b>2.2</b>	<b>1.6</b>	<b>0.7</b>	<b>1.4</b>
Industry*	409	331	246	280	316	332	48	36	34	-2.0	2.6	1.2	0.5	1.2
Transportation	129	186	140	156	201	220	15	20	23	0.3	2.3	2.5	0.9	1.8
Residential/Commercial	278	556	279	305	350	376	32	41	39	0.0	1.8	1.4	0.7	1.2
Non-energy, etc.	42	20	18	21	29	33	4.9	2.6	3.5	-3.4	3.2	3.1	1.6	2.5
<b>Energy Source</b>														
<b>Total</b>	<b>858</b>	<b>1,093</b>	<b>683</b>	<b>762</b>	<b>895</b>	<b>961</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>-0.9</b>	<b>2.2</b>	<b>1.6</b>	<b>0.7</b>	<b>1.4</b>
Coal	150	117	41	44	48	48	17	6.1	4.9	-5.0	1.3	0.8	-0.1	0.6
Oil	328	298	165	181	220	236	38	24	25	-2.7	1.9	2.0	0.7	1.4
Natural gas	212	262	233	274	329	358	25	34	37	0.4	3.3	1.9	0.8	1.7
Electricity	90	128	95	114	150	173	11	14	18	0.2	3.8	2.7	1.5	2.4
Heat	78	288	149	149	147	146	9.0	22	15	2.6	0.0	-0.1	-0.1	-0.1
Renewables	0	0	0.1	0.2	0.2	0.2	0	0	0	-	2.4	1.4	1.2	1.5

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
<b>Total</b>	<b>1,402</b>	<b>1,913</b>	<b>1,597</b>	<b>1,900</b>	<b>2,463</b>	<b>2,868</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>0.5</b>	<b>3.5</b>	<b>2.6</b>	<b>1.5</b>	<b>2.4</b>
Coal	445	448	359	504	622	618	32	23	22	-0.9	7.0	2.1	-0.1	2.2
Oil	353	271	54	61	74	89	25	3.4	3.1	-7.2	2.4	1.9	1.9	2.0
Natural gas	294	695	595	698	1,036	1,386	21	37	48	2.9	3.2	4.0	3.0	3.4
Nuclear	79	231	281	306	379	427	5.6	18	15	5.2	1.7	2.2	1.2	1.7
Hydro	204	269	304	326	345	338	15	19	12	1.6	1.5	0.6	-0.2	0.4
Geothermal	0	0	0.4	1.4	2.1	4.2	0	0	0.1	-	27.6	4.1	7.2	9.7
Other renewables	27	0	3.1	3.8	4.5	5.7	1.9	0.2	0.2	-8.3	4.1	1.8	2.5	2.5

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
GDP (billions of US dollars at 2000 value)	580	714	684	960	1,638	2,170	0.7	7.0	5.5	2.9	4.7			
Population (millions of people)	322	349	340	337	331	320	0.2	-0.2	-0.2	-0.3	-0.2			
CO <sub>2</sub> emissions (Mt-C)	972	1,170	743	824	949	991	-1.1	2.1	1.4	0.4	1.2			
GDP per capita (US dollars at 2000 value/pers.)	1,799	2,046	2,015	2,848	4,954	6,778	0.5	7.2	5.7	3.2	5.0			
Primary energy consumption per capita	3.75	4.41	3.14	3.49	4.16	4.59	-0.7	2.1	1.8	1.0	1.5			
Primary energy consumption per unit of GDP*	2,086	2,154	1,559	1,225	839	678	-1.2	-4.7	-3.7	-2.1	-3.3			
CO <sub>2</sub> emissions per unit of GDP**	1,676	1,639	1,085	858	579	457	-1.7	-4.6	-3.9	-2.3	-3.4			
Primary energy consumption per unit of primary energy cons.	0.80	0.76	0.70	0.70	0.69	0.67	-0.6	0.1	-0.2	-0.2	-0.1			
Automobile ownership volume (millions of vehicles)	22	33	64	95	178	205	4.4	8.4	6.5	1.4	4.8			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	68	96	187	282	538	640	4.1	8.5	6.7	1.8	5.0			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

# Africa

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	133	202	319	355	458	561	100	100	100	3.6	2.2	2.6	2.1	2.3
Coal	51	74	102	104	107	105	39	32	19	2.8	0.4	0.3	-0.2	0.1
Oil	64	90	132	144	179	210	48	41	37	2.9	1.7	2.2	1.6	1.9
Natural gas	12	31	73	94	156	227	9.2	23	40	7.4	5.3	5.1	3.8	4.6
Nuclear	0	2.2	2.9	3.8	6.2	6.2	0	0.9	1.1	-	5.0	5.1	0.0	3.0
Hydro	4.1	4.8	7.8	8.5	8.5	12	3.1	2.5	2.2	2.6	1.7	0.0	3.6	1.8
Geothermal	0.8	0.1	0.8	0.9	0.9	0.9	0.6	0.3	0.2	0.1	0.7	0.0	0.0	0.1
Other renewables	0	0	0.2	0.3	0.5	1.2	0	0.1	0.2	-	11.7	5.0	10.0	8.3

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	95	124	194	220	287	358	100	100	100	2.9	2.6	2.7	2.2	2.5
Industry*	41	52	63	69	89	113	43	33	32	1.8	1.9	2.5	2.5	2.4
Transportation	31	40	67	80	101	113	33	35	31	3.1	3.7	2.3	1.1	2.1
Residential/Commercial	20	29	57	63	88	119	21	30	33	4.3	2.0	3.3	3.1	3.0
Non-energy, etc.	2.8	3.5	6.3	6.9	9.3	12	2.9	3.2	3.4	3.4	2.0	3.0	2.8	2.7
Energy Source														
Total	95	124	194	220	287	358	100	100	100	2.9	2.6	2.7	2.2	2.5
Coal	21	19	18	19	21	22	22	9.1	6.2	-0.7	1.7	0.7	0.6	0.9
Oil	57	74	112	128	164	195	60	58	54	2.8	2.8	2.5	1.8	2.2
Natural gas	3.4	9.5	25	25	32	41	3.6	13	11	8.3	0.3	2.6	2.4	2.1
Electricity	14	21	39	47	70	100	14	20	28	4.3	3.7	4.0	3.6	3.8
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Renewables	0	0	0	0	0	0	0	0	0	-	-	-	-	-

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
Total	183	316	563	687	1,026	1,465	100	100	100	4.6	4.1	4.1	3.6	3.9
Coal	100	165	251	281	366	433	54	45	30	3.8	2.3	2.7	1.7	2.2
Oil	22	43	59	59	67	73	12	10	5.0	3.9	0.2	1.2	0.8	0.9
Natural gas	14	43	149	229	464	780	7.6	26	53	9.9	9.0	7.3	5.3	6.8
Nuclear	0	8.4	11	14	24	24	0	2.0	1.6	-	5.0	5.1	0.0	3.0
Hydro	47	56	91	99	99	141	26	16	9.6	2.6	1.7	0.0	3.6	1.8
Geothermal	0	0.3	0.9	0.9	0.9	0.9	0	0.2	0.1	-	0.7	0.0	0.0	0.1
Other renewables	0	0	2.0	3.4	5.5	14	0	0.4	1.0	-	11.1	4.8	9.8	8.1

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2030	2005	2010	2020	2030	2005	2010	2020	2030
GDP (billions of US dollars at 2000 value)	351	445	709	869	1,282	1,841	2.9	4.2	4.0	3.7	3.9			
Population (millions of people)	476	632	902	1,010	1,243	1,486	2.6	2.3	2.1	1.8	2.0			
CO <sub>2</sub> emissions (Mt-C)	115	171	261	286	357	423	3.3	1.9	2.2	1.7	1.9			
GDP per capita (US dollars at 2000 value/pers.)	737	704	786	861	1,031	1,239	0.3	1.8	1.8	1.9	1.8			
Primary energy consumption per capita	0.28	0.32	0.35	0.35	0.37	0.38	0.9	-0.1	0.5	0.3	0.3			
Primary energy consumption per unit of GDP*	378	453	449	409	357	305	0.7	-1.9	-1.3	-1.6	-1.5			
CO <sub>2</sub> emissions per unit of GDP**	327	385	368	329	278	230	0.5	-2.2	-1.7	-1.9	-1.9			
Primary energy consumption per unit of primary energy cons.	0.86	0.85	0.82	0.81	0.78	0.75	-0.2	-0.3	-0.3	-0.3	-0.3			
Automobile ownership volume (millions of vehicles)	9.8	14	21	25	35	50	3.2	2.9	3.6	3.6	3.4			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	21	23	24	24	28	34	0.5	0.8	1.4	1.8	1.4			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## Middle East

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
Total	132	227	502	603	827	1,049	100	100	100	5.5	3.7	3.2	2.4	3.0
Coal	1.1	3.0	8.9	10	13	17	0.8	1.8	1.6	8.7	2.6	2.7	2.7	2.7
Oil	100	150	275	325	441	541	76	55	52	4.1	3.4	3.1	2.1	2.7
Natural gas	29	72	216	265	364	482	22	43	46	8.3	4.1	3.2	2.9	3.3
Nuclear	0	0	0	0	3.7	3.7	0	0	0.3	-	-	-	0.0	-
Hydro	0.8	1.0	1.8	2.3	3.5	3.5	0.6	0.4	0.3	3.2	4.9	4.1	0.0	2.6
Geothermal	0	0	0	0	0	0	0	0	0	-201.3	0.0	0.0	0.0	0.0
Other renewables	0	0.4	0.8	1.0	1.3	1.7	0	0.2	0.2	-	4.1	3.0	2.3	2.9

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
Total	91	164	330	403	563	716	100	100	100	5.3	4.1	3.4	2.4	3.1
Industry*	34	59	115	145	205	277	37	35	39	5.0	4.8	3.5	3.0	3.6
Transportation	32	60	107	127	182	219	35	32	31	5.0	3.5	3.7	1.9	2.9
Residential/Commercial	22	41	98	120	162	203	24	30	28	6.2	4.1	3.0	2.3	2.9
Non-energy, etc.*	3.5	5.5	9.9	11	13	17	3.9	3.0	2.4	4.2	1.9	2.2	2.4	2.2
Energy Source														
Total	91	164	330	403	563	716	100	100	100	5.3	4.1	3.4	2.4	3.1
Coal	0.5	0.3	0.7	0.8	0.8	0.8	0.6	0.2	0.1	1.5	0.1	0.1	0.1	0.1
Oil	73	116	199	239	336	416	80	60	58	4.1	3.8	3.5	2.1	3.0
Natural gas	11	31	87	107	143	187	12	26	26	8.5	4.3	2.9	2.7	3.1
Electricity	6.5	17	43	55	82	111	7.1	13	16	7.9	5.2	4.0	3.1	3.9
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Renewables	0	0	0	0	0	0	0	0	0	-	-	-	-	-

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
Total	95	240	640	802	1,184	1,607	100	100	100	7.9	4.6	4.0	3.1	3.8
Coal	0	10	35	41	56	78	0	5.5	4.9	-	2.8	3.3	3.3	3.2
Oil	49	114	240	286	379	479	52	38	30	6.5	3.5	2.9	2.4	2.8
Natural gas	36	104	343	448	695	996	38	54	62	9.4	5.5	4.5	3.7	4.4
Nuclear	0	0	0	0	14	14	0	0	0.9	-	-	-	0.0	-
Hydro	9.7	12	21	27	40	40	10	3.3	2.5	3.2	4.9	4.1	0.0	2.6
Geothermal	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Other renewables	0	0	0	0	0	0	0	0	0	-	0.1	0.0	0.0	0.0

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
GDP (billions of US dollars at 2000 value)	582	618	1,152	1,458	2,088	2,923	2.8	4.8	3.7	3.4	3.8			
Population (millions of people)	93	131	188	207	247	284	2.9	2.0	1.8	1.4	1.7			
CO <sub>2</sub> emissions (Mt-C)	100	169	362	434	592	748	5.3	3.7	3.2	2.4	2.9			
GDP per capita (US dollars at 2000 value/pers.)	6,261	4,700	6,121	7,032	8,435	10,296	-0.1	2.8	1.8	2.0	2.1			
Primary energy consumption per capita	1.42	1.73	2.67	2.91	3.34	3.69	2.6	1.7	1.4	1.0	1.3			
Primary energy consumption per unit of GDP*	226	368	436	413	396	359	2.7	-1.1	-0.4	-1.0	-0.8			
CO <sub>2</sub> emissions per unit of GDP**	172	274	314	297	284	256	2.4	-1.1	-0.5	-1.0	-0.8			
Primary energy consumption per unit of primary energy cons.	0.76	0.75	0.72	0.72	0.72	0.71	-0.2	0.0	0.0	0.0	0.0			
Automobile ownership volume (millions of vehicles)	5.8	10	21	29	46	59	5.4	6.2	4.8	2.5	4.1			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	62	77	114	139	186	208	2.5	4.1	2.9	1.1	2.4			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## Oceania

Primary energy consumption	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	2030
<b>Total</b>	<b>80</b>	<b>101</b>	<b>139</b>	<b>153</b>	<b>177</b>	<b>203</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>2.3</b>	<b>1.9</b>	<b>1.5</b>	<b>1.4</b>	<b>1.5</b>
Coal	28	36	56	58	62	65	36	41	32	2.8	0.5	0.7	0.5	0.6
Oil	35	36	45	48	57	65	44	32	32	1.0	1.5	1.7	1.4	1.5
Natural gas	8.3	19	26	33	41	49	10	19	24	4.7	4.5	2.2	1.9	2.5
Nuclear	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Hydro	2.7	3.2	3.4	3.5	3.6	3.7	3.4	2.4	1.8	0.8	0.9	0.3	0.3	0.4
Geothermal	1.0	2.2	1.9	2.4	3.0	4.6	1.3	1.4	2.2	2.6	4.0	2.5	4.2	3.5
Other renewables	4.2	4.6	6.3	8.2	11	15	5.2	4.5	7.2	1.7	5.3	2.7	3.2	3.4

Final energy demand	Mtoe						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	2030
<b>Total</b>	<b>55</b>	<b>68</b>	<b>89</b>	<b>98</b>	<b>114</b>	<b>130</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>2.0</b>	<b>1.9</b>	<b>1.5</b>	<b>1.3</b>	<b>1.5</b>
Industry*	21	25	30	33	37	40	39	33	31	1.3	2.0	1.1	0.9	1.2
Transportation	20	26	36	39	47	54	37	40	41	2.3	1.6	1.8	1.5	1.7
Residential/Commercial	12	15	21	24	28	33	21	24	25	2.5	2.4	1.7	1.6	1.8
Non-energy, etc.*	1.5	1.9	2.3	2.4	2.6	2.7	2.7	2.6	2.1	1.7	0.8	0.8	0.7	0.7
<b>Energy Source</b>														
<b>Total</b>	<b>55</b>	<b>68</b>	<b>89</b>	<b>98</b>	<b>114</b>	<b>130</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>2.0</b>	<b>1.9</b>	<b>1.5</b>	<b>1.3</b>	<b>1.5</b>
Coal	5.0	5.0	4.0	3.9	3.6	3.4	9.2	4.4	2.6	-0.9	-0.4	-0.8	-0.5	-0.6
Oil	31	35	46	49	57	65	58	52	50	1.5	1.3	1.5	1.3	1.4
Natural gas	5.7	10	13	16	19	22	10	15	17	3.5	3.3	1.8	1.6	2.0
Electricity	8.5	14	21	24	28	33	16	23	25	3.7	2.6	1.7	1.5	1.8
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Renewables	3.9	4.0	4.9	5.5	6.4	7.1	7.2	5.5	5.4	0.9	2.4	1.4	1.1	1.4

Power generation	TWh						Share, %			AAGR(%)				
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	2030
<b>Total</b>	<b>118</b>	<b>187</b>	<b>294</b>	<b>329</b>	<b>390</b>	<b>451</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>3.7</b>	<b>2.3</b>	<b>1.7</b>	<b>1.5</b>	<b>1.7</b>
Coal	70	120	207	219	251	277	60	70	61	4.4	1.1	1.4	1.0	1.2
Oil	5.2	4.2	1.9	2.0	2.2	2.4	4.4	0.7	0.5	-3.9	0.7	0.8	0.9	0.8
Natural gas	8.7	22	39	55	75	97	7.4	13	21	6.2	7.2	3.2	2.5	3.7
Nuclear	0	0	0	0	0	0	0	0	0	-	-	-	-	-
Hydro	32	37	39	41	42	44	27	13	9.7	0.8	0.9	0.3	0.3	0.4
Geothermal	1.2	2.2	2.9	3.6	4.7	7.4	1.0	1.0	1.6	3.6	4.6	2.8	4.7	3.9
Other renewables	0.7	1.0	4.2	8.8	14	24	0.6	1.4	5.2	7.5	15.7	5.0	5.2	7.1

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	2030
GDP (billions of US dollars at 2000 value)	242	320	531	616	814	1,055	3.2	3.0	2.8	2.6	2.8			
Population (millions of people)	18	21	24	26	28	30	1.3	1.0	0.9	0.7	0.9			
CO <sub>2</sub> emissions (Mt-C)	64	80	113	122	139	155	2.3	1.5	1.3	1.1	1.3			
GDP per capita (US dollars at 2000 value/pers)	13,570	15,618	21,740	23,990	29,003	34,915	1.9	2.0	1.9	1.9	1.9			
Primary energy consumption per capita	4.47	4.94	5.68	5.96	6.32	6.72	1.0	0.9	0.6	0.6	0.6	0.7		
Primary energy consumption per unit of GDP*	329	316	261	248	218	192	-0.9	-1.0	-1.3	-1.2	-1.2			
CO <sub>2</sub> emissions per unit of GDP**	264	249	213	198	171	147	-0.8	-1.5	-1.5	-1.5	-1.5	-1.5		
Primary energy consumption per unit of primary energy cons	0.80	0.79	0.81	0.80	0.78	0.76	0.1	-0.4	-0.2	-0.3	-0.3	-0.3		
Automobile ownership volume (millions of vehicles)	8.8	12	17	19	22	26	2.6	2.2	1.8	1.6	1.8			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	495	564	683	723	792	858	1.3	1.1	0.9	0.8	0.9			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## OECD country total

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	4,077	4,525	5,548	5,775	6,391	6,971	100	100	100	1.2	0.8	1.0	0.9	0.9	
Coal	961	1,063	1,130	1,126	1,220	1,420	24	20	20	0.7	-0.1	0.8	1.5	0.9	
Oil	1,961	1,899	2,249	2,272	2,434	2,572	48	41	37	0.5	0.2	0.7	0.6	0.5	
Natural gas	778	841	1,211	1,322	1,546	1,705	19	22	24	1.8	1.8	1.6	1.0	1.4	
Nuclear	162	450	611	627	677	686	4.0	11	9.8	5.4	0.5	0.8	0.1	0.5	
Hydro	93	101	109	120	128	134	2.3	2.0	1.9	0.6	1.8	0.7	0.5	0.8	
Geothermal	12	29	30	35	45	54	0.3	0.5	0.8	3.9	3.0	2.4	1.9	2.3	
Other renewables	109	143	206	273	342	400	2.7	3.7	5.7	2.6	5.8	2.3	1.6	2.7	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	2,964	3,140	3,853	4,020	4,444	4,833	100	100	100	1.1	0.9	1.0	0.8	0.9	
Industry*	1,092	1,012	1,127	1,172	1,264	1,351	37	29	28	0.1	0.8	0.8	0.7	0.7	
Transportation	811	990	1,299	1,378	1,576	1,747	27	34	36	1.9	1.2	1.4	1.0	1.2	
Residential/Commercial	975	1,041	1,307	1,342	1,465	1,589	33	34	33	1.2	0.5	0.9	0.8	0.8	
Non-energy, etc.*	86	97	120	129	139	145	2.9	3.1	3.0	1.3	1.4	0.8	0.4	0.8	
Energy Source															
Total	2,964	3,140	3,853	4,020	4,444	4,833	100	100	100	1.1	0.9	1.0	0.8	0.9	
Coal	249	229	126	120	112	106	8.4	3.3	2.2	-2.7	-1.1	-0.7	-0.5	-0.7	
Oil	1,598	1,641	2,000	2,041	2,203	2,341	54	52	48	0.9	0.4	0.8	0.6	0.6	
Natural gas	570	590	740	774	846	903	19	19	19	1.1	0.9	0.9	0.7	0.8	
Electricity	408	548	770	836	992	1,156	14	20	24	2.6	1.7	1.7	1.5	1.6	
Heat	36	40	76	79	81	83	1.2	2.0	1.7	3.1	0.5	0.3	0.2	0.3	
Renewables	104	91	137	167	206	239	3.5	3.6	4.9	1.1	4.0	2.1	1.5	2.2	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	5,644	7,570	10,393	11,205	13,259	15,420	100	100	100	2.5	1.5	1.7	1.5	1.6	
Coal	2,317	3,060	3,947	4,032	4,701	5,926	41	38	38	2.2	0.4	1.5	2.3	1.6	
Oil	979	694	538	480	511	536	17	5.2	3.5	-2.4	-2.2	0.6	0.5	0.0	
Natural gas	618	770	1,958	2,372	3,257	3,923	11	19	25	4.7	3.9	3.2	1.9	2.8	
Nuclear	621	1,725	2,346	2,408	2,597	2,634	11	23	17	5.5	0.5	0.8	0.1	0.5	
Hydro	1,085	1,170	1,270	1,390	1,484	1,554	19	12	10	0.6	1.8	0.7	0.5	0.8	
Geothermal	11	29	37	44	56	69	0.2	0.4	0.4	5.0	3.4	2.5	2.0	2.5	
Other renewables	14	123	296	477	653	777	0.2	2.8	5.0	13.1	10.1	3.2	1.7	3.9	

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
GDP (billions of US dollars at 2000 value)	14,641	19,847	28,301	32,252	41,155	51,578	2.7	2.6	2.5	2.3	2.4			
Population (millions of people)	964	1,044	1,168	1,202	1,256	1,291	0.8	0.6	0.4	0.3	0.4			
CO <sub>2</sub> emissions (Mt-C)	3,046	3,128	3,676	3,752	4,118	4,541	0.8	0.4	0.9	1.0	0.8			
GDP per capita (US dollars at 2000 value/pers)	15,187	19,018	24,238	26,830	32,768	39,955	1.9	2.1	2.0	2.0	2.0			
Primary energy consumption per capita	4.23	4.34	4.75	4.80	5.09	5.40	0.5	0.2	0.6	0.6	0.5			
Primary energy consumption per unit of GDP*	278	228	196	179	155	135	-1.4	-1.8	-1.4	-1.4	-1.5			
CO <sub>2</sub> emissions per unit of GDP**	208	158	130	116	100	88	-1.9	-2.2	-1.5	-1.3	-1.5			
Primary energy consumption per unit of primary energy cons	0.75	0.69	0.66	0.65	0.64	0.65	-0.5	-0.4	-0.1	0.1	-0.1			
Automobile ownership volume (millions of vehicles)	350	473	655	714	827	918	2.5	1.7	1.5	1.0	1.4			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	363	453	561	594	659	711	1.8	1.1	1.0	0.8	1.0			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## Non-OECD country total

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	2,371	3,364	4,767	5,749	7,587	9,509	100	100	100	2.8	3.8	2.8	2.3	2.8	
Coal	814	1,151	1,760	2,150	2,588	2,978	34	37	31	3.1	4.1	1.9	1.4	2.1	
Oil	1,022	1,208	1,580	1,857	2,466	3,077	43	33	32	1.8	3.3	2.9	2.2	2.7	
Natural gas	456	833	1,150	1,376	1,945	2,693	19	24	28	3.8	3.6	3.5	3.3	3.5	
Nuclear	24	76	110	136	233	310	1.0	2.3	3.3	6.3	4.3	5.5	2.9	4.2	
Hydro	52	84	142	173	216	252	2.2	3.0	2.6	4.1	4.0	2.2	1.6	2.3	
Geothermal	1.6	4.9	15	18	25	35	0.1	0.3	0.4	9.5	3.6	3.4	3.5	3.4	
Other renewables	2.0	7.4	9.4	38	115	164	0.1	0.2	1.7	6.5	32.4	11.7	3.6	12.1	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	1,699	2,350	3,008	3,680	4,921	6,224	100	100	100	2.3	4.1	2.9	2.4	3.0	
Industry*	817	916	1,320	1,625	2,065	2,503	48	44	40	1.9	4.3	2.4	1.9	2.6	
Transportation	325	476	713	882	1,244	1,591	19	24	26	3.2	4.3	3.5	2.5	3.3	
Residential/Commercial	489	892	861	1,043	1,444	1,919	29	29	31	2.3	3.9	3.3	2.9	3.3	
Non-energy, etc.*	68	66	114	131	168	211	4.0	3.8	3.4	2.1	2.7	2.6	2.3	2.5	
Energy Source															
Total	1,699	2,350	3,008	3,680	4,921	6,224	100	100	100	2.3	4.1	2.9	2.4	3.0	
Coal	448	532	533	627	688	719	26	18	12	0.7	3.3	0.9	0.4	1.2	
Oil	733	863	1,259	1,547	2,144	2,740	43	42	44	2.2	4.2	3.3	2.5	3.2	
Natural gas	258	361	493	602	821	1,086	15	16	17	2.6	4.1	3.2	2.8	3.2	
Electricity	173	286	522	682	1,005	1,376	10	17	22	4.5	5.5	3.9	3.2	4.0	
Heat	85	301	192	208	234	262	5.0	6.4	4.2	3.3	1.5	1.2	1.1	1.2	
Renewables	2.0	7.0	7.9	14	28	38	0.1	0.3	0.6	5.7	12.4	6.9	3.4	6.5	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	2,563	4,230	7,831	10,116	14,731	20,016	100	100	100	4.6	5.3	3.8	3.1	3.8	
Coal	797	1,366	3,400	4,531	6,241	8,050	31	43	40	6.0	5.9	3.3	2.6	3.5	
Oil	659	641	662	722	894	1,078	26	8.4	5.4	0.0	1.8	2.2	1.9	2.0	
Natural gas	378	945	1,639	2,214	3,868	6,236	15	21	31	6.0	6.2	5.7	4.9	5.5	
Nuclear	93	288	422	523	895	1,191	3.6	5.4	5.9	6.3	4.4	5.5	2.9	4.2	
Hydro	605	978	1,652	2,011	2,506	2,928	24	21	15	4.1	4.0	2.2	1.6	2.3	
Geothermal	2.6	7.7	20	24	31	42	0.1	0.3	0.2	8.6	3.1	2.8	2.9	2.9	
Other renewables	31	6.7	41	90	295	490	1.2	0.5	2.4	1.1	16.9	12.6	5.2	10.4	

Energy and economic indicators							AAGR(%)						
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005
GDP (billions of US dollars at 2000 value)	3,382	4,474	8,765	11,932	19,155	28,309	3.9	6.4	4.8	4.0	4.8		
Population (millions of people)	3,461	4,203	5,248	5,599	6,288	6,930	1.7	1.3	1.2	1.0	1.1		
CO <sub>2</sub> emissions (Mt-C)	1,979	2,736	3,867	4,611	5,884	7,193	2.7	3.6	2.5	2.0	2.5		
GDP per capita (US dollars at 2000 value/pers.)	977	1,064	1,670	2,131	3,046	4,085	2.2	5.0	3.6	3.0	3.6		
Primary energy consumption per capita	0.69	0.80	0.91	1.03	1.21	1.37	1.1	2.5	1.6	1.3	1.7		
Primary energy consumption per unit of GDP*	701	752	544	482	396	336	-1.0	-2.4	-1.9	-1.6	-1.9		
CO <sub>2</sub> emissions per unit of GDP**	585	612	441	386	307	254	-1.1	-2.6	-2.3	-1.9	-2.2		
Primary energy consumption per unit of primary energy cons.	0.83	0.81	0.81	0.80	0.78	0.76	-0.1	-0.2	-0.3	-0.2	-0.3		
Automobile ownership volume (millions of vehicles)	70	111	243	330	581	844	5.1	6.2	5.8	3.8	5.1		
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	20	27	46	59	92	122	3.4	4.9	4.6	2.8	3.9		

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## Asia (exc. Japan)

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	714	1,221	2,675	3,375	4,598	5,973	100	100	100	5.4	4.8	3.1	2.7	3.3	
Coal	414	720	1,471	1,819	2,219	2,619	58	55	44	5.2	4.3	2.0	1.7	2.3	
Oil	251	371	822	1,013	1,407	1,841	35	31	31	4.9	4.3	3.3	2.7	3.3	
Natural gas	31	74	243	334	569	974	4.3	9.1	16	8.6	6.6	5.5	5.5	5.7	
Nuclear	3.8	24	68	87	177	247	0.5	2.5	4.1	12.2	5.2	7.4	3.4	5.3	
Hydro	12	24	53	75	99	115	1.7	2.0	1.9	6.0	6.9	2.9	1.5	3.1	
Geothermal	1.8	5.7	15	16	20	24	0.2	0.5	0.4	8.8	1.7	2.4	2.0	2.1	
Other renewables	0	0.7	2.8	31	106	154	0	0.1	2.6	-	61.3	13.1	3.8	17.3	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	523	832	1,624	2,084	2,889	3,802	100	100	100	4.6	5.1	3.3	2.8	3.5	
Industry*	287	429	849	1,073	1,359	1,633	55	52	43	4.4	4.8	2.4	1.9	2.7	
Transportation	73	128	308	412	634	891	14	19	23	5.9	5.9	4.4	3.5	4.3	
Residential/Commercial	150	242	395	516	790	1,144	29	24	30	3.9	5.5	4.3	3.8	4.4	
Non-energy, etc.*	13	32	73	83	106	135	2.5	4.5	3.5	7.1	2.8	2.5	2.4	2.5	
Energy Source															
Total	523	832	1,624	2,084	2,889	3,802	100	100	100	4.6	5.1	3.3	2.8	3.5	
Coal	282	400	471	557	609	633	54	29	17	2.1	3.4	0.9	0.4	1.2	
Oil	175	291	684	878	1,266	1,693	33	42	45	5.6	5.1	3.7	3.0	3.7	
Natural gas	15	34	107	151	261	426	2.9	6.6	11	8.1	7.0	5.6	5.0	5.7	
Electricity	44	93	312	427	642	901	8.4	19	24	8.2	6.5	4.2	3.4	4.3	
Heat	7.4	13	48	64	93	123	1.4	2.9	3.2	7.8	5.9	3.8	2.8	3.8	
Renewables	0	0.7	1.9	6.7	17	26	0	0.1	0.7	-	28.7	9.6	4.3	11.0	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	623	1,378	4,517	6,105	9,101	12,659	100	100	100	8.2	6.2	4.1	3.4	4.2	
Coal	247	746	2,876	3,856	5,339	7,061	40	64	56	10.3	6.0	3.3	2.8	3.7	
Oil	205	182	239	242	294	367	33	5.3	2.9	0.6	0.2	2.0	2.3	1.7	
Natural gas	9.2	68	490	723	1,356	2,495	1.5	11	20	17.2	8.1	6.5	6.3	6.7	
Nuclear	15	92	260	335	681	947	2.4	5.7	7.5	12.2	5.2	7.4	3.4	5.3	
Hydro	144	283	621	867	1,151	1,332	23	14	11	6.0	6.9	2.9	1.5	3.1	
Geothermal	2.1	6.6	17	18	22	26	0.3	0.4	0.2	8.6	1.7	2.2	1.5	1.8	
Other renewables	0	0	17	65	259	431	0	0.4	3.4	-	30.7	14.8	5.2	13.8	

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
GDP (billions of US dollars at 2000 value)	1,050	1,945	5,317	7,634	12,813	19,568	6.7	7.5	5.3	4.3	5.3			
Population (millions of people)	2,317	2,780	3,419	3,616	3,984	4,312	1.6	1.1	1.0	0.8	0.9			
CO <sub>2</sub> emissions (Mt-C)	667	1,116	2,362	2,908	3,763	4,731	5.2	4.2	2.6	2.3	2.8			
GDP per capita (US dollars at 2000 value/pers.)	453	700	1,555	2,111	3,216	4,538	5.1	6.3	4.3	3.5	4.4			
Primary energy consumption per capita	0.31	0.44	0.78	0.93	1.15	1.39	3.8	3.6	2.1	1.8	2.3			
Primary energy consumption per unit of GDP*	679	628	503	442	359	305	-1.2	-2.6	-2.1	-1.6	-2.0			
CO <sub>2</sub> emissions per unit of GDP**	635	574	444	381	294	242	-1.4	-3.0	-2.6	-1.9	-2.4			
Primary energy consumption per unit of primary energy cons.	0.93	0.91	0.88	0.86	0.82	0.79	-0.2	-0.5	-0.5	-0.3	-0.4			
Automobile ownership volume (millions of vehicles)	10	28	103	142	270	455	9.6	6.6	6.6	5.4	6.1			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	4.5	10	30	39	68	106	7.9	5.4	5.6	4.5	5.1			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## Asia (Tech. Advanced)

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	1,060	1,665	3,205	3,743	4,553	5,408	100	100	100	4.5	3.2	2.0	1.7	2.1	
Coal	473	798	1,583	1,792	1,890	1,937	45	49	36	4.9	2.5	0.5	0.2	0.8	
Oil	487	626	1,074	1,223	1,484	1,718	46	34	32	3.2	2.6	2.0	1.5	1.9	
Natural gas	52	118	313	398	595	935	4.9	9.8	17	7.4	4.9	4.1	4.6	4.5	
Nuclear	25	77	147	189	307	444	2.4	4.6	8.2	7.3	5.1	5.0	3.7	4.5	
Hydro	20	32	60	82	107	122	1.9	1.9	2.3	4.5	6.4	2.7	1.4	2.9	
Geothermal	2.6	7.2	18	19	23	28	0.2	0.5	0.5	8.0	1.6	2.0	1.7	1.8	
Other renewables	0	6.9	9.9	40	146	225	0	0.3	4.2	-	32.4	13.8	4.4	13.3	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	756	1,136	1,975	2,364	2,961	3,590	100	100	100	3.9	3.7	2.3	1.9	2.4	
Industry*	398	555	976	1,168	1,381	1,583	53	49	44	3.7	3.7	1.7	1.4	2.0	
Transportation	128	205	401	484	648	796	17	20	22	4.7	3.8	3.0	2.1	2.8	
Residential/Commercial	208	333	516	619	817	1,068	28	26	30	3.7	3.7	2.8	2.7	3.0	
Non-energy, etc.*	21	44	82	93	115	143	2.8	4.2	4.0	5.5	2.4	2.2	2.2	2.2	
Energy Source															
Total	756	1,136	1,975	2,364	2,961	3,590	100	100	100	3.9	3.7	2.3	1.9	2.4	
Coal	303	432	497	560	570	560	40	25	16	2.0	2.4	0.2	-0.2	0.5	
Oil	332	480	893	1,049	1,321	1,568	44	45	44	4.0	3.3	2.3	1.7	2.3	
Natural gas	25	48	135	178	280	433	3.3	6.9	12	7.0	5.6	4.6	4.5	4.8	
Electricity	88	158	397	503	677	875	12	20	24	6.2	4.8	3.0	2.6	3.2	
Heat	7.5	13	49	63	86	110	1.0	2.5	3.1	7.8	5.2	3.3	2.5	3.3	
Renewables	0	3.4	4.5	10	26	42	0	0.2	1.2	-	17.4	9.8	4.9	9.3	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	1,195	2,215	5,611	6,975	9,260	11,816	100	100	100	6.4	4.4	2.9	2.5	3.0	
Coal	302	863	3,185	3,879	4,568	5,104	25	57	43	9.9	4.0	1.6	1.1	1.9	
Oil	470	431	385	354	337	359	39	6.9	3.0	-0.8	-1.7	-0.5	0.6	-0.3	
Natural gas	90	235	722	941	1,501	2,527	7.6	13	21	8.7	5.5	4.8	5.3	5.1	
Nuclear	97	294	564	724	1,180	1,703	8.1	10	14	7.3	5.1	5.0	3.7	4.5	
Hydro	233	373	699	955	1,241	1,423	19	12	12	4.5	6.4	2.7	1.4	2.9	
Geothermal	3.0	8.3	20	21	26	29	0.2	0.4	0.2	7.9	1.6	1.8	1.3	1.6	
Other renewables	0	11	38	101	407	695	0	0.7	5.9	-	21.4	14.9	5.5	12.3	

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
GDP (billions of US dollars at 2000 value)	3,843	6,056	10,310	13,235	19,314	26,856	4.0	5.1	3.9	3.4	3.9			
Population (millions of people)	2,434	2,904	3,547	3,744	4,108	4,429	1.5	1.1	0.9	0.8	0.9			
CO2 emissions (Mt-C)	922	1,411	2,704	3,064	3,464	3,846	4.4	2.5	1.2	1.1	1.4			
GDP per capita (US dollars at 2000 value/pers.)	1,579	2,086	2,907	3,535	4,702	6,064	2.5	4.0	2.9	2.6	3.0			
Primary energy consumption per capita	0.44	0.57	0.90	1.00	1.11	1.22	3.0	2.0	1.0	1.0	1.2			
Primary energy consumption per unit of GDP*	276	275	311	283	236	201	0.5	-1.9	-1.8	-1.6	-1.7			
CO2 emissions per unit of GDP***	240	233	262	232	179	143	0.4	-2.5	-2.5	-2.2	-2.4			
Primary energy consumption per unit of primary energy cons.	0.87	0.85	0.84	0.82	0.76	0.71	-0.1	-0.6	-0.7	-0.7	-0.7			
Automobile ownership volume (millions of vehicles)	48	86	177	219	349	533	5.3	4.3	4.8	4.3	4.5			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	20	30	50	58	85	120	3.8	3.1	3.8	3.5	3.6			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## China (Tech. Advanced)

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	419	663	1,494	1,800	2,150	2,487	100	100	100	5.2	3.8	1.8	1.5	2.1	
Coal	313	529	1,088	1,247	1,258	1,209	75	73	49	5.1	2.8	0.1	-0.4	0.4	
Oil	89	110	318	396	505	566	21	21	23	5.2	4.5	2.4	1.2	2.3	
Natural gas	12	13	40	59	132	333	2.9	2.7	13	5.0	8.0	8.4	9.7	8.8	
Nuclear	0	0	14	22	73	128	0	0.9	5.1	-	9.3	13.0	5.8	9.3	
Hydro	5.0	11	34	52	70	76	1.2	2.3	3.1	8.0	8.8	3.0	0.9	3.3	
Geothermal	0	0.2	-0.5	-0.5	-0.2	0.2	0	0	0	-	-2.8	-6.9	-	-196.9	
Other renewables	0	0	0	24	113	175	0	0	7.0	-	-	16.9	4.4	-	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	312	463	890	1,122	1,377	1,607	100	100	100	4.3	4.7	2.1	1.6	2.4	
Industry*	188	259	518	646	718	746	60	58	46	4.1	4.5	1.1	0.4	1.5	
Transportation	25	37	114	156	234	301	7.9	13	19	6.3	6.4	4.2	2.5	4.0	
Residential/Commercial	92	142	208	267	362	489	29	23	30	3.3	5.0	3.1	3.1	3.5	
Non-energy, etc.*	8.3	24	50	54	63	70	2.7	5.6	4.4	7.4	1.7	1.5	1.1	1.4	
Energy Source															
Total	312	463	890	1,122	1,377	1,607	100	100	100	4.3	4.7	2.1	1.6	2.4	
Coal	217	315	373	425	401	356	70	42	22	2.2	2.6	-0.6	-1.2	-0.2	
Oil	60	83	270	355	476	561	19	30	35	6.2	5.6	3.0	1.7	3.0	
Natural gas	6.8	9.7	32	48	92	172	2.2	3.6	11	6.4	8.7	6.6	6.5	7.0	
Electricity	21	41	171	235	317	391	6.8	19	24	8.7	6.5	3.0	2.1	3.4	
Heat	7.4	13	43	57	79	103	2.4	4.9	6.4	7.3	5.5	3.4	2.6	3.5	
Renewables	0	0	0	2.3	13	24	0	0	1.5	-	-	18.9	6.4	-	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	301	621	2,495	3,300	4,351	5,300	100	100	100	8.8	5.8	2.8	2.0	3.1	
Coal	164	443	1,972	2,478	2,783	2,809	55	79	53	10.5	4.7	1.2	0.1	1.4	
Oil	78	49	61	59	57	56	26	2.4	1.1	-1.0	-0.5	-0.4	-0.2	-0.3	
Natural gas	0.7	2.8	12	34	193	708	0.2	0.5	13	12.1	23.1	19.0	13.9	17.7	
Nuclear	0	0	53	83	280	491	0	2.1	9.3	-	9.3	13.0	5.8	9.3	
Hydro	58	127	397	606	811	884	19	16	17	8.0	8.8	3.0	0.9	3.3	
Geothermal	0	0	0	0.1	0.4	0.9	0	0	0	-	-	15.8	9.8	-	
Other renewables	0	0	2.5	40	227	353	0	0.1	6.7	-	73.8	19.0	4.5	21.9	

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
GDP (billions of US dollars at 2000 value)	183	445	1,890	3,086	5,542	8,594	9.8	10.3	6.0	4.5	6.2			
Population (millions of people)	987	1,143	1,308	1,346	1,415	1,452	1.1	0.6	0.5	0.3	0.4			
CO2 emissions (Mt-C)	420	671	1,467	1,686	1,820	1,924	5.1	2.8	0.8	0.6	1.1			
GDP per capita (US dollars at 2000 value/pers.)	185	389	1,445	2,293	3,916	5,917	8.6	9.7	5.5	4.2	5.8			
Primary energy consumption per capita	0.42	0.58	1.14	1.34	1.52	1.71	4.0	3.2	1.3	1.2	1.6			
Primary energy consumption per unit of GDP*	2,288	1,491	790	583	388	289	-4.2	-5.9	-4.0	-2.9	-3.9			
CO2 emissions per unit of GDP***	2,294	1,510	776	547	328	224	-4.2	-6.8	-5.0	-3.8	-4.9			
Primary energy consumption per unit of primary energy cons.	1.00	1.01	0.98	0.94	0.85	0.77	-0.1	-0.9	-1.0	-0.9	-1.0			
Automobile ownership volume (millions of vehicles)	1.8	5.5	32	46	116	233	12.2	7.5	9.8	7.2	8.3			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	1.8	4.8	24	34	82	160	11.0	6.9	9.3	6.9	7.8			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## India (Tech. Advanced)

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-2005	2005-2010	2010-2020	2020-2030	2005-2030	
<b>Total</b>	<b>92</b>	<b>186</b>	<b>379</b>	<b>472</b>	<b>663</b>	<b>876</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>5.8</b>	<b>4.5</b>	<b>3.5</b>	<b>2.8</b>	<b>3.4</b>	
Coal	52	106	208	241	292	327	57	55	37	5.7	3.0	2.0	1.1	1.8	
Oil	34	63	129	169	244	319	37	34	36	5.5	5.6	3.8	2.7	3.7	
Natural gas	1.2	9.8	29	41	76	129	1.3	7.6	15	13.6	7.4	6.3	5.4	6.2	
Nuclear	0.8	1.6	4.5	9.6	31	68	0.8	1.2	7.8	7.3	16.3	12.6	8.1	11.5	
Hydro	4.0	6.2	8.6	10	14	21	4.3	2.3	2.4	3.1	3.3	3.6	3.9	3.7	
Geothermal	0	0.1	0.1	0.1	0.1	0.1	0	0	0	-216.5	0.0	0.0	0.0	0.0	
Other renewables	0	0	0.6	1.4	5.0	12	0	0.2	1.4	-	17.3	13.5	9.3	12.5	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-2005	2005-2010	2010-2020	2020-2030	2005-2030	
<b>Sector</b>															
<b>Total</b>	<b>62</b>	<b>117</b>	<b>199</b>	<b>263</b>	<b>394</b>	<b>552</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>4.8</b>	<b>5.7</b>	<b>4.1</b>	<b>3.4</b>	<b>4.2</b>	
Industry*	30	60	90	113	158	212	48	45	39	4.5	4.6	3.4	3.0	3.5	
Transportation	13	20	37	55	85	110	22	19	20	4.1	8.1	4.6	2.6	4.5	
Residential/Commercial	17	33	58	76	120	179	27	29	32	5.2	5.4	4.6	4.1	4.6	
Non-energy, etc.*	2.2	3.6	13	19	32	50	3.6	6.7	9.0	7.4	7.1	5.3	4.7	5.4	
<b>Energy Source</b>															
<b>Total</b>	<b>62</b>	<b>117</b>	<b>199</b>	<b>263</b>	<b>394</b>	<b>552</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>4.8</b>	<b>5.7</b>	<b>4.1</b>	<b>3.4</b>	<b>4.2</b>	
Coal	27	41	38	42	49	56	44	19	10	1.3	2.4	1.5	1.3	1.6	
Oil	26	52	106	147	219	291	42	53	53	5.7	6.6	4.1	2.9	4.1	
Natural gas	0.7	5.6	14	17	27	41	1.1	7.0	7.4	12.8	4.6	4.4	4.2	4.4	
Electricity	7.7	18	41	56	97	160	12	21	29	6.9	6.3	5.7	5.1	5.6	
Heat	0	0	0	0	0	0	0	0	0	-	-	-	-	-	
Renewables	0	0	0.1	0.4	1.8	4.4	0	0.1	0.8	-	29.0	17.3	9.4	16.3	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-2005	2005-2010	2010-2020	2020-2030	2005-2030	
<b>Total</b>	<b>119</b>	<b>289</b>	<b>699</b>	<b>923</b>	<b>1,512</b>	<b>2,321</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>7.3</b>	<b>5.7</b>	<b>5.1</b>	<b>4.4</b>	<b>4.9</b>	
Coal	61	192	480	619	899	1,180	52	69	51	8.6	5.2	3.8	2.8	3.7	
Oil	7.6	10	31	30	32	33	6.4	4.5	1.4	5.8	-1.0	0.7	0.5	0.3	
Natural gas	0.6	10.0	62	103	234	458	0.5	8.9	20	20.2	10.5	8.6	7.0	8.3	
Nuclear	3.0	6.1	17	37	120	262	2.5	2.5	11	7.3	16.3	12.6	8.1	11.5	
Hydro	47	72	100	117	167	246	39	14	11	3.1	3.3	3.6	3.9	3.7	
Geothermal	0	0	0	0	0	0	0	0	0	-	-	-	-	-	
Other renewables	0	0	8.1	17	60	142	0	1.2	6.1	-	16.6	13.1	9.1	12.1	

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-2005	2005-2010	2010-2020	2020-2030	2005-2030
GDP (billions of US dollars at 2000 value)	156	274	655	961	1,721	2,884	5.9	8.0	6.0	5.3	6.1			
Population (millions of people)	687	850	1,095	1,177	1,331	1,492	1.9	1.5	1.2	1.2	1.2			
CO2 emissions (Mt-C)	82	167	329	395	513	617	5.7	3.7	2.6	1.9	2.5			
GDP per capita (US dollars at 2000 value/pers.)	227	322	598	816	1,293	1,933	4.0	6.4	4.7	4.1	4.8			
Primary energy consumption per capita	0.13	0.22	0.35	0.40	0.50	0.59	3.9	3.0	2.2	1.7	2.1			
Primary energy consumption per unit of GDP*	591	681	579	491	385	304	-0.1	-3.2	-2.4	-2.3	-2.5			
CO2 emissions per unit of GDP***	523	611	503	411	298	214	-0.2	-3.9	-3.2	-3.3	-3.4			
Primary energy consumption per unit of primary energy cons.	0.89	0.90	0.87	0.84	0.77	0.70	-0.1	-0.7	-0.8	-0.9	-0.8			
Automobile ownership volume (millions of vehicles)	1.7	4.3	15	24	50	86	9.3	9.7	7.5	5.5	7.2			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	2.4	5.1	14	21	38	58	7.3	8.1	6.2	4.3	5.8			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /

## Asia (exc. Japan) (Tech. Advanced)

Primary energy consumption	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	714	1,221	2,675	3,212	4,034	4,923	100	100	100	5.4	3.7	2.3	2.0	2.5	
Coal	414	720	1,471	1,692	1,797	1,851	58	55	38	5.2	2.8	0.6	0.3	0.9	
Oil	251	371	822	983	1,270	1,534	35	31	31	4.9	3.6	2.6	1.9	2.5	
Natural gas	31	74	243	326	524	871	4.3	9.1	18	8.6	6.1	4.9	5.2	5.2	
Nuclear	3.8	24	68	88	189	318	0.5	2.5	6.5	12.2	5.4	8.0	5.3	6.4	
Hydro	12	24	53	75	99	115	1.7	2.0	2.3	6.0	6.9	2.9	1.5	3.1	
Geothermal	1.8	5.7	15	16	20	24	0.2	0.5	0.5	8.8	1.7	2.4	2.0	2.1	
Other renewables	0	0.7	2.8	32	135	211	0	0.1	4.3	-	62.5	15.4	4.6	18.8	

Final energy demand	Mtoe						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	523	832	1,624	2,018	2,627	3,282	100	100	100	4.6	4.4	2.7	2.2	2.9	
Industry*	287	429	849	1,042	1,260	1,470	55	52	45	4.4	4.2	1.9	1.6	2.2	
Transportation	73	128	308	394	565	729	14	19	22	5.9	5.0	3.7	2.6	3.5	
Residential/Commercial	150	242	395	499	697	949	29	24	29	3.9	4.8	3.4	3.1	3.6	
Non-energy, etc.*	13	32	73	83	106	134	2.5	4.5	4.1	7.1	2.8	2.5	2.4	2.5	
Energy Source															
Total	523	832	1,624	2,018	2,627	3,282	100	100	100	4.6	4.4	2.7	2.2	2.9	
Coal	282	400	471	538	548	542	54	29	17	2.1	2.7	0.2	-0.1	0.6	
Oil	175	291	684	848	1,138	1,410	33	42	43	5.6	4.4	3.0	2.2	2.9	
Natural gas	15	34	107	149	249	400	2.9	6.6	12	8.1	6.8	5.3	4.8	5.4	
Electricity	44	93	312	413	584	782	8	19	24	8.2	5.8	3.5	3.0	3.7	
Heat	7.4	13	48	62	86	110	1.4	2.9	3.3	7.8	5.3	3.3	2.5	3.4	
Renewables	0	0.7	1.9	7.3	22	37	0	0.1	1.1	-	31.0	11.5	5.5	12.6	

Power generation	TWh						Share, %			AAGR(%)					
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-	
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005		
Total	623	1,378	4,517	5,849	8,124	10,700	100	100	100	8.2	5.3	3.3	2.8	3.5	
Coal	247	746	2,876	3,612	4,317	4,867	40	64	45	10.3	4.7	1.8	1.2	2.1	
Oil	205	182	239	240	279	334	33	5.3	3.1	0.6	0.0	1.5	1.8	1.3	
Natural gas	9.2	68	490	702	1,269	2,321	1.5	11	22	17.2	7.5	6.1	6.2	6.4	
Nuclear	15	92	260	337	727	1,219	2.4	5.7	11	12.2	5.4	8.0	5.3	6.4	
Hydro	144	283	621	867	1,151	1,332	23	14	12	6.0	6.9	2.9	1.5	3.1	
Geothermal	2.1	6.6	17	18	22	26	0.3	0.4	0.2	8.6	1.7	2.2	1.5	1.8	
Other renewables	0	0	17	72	359	625	0	0.4	5.8	-	33.4	17.4	5.7	15.5	

Energy and economic indicators							AAGR(%)							
	1980	1990	2005	2010	2020	2030	1980	2005	2030	1980-	2005-	2010-	2020-	2005-
	2005	2010	2020	2030	2005	2010	2020	2030	2005	2010	2020	2030	2005	
GDP (billions of US dollars at 2000 value)	1,050	1,945	5,317	7,634	12,813	19,568	6.7	7.5	5.3	4.3	5.3			
Population (millions of people)	2,317	2,780	3,419	3,616	3,984	4,312	1.6	1.1	1.0	0.8	0.9			
CO2 emissions (Mt-C)	667	1,116	2,362	2,742	3,169	3,588	5.2	3.0	1.5	1.2	1.7			
GDP per capita (US dollars at 2000 value/pers.)	453	700	1,555	2,111	3,216	4,538	5.1	6.3	4.3	3.5	4.4			
Primary energy consumption per capita	0.31	0.44	0.78	0.89	1.01	1.14	3.8	2.6	1.3	1.2	1.5			
Primary energy consumption per unit of GDP*	679	628	503	421	315	252	-1.2	-3.5	-2.9	-2.2	-2.7			
CO2 emissions per unit of GDP***	635	574	444	359	247	183	-1.4	-4.2	-3.7	-2.9	-3.5			
Primary energy consumption per unit of primary energy cons.	0.93	0.91	0.88	0.85	0.79	0.73	-0.2	-0.7	-0.8	-0.7	-0.8			
Automobile ownership volume (millions of vehicles)	10	28	103	142	270	455	9.6	6.6	6.6	5.4	6.1			
Automobile ownership volume per 1,000 population (vehicles per 1,000 populat)	4.5	10	30	39	68	106	7.9	5.4	5.6	4.5	5.1			

\*Industry sector includes petrochemical feedstocks, \*\*Toe / millions of US dollars at 2000 value, \*\*\*T-C / millions of US dollars at 2000 value, \*\*\*\*T-C /