

Table 1 Major energy and economic indicators

					World = 100			AAGR (%)	
		1990	2010	2035	1990	2010	2035	1990-2010	2010-2035
Population (Million)	<b>World</b>	<b>5,265</b>	<b>6,828</b>	<b>8,599</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>1.3</b>	<b>0.9</b>
	Asia	2,923	3,751	4,496	55.5	54.9	52.3	1.3	0.7
	P.R. China	1,135	1,338	1,382	21.6	19.6	16.1	0.8	0.1
	India	850	1,171	1,580	16.1	17.1	18.4	1.6	1.2
	Japan	124	127	111	2.4	1.9	1.3	0.1	-0.6
GDP (\$2000 billion)	<b>World</b>	<b>24,389</b>	<b>41,713</b>	<b>85,711</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>2.7</b>	<b>2.9</b>
	Asia	5,947	12,046	31,648	24.4	28.9	36.9	3.6	3.9
	P.R. China	445	3,246	12,864	1.8	7.8	15.0	10.5	5.7
	India	275	995	4,776	1.1	2.4	5.6	6.6	6.5
	Japan	4,150	5,029	6,854	17.0	12.1	8.0	1.0	1.2
Total primary energy consumption (Mtoe)	<b>World</b>	<b>8,035</b>	<b>11,743</b>	<b>17,517</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>1.9</b>	<b>1.6</b>
	Asia	1,655	4,163	7,684	20.6	35.5	43.9	4.7	2.5
	P.R. China	672	2,216	3,983	8.4	18.9	22.7	6.2	2.4
	India	183	524	1,376	2.3	4.5	7.9	5.4	3.9
	Japan	439	497	462	5.5	4.2	2.6	0.6	-0.3
Primary oil consumption (Mtoe)	<b>World</b>	<b>3,232</b>	<b>4,107</b>	<b>5,573</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>1.2</b>	<b>1.2</b>
	Asia	619	1,174	1,987	19.1	28.6	35.7	3.3	2.1
	P.R. China	120	431	836	3.7	10.5	15.0	6.6	2.7
	India	61	162	387	1.9	4.0	6.9	5.0	3.5
	Japan	250	203	145	7.7	4.9	2.6	-1.0	-1.3
Electricity generated (TWh)	<b>World</b>	<b>11,819</b>	<b>21,431</b>	<b>38,128</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>3.0</b>	<b>2.3</b>
	Asia	2,212	7,932	18,113	18.7	37.0	47.5	6.6	3.4
	P.R. China	621	4,208	8,818	5.3	19.6	23.1	10.0	3.0
	India	289	960	3,746	2.4	4.5	9.8	6.2	5.6
	Japan	836	1,111	1,269	7.1	5.2	3.3	1.4	0.5
Energy related CO <sub>2</sub> emissions (Mt)	<b>World</b>	<b>21,250</b>	<b>30,411</b>	<b>43,357</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>1.8</b>	<b>1.4</b>
	Asia	4,960	12,485	21,295	23.3	41.1	49.1	4.7	2.2
	P.R. China	2,337	7,425	11,496	11.0	24.4	26.5	6.0	1.8
	India	591	1,657	4,172	2.8	5.4	9.6	5.3	3.8
	Japan	1,070	1,158	1,138	5.0	3.8	2.6	0.4	-0.1
TPES per GDP (toe/\$2000 million)	<b>World</b>	<b>329</b>	<b>282</b>	<b>204</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>-0.8</b>	<b>-1.3</b>
	Asia	278	346	243	84.5	122.8	118.8	1.1	-1.4
	P.R. China	1,511	683	310	458.6	242.6	151.5	-3.9	-3.1
	India	667	526	288	202.3	186.9	140.9	-1.2	-2.4
	Japan	106	99	67	32.1	35.1	33.0	-0.3	-1.5
TPES per capita (toe/person)	<b>World</b>	<b>1.53</b>	<b>1.72</b>	<b>2.04</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>0.6</b>	<b>0.7</b>
	Asia	0.57	1.11	1.71	37.1	64.5	83.9	3.4	1.7
	P.R. China	0.59	1.66	2.88	38.8	96.3	141.5	5.3	2.2
	India	0.22	0.45	0.87	14.1	26.0	42.7	3.7	2.7
	Japan	3.55	3.91	4.17	232.3	227.1	204.7	0.5	0.3
Vehicle ownership (Million)	<b>World</b>	<b>581</b>	<b>1,043</b>	<b>1,926</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>3.0</b>	<b>2.5</b>
	Asia	85	240	686	14.6	23.1	35.6	5.3	4.3
	P.R. China	5.5	78	315	0.9	7.5	16.4	14.2	5.7
	India	4.3	21	147	0.7	2.0	7.6	8.3	8.0
	Japan	56	75	67	9.7	7.2	3.5	1.5	-0.5

Table 2 Population

(Million)

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	2,923 (55.5)	3,381 (55.7)	3,751 (54.9)	4,167 (54.4)	4,411 (53.1)	4,496 (52.3)	1.3	1.1	0.6	0.4	0.7
P.R. China	1,135 (21.6)	1,263 (20.8)	1,338 (19.6)	1,388 (18.1)	1,393 (16.8)	1,382 (16.1)	0.8	0.4	0.0	-0.2	0.1
India	850 (16.1)	1,016 (16.7)	1,171 (17.1)	1,387 (18.1)	1,523 (18.3)	1,580 (18.4)	1.6	1.7	0.9	0.7	1.2
Japan	124 (2.4)	127 (2.1)	127 (1.9)	123 (1.6)	115 (1.4)	111 (1.3)	0.1	-0.4	-0.6	-0.8	-0.6
Republic of Korea	43 (0.8)	47 (0.8)	49 (0.7)	51 (0.7)	51 (0.6)	51 (0.6)	0.7	0.3	0.1	-0.1	0.2
Chinese Taipei	20 (0.4)	22 (0.4)	23 (0.3)	24 (0.3)	24 (0.3)	24 (0.3)	0.6	0.3	0.0	-0.2	0.1
Indonesia	184 (3.5)	213 (3.5)	240 (3.5)	262 (3.4)	278 (3.3)	284 (3.3)	1.3	0.9	0.6	0.4	0.7
Malaysia	18 (0.3)	23 (0.4)	28 (0.4)	32 (0.4)	35 (0.4)	37 (0.4)	2.2	1.3	0.9	0.9	1.1
Philippines	62 (1.2)	77 (1.3)	93 (1.4)	109 (1.4)	122 (1.5)	129 (1.5)	2.1	1.6	1.2	1.2	1.3
Thailand	57 (1.1)	63 (1.0)	69 (1.0)	72 (0.9)	74 (0.9)	75 (0.9)	1.0	0.4	0.2	0.2	0.3
Vietnam	66 (1.3)	78 (1.3)	87 (1.3)	95 (1.2)	100 (1.2)	102 (1.2)	1.4	0.9	0.5	0.3	0.6
Singapore	3 (0.1)	4 (0.1)	5 (0.1)	6 (0.1)	6 (0.1)	6 (0.1)	2.6	1.0	0.7	0.4	0.7
Asia excl. Japan	2,799 (53.2)	3,253 (53.6)	3,624 (53.1)	4,045 (52.8)	4,296 (51.7)	4,385 (51.0)	1.3	1.1	0.6	0.4	0.8
North Americas	277 (5.3)	313 (5.2)	343 (5.0)	372 (4.9)	399 (4.8)	411 (4.8)	1.1	0.8	0.7	0.6	0.7
Latin Americas	439 (8.3)	516 (8.5)	585 (8.6)	647 (8.4)	696 (8.4)	715 (8.3)	1.4	1.0	0.7	0.5	0.8
OECD Europe	499 (9.5)	521 (8.6)	552 (8.1)	571 (7.5)	583 (7.0)	586 (6.8)	0.5	0.3	0.2	0.1	0.2
Non-OECD Europe	344 (6.5)	341 (5.6)	338 (5.0)	341 (4.5)	337 (4.1)	333 (3.9)	-0.1	0.1	-0.1	-0.2	-0.1
Africa	633 (12.0)	809 (13.3)	1,020 (14.9)	1,278 (16.7)	1,562 (18.8)	1,713 (19.9)	2.4	2.3	2.0	1.9	2.1
Middle East	131 (2.5)	167 (2.7)	212 (3.1)	254 (3.3)	292 (3.5)	311 (3.6)	2.4	1.8	1.4	1.2	1.5
Oceania	20 (0.4)	23 (0.4)	26 (0.4)	30 (0.4)	33 (0.4)	34 (0.4)	1.3	1.2	0.9	0.7	1.0
OECD	1,061 (20.1)	1,147 (18.9)	1,228 (18.0)	1,291 (16.9)	1,336 (16.1)	1,351 (15.7)	0.7	0.5	0.3	0.2	0.4
Non-OECD	4,204 (79.9)	4,924 (81.1)	5,600 (82.0)	6,369 (83.1)	6,977 (83.9)	7,247 (84.3)	1.4	1.3	0.9	0.8	1.0
World	5,265 (100)	6,071 (100)	6,828 (100)	7,661 (100)	8,313 (100)	8,599 (100)	1.3	1.2	0.8	0.7	0.9

Source: United Nations "Population Estimates and Projections: The 2010 Revision", World Bank "World Development Indicators"

Note: Figures in parentheses are global shares (%).

Table 3 GDP

(\$2000 billion)

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	5,947 (24.4)	8,124 (25.1)	12,046 (28.9)	19,192 (33.3)	27,200 (35.8)	31,648 (36.9)	3.6	4.8	3.5	3.1	3.9
P.R. China	445 (1.8)	1,199 (3.7)	3,246 (7.8)	6,942 (12.0)	10,831 (14.2)	12,864 (15.0)	10.5	7.9	4.5	3.5	5.7
India	275 (1.1)	468 (1.4)	995 (2.4)	2,077 (3.6)	3,663 (4.8)	4,776 (5.6)	6.6	7.6	5.8	5.5	6.5
Japan	4,150 (17.0)	4,667 (14.4)	5,029 (12.1)	5,782 (10.0)	6,537 (8.6)	6,854 (8.0)	1.0	1.4	1.2	0.9	1.2
Republic of Korea	296 (1.2)	533 (1.6)	801 (1.9)	1,163 (2.0)	1,490 (2.0)	1,641 (1.9)	5.1	3.8	2.5	2.0	2.9
Chinese Taipei	169 (0.7)	309 (1.0)	450 (1.1)	687 (1.2)	866 (1.1)	945 (1.1)	5.0	4.3	2.3	1.8	3.0
Indonesia	109 (0.4)	165 (0.5)	275 (0.7)	491 (0.9)	777 (1.0)	962 (1.1)	4.7	6.0	4.7	4.4	5.1
Malaysia	47 (0.2)	94 (0.3)	147 (0.4)	233 (0.4)	354 (0.5)	425 (0.5)	5.8	4.7	4.3	3.7	4.3
Philippines	61 (0.3)	81 (0.3)	129 (0.3)	201 (0.3)	310 (0.4)	383 (0.4)	3.8	4.6	4.4	4.3	4.4
Thailand	79 (0.3)	123 (0.4)	187 (0.4)	302 (0.5)	448 (0.6)	545 (0.6)	4.4	4.9	4.0	4.0	4.4
Vietnam	15 (0.1)	31 (0.1)	63 (0.2)	120 (0.2)	213 (0.3)	271 (0.3)	7.4	6.7	5.9	5.0	6.0
Singapore	47 (0.2)	94 (0.3)	163 (0.4)	247 (0.4)	325 (0.4)	356 (0.4)	6.4	4.2	2.8	1.8	3.2
Asia excl. Japan	1,797 (7.4)	3,457 (10.7)	7,017 (16.8)	13,410 (23.3)	20,663 (27.2)	24,794 (28.9)	7.0	6.7	4.4	3.7	5.2
North Americas	7,608 (31.2)	10,624 (32.8)	12,572 (30.1)	16,156 (28.0)	20,548 (27.0)	22,712 (26.5)	2.5	2.5	2.4	2.0	2.4
Latin Americas	1,509 (6.2)	2,067 (6.4)	2,866 (6.9)	4,313 (7.5)	5,923 (7.8)	6,727 (7.8)	3.3	4.2	3.2	2.6	3.5
OECD Europe	7,249 (29.7)	9,096 (28.1)	10,436 (25.0)	12,386 (21.5)	14,597 (19.2)	15,629 (18.2)	1.8	1.7	1.7	1.4	1.6
Non-OECD Europe	684 (2.8)	478 (1.5)	788 (1.9)	1,188 (2.1)	1,633 (2.1)	1,855 (2.2)	0.7	4.2	3.2	2.6	3.5
Africa	455 (1.9)	595 (1.8)	942 (2.3)	1,453 (2.5)	2,261 (3.0)	2,788 (3.3)	3.7	4.4	4.5	4.3	4.4
Middle East	621 (2.5)	930 (2.9)	1,477 (3.5)	2,129 (3.7)	2,856 (3.8)	3,231 (3.8)	4.4	3.7	3.0	2.5	3.2
Oceania	316 (1.3)	438 (1.4)	587 (1.4)	820 (1.4)	1,031 (1.4)	1,120 (1.3)	3.1	3.4	2.3	1.7	2.6
OECD	20,072 (82.3)	26,016 (80.4)	30,230 (72.5)	37,471 (65.0)	45,818 (60.2)	49,826 (58.1)	2.1	2.2	2.0	1.7	2.0
Non-OECD	4,317 (17.7)	6,336 (19.6)	11,483 (27.5)	20,166 (35.0)	30,231 (39.8)	35,885 (41.9)	5.0	5.8	4.1	3.5	4.7
World	24,389 (100)	32,352 (100)	41,713 (100)	57,638 (100)	76,049 (100)	85,711 (100)	2.7	3.3	2.8	2.4	2.9

Source: World Bank "World Development Indicators", etc.

Projection by IEEJ

Note: Figures in parentheses are global shares (%).

Table 4 International energy prices

Real			2011	2020	2030	2035
Crude oil		\$2011/bbl	109	115	122	125
Natural gas	Japan	\$2011/Mbtu	15	15	14	14
	United States	\$2011/Mbtu	4.1	5.2	6.4	7.1
	Europe	\$2011/Mbtu	10	11	12	13
Steam coal		\$2011/t	138	136	139	143
Nominal			2011	2020	2030	2035
Crude oil		\$/bbl	109	137	177	201
Natural gas	Japan	\$/Mbtu	15	17	21	23
	United States	\$/Mbtu	4.1	6.2	9.4	11
	Europe	\$/Mbtu	10	13	18	20
Steam coal		\$/t	138	163	203	230

Note: 2% per annum of inflation rates are assumed.

Table 5 Primary energy consumption

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	1,655 (20.6)	2,456 (26.5)	4,163 (35.5)	5,644 (40.0)	7,031 (42.7)	7,684 (43.9)	4.7	3.1	2.2	1.8	2.5
P.R. China	672 (8.4)	980 (10.6)	2,216 (18.9)	3,077 (21.8)	3,744 (22.7)	3,983 (22.7)	6.2	3.3	2.0	1.2	2.4
India	183 (2.3)	309 (3.3)	524 (4.5)	808 (5.7)	1,161 (7.1)	1,376 (7.9)	5.4	4.4	3.7	3.5	3.9
Japan	439 (5.5)	519 (5.6)	497 (4.2)	489 (3.5)	475 (2.9)	462 (2.6)	0.6	-0.2	-0.3	-0.6	-0.3
Republic of Korea	93 (1.2)	188 (2.0)	250 (2.1)	281 (2.0)	297 (1.8)	301 (1.7)	5.1	1.2	0.5	0.3	0.7
Chinese Taipei	48 (0.6)	85 (0.9)	109 (0.9)	127 (0.9)	133 (0.8)	133 (0.8)	4.2	1.5	0.4	0.1	0.8
Indonesia	55 (0.7)	106 (1.1)	154 (1.3)	239 (1.7)	344 (2.1)	406 (2.3)	5.3	4.5	3.7	3.3	3.9
Malaysia	19 (0.2)	44 (0.5)	70 (0.6)	94 (0.7)	128 (0.8)	148 (0.8)	6.7	3.1	3.1	2.9	3.1
Philippines	18 (0.2)	32 (0.3)	34 (0.3)	46 (0.3)	60 (0.4)	69 (0.4)	3.3	3.1	2.7	2.8	2.9
Thailand	27 (0.3)	58 (0.6)	98 (0.8)	149 (1.1)	212 (1.3)	252 (1.4)	6.6	4.3	3.6	3.5	3.9
Vietnam	5 (0.1)	15 (0.2)	45 (0.4)	82 (0.6)	135 (0.8)	166 (0.9)	11.1	6.3	5.1	4.2	5.4
Singapore	12 (0.1)	19 (0.2)	33 (0.3)	41 (0.3)	48 (0.3)	50 (0.3)	5.4	2.3	1.5	1.0	1.7
Asia excl. Japan	1,215 (15.1)	1,937 (20.9)	3,667 (31.2)	5,156 (36.5)	6,556 (39.8)	7,223 (41.2)	5.7	3.5	2.4	2.0	2.7
North Americas	2,124 (26.4)	2,525 (27.2)	2,468 (21.0)	2,524 (17.9)	2,612 (15.9)	2,617 (14.9)	0.8	0.2	0.3	0.0	0.2
Latin Americas	396 (4.9)	532 (5.7)	701 (6.0)	941 (6.7)	1,198 (7.3)	1,315 (7.5)	2.9	3.0	2.4	1.9	2.5
OECD Europe	1,619 (20.2)	1,747 (18.9)	1,816 (15.5)	1,832 (13.0)	1,867 (11.3)	1,876 (10.7)	0.6	0.1	0.2	0.1	0.1
Non-OECD Europe	1,521 (18.9)	985 (10.6)	1,114 (9.5)	1,267 (9.0)	1,392 (8.5)	1,448 (8.3)	-1.5	1.3	0.9	0.8	1.1
Africa	198 (2.5)	249 (2.7)	354 (3.0)	486 (3.4)	615 (3.7)	683 (3.9)	3.0	3.2	2.4	2.1	2.7
Middle East	222 (2.8)	375 (4.1)	628 (5.3)	839 (5.9)	1,046 (6.4)	1,144 (6.5)	5.3	2.9	2.2	1.8	2.4
Oceania	99 (1.2)	125 (1.4)	143 (1.2)	156 (1.1)	168 (1.0)	174 (1.0)	1.8	0.9	0.8	0.6	0.8
OECD	4,511 (56.1)	5,274 (56.9)	5,383 (45.8)	5,547 (39.3)	5,742 (34.9)	5,780 (33.0)	0.9	0.3	0.3	0.1	0.3
Non-OECD	3,323 (41.4)	3,720 (40.2)	6,005 (51.1)	8,142 (57.6)	10,187 (61.9)	11,162 (63.7)	3.0	3.1	2.3	1.8	2.5
World	8,035 (100)	9,266 (100)	11,743 (100)	14,128 (100)	16,458 (100)	17,517 (100)	1.9	1.9	1.5	1.3	1.6

Source: IEA "World Energy Balances"

Projection by IEEJ

Note: Figures in parentheses are global shares (%). World includes international bunkers.

Table 6 Primary energy consumption, coal

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	796 (35.7)	1,099 (46.2)	2,228 (64.1)	2,783 (68.7)	3,301 (71.4)	3,544 (72.8)	5.3	2.3	1.7	1.4	1.9
P.R. China	528 (23.7)	712 (29.9)	1,595 (45.9)	1,896 (46.8)	2,134 (46.2)	2,205 (45.3)	5.7	1.7	1.2	0.7	1.3
India	103 (4.6)	161 (6.8)	288 (8.3)	447 (11.0)	618 (13.4)	721 (14.8)	5.3	4.5	3.3	3.1	3.7
Japan	77 (3.4)	97 (4.1)	115 (3.3)	117 (2.9)	121 (2.6)	124 (2.5)	2.0	0.2	0.3	0.4	0.3
Republic of Korea	26 (1.1)	42 (1.8)	73 (2.1)	72 (1.8)	69 (1.5)	67 (1.4)	5.4	-0.1	-0.5	-0.6	-0.4
Chinese Taipei	11 (0.5)	30 (1.3)	41 (1.2)	44 (1.1)	42 (0.9)	39 (0.8)	6.7	0.6	-0.3	-1.5	-0.2
Indonesia	4 (0.2)	12 (0.5)	30 (0.9)	68 (1.7)	107 (2.3)	133 (2.7)	11.4	8.4	4.6	4.5	6.1
Malaysia	1 (0.1)	2 (0.1)	15 (0.4)	20 (0.5)	30 (0.6)	36 (0.7)	12.6	3.2	4.1	3.8	3.7
Philippines	1 (0.1)	5 (0.2)	8 (0.2)	11 (0.3)	16 (0.3)	19 (0.4)	8.8	3.8	3.5	3.5	3.6
Thailand	4 (0.2)	8 (0.3)	16 (0.5)	27 (0.7)	40 (0.9)	48 (1.0)	7.5	5.0	4.0	4.0	4.4
Vietnam	2 (0.1)	4 (0.2)	15 (0.4)	35 (0.9)	63 (1.4)	81 (1.7)	9.9	9.0	6.1	5.1	7.1
Singapore	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	-5.2	0.0	0.0	0.0	0.0
Asia excl. Japan	720 (32.3)	1,002 (42.1)	2,113 (60.8)	2,666 (65.8)	3,180 (68.8)	3,421 (70.2)	5.5	2.4	1.8	1.5	1.9
North Americas	484 (21.7)	565 (23.8)	525 (15.1)	524 (12.9)	543 (11.7)	530 (10.9)	0.4	-0.0	0.4	-0.5	0.0
Latin Americas	20 (0.9)	27 (1.1)	34 (1.0)	46 (1.1)	64 (1.4)	73 (1.5)	2.6	3.1	3.3	2.6	3.1
OECD Europe	449 (20.1)	331 (13.9)	300 (8.6)	270 (6.7)	259 (5.6)	259 (5.3)	-2.0	-1.0	-0.4	-0.0	-0.6
Non-OECD Europe	367 (16.4)	209 (8.8)	218 (6.3)	232 (5.7)	243 (5.3)	244 (5.0)	-2.6	0.6	0.4	0.1	0.4
Africa	74 (3.3)	90 (3.8)	109 (3.1)	133 (3.3)	149 (3.2)	159 (3.3)	1.9	2.1	1.1	1.3	1.5
Middle East	3 (0.1)	8 (0.3)	10 (0.3)	10 (0.2)	9 (0.2)	9 (0.2)	6.1	-0.3	-0.6	-0.3	-0.4
Oceania	36 (1.6)	49 (2.1)	53 (1.5)	53 (1.3)	54 (1.2)	52 (1.1)	1.9	0.1	0.1	-0.5	-0.0
OECD	1,078 (48.3)	1,094 (46.0)	1,079 (31.0)	1,055 (26.0)	1,072 (23.2)	1,062 (21.8)	0.0	-0.2	0.2	-0.2	-0.1
Non-OECD	1,153 (51.7)	1,285 (54.0)	2,397 (69.0)	2,997 (74.0)	3,550 (76.8)	3,808 (78.2)	3.7	2.3	1.7	1.4	1.9
World	2,231 (100)	2,379 (100)	3,476 (100)	4,052 (100)	4,622 (100)	4,870 (100)	2.2	1.5	1.3	1.1	1.4

Source: IEA "World Energy Balances"

Projection by IEEJ

Note: Figures in parentheses are global shares (%).

Table 7 Primary energy consumption, oil

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	619 (19.1)	917 (25.1)	1,174 (28.6)	1,531 (32.6)	1,842 (34.7)	1,987 (35.7)	3.3	2.7	1.9	1.5	2.1
P.R. China	120 (3.7)	221 (6.0)	431 (10.5)	658 (14.0)	792 (14.9)	836 (15.0)	6.6	4.3	1.9	1.1	2.7
India	61 (1.9)	113 (3.1)	162 (4.0)	226 (4.8)	327 (6.2)	387 (6.9)	5.0	3.4	3.8	3.5	3.5
Japan	250 (7.7)	255 (7.0)	203 (4.9)	176 (3.7)	154 (2.9)	145 (2.6)	-1.0	-1.4	-1.3	-1.2	-1.3
Republic of Korea	50 (1.5)	99 (2.7)	95 (2.3)	94 (2.0)	91 (1.7)	89 (1.6)	3.3	-0.1	-0.3	-0.5	-0.3
Chinese Taipei	26 (0.8)	38 (1.0)	42 (1.0)	46 (1.0)	48 (0.9)	48 (0.9)	2.5	0.8	0.5	-0.0	0.5
Indonesia	33 (1.0)	58 (1.6)	67 (1.6)	94 (2.0)	121 (2.3)	135 (2.4)	3.5	3.4	2.6	2.2	2.9
Malaysia	11 (0.4)	19 (0.5)	26 (0.6)	30 (0.6)	36 (0.7)	40 (0.7)	4.2	1.4	1.9	2.1	1.8
Philippines	11 (0.3)	16 (0.4)	14 (0.3)	18 (0.4)	23 (0.4)	26 (0.5)	1.1	2.7	2.5	2.6	2.6
Thailand	18 (0.6)	32 (0.9)	45 (1.1)	57 (1.2)	70 (1.3)	78 (1.4)	4.6	2.5	2.1	2.2	2.3
Vietnam	3 (0.1)	8 (0.2)	19 (0.5)	29 (0.6)	43 (0.8)	51 (0.9)	10.2	4.5	3.9	3.4	4.0
Singapore	11 (0.4)	17 (0.5)	25 (0.6)	30 (0.6)	34 (0.6)	35 (0.6)	4.0	1.8	1.1	0.8	1.3
Asia excl. Japan	368 (11.4)	662 (18.1)	971 (23.6)	1,355 (28.9)	1,687 (31.8)	1,842 (33.1)	5.0	3.4	2.2	1.8	2.6
North Americas	833 (25.8)	958 (26.2)	891 (21.7)	810 (17.3)	795 (15.0)	792 (14.2)	0.3	-1.0	-0.2	-0.1	-0.5
Latin Americas	237 (7.3)	303 (8.3)	367 (8.9)	462 (9.8)	540 (10.2)	566 (10.2)	2.2	2.3	1.6	1.0	1.7
OECD Europe	606 (18.7)	650 (17.8)	603 (14.7)	547 (11.7)	520 (9.8)	504 (9.0)	-0.0	-1.0	-0.5	-0.6	-0.7
Non-OECD Europe	470 (14.5)	200 (5.5)	223 (5.4)	247 (5.3)	270 (5.1)	277 (5.0)	-3.7	1.0	0.9	0.5	0.9
Africa	87 (2.7)	100 (2.7)	143 (3.5)	190 (4.0)	233 (4.4)	254 (4.6)	2.5	2.8	2.1	1.7	2.3
Middle East	145 (4.5)	216 (5.9)	304 (7.4)	418 (8.9)	518 (9.8)	563 (10.1)	3.8	3.2	2.2	1.7	2.5
Oceania	35 (1.1)	40 (1.1)	46 (1.1)	50 (1.1)	54 (1.0)	55 (1.0)	1.4	0.9	0.7	0.6	0.8
OECD	1,861 (57.6)	2,103 (57.5)	1,951 (47.5)	1,810 (38.6)	1,760 (33.2)	1,736 (31.2)	0.2	-0.8	-0.3	-0.3	-0.5
Non-OECD	1,171 (36.2)	1,281 (35.0)	1,802 (43.9)	2,444 (52.1)	3,011 (56.8)	3,262 (58.5)	2.2	3.1	2.1	1.6	2.4
World	3,232 (100)	3,655 (100)	4,107 (100)	4,693 (100)	5,301 (100)	5,573 (100)	1.2	1.3	1.2	1.0	1.2

Source: IEA "World Energy Balances"

Projection by IEEJ

Note: Figures in parentheses are global shares (%). World includes international bunkers.

Table 8 Primary energy consumption, natural gas

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	116 (6.9)	231 (11.1)	448 (16.4)	766 (22.3)	1,123 (27.0)	1,284 (28.7)	7.0	5.5	3.9	2.7	4.3
P.R. China	13 (0.8)	21 (1.0)	89 (3.2)	260 (7.6)	444 (10.7)	502 (11.2)	10.2	11.4	5.5	2.5	7.2
India	11 (0.6)	23 (1.1)	53 (1.9)	80 (2.3)	127 (3.1)	161 (3.6)	8.4	4.3	4.7	4.9	4.6
Japan	44 (2.6)	66 (3.2)	86 (3.2)	105 (3.1)	120 (2.9)	129 (2.9)	3.4	2.0	1.3	1.5	1.6
Republic of Korea	3 (0.2)	17 (0.8)	39 (1.4)	42 (1.2)	42 (1.0)	41 (0.9)	14.2	0.9	-0.1	-0.5	0.2
Chinese Taipei	2 (0.1)	6 (0.3)	13 (0.5)	18 (0.5)	24 (0.6)	26 (0.6)	10.2	3.3	2.7	1.9	2.8
Indonesia	16 (0.9)	27 (1.3)	39 (1.4)	51 (1.5)	70 (1.7)	82 (1.8)	4.6	2.8	3.2	3.2	3.0
Malaysia	6 (0.4)	22 (1.1)	28 (1.0)	43 (1.2)	56 (1.3)	62 (1.4)	7.9	4.3	2.7	2.2	3.2
Philippines	0 (0.0)	0 (0.0)	3 (0.1)	6 (0.2)	10 (0.2)	12 (0.3)	-	7.2	4.5	4.0	5.5
Thailand	5 (0.3)	17 (0.8)	33 (1.2)	58 (1.7)	86 (2.1)	103 (2.3)	9.9	5.7	4.1	3.8	4.7
Vietnam	0 (0.0)	1 (0.1)	8 (0.3)	13 (0.4)	15 (0.4)	17 (0.4)	49.2	4.8	1.8	2.3	3.1
Singapore	0 (0.0)	1 (0.1)	7 (0.3)	10 (0.3)	13 (0.3)	14 (0.3)	-	3.7	2.1	1.3	2.6
Asia excl. Japan	71 (4.3)	165 (8.0)	362 (13.3)	661 (19.2)	1,003 (24.1)	1,155 (25.8)	8.5	6.2	4.3	2.9	4.8
North Americas	493 (29.6)	622 (30.0)	635 (23.3)	688 (20.0)	718 (17.3)	719 (16.1)	1.3	0.8	0.4	0.0	0.5
Latin Americas	76 (4.6)	117 (5.6)	183 (6.7)	260 (7.6)	350 (8.4)	398 (8.9)	4.5	3.6	3.0	2.6	3.2
OECD Europe	260 (15.6)	393 (19.0)	465 (17.0)	503 (14.6)	530 (12.8)	540 (12.1)	2.9	0.8	0.5	0.4	0.6
Non-OECD Europe	602 (36.1)	488 (23.6)	568 (20.8)	644 (18.7)	705 (17.0)	723 (16.2)	-0.3	1.3	0.9	0.5	1.0
Africa	30 (1.8)	47 (2.3)	87 (3.2)	137 (4.0)	194 (4.7)	224 (5.0)	5.5	4.7	3.5	3.0	3.9
Middle East	72 (4.3)	150 (7.3)	312 (11.4)	405 (11.8)	496 (11.9)	544 (12.2)	7.6	2.6	2.0	1.9	2.2
Oceania	19 (1.1)	24 (1.2)	30 (1.1)	34 (1.0)	38 (0.9)	39 (0.9)	2.4	1.3	1.0	0.4	1.0
OECD	843 (50.5)	1,156 (55.8)	1,313 (48.1)	1,446 (42.1)	1,544 (37.2)	1,576 (35.3)	2.2	1.0	0.7	0.4	0.7
Non-OECD	825 (49.5)	916 (44.2)	1,415 (51.9)	1,991 (57.9)	2,609 (62.8)	2,894 (64.7)	2.7	3.5	2.7	2.1	2.9
World	1,668 (100)	2,072 (100)	2,728 (100)	3,437 (100)	4,153 (100)	4,470 (100)	2.5	2.3	1.9	1.5	2.0

Source: IEA "World Energy Balances"

Projection by IEEJ

Note: Figures in parentheses are global shares (%).



Table 9 Final energy consumption

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	1,131 (20.3)	1,555 (24.7)	2,542 (32.7)	3,516 (37.5)	4,325 (39.9)	4,707 (40.9)	4.1	3.3	2.1	1.7	2.5
P.R. China	466 (8.4)	612 (9.7)	1,313 (16.9)	1,929 (20.6)	2,320 (21.4)	2,452 (21.3)	5.3	3.9	1.9	1.1	2.5
India	118 (2.1)	171 (2.7)	289 (3.7)	452 (4.8)	659 (6.1)	792 (6.9)	4.6	4.6	3.8	3.7	4.1
Japan	300 (5.4)	345 (5.5)	325 (4.2)	315 (3.4)	302 (2.8)	294 (2.5)	0.4	-0.3	-0.5	-0.5	-0.4
Republic of Korea	65 (1.2)	127 (2.0)	157 (2.0)	175 (1.9)	181 (1.7)	181 (1.6)	4.5	1.0	0.3	0.1	0.6
Chinese Taipei	29 (0.5)	49 (0.8)	68 (0.9)	77 (0.8)	82 (0.8)	83 (0.7)	4.3	1.3	0.6	0.2	0.8
Indonesia	38 (0.7)	72 (1.1)	103 (1.3)	154 (1.6)	217 (2.0)	253 (2.2)	5.2	4.1	3.5	3.1	3.6
Malaysia	12 (0.2)	28 (0.4)	42 (0.5)	59 (0.6)	80 (0.7)	92 (0.8)	6.2	3.5	3.2	2.8	3.2
Philippines	11 (0.2)	17 (0.3)	18 (0.2)	26 (0.3)	35 (0.3)	41 (0.4)	2.8	3.6	3.0	2.9	3.2
Thailand	20 (0.4)	41 (0.7)	71 (0.9)	101 (1.1)	136 (1.2)	158 (1.4)	6.6	3.6	3.0	3.1	3.3
Vietnam	4 (0.1)	12 (0.2)	35 (0.4)	61 (0.6)	95 (0.9)	115 (1.0)	11.1	5.7	4.6	3.9	4.9
Singapore	5 (0.1)	9 (0.2)	24 (0.3)	31 (0.3)	36 (0.3)	38 (0.3)	8.1	2.7	1.6	1.1	1.9
Asia excl. Japan	831 (14.9)	1,210 (19.2)	2,217 (28.5)	3,201 (34.2)	4,024 (37.1)	4,413 (38.3)	5.0	3.7	2.3	1.9	2.8
North Americas	1,453 (26.0)	1,736 (27.5)	1,696 (21.8)	1,711 (18.3)	1,757 (16.2)	1,767 (15.3)	0.8	0.1	0.3	0.1	0.2
Latin Americas	290 (5.2)	398 (6.3)	498 (6.4)	676 (7.2)	862 (7.9)	944 (8.2)	2.7	3.1	2.5	1.8	2.6
OECD Europe	1,123 (20.1)	1,226 (19.4)	1,273 (16.4)	1,287 (13.7)	1,304 (12.0)	1,306 (11.3)	0.6	0.1	0.1	0.0	0.1
Non-OECD Europe	1,045 (18.7)	637 (10.1)	700 (9.0)	802 (8.6)	900 (8.3)	939 (8.1)	-2.0	1.4	1.2	0.9	1.2
Africa	121 (2.2)	153 (2.4)	212 (2.7)	299 (3.2)	384 (3.5)	429 (3.7)	2.8	3.5	2.5	2.3	2.9
Middle East	153 (2.7)	243 (3.9)	410 (5.3)	537 (5.7)	675 (6.2)	740 (6.4)	5.1	2.7	2.3	1.9	2.4
Oceania	67 (1.2)	82 (1.3)	88 (1.1)	98 (1.0)	108 (1.0)	113 (1.0)	1.4	1.1	1.0	0.8	1.0
OECD	3,102 (55.6)	3,635 (57.7)	3,676 (47.3)	3,757 (40.1)	3,850 (35.5)	3,872 (33.6)	0.9	0.2	0.2	0.1	0.2
Non-OECD	2,279 (40.8)	2,396 (38.0)	3,742 (48.1)	5,168 (55.2)	6,464 (59.6)	7,072 (61.4)	2.5	3.3	2.3	1.8	2.6
World	5,582 (100)	6,302 (100)	7,773 (100)	9,365 (100)	10,844 (100)	11,518 (100)	1.7	1.9	1.5	1.2	1.6

Source: IEA "World Energy Balances"

Projection by IEEJ

Note: Figures in parentheses are global shares (%). World includes international bunkers.

Table 10 Final energy consumption, industry

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	484 (28.0)	633 (35.1)	1,128 (49.1)	1,431 (52.0)	1,612 (52.3)	1,706 (52.5)	4.3	2.4	1.2	1.1	1.7
P.R. China	244 (14.1)	329 (18.2)	712 (31.0)	877 (31.9)	913 (29.6)	918 (28.3)	5.5	2.1	0.4	0.1	1.0
India	48 (2.8)	62 (3.4)	123 (5.3)	176 (6.4)	241 (7.8)	284 (8.7)	4.8	3.7	3.2	3.3	3.4
Japan	103 (6.0)	100 (5.5)	90 (3.9)	98 (3.6)	95 (3.1)	94 (2.9)	-0.7	0.9	-0.3	-0.3	0.2
Republic of Korea	19 (1.1)	38 (2.1)	45 (1.9)	52 (1.9)	55 (1.8)	55 (1.7)	4.3	1.6	0.5	0.2	0.8
Chinese Taipei	12 (0.7)	19 (1.1)	22 (1.0)	25 (0.9)	27 (0.9)	27 (0.8)	3.0	1.4	0.5	0.4	0.8
Indonesia	11 (0.6)	22 (1.2)	40 (1.7)	58 (2.1)	83 (2.7)	98 (3.0)	6.7	4.0	3.7	3.3	3.7
Malaysia	5 (0.3)	11 (0.6)	13 (0.6)	19 (0.7)	27 (0.9)	31 (1.0)	4.7	4.0	3.4	2.8	3.5
Philippines	4 (0.2)	4 (0.2)	5 (0.2)	7 (0.2)	9 (0.3)	10 (0.3)	1.4	3.2	2.5	2.5	2.8
Thailand	6 (0.3)	12 (0.7)	19 (0.8)	30 (1.1)	43 (1.4)	53 (1.6)	6.3	4.5	3.7	3.9	4.1
Vietnam	2 (0.1)	5 (0.3)	15 (0.6)	27 (1.0)	42 (1.4)	50 (1.5)	11.4	6.0	4.6	3.7	5.0
Singapore	1 (0.0)	3 (0.2)	7 (0.3)	11 (0.4)	13 (0.4)	13 (0.4)	13.4	3.7	1.5	0.9	2.3
Asia excl. Japan	381 (22.1)	533 (29.5)	1,038 (45.1)	1,333 (48.4)	1,517 (49.2)	1,612 (49.6)	5.1	2.5	1.3	1.2	1.8
North Americas	331 (19.2)	387 (21.4)	334 (14.5)	330 (12.0)	322 (10.4)	315 (9.7)	0.0	-0.1	-0.2	-0.4	-0.2
Latin Americas	88 (5.1)	119 (6.6)	140 (6.1)	202 (7.3)	271 (8.8)	306 (9.4)	2.4	3.7	3.0	2.5	3.2
OECD Europe	322 (18.7)	324 (17.9)	296 (12.9)	299 (10.9)	303 (9.8)	306 (9.4)	-0.4	0.1	0.1	0.2	0.1
Non-OECD Europe	392 (22.7)	205 (11.3)	208 (9.1)	248 (9.0)	274 (8.9)	285 (8.8)	-3.1	1.7	1.0	0.8	1.3
Africa	44 (2.6)	45 (2.5)	56 (2.4)	72 (2.6)	91 (3.0)	102 (3.2)	1.2	2.5	2.4	2.4	2.5
Middle East	43 (2.5)	65 (3.6)	111 (4.8)	142 (5.2)	178 (5.8)	197 (6.1)	4.9	2.5	2.3	2.0	2.3
Oceania	23 (1.3)	28 (1.6)	26 (1.1)	29 (1.0)	32 (1.0)	33 (1.0)	0.7	0.9	1.0	0.8	0.9
OECD	828 (48.0)	912 (50.5)	827 (36.0)	853 (31.0)	862 (27.9)	863 (26.6)	-0.0	0.3	0.1	0.0	0.2
Non-OECD	899 (52.0)	894 (49.5)	1,472 (64.0)	1,899 (69.0)	2,221 (72.1)	2,387 (73.4)	2.5	2.6	1.6	1.4	2.0
World	1,727 (100)	1,806 (100)	2,299 (100)	2,752 (100)	3,083 (100)	3,250 (100)	1.4	1.8	1.1	1.1	1.4

Source: IEA "World Energy Balances"

Projection by IEEJ

Note: Figures in parentheses are global shares (%).

Table 11 Final energy consumption, transport

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	197 (12.5)	321 (16.4)	472 (19.9)	718 (25.2)	915 (27.7)	1,009 (28.7)	4.5	4.3	2.4	2.0	3.1
P.R. China	34 (2.2)	83 (4.3)	182 (7.7)	364 (12.8)	473 (14.3)	511 (14.5)	8.8	7.2	2.7	1.6	4.2
India	27 (1.7)	32 (1.6)	55 (2.3)	89 (3.1)	142 (4.3)	179 (5.1)	3.6	4.8	4.8	4.7	4.8
Japan	72 (4.6)	88 (4.5)	77 (3.2)	66 (2.3)	57 (1.7)	53 (1.5)	0.4	-1.5	-1.5	-1.4	-1.5
Republic of Korea	15 (0.9)	26 (1.3)	30 (1.3)	32 (1.1)	31 (1.0)	31 (0.9)	3.7	0.7	-0.2	-0.6	0.1
Chinese Taipei	7 (0.4)	12 (0.6)	12 (0.5)	13 (0.5)	14 (0.4)	14 (0.4)	3.0	1.0	0.4	0.1	0.6
Indonesia	11 (0.7)	22 (1.1)	36 (1.5)	48 (1.7)	63 (1.9)	71 (2.0)	6.2	2.9	2.8	2.3	2.7
Malaysia	5 (0.3)	10 (0.5)	14 (0.6)	18 (0.6)	21 (0.6)	22 (0.6)	5.7	2.5	1.3	0.9	1.7
Philippines	5 (0.3)	8 (0.4)	8 (0.3)	11 (0.4)	15 (0.5)	17 (0.5)	2.9	3.4	3.0	3.0	3.1
Thailand	9 (0.6)	15 (0.7)	19 (0.8)	23 (0.8)	27 (0.8)	29 (0.8)	3.9	1.8	1.3	1.5	1.5
Vietnam	1 (0.1)	3 (0.2)	10 (0.4)	16 (0.6)	24 (0.7)	28 (0.8)	10.5	5.0	3.9	3.3	4.2
Singapore	1 (0.1)	2 (0.1)	3 (0.1)	3 (0.1)	4 (0.1)	4 (0.1)	3.7	1.4	1.0	0.7	1.1
Asia excl. Japan	125 (8.0)	233 (11.9)	395 (16.7)	652 (22.9)	858 (25.9)	956 (27.2)	5.9	5.1	2.8	2.2	3.6
North Americas	531 (33.8)	640 (32.8)	643 (27.1)	617 (21.7)	614 (18.6)	617 (17.5)	1.0	-0.4	-0.1	0.1	-0.2
Latin Americas	103 (6.6)	142 (7.2)	197 (8.3)	273 (9.6)	346 (10.5)	372 (10.6)	3.3	3.3	2.4	1.5	2.6
OECD Europe	265 (16.9)	317 (16.2)	334 (14.1)	327 (11.5)	326 (9.9)	320 (9.1)	1.1	-0.2	-0.0	-0.3	-0.2
Non-OECD Europe	162 (10.3)	107 (5.5)	143 (6.0)	182 (6.4)	221 (6.7)	237 (6.7)	-0.6	2.5	2.0	1.4	2.1
Africa	36 (2.3)	53 (2.7)	75 (3.1)	97 (3.4)	117 (3.5)	127 (3.6)	3.6	2.7	1.9	1.6	2.1
Middle East	50 (3.2)	74 (3.8)	119 (5.0)	155 (5.4)	200 (6.1)	220 (6.3)	4.4	2.6	2.6	1.9	2.5
Oceania	24 (1.5)	30 (1.5)	33 (1.4)	36 (1.3)	38 (1.2)	39 (1.1)	1.6	0.9	0.6	0.4	0.7
OECD	938 (59.8)	1,143 (58.5)	1,176 (49.6)	1,155 (40.6)	1,151 (34.8)	1,146 (32.6)	1.1	-0.2	-0.0	-0.1	-0.1
Non-OECD	431 (27.4)	540 (27.6)	840 (35.4)	1,251 (44.0)	1,627 (49.2)	1,795 (51.1)	3.4	4.1	2.7	2.0	3.1
World	1,569 (100)	1,954 (100)	2,370 (100)	2,846 (100)	3,307 (100)	3,515 (100)	2.1	1.8	1.5	1.2	1.6

Source: IEA "World Energy Balances"

Projection by IEEJ

Note: Figures in parentheses are global shares (%). World includes international bunkers.

Table 12 Final energy consumption, buildings, etc.

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	334 (18.5)	411 (21.3)	619 (26.9)	921 (32.7)	1,258 (37.5)	1,404 (39.2)	3.1	4.0	3.2	2.2	3.3
P.R. China	144 (8.0)	139 (7.2)	287 (12.4)	475 (16.8)	669 (19.9)	730 (20.4)	3.5	5.2	3.5	1.8	3.8
India	32 (1.8)	48 (2.5)	72 (3.1)	128 (4.5)	199 (5.9)	244 (6.8)	4.2	5.9	4.5	4.1	5.0
Japan	91 (5.0)	116 (6.0)	118 (5.1)	117 (4.1)	116 (3.5)	114 (3.2)	1.3	-0.1	-0.0	-0.3	-0.1
Republic of Korea	24 (1.3)	37 (1.9)	44 (1.9)	48 (1.7)	51 (1.5)	52 (1.5)	3.1	0.8	0.6	0.4	0.6
Chinese Taipei	6 (0.4)	10 (0.5)	12 (0.5)	16 (0.6)	16 (0.5)	16 (0.5)	3.1	2.9	0.6	-0.1	1.4
Indonesia	9 (0.5)	18 (1.0)	19 (0.8)	33 (1.2)	50 (1.5)	60 (1.7)	3.9	5.7	4.1	3.9	4.7
Malaysia	2 (0.1)	4 (0.2)	8 (0.3)	13 (0.5)	21 (0.6)	25 (0.7)	8.3	5.3	4.4	4.1	4.7
Philippines	2 (0.1)	4 (0.2)	5 (0.2)	8 (0.3)	11 (0.3)	13 (0.4)	4.7	4.1	3.4	3.2	3.6
Thailand	4 (0.2)	9 (0.4)	14 (0.6)	21 (0.8)	34 (1.0)	43 (1.2)	5.7	4.6	4.8	4.5	4.6
Vietnam	1 (0.1)	3 (0.2)	7 (0.3)	13 (0.5)	24 (0.7)	30 (0.8)	10.0	6.6	5.8	4.9	5.9
Singapore	1 (0.0)	2 (0.1)	2 (0.1)	3 (0.1)	4 (0.1)	4 (0.1)	6.1	2.8	1.5	1.3	2.0
Asia excl. Japan	243 (13.4)	295 (15.3)	502 (21.8)	805 (28.5)	1,142 (34.0)	1,290 (36.0)	3.7	4.8	3.6	2.5	3.8
North Americas	457 (25.3)	535 (27.8)	563 (24.4)	616 (21.8)	661 (19.7)	668 (18.6)	1.0	0.9	0.7	0.2	0.7
Latin Americas	74 (4.1)	97 (5.0)	116 (5.0)	150 (5.3)	187 (5.6)	204 (5.7)	2.3	2.6	2.2	1.8	2.3
OECD Europe	436 (24.1)	472 (24.5)	530 (23.0)	544 (19.3)	554 (16.5)	557 (15.6)	1.0	0.3	0.2	0.1	0.2
Non-OECD Europe	424 (23.5)	277 (14.4)	272 (11.8)	296 (10.5)	322 (9.6)	333 (9.3)	-2.2	0.8	0.9	0.7	0.8
Africa	29 (1.6)	41 (2.1)	64 (2.8)	107 (3.8)	148 (4.4)	170 (4.7)	4.0	5.3	3.3	2.8	4.0
Middle East	40 (2.2)	76 (3.9)	119 (5.2)	160 (5.7)	196 (5.8)	212 (5.9)	5.6	3.0	2.1	1.6	2.3
Oceania	15 (0.8)	19 (1.0)	23 (1.0)	26 (0.9)	31 (0.9)	33 (0.9)	2.1	1.4	1.6	1.3	1.5
OECD	1,046 (57.9)	1,209 (62.8)	1,310 (56.8)	1,390 (49.3)	1,461 (43.5)	1,477 (41.2)	1.1	0.6	0.5	0.2	0.5
Non-OECD	761 (42.1)	718 (37.2)	996 (43.2)	1,430 (50.7)	1,895 (56.5)	2,105 (58.8)	1.4	3.7	2.9	2.1	3.0
World	1,808 (100)	1,927 (100)	2,306 (100)	2,820 (100)	3,356 (100)	3,581 (100)	1.2	2.0	1.8	1.3	1.8

Source: IEA "World Energy Balances"

Projection by IEEJ

Note: Figures in parentheses are global shares (%).

Table 13 Final energy consumption, electricity

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	1,809 (18.7)	3,220 (25.4)	6,643 (37.2)	9,803 (42.2)	13,449 (46.0)	15,408 (47.9)	6.7	4.0	3.2	2.8	3.4
P.R. China	454 (4.7)	1,037 (8.2)	3,451 (19.3)	5,093 (21.9)	6,773 (23.2)	7,497 (23.3)	10.7	4.0	2.9	2.1	3.2
India	212 (2.2)	367 (2.9)	711 (4.0)	1,390 (6.0)	2,395 (8.2)	3,075 (9.6)	6.2	6.9	5.6	5.1	6.0
Japan	750 (7.7)	944 (7.4)	1,002 (5.6)	1,062 (4.6)	1,124 (3.8)	1,140 (3.5)	1.5	0.6	0.6	0.3	0.5
Republic of Korea	94 (1.0)	263 (2.1)	449 (2.5)	562 (2.4)	627 (2.1)	653 (2.0)	8.1	2.3	1.1	0.8	1.5
Chinese Taipei	77 (0.8)	160 (1.3)	218 (1.2)	266 (1.1)	285 (1.0)	291 (0.9)	5.4	2.0	0.7	0.4	1.2
Indonesia	28 (0.3)	79 (0.6)	148 (0.8)	298 (1.3)	489 (1.7)	613 (1.9)	8.6	7.3	5.1	4.6	5.9
Malaysia	20 (0.2)	61 (0.5)	111 (0.6)	178 (0.8)	286 (1.0)	353 (1.1)	9.0	4.8	4.9	4.3	4.7
Philippines	21 (0.2)	37 (0.3)	55 (0.3)	83 (0.4)	118 (0.4)	140 (0.4)	4.9	4.1	3.6	3.5	3.8
Thailand	38 (0.4)	88 (0.7)	149 (0.8)	264 (1.1)	408 (1.4)	504 (1.6)	7.0	5.8	4.5	4.3	5.0
Vietnam	6 (0.1)	22 (0.2)	87 (0.5)	183 (0.8)	315 (1.1)	395 (1.2)	14.1	7.7	5.6	4.7	6.2
Singapore	13 (0.1)	27 (0.2)	42 (0.2)	55 (0.2)	65 (0.2)	69 (0.2)	6.1	2.8	1.6	1.3	2.0
Asia excl. Japan	1,059 (10.9)	2,277 (18.0)	5,641 (31.6)	8,741 (37.6)	12,325 (42.1)	14,268 (44.3)	8.7	4.5	3.5	3.0	3.8
North Americas	3,052 (31.5)	3,981 (31.4)	4,272 (23.9)	4,760 (20.5)	5,315 (18.2)	5,409 (16.8)	1.7	1.1	1.1	0.4	0.9
Latin Americas	517 (5.3)	810 (6.4)	1,120 (6.3)	1,634 (7.0)	2,212 (7.6)	2,498 (7.8)	3.9	3.8	3.1	2.5	3.3
OECD Europe	2,230 (23.0)	2,710 (21.4)	3,107 (17.4)	3,411 (14.7)	3,699 (12.6)	3,819 (11.9)	1.7	0.9	0.8	0.6	0.8
Non-OECD Europe	1,474 (15.2)	1,010 (8.0)	1,211 (6.8)	1,466 (6.3)	1,682 (5.8)	1,779 (5.5)	-1.0	1.9	1.4	1.1	1.6
Africa	257 (2.6)	372 (2.9)	559 (3.1)	848 (3.7)	1,159 (4.0)	1,328 (4.1)	4.0	4.3	3.2	2.8	3.5
Middle East	194 (2.0)	372 (2.9)	704 (3.9)	1,039 (4.5)	1,397 (4.8)	1,588 (4.9)	6.7	4.0	3.0	2.6	3.3
Oceania	157 (1.6)	207 (1.6)	241 (1.3)	284 (1.2)	334 (1.1)	358 (1.1)	2.1	1.7	1.6	1.4	1.6
OECD	6,399 (66.0)	8,304 (65.5)	9,333 (52.3)	10,459 (45.0)	11,630 (39.8)	11,995 (37.3)	1.9	1.1	1.1	0.6	1.0
Non-OECD	3,291 (34.0)	4,379 (34.5)	8,523 (47.7)	12,787 (55.0)	17,616 (60.2)	20,192 (62.7)	4.9	4.1	3.3	2.8	3.5
World	9,690 (100)	12,683 (100)	17,857 (100)	23,246 (100)	29,246 (100)	32,187 (100)	3.1	2.7	2.3	1.9	2.4

Source: IEA "World Energy Balances"

Projection by IEEJ

Note: Figures in parentheses are global shares (%).

Table 14 Electricity generated

(TWh)

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	2,212 (18.7)	3,966 (25.7)	7,932 (37.0)	11,634 (41.9)	15,896 (45.7)	18,113 (47.5)	6.6	3.9	3.2	2.6	3.4
P.R. China	621 (5.3)	1,356 (8.8)	4,208 (19.6)	6,053 (21.8)	7,994 (23.0)	8,818 (23.1)	10.0	3.7	2.8	2.0	3.0
India	289 (2.4)	561 (3.6)	960 (4.5)	1,804 (6.5)	2,981 (8.6)	3,746 (9.8)	6.2	6.5	5.1	4.7	5.6
Japan	836 (7.1)	1,049 (6.8)	1,111 (5.2)	1,182 (4.3)	1,252 (3.6)	1,269 (3.3)	1.4	0.6	0.6	0.3	0.5
Republic of Korea	105 (0.9)	289 (1.9)	497 (2.3)	612 (2.2)	682 (2.0)	710 (1.9)	8.1	2.1	1.1	0.8	1.4
Chinese Taipei	88 (0.7)	181 (1.2)	244 (1.1)	295 (1.1)	314 (0.9)	320 (0.8)	5.2	1.9	0.6	0.3	1.1
Indonesia	33 (0.3)	93 (0.6)	170 (0.8)	348 (1.3)	570 (1.6)	715 (1.9)	8.6	7.4	5.1	4.6	5.9
Malaysia	23 (0.2)	69 (0.4)	125 (0.6)	196 (0.7)	308 (0.9)	378 (1.0)	8.8	4.6	4.6	4.2	4.5
Philippines	26 (0.2)	45 (0.3)	68 (0.3)	100 (0.4)	141 (0.4)	167 (0.4)	4.8	4.0	3.5	3.4	3.7
Thailand	44 (0.4)	96 (0.6)	160 (0.7)	282 (1.0)	435 (1.3)	535 (1.4)	6.6	5.9	4.4	4.3	5.0
Vietnam	9 (0.1)	27 (0.2)	95 (0.4)	202 (0.7)	348 (1.0)	438 (1.1)	12.7	7.8	5.6	4.7	6.3
Singapore	16 (0.1)	32 (0.2)	45 (0.2)	59 (0.2)	70 (0.2)	74 (0.2)	5.4	2.7	1.6	1.2	2.0
Asia excl. Japan	1,377 (11.6)	2,917 (18.9)	6,821 (31.8)	10,452 (37.6)	14,644 (42.1)	16,844 (44.2)	8.3	4.4	3.4	2.8	3.7
North Americas	3,685 (31.2)	4,631 (30.1)	4,962 (23.2)	5,523 (19.9)	6,145 (17.7)	6,252 (16.4)	1.5	1.1	1.1	0.3	0.9
Latin Americas	623 (5.3)	1,003 (6.5)	1,400 (6.5)	2,000 (7.2)	2,692 (7.7)	3,035 (8.0)	4.1	3.6	3.0	2.4	3.1
OECD Europe	2,662 (22.5)	3,225 (20.9)	3,608 (16.8)	3,983 (14.3)	4,308 (12.4)	4,443 (11.7)	1.5	1.0	0.8	0.6	0.8
Non-OECD Europe	1,894 (16.0)	1,430 (9.3)	1,696 (7.9)	2,001 (7.2)	2,256 (6.5)	2,372 (6.2)	-0.6	1.7	1.2	1.0	1.4
Africa	316 (2.7)	441 (2.9)	664 (3.1)	995 (3.6)	1,349 (3.9)	1,540 (4.0)	3.8	4.1	3.1	2.7	3.4
Middle East	240 (2.0)	465 (3.0)	882 (4.1)	1,289 (4.6)	1,714 (4.9)	1,945 (5.1)	6.7	3.9	2.9	2.6	3.2
Oceania	187 (1.6)	249 (1.6)	286 (1.3)	339 (1.2)	399 (1.1)	427 (1.1)	2.2	1.7	1.6	1.4	1.6
OECD	7,608 (64.4)	9,687 (62.9)	10,796 (50.4)	12,110 (43.6)	13,441 (38.7)	13,859 (36.3)	1.8	1.2	1.0	0.6	1.0
Non-OECD	4,211 (35.6)	5,723 (37.1)	10,635 (49.6)	15,654 (56.4)	21,317 (61.3)	24,268 (63.7)	4.7	3.9	3.1	2.6	3.4
World	11,819 (100)	15,410 (100)	21,431 (100)	27,763 (100)	34,758 (100)	38,128 (100)	3.0	2.6	2.3	1.9	2.3

Source: IEA "World Energy Balances"

Projection by IEEJ

Note: Figures in parentheses are global shares (%).

Table 15 GDP per capita

(\$2000/person)

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	2,035	2,403	3,211	4,605	6,167	7,039	2.3	3.7	3.0	2.7	3.2
P.R. China	392	949	2,426	5,002	7,775	9,311	9.5	7.5	4.5	3.7	5.5
India	324	460	850	1,497	2,404	3,023	4.9	5.8	4.9	4.7	5.2
Japan	33,491	36,709	39,530	47,104	56,733	61,921	0.8	1.8	1.9	1.8	1.8
Republic of Korea	6,895	11,347	16,394	23,007	29,168	32,312	4.4	3.4	2.4	2.1	2.8
Chinese Taipei	8,269	13,861	19,441	28,906	36,355	40,145	4.4	4.0	2.3	2.0	2.9
Indonesia	592	773	1,146	1,874	2,791	3,385	3.4	5.0	4.1	3.9	4.4
Malaysia	2,593	4,006	5,176	7,192	9,979	11,469	3.5	3.3	3.3	2.8	3.2
Philippines	991	1,048	1,383	1,850	2,535	2,957	1.7	3.0	3.2	3.1	3.1
Thailand	1,391	1,943	2,712	4,186	6,055	7,284	3.4	4.4	3.8	3.8	4.0
Vietnam	227	402	723	1,261	2,120	2,659	6.0	5.7	5.3	4.6	5.3
Singapore	15,484	23,414	32,023	44,124	54,445	58,357	3.7	3.3	2.1	1.4	2.4
Asia excl. Japan	642	1,063	1,936	3,315	4,810	5,654	5.7	5.5	3.8	3.3	4.4
North Americas	27,423	33,948	36,635	43,402	51,455	55,212	1.5	1.7	1.7	1.4	1.7
Latin Americas	3,439	4,002	4,900	6,667	8,509	9,411	1.8	3.1	2.5	2.0	2.6
OECD Europe	14,535	17,449	18,912	21,676	25,032	26,676	1.3	1.4	1.5	1.3	1.4
Non-OECD Europe	1,991	1,403	2,329	3,484	4,848	5,570	0.8	4.1	3.4	2.8	3.5
Africa	720	735	923	1,137	1,448	1,628	1.3	2.1	2.4	2.4	2.3
Middle East	4,739	5,580	6,970	8,393	9,768	10,403	1.9	1.9	1.5	1.3	1.6
Oceania	15,461	19,046	22,167	27,446	31,448	32,978	1.8	2.2	1.4	1.0	1.6
OECD	18,920	22,686	24,615	29,018	34,282	36,869	1.3	1.7	1.7	1.5	1.6
Non-OECD	1,027	1,287	2,051	3,166	4,333	4,951	3.5	4.4	3.2	2.7	3.6
World	4,632	5,329	6,109	7,524	9,148	9,968	1.4	2.1	2.0	1.7	2.0

Source: World Bank "World Development Indicators", IEA "World Energy Balances", etc.

Projection by IEEJ

Table 16 Primary energy consumption per capita

	(toe/person)										
	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	0.57	0.73	1.11	1.35	1.59	1.71	3.4	2.0	1.6	1.4	1.7
P.R. China	0.59	0.78	1.66	2.22	2.69	2.88	5.3	3.0	1.9	1.4	2.2
India	0.22	0.30	0.45	0.58	0.76	0.87	3.7	2.7	2.7	2.7	2.7
Japan	3.55	4.08	3.91	3.98	4.13	4.17	0.5	0.2	0.4	0.2	0.3
Republic of Korea	2.17	4.00	5.12	5.57	5.81	5.92	4.4	0.9	0.4	0.4	0.6
Chinese Taipei	2.37	3.83	4.72	5.35	5.57	5.66	3.5	1.3	0.4	0.3	0.7
Indonesia	0.30	0.50	0.64	0.91	1.24	1.43	3.9	3.6	3.1	2.9	3.2
Malaysia	1.05	1.89	2.45	2.91	3.62	4.01	4.3	1.7	2.2	2.0	2.0
Philippines	0.29	0.41	0.36	0.42	0.49	0.53	1.2	1.6	1.6	1.6	1.6
Thailand	0.48	0.92	1.41	2.06	2.87	3.37	5.6	3.8	3.4	3.3	3.5
Vietnam	0.08	0.19	0.51	0.86	1.34	1.63	9.6	5.3	4.6	3.9	4.7
Singapore	3.78	4.65	6.44	7.36	7.98	8.24	2.7	1.3	0.8	0.6	1.0
Asia excl. Japan	0.43	0.60	1.01	1.27	1.53	1.65	4.3	2.3	1.8	1.5	2.0
North Americas	7.65	8.07	7.19	6.78	6.54	6.36	-0.3	-0.6	-0.4	-0.6	-0.5
Latin Americas	0.90	1.03	1.20	1.45	1.72	1.84	1.4	1.9	1.7	1.4	1.7
OECD Europe	3.25	3.35	3.29	3.21	3.20	3.20	0.1	-0.3	-0.0	0.0	-0.1
Non-OECD Europe	4.43	2.89	3.29	3.71	4.13	4.35	-1.5	1.2	1.1	1.0	1.1
Africa	0.31	0.31	0.35	0.38	0.39	0.40	0.5	0.9	0.4	0.3	0.6
Middle East	1.70	2.25	2.96	3.31	3.58	3.68	2.8	1.1	0.8	0.6	0.9
Oceania	4.84	5.44	5.40	5.21	5.13	5.11	0.5	-0.4	-0.1	-0.1	-0.2
OECD	4.25	4.60	4.38	4.30	4.30	4.28	0.2	-0.2	0.0	-0.1	-0.1
Non-OECD	0.79	0.76	1.07	1.28	1.46	1.54	1.5	1.8	1.3	1.1	1.5
World	1.53	1.53	1.72	1.84	1.98	2.04	0.6	0.7	0.7	0.6	0.7

Source: World Bank "World Development Indicators", IEA "World Energy Balances", etc.

Projection by IEEJ



Table 17 Primary energy consumption per GDP

	(toe/\$2000 million)										
	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	278	302	346	294	258	243	1.1	-1.6	-1.3	-1.2	-1.4
P.R. China	1,511	818	683	443	346	310	-3.9	-4.2	-2.5	-2.2	-3.1
India	667	661	526	389	317	288	-1.2	-3.0	-2.0	-1.9	-2.4
Japan	106	111	99	84	73	67	-0.3	-1.6	-1.5	-1.5	-1.5
Republic of Korea	315	353	312	242	199	183	-0.0	-2.5	-1.9	-1.6	-2.1
Chinese Taipei	286	276	243	185	153	141	-0.8	-2.7	-1.9	-1.6	-2.1
Indonesia	505	642	561	487	443	422	0.5	-1.4	-0.9	-1.0	-1.1
Malaysia	406	472	474	405	363	349	0.8	-1.6	-1.1	-0.8	-1.2
Philippines	290	392	262	229	195	181	-0.5	-1.4	-1.6	-1.5	-1.5
Thailand	343	474	522	493	474	463	2.1	-0.6	-0.4	-0.5	-0.5
Vietnam	359	467	709	681	633	612	3.5	-0.4	-0.7	-0.7	-0.6
Singapore	244	198	201	167	147	141	-1.0	-1.9	-1.3	-0.7	-1.4
Asia excl. Japan	676	560	523	384	317	291	-1.3	-3.0	-1.9	-1.7	-2.3
North Americas	279	238	196	156	127	115	-1.7	-2.3	-2.0	-1.9	-2.1
Latin Americas	263	258	245	218	202	196	-0.4	-1.1	-0.8	-0.7	-0.9
OECD Europe	223	192	174	148	128	120	-1.2	-1.6	-1.4	-1.3	-1.5
Non-OECD Europe	2,223	2,062	1,414	1,066	852	781	-2.2	-2.8	-2.2	-1.7	-2.3
Africa	434	419	376	334	272	245	-0.7	-1.2	-2.0	-2.1	-1.7
Middle East	358	404	425	394	366	354	0.9	-0.8	-0.7	-0.7	-0.7
Oceania	313	286	244	190	163	155	-1.3	-2.5	-1.5	-1.0	-1.8
OECD	225	203	178	148	125	116	-1.2	-1.8	-1.7	-1.5	-1.7
Non-OECD	770	587	523	404	337	311	-1.9	-2.6	-1.8	-1.6	-2.1
World	329	286	282	245	216	204	-0.8	-1.4	-1.2	-1.1	-1.3

Source: World Bank "World Development Indicators", IEA "World Energy Balances", etc.

Projection by IEEJ

Table 18 Energy related carbon dioxide emissions

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	4,960 (23.3)	7,126 (30.1)	12,485 (41.1)	16,147 (45.2)	19,674 (47.9)	21,295 (49.1)	4.7	2.6	2.0	1.6	2.2
P.R. China	2,337 (11.0)	3,346 (14.1)	7,425 (24.4)	9,458 (26.5)	11,051 (26.9)	11,496 (26.5)	6.0	2.5	1.6	0.8	1.8
India	591 (2.8)	958 (4.0)	1,657 (5.4)	2,483 (7.0)	3,523 (8.6)	4,172 (9.6)	5.3	4.1	3.6	3.4	3.8
Japan	1,070 (5.0)	1,194 (5.0)	1,158 (3.8)	1,143 (3.2)	1,133 (2.8)	1,138 (2.6)	0.4	-0.1	-0.1	0.1	-0.1
Republic of Korea	240 (1.1)	433 (1.8)	555 (1.8)	545 (1.5)	517 (1.3)	501 (1.2)	4.3	-0.2	-0.5	-0.6	-0.4
Chinese Taipei	117 (0.5)	226 (1.0)	257 (0.8)	286 (0.8)	294 (0.7)	286 (0.7)	4.0	1.1	0.3	-0.5	0.4
Indonesia	134 (0.6)	263 (1.1)	393 (1.3)	637 (1.8)	904 (2.2)	1,069 (2.5)	5.5	4.9	3.6	3.4	4.1
Malaysia	53 (0.2)	115 (0.5)	186 (0.6)	250 (0.7)	328 (0.8)	372 (0.9)	6.5	3.0	2.7	2.6	2.8
Philippines	38 (0.2)	68 (0.3)	79 (0.3)	112 (0.3)	154 (0.4)	180 (0.4)	3.8	3.6	3.2	3.2	3.4
Thailand	81 (0.4)	152 (0.6)	224 (0.7)	338 (0.9)	480 (1.2)	570 (1.3)	5.2	4.2	3.5	3.5	3.8
Vietnam	17 (0.1)	43 (0.2)	127 (0.4)	246 (0.7)	400 (1.0)	495 (1.1)	10.6	6.8	5.0	4.4	5.6
Singapore	28 (0.1)	48 (0.2)	60 (0.2)	75 (0.2)	83 (0.2)	86 (0.2)	3.9	2.2	1.0	0.7	1.4
Asia excl. Japan	3,891 (18.3)	5,933 (25.1)	11,327 (37.2)	15,003 (42.0)	18,541 (45.2)	20,157 (46.5)	5.5	2.9	2.1	1.7	2.3
North Americas	5,235 (24.6)	6,125 (25.9)	5,834 (19.2)	5,733 (16.1)	5,794 (14.1)	5,715 (13.2)	0.5	-0.2	0.1	-0.3	-0.1
Latin Americas	913 (4.3)	1,197 (5.1)	1,566 (5.2)	2,070 (5.8)	2,574 (6.3)	2,791 (6.4)	2.7	2.8	2.2	1.6	2.3
OECD Europe	3,952 (18.6)	3,893 (16.4)	3,792 (12.5)	3,581 (10.0)	3,503 (8.5)	3,470 (8.0)	-0.2	-0.6	-0.2	-0.2	-0.4
Non-OECD Europe	4,127 (19.4)	2,452 (10.4)	2,680 (8.8)	2,987 (8.4)	3,227 (7.9)	3,292 (7.6)	-2.1	1.1	0.8	0.4	0.8
Africa	594 (2.8)	727 (3.1)	1,025 (3.4)	1,366 (3.8)	1,683 (4.1)	1,852 (4.3)	2.8	2.9	2.1	1.9	2.4
Middle East	573 (2.7)	964 (4.1)	1,538 (5.1)	2,048 (5.7)	2,510 (6.1)	2,733 (6.3)	5.1	2.9	2.1	1.7	2.3
Oceania	280 (1.3)	357 (1.5)	403 (1.3)	425 (1.2)	445 (1.1)	446 (1.0)	1.8	0.5	0.5	0.0	0.4
OECD	11,095 (52.2)	12,397 (52.4)	12,249 (40.3)	12,051 (33.7)	12,139 (29.6)	12,074 (27.8)	0.5	-0.2	0.1	-0.1	-0.1
Non-OECD	9,539 (44.9)	10,444 (44.1)	17,074 (56.1)	22,307 (62.5)	27,273 (66.5)	29,521 (68.1)	3.0	2.7	2.0	1.6	2.2
World	21,250 (100)	23,673 (100)	30,411 (100)	35,707 (100)	41,037 (100)	43,357 (100)	1.8	1.6	1.4	1.1	1.4

Source: IEA "World Energy Balances"

Projection by IEEJ

Note: Figures in parentheses are global shares (%). World includes international bunkers.

Table 19 Vehicle ownership

(Million)

	Historical			Projection			AAGR(%)				
	1990	2000	2010	2020	2030	2035	1990/ 2010	2010/ 2020	2020/ 2030	2030/ 2035	2010/ 2035
Asia	85 (14.6)	138 (18.0)	240 (23.1)	401 (28.8)	577 (33.0)	686 (35.6)	5.3	5.2	3.7	3.5	4.3
P.R. China	6 (0.9)	16 (2.1)	78 (7.5)	184 (13.2)	272 (15.6)	315 (16.4)	14.2	8.9	4.0	3.0	5.7
India	4 (0.7)	9 (1.2)	21 (2.0)	50 (3.6)	103 (5.9)	147 (7.6)	8.3	8.8	7.6	7.3	8.0
Japan	56 (9.7)	71 (9.3)	75 (7.2)	73 (5.2)	69 (3.9)	67 (3.5)	1.5	-0.4	-0.5	-0.6	-0.5
Republic of Korea	3 (0.6)	12 (1.6)	18 (1.7)	22 (1.6)	24 (1.4)	24 (1.3)	8.7	1.9	0.9	0.4	1.2
Chinese Taipei	3 (0.5)	6 (0.7)	7 (0.7)	9 (0.7)	11 (0.6)	11 (0.6)	4.4	3.1	1.4	0.8	2.0
Indonesia	3 (0.5)	5 (0.7)	9 (0.9)	18 (1.3)	32 (1.8)	42 (2.2)	6.3	6.4	6.1	5.8	6.2
Malaysia	2 (0.4)	5 (0.7)	10 (1.0)	14 (1.0)	16 (0.9)	17 (0.9)	7.4	3.1	1.4	1.1	2.0
Philippines	1 (0.2)	2 (0.3)	3 (0.3)	5 (0.3)	7 (0.4)	9 (0.5)	4.8	4.2	4.3	4.4	4.3
Thailand	3 (0.5)	6 (0.8)	11 (1.0)	14 (1.0)	18 (1.0)	20 (1.0)	6.9	2.5	2.5	2.6	2.5
Vietnam	0 (0.0)	0 (0.0)	1 (0.1)	5 (0.3)	13 (0.7)	18 (0.9)	8.4	14.7	10.7	6.5	11.4
Singapore	0 (0.1)	1 (0.1)	1 (0.1)	1 (0.1)	1 (0.1)	1 (0.1)	3.2	2.2	1.4	1.0	1.6
Asia excl. Japan	28 (4.9)	67 (8.8)	165 (15.8)	328 (23.6)	509 (29.1)	620 (32.2)	9.2	7.1	4.5	4.0	5.4
North Americas	205 (35.4)	239 (31.2)	263 (25.2)	301 (21.6)	336 (19.2)	352 (18.3)	1.2	1.4	1.1	0.9	1.2
Latin Americas	38 (6.6)	56 (7.3)	94 (9.0)	157 (11.3)	214 (12.2)	233 (12.1)	4.6	5.3	3.1	1.8	3.7
OECD Europe	182 (31.4)	238 (31.1)	290 (27.8)	324 (23.3)	353 (20.2)	362 (18.8)	2.3	1.1	0.9	0.5	0.9
Non-OECD Europe	33 (5.7)	47 (6.1)	82 (7.9)	110 (7.9)	132 (7.5)	139 (7.2)	4.6	2.9	1.8	1.1	2.1
Africa	14 (2.5)	20 (2.6)	26 (2.5)	34 (2.4)	45 (2.6)	52 (2.7)	3.0	2.5	3.0	3.0	2.8
Middle East	10 (1.8)	14 (1.8)	29 (2.8)	45 (3.2)	67 (3.8)	77 (4.0)	5.3	4.5	4.1	2.9	4.0
Oceania	12 (2.0)	15 (2.0)	18 (1.8)	21 (1.5)	24 (1.4)	25 (1.3)	2.4	1.4	1.2	0.9	1.2
OECD	470 (80.9)	592 (77.3)	698 (66.9)	789 (56.7)	864 (49.5)	892 (46.3)	2.0	1.2	0.9	0.6	1.0
Non-OECD	111 (19.1)	174 (22.7)	345 (33.1)	603 (43.3)	883 (50.5)	1,034 (53.7)	5.8	5.8	3.9	3.2	4.5
World	581 (100)	766 (100)	1,043 (100)	1,392 (100)	1,747 (100)	1,926 (100)	3.0	2.9	2.3	2.0	2.5

Source: Japan Automobile Manufacturers Association "World Motor Vehicle Statistics", etc.

Projection by IEEJ

Note: Figures in parentheses are global shares (%).

Table 20 World

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>1</sup>	6,585	8,035	9,266	11,743	14,128	16,458	17,517	100	100	100	1.9	1.9	1.5	1.3	1.6
Coal	1,788	2,231	2,379	3,476	4,052	4,622	4,870	28	30	28	2.2	1.5	1.3	1.1	1.4
Oil	3,101	3,232	3,655	4,107	4,693	5,301	5,573	40	35	32	1.2	1.3	1.2	1.0	1.2
Natural gas	1,234	1,668	2,072	2,728	3,437	4,153	4,470	21	23	26	2.5	2.3	1.9	1.5	2.0
Nuclear	186	526	676	719	913	1,045	1,080	6.5	6.1	6.2	1.6	2.4	1.4	0.7	1.6
Hydro	148	184	226	296	353	400	422	2.3	2.5	2.4	2.4	1.8	1.3	1.1	1.4
Geothermal	12	34	52	65	112	173	203	0.4	0.6	1.2	3.3	5.6	4.5	3.3	4.7
Other renewables	115	159	205	351	570	768	902	2.0	3.0	5.1	4.0	5.0	3.0	3.3	3.8

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	4,788	5,582	6,302	7,773	9,365	10,844	11,518	100	100	100	1.7	1.9	1.5	1.2	1.6
By sector															
Industry	1,722	1,727	1,806	2,299	2,752	3,083	3,250	31	30	28	1.4	1.8	1.1	1.1	1.4
Transport	1,247	1,569	1,954	2,370	2,846	3,307	3,515	28	30	31	2.1	1.8	1.5	1.2	1.6
Buildings, etc.	1,465	1,808	1,927	2,306	2,820	3,356	3,581	32	30	31	1.2	2.0	1.8	1.3	1.8
Non-energy use	354	478	615	797	947	1,098	1,171	8.6	10	10	2.6	1.7	1.5	1.3	1.6
By energy															
Coal	712	773	580	853	988	1,000	1,009	14	11	8.8	0.5	1.5	0.1	0.2	0.7
Oil	2,445	2,595	3,117	3,570	4,102	4,659	4,911	46	46	43	1.6	1.4	1.3	1.1	1.3
Natural gas	816	942	1,116	1,318	1,683	1,997	2,118	17	17	18	1.7	2.5	1.7	1.2	1.9
Electricity	586	833	1,091	1,536	1,999	2,515	2,768	15	20	24	3.1	2.7	2.3	1.9	2.4
Heat	121	333	247	276	299	313	317	6.0	3.5	2.8	-0.9	0.8	0.5	0.3	0.6
Renewables	108	105	151	220	293	359	394	1.9	2.8	3.4	3.8	2.9	2.0	1.9	2.4

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	8,282	11,819	15,410	21,431	27,763	34,758	38,128	100	100	100	3.0	2.6	2.3	1.9	2.3
Coal	3,141	4,426	6,001	8,698	10,626	13,447	14,744	37	41	39	3.4	2.0	2.4	1.9	2.1
Oil	1,656	1,336	1,207	989	1,308	1,591	1,704	11	4.6	4.5	-1.5	2.8	2.0	1.4	2.2
Natural gas	997	1,727	2,732	4,768	6,390	8,263	9,214	15	22	24	5.2	3.0	2.6	2.2	2.7
Nuclear	713	2,013	2,591	2,756	3,499	4,008	4,141	17	13	11	1.6	2.4	1.4	0.7	1.6
Hydro	1,717	2,144	2,623	3,437	4,102	4,653	4,914	18	16	13	2.4	1.8	1.3	1.1	1.4
Geothermal	14	36	52	68	140	219	258	0.3	0.3	0.7	3.2	7.4	4.6	3.4	5.5
Other renew., etc.	45	137	205	715	1,699	2,577	3,153	1.2	3.3	8.3	8.6	9.0	4.3	4.1	6.1

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	17,842	24,389	32,352	41,713	57,638	76,049	85,711	2.7	3.3	2.8	2.4	2.9
Population (million)	4,432	5,265	6,071	6,828	7,661	8,313	8,599	1.3	1.2	0.8	0.7	0.9
CO <sub>2</sub> emissions (Mt)	18,433	21,250	23,673	30,411	35,707	41,037	43,357	1.8	1.6	1.4	1.1	1.4
GDP per capita (\$2000)	4,025	4,632	5,329	6,109	7,524	9,148	9,968	1.4	2.1	2.0	1.7	2.0
Primary energy consump. per capita (toe)	1.49	1.53	1.53	1.72	1.84	1.98	2.04	0.6	0.7	0.7	0.6	0.7
Primary energy consumption per GDP <sup>2</sup>	369	329	286	282	245	216	204	-0.8	-1.4	-1.2	-1.1	-1.3
CO <sub>2</sub> emissions per GDP <sup>3</sup>	1,033	871	732	729	620	540	506	-0.9	-1.6	-1.4	-1.3	-1.5
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	2.80	2.64	2.55	2.59	2.53	2.49	2.48	-0.1	-0.2	-0.1	-0.1	-0.2
Automobile ownership (million)	417	581	766	1,043	1,392	1,747	1,926	3.0	2.9	2.3	2.0	2.5
Automobile ownership <sup>5</sup>	94	110	126	153	182	210	224	1.6	1.8	1.5	1.3	1.5

<sup>1</sup> Trade of electricity and heat are not shown, <sup>2</sup> toe/\$2000 million, <sup>3</sup> t/\$2000 million

<sup>4</sup> t/toe, <sup>5</sup> vehicles per 1,000 people

Table 21 Asia

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	1,047	1,655	2,456	4,163	5,644	7,031	7,684	100	100	100	4.7	3.1	2.2	1.8	2.5
Coal	471	796	1,099	2,228	2,783	3,301	3,544	48	54	46	5.3	2.3	1.7	1.4	1.9
Oil	478	619	917	1,174	1,531	1,842	1,987	37	28	26	3.3	2.7	1.9	1.5	2.1
Natural gas	51	116	231	448	766	1,123	1,284	7.0	11	17	7.0	5.5	3.9	2.7	4.3
Nuclear	25	77	132	152	286	387	424	4.6	3.6	5.5	3.5	6.6	3.1	1.8	4.2
Hydro	20	32	41	92	125	144	152	1.9	2.2	2.0	5.4	3.1	1.4	1.1	2.0
Geothermal	2.6	8.2	23	31	45	69	81	0.5	0.7	1.1	6.8	3.8	4.4	3.3	3.9
Other renewables	0.0	7.2	12	38	109	170	216	0.4	0.9	2.8	8.7	11.0	4.5	4.9	7.2

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	754	1,131	1,555	2,542	3,516	4,325	4,707	100	100	100	4.1	3.3	2.1	1.7	2.5
By sector															
Industry	366	484	633	1,128	1,431	1,612	1,706	43	44	36	4.3	2.4	1.2	1.1	1.7
Transport	127	197	321	472	718	915	1,009	17	19	21	4.5	4.3	2.4	2.0	3.1
Buildings, etc.	207	334	411	619	921	1,258	1,404	30	24	30	3.1	4.0	3.2	2.2	3.3
Non-energy use	54	117	191	322	446	541	588	10	13	12	5.2	3.3	1.9	1.7	2.4
By energy															
Coal	310	441	409	690	800	801	805	39	27	17	2.3	1.5	0.0	0.1	0.6
Oil	328	469	744	998	1,352	1,649	1,790	41	39	38	3.9	3.1	2.0	1.6	2.4
Natural gas	21	47	88	191	388	552	605	4.1	7.5	13	7.3	7.3	3.6	1.8	4.7
Electricity	88	156	277	571	843	1,157	1,325	14	22	28	6.7	4.0	3.2	2.8	3.4
Heat	7.5	14	30	70	99	116	121	1.3	2.8	2.6	8.2	3.5	1.6	0.9	2.2
Renewables	-	4.7	7.7	21	34	50	61	0.4	0.8	1.3	7.8	5.1	3.9	3.9	4.4

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	1,195	2,212	3,966	7,932	11,634	15,896	18,113	100	100	100	6.6	3.9	3.2	2.6	3.4
Coal	302	864	1,991	4,797	6,542	8,993	10,207	39	60	56	8.9	3.2	3.2	2.6	3.1
Oil	470	429	382	275	345	401	423	19	3.5	2.3	-2.2	2.3	1.5	1.1	1.7
Natural gas	90	235	562	1,066	1,678	2,521	3,044	11	13	17	7.8	4.6	4.2	3.8	4.3
Nuclear	97	294	505	582	1,098	1,485	1,626	13	7.3	9.0	3.5	6.6	3.1	1.8	4.2
Hydro	232	370	481	1,067	1,455	1,676	1,766	17	13	9.8	5.4	3.2	1.4	1.1	2.0
Geothermal	3.0	8.3	20	22	47	74	88	0.4	0.3	0.5	5.0	7.9	4.7	3.4	5.7
Other renew., etc.	0.0	11	25	124	469	745	958	0.5	1.6	5.3	12.8	14.2	4.7	5.2	8.5

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	3,552	5,947	8,124	12,046	19,192	27,200	31,648	3.6	4.8	3.5	3.1	3.9
Population (million)	2,436	2,923	3,381	3,751	4,167	4,411	4,496	1.3	1.1	0.6	0.4	0.7
CO <sub>2</sub> emissions (Mt)	3,288	4,960	7,126	12,485	16,147	19,674	21,295	4.7	2.6	2.0	1.6	2.2
GDP per capita (\$2000)	1,458	2,035	2,403	3,211	4,605	6,167	7,039	2.3	3.7	3.0	2.7	3.2
Primary energy consump. per capita (toe)	0.43	0.57	0.73	1.11	1.35	1.59	1.71	3.4	2.0	1.6	1.4	1.7
Primary energy consumption per GDP <sup>*2</sup>	295	278	302	346	294	258	243	1.1	-1.6	-1.3	-1.2	-1.4
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	926	834	877	1,036	841	723	673	1.1	-2.1	-1.5	-1.4	-1.7
CO <sub>2</sub> per primary energy consumption <sup>*4</sup>	3.14	3.00	2.90	3.00	2.86	2.80	2.77	0.0	-0.5	-0.2	-0.2	-0.3
Automobile ownership (million)	47	85	138	240	401	577	686	5.3	5.2	3.7	3.5	4.3
Automobile ownership <sup>*5</sup>	19	29	41	64	96	131	153	4.0	4.1	3.1	3.1	3.5

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 22 People's Republic of China

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	418	672	980	2,216	3,077	3,744	3,983	100	100	100	6.2	3.3	2.0	1.2	2.4
Coal	313	528	712	1,595	1,896	2,134	2,205	79	72	55	5.7	1.7	1.2	0.7	1.3
Oil	89	120	221	431	658	792	836	18	19	21	6.6	4.3	1.9	1.1	2.7
Natural gas	12	13	21	89	260	444	502	1.9	4.0	13	10.2	11.4	5.5	2.5	7.2
Nuclear	-	-	4.4	19	112	179	212	-	0.9	5.3	-	19.2	4.8	3.5	10.1
Hydro	5.0	11	19	62	83	89	92	1.6	2.8	2.3	9.1	3.0	0.7	0.5	1.6
Geothermal	-	-	1.6	3.7	4.4	5.1	5.4	-	0.2	0.1	-	1.6	1.5	1.4	1.5
Other renewables	-	0.0	1.8	17	64	103	132	0.0	0.8	3.3	36.8	13.9	4.8	5.2	8.4

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	315	466	612	1,313	1,929	2,320	2,452	100	100	100	5.3	3.9	1.9	1.1	2.5
By sector															
Industry	188	244	329	712	877	913	918	52	54	37	5.5	2.1	0.4	0.1	1.0
Transport	24	34	83	182	364	473	511	7.3	14	21	8.8	7.2	2.7	1.6	4.2
Buildings, etc.	92	144	139	287	475	669	730	31	22	30	3.5	5.2	3.5	1.8	3.8
Non-energy use	11	44	61	131	213	265	292	9.5	10	12	5.6	4.9	2.2	2.0	3.2
By energy															
Coal	220	320	304	512	560	523	504	69	39	21	2.4	0.9	-0.7	-0.7	-0.1
Oil	59	85	179	369	621	760	809	18	28	33	7.6	5.3	2.0	1.2	3.2
Natural gas	6.4	8.9	12	57	200	318	346	1.9	4.4	14	9.8	13.3	4.8	1.7	7.5
Electricity	21	39	89	297	438	582	645	8.4	23	26	10.7	4.0	2.9	2.1	3.2
Heat	7.4	13	25	64	89	103	107	2.8	4.9	4.4	8.2	3.3	1.5	0.8	2.1
Renewables	-	0.0	2.5	13	22	34	42	0.0	1.0	1.7	35.1	5.3	4.3	4.4	4.7

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	301	621	1,356	4,208	6,053	7,994	8,818	100	100	100	10.0	3.7	2.8	2.0	3.0
Coal	164	443	1,062	3,273	4,185	5,441	5,882	71	78	67	10.5	2.5	2.7	1.6	2.4
Oil	78	49	46	13	16	16	15	7.8	0.3	0.2	-6.3	1.8	-0.2	-0.2	0.6
Natural gas	0.7	2.8	5.8	69	192	389	494	0.4	1.6	5.6	17.5	10.8	7.3	4.9	8.2
Nuclear	-	-	17	74	429	685	813	-	1.8	9.2	-	19.2	4.8	3.5	10.1
Hydro	58	127	222	722	969	1,039	1,064	20	17	12	9.1	3.0	0.7	0.5	1.6
Geothermal	-	-	-	0.2	0.5	0.8	1.0	-	0.0	0.0	-	11.3	5.6	3.9	7.5
Other renew., etc.	-	0.0	3.1	57	261	423	548	0.0	1.4	6.2	61.3	16.4	4.9	5.3	9.5

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	183	445	1,199	3,246	6,942	10,831	12,864	10.5	7.9	4.5	3.5	5.7
Population (million)	981	1,135	1,263	1,338	1,388	1,393	1,382	0.8	0.4	0.0	-0.2	0.1
CO <sub>2</sub> emissions (Mt)	1,505	2,337	3,346	7,425	9,458	11,051	11,496	6.0	2.5	1.6	0.8	1.8
GDP per capita (\$2000)	186	392	949	2,426	5,002	7,775	9,311	9.5	7.5	4.5	3.7	5.5
Primary energy consump. per capita (toe)	0.43	0.59	0.78	1.66	2.22	2.69	2.88	5.3	3.0	1.9	1.4	2.2
Primary energy consumption per GDP <sup>2</sup>	2,288	1,511	818	683	443	346	310	-3.9	-4.2	-2.5	-2.2	-3.1
CO <sub>2</sub> emissions per GDP <sup>3</sup>	8,230	5,256	2,792	2,287	1,362	1,020	894	-4.1	-5.0	-2.9	-2.6	-3.7
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	3.60	3.48	3.41	3.35	3.07	2.95	2.89	-0.2	-0.9	-0.4	-0.4	-0.6
Automobile ownership (million)	1.8	5.5	16	78	184	272	315	14.2	8.9	4.0	3.0	5.7
Automobile ownership <sup>5</sup>	1.8	4.8	13	58	132	195	228	13.3	8.5	4.0	3.2	5.6

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 23 India

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	89	183	309	524	808	1,161	1,376	100	100	100	5.4	4.4	3.7	3.5	3.9
Coal	49	103	161	288	447	618	721	56	55	52	5.3	4.5	3.3	3.1	3.7
Oil	33	61	113	162	226	327	387	34	31	28	5.0	3.4	3.8	3.5	3.5
Natural gas	1.3	11	23	53	80	127	161	5.8	10	12	8.4	4.3	4.7	4.9	4.6
Nuclear	0.8	1.6	4.4	6.8	28	51	60	0.9	1.3	4.4	7.5	15.2	6.2	3.2	9.1
Hydro	4.0	6.2	6.4	9.8	14	18	20	3.4	1.9	1.5	2.4	3.6	2.5	2.5	2.9
Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other renewables	-	0.0	1.0	3.4	12	20	25	0.0	0.6	1.9	33.8	13.2	5.4	5.5	8.4

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	63	118	171	289	452	659	792	100	100	100	4.6	4.6	3.8	3.7	4.1
By sector															
Industry	24	48	62	123	176	241	284	40	43	36	4.8	3.7	3.2	3.3	3.4
Transport	17	27	32	55	89	142	179	23	19	23	3.6	4.8	4.8	4.7	4.8
Buildings, etc.	16	32	48	72	128	199	244	27	25	31	4.2	5.9	4.5	4.1	5.0
Non-energy use	5.2	12	29	38	59	77	86	9.9	13	11	6.1	4.5	2.8	2.2	3.3
By energy															
Coal	28	42	33	76	108	118	125	35	26	16	3.0	3.6	0.9	1.2	2.0
Oil	27	53	96	128	193	289	347	44	44	44	4.6	4.2	4.1	3.7	4.1
Natural gas	0.7	5.6	9.7	23	31	44	52	4.8	7.9	6.6	7.3	3.2	3.4	3.5	3.4
Electricity	7.7	18	32	61	120	206	264	15	21	33	6.2	6.9	5.6	5.1	6.0
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	-	0.0	0.1	0.5	0.9	1.9	3.1	0.0	0.2	0.4	22.9	6.6	7.5	10.6	7.8

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	119	289	561	960	1,804	2,981	3,746	100	100	100	6.2	6.5	5.1	4.7	5.6
Coal	61	192	387	653	1,172	1,959	2,475	66	68	66	6.3	6.0	5.3	4.8	5.5
Oil	7.6	10	24	26	27	37	43	3.5	2.8	1.2	5.0	0.2	3.2	3.1	2.0
Natural gas	0.6	10.0	56	118	240	426	573	3.4	12	15	13.1	7.4	5.9	6.1	6.5
Nuclear	3.0	6.1	17	26	108	198	231	2.1	2.7	6.2	7.5	15.2	6.2	3.2	9.1
Hydro	47	72	74	114	163	208	236	25	12	6.3	2.4	3.6	2.5	2.5	2.9
Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other renew., etc.	-	0.0	3.0	22	94	153	189	0.0	2.3	5.0	38.6	15.7	5.0	4.3	9.0

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	160	275	468	995	2,077	3,663	4,776	6.6	7.6	5.8	5.5	6.5
Population (million)	687	850	1,016	1,171	1,387	1,523	1,580	1.6	1.7	0.9	0.7	1.2
CO <sub>2</sub> emissions (Mt)	285	591	958	1,657	2,483	3,523	4,172	5.3	4.1	3.6	3.4	3.8
GDP per capita (\$2000)	233	324	460	850	1,497	2,404	3,023	4.9	5.8	4.9	4.7	5.2
Primary energy consump. per capita (toe)	0.13	0.22	0.30	0.45	0.58	0.76	0.87	3.7	2.7	2.7	2.7	2.7
Primary energy consumption per GDP <sup>*2</sup>	554	667	661	526	389	317	288	-1.2	-3.0	-2.0	-1.9	-2.4
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	1,779	2,149	2,047	1,664	1,196	962	874	-1.3	-3.3	-2.2	-1.9	-2.5
CO <sub>2</sub> per primary energy consumption <sup>*4</sup>	3.21	3.22	3.10	3.16	3.07	3.04	3.03	-0.1	-0.3	-0.1	0.0	-0.2
Automobile ownership (million)	1.7	4.3	9.4	21	50	103	147	8.3	8.8	7.6	7.3	8.0
Automobile ownership <sup>*5</sup>	2.4	5.1	9.3	18	36	68	93	6.6	6.9	6.6	6.6	6.7

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 24 Japan

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	345	439	519	497	489	475	462	100	100	100	0.6	-0.2	-0.3	-0.6	-0.3
Coal	60	77	97	115	117	121	124	17	23	27	2.0	0.2	0.3	0.4	0.3
Oil	234	250	255	203	176	154	145	57	41	31	-1.0	-1.4	-1.3	-1.2	-1.3
Natural gas	21	44	66	86	105	120	129	10	17	28	3.4	2.0	1.3	1.5	1.6
Nuclear	22	53	84	75	62	44	24	12	15	5.2	1.8	-1.9	-3.4	-11.6	-4.5
Hydro	7.6	7.7	7.5	7.1	7.4	7.5	7.5	1.7	1.4	1.6	-0.4	0.4	0.1	0.0	0.2
Geothermal	0.8	1.6	3.1	2.5	6.8	12	14	0.4	0.5	3.0	2.3	10.7	5.5	3.8	7.2
Other renewables	-	6.2	6.7	8.2	14	17	18	1.4	1.7	4.0	1.5	5.6	1.6	2.0	3.3

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	232	300	345	325	315	302	294	100	100	100	0.4	-0.3	-0.5	-0.5	-0.4
By sector															
Industry	91	103	100	90	98	95	94	34	28	32	-0.7	0.9	-0.3	-0.3	0.2
Transport	54	72	88	77	66	57	53	24	24	18	0.4	-1.5	-1.5	-1.4	-1.5
Buildings, etc.	58	91	116	118	117	116	114	30	36	39	1.3	-0.1	0.0	-0.3	-0.1
Non-energy use	28	35	42	40	35	33	33	12	12	11	0.7	-1.4	-0.4	-0.5	-0.8
By energy															
Coal	25	32	27	29	29	27	26	11	8.8	8.7	-0.6	0.1	-0.8	-1.0	-0.5
Oil	157	184	210	171	142	124	115	61	53	39	-0.4	-1.8	-1.4	-1.4	-1.6
Natural gas	5.8	15	23	34	45	44	44	5.1	11	15	4.2	2.6	0.0	-0.1	1.0
Electricity	44	64	81	86	91	97	98	21	27	33	1.5	0.6	0.6	0.3	0.5
Heat	0.1	0.2	0.5	0.6	3.3	5.4	6.3	0.1	0.2	2.2	5.5	19.0	4.9	3.3	10.0
Renewables	-	3.9	3.7	3.5	4.9	4.6	4.5	1.3	1.1	1.5	-0.5	3.3	-0.5	-0.5	1.0

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	573	836	1,049	1,111	1,182	1,252	1,269	100	100	100	1.4	0.6	0.6	0.3	0.5
Coal	55	117	232	304	319	356	382	14	27	30	4.9	0.5	1.1	1.4	0.9
Oil	265	248	137	97	105	93	89	30	8.8	7.0	-4.6	0.8	-1.2	-0.8	-0.3
Natural gas	81	167	251	305	356	439	492	20	27	39	3.0	1.6	2.1	2.3	1.9
Nuclear	83	202	322	288	239	169	91	24	26	7.2	1.8	-1.9	-3.4	-11.6	-4.5
Hydro	88	89	87	82	86	87	87	11	7.4	6.8	-0.4	0.4	0.1	0.0	0.2
Geothermal	0.9	1.7	3.3	2.6	7.7	13	16	0.2	0.2	1.3	2.1	11.3	5.6	3.9	7.5
Other renew., etc.	-	11	16	31	70	94	111	1.3	2.8	8.8	5.6	8.4	3.0	3.4	5.2

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	2,638	4,150	4,667	5,029	5,782	6,537	6,854	1.0	1.4	1.2	0.9	1.2
Population (million)	118	124	127	127	123	115	111	0.1	-0.4	-0.6	-0.8	-0.6
CO <sub>2</sub> emissions (Mt)	916	1,070	1,194	1,158	1,143	1,133	1,138	0.4	-0.1	-0.1	0.1	-0.1
GDP per capita (\$2000)	22,424	33,491	36,709	39,530	47,104	56,733	61,921	0.8	1.8	1.9	1.8	1.8
Primary energy consump. per capita (toe)	2.93	3.55	4.08	3.91	3.98	4.13	4.17	0.5	0.2	0.4	0.2	0.3
Primary energy consumption per GDP <sup>*2</sup>	131	106	111	99	84	73	67	-0.3	-1.6	-1.5	-1.5	-1.5
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	347	258	256	230	198	173	166	-0.6	-1.5	-1.3	-0.8	-1.3
CO <sub>2</sub> per primary energy consumption <sup>*4</sup>	2.66	2.43	2.30	2.33	2.34	2.38	2.47	-0.2	0.0	0.2	0.7	0.2
Automobile ownership (million)	37	56	71	75	73	69	67	1.5	-0.4	-0.5	-0.6	-0.5
Automobile ownership <sup>*5</sup>	317	457	559	592	591	597	602	1.3	0.0	0.1	0.2	0.1

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people



Table 25 Republic of Korea

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	41	93	188	250	281	297	301	100	100	100	5.1	1.2	0.5	0.3	0.7
Coal	13	26	42	73	72	69	67	27	29	22	5.4	-0.1	-0.5	-0.6	-0.4
Oil	27	50	99	95	94	91	89	53	38	30	3.3	-0.1	-0.3	-0.5	-0.3
Natural gas	-	2.7	17	39	42	42	41	2.9	15	14	14.2	0.9	-0.1	-0.5	0.2
Nuclear	0.9	14	28	39	65	85	92	15	15	31	5.3	5.4	2.7	1.6	3.5
Hydro	0.2	0.5	0.3	0.3	0.3	0.3	0.3	0.6	0.1	0.1	-2.7	-2.0	0.0	0.0	-0.8
Geothermal	-	-	-	0.0	0.1	0.1	0.1	-	0.0	0.0	-	8.2	4.4	3.3	5.7
Other renewables	-	0.7	1.4	3.6	7.0	9.5	11	0.8	1.5	3.8	8.3	6.8	3.1	3.6	4.7

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	31	65	127	157	175	181	181	100	100	100	4.5	1.0	0.3	0.1	0.6
By sector															
Industry	10	19	38	45	52	55	55	30	28	31	4.3	1.6	0.5	0.2	0.8
Transport	4.8	15	26	30	32	31	31	22	19	17	3.7	0.7	-0.2	-0.6	0.1
Buildings, etc.	13	24	37	44	48	51	52	38	28	29	3.1	0.8	0.6	0.4	0.6
Non-energy use	3.1	6.7	25	38	42	43	43	10	24	24	9.1	0.9	0.3	0.0	0.5
By energy															
Coal	9.7	12	9.1	9.5	9.6	8.8	8.3	18	6.1	4.6	-1.0	0.0	-0.8	-1.2	-0.6
Oil	19	44	80	82	83	81	79	67	52	44	3.2	0.1	-0.2	-0.4	-0.1
Natural gas	-	0.7	11	20	25	26	26	1.0	13	15	18.6	2.0	0.6	0.0	1.0
Electricity	2.8	8.1	23	39	48	54	56	13	25	31	8.1	2.3	1.1	0.8	1.5
Heat	-	-	3.3	4.3	5.9	6.7	6.8	-	2.8	3.8	-	3.1	1.2	0.4	1.8
Renewables	-	0.7	1.3	2.7	3.5	4.1	4.4	1.1	1.7	2.4	6.7	2.7	1.6	1.4	2.0

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	37	105	289	497	612	682	710	100	100	100	8.1	2.1	1.1	0.8	1.4
Coal	2.5	18	111	219	228	225	222	17	44	31	13.4	0.4	-0.2	-0.2	0.1
Oil	29	19	35	19	12	8.1	6.3	18	3.8	0.9	0.0	-4.4	-3.8	-4.9	-4.3
Natural gas	-	9.6	29	103	99	87	81	9.1	21	11	12.6	-0.4	-1.3	-1.4	-1.0
Nuclear	3.5	53	109	149	251	327	355	50	30	50	5.3	5.4	2.7	1.6	3.5
Hydro	2.0	6.4	4.0	3.7	3.0	3.0	3.0	6.0	0.7	0.4	-2.7	-2.0	0.0	0.0	-0.8
Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other renew., etc.	-	0.0	0.1	3.0	18	31	42	0.0	0.6	6.0	49.3	19.3	5.9	6.2	11.1

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	128	296	533	801	1,163	1,490	1,641	5.1	3.8	2.5	2.0	2.9
Population (million)	38	43	47	49	51	51	51	0.7	0.3	0.1	-0.1	0.2
CO <sub>2</sub> emissions (Mt)	126	240	433	555	545	517	501	4.3	-0.2	-0.5	-0.6	-0.4
GDP per capita (\$2000)	3,358	6,895	11,347	16,394	23,007	29,168	32,312	4.4	3.4	2.4	2.1	2.8
Primary energy consump. per capita (toe)	1.08	2.17	4.00	5.12	5.57	5.81	5.92	4.4	0.9	0.4	0.4	0.6
Primary energy consumption per GDP <sup>2</sup>	322	315	353	312	242	199	183	0.0	-2.5	-1.9	-1.6	-2.1
CO <sub>2</sub> emissions per GDP <sup>3</sup>	983	811	812	693	469	347	305	-0.8	-3.8	-3.0	-2.6	-3.2
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	3.05	2.57	2.30	2.22	1.94	1.74	1.66	-0.7	-1.4	-1.1	-0.9	-1.2
Automobile ownership (million)	0.5	3.4	12	18	22	24	24	8.7	1.9	0.9	0.4	1.2
Automobile ownership <sup>5</sup>	14	79	257	367	430	466	478	8.0	1.6	0.8	0.5	1.1

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 26 Chinese Taipei

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	28	48	85	109	127	133	133	100	100	100	4.2	1.5	0.4	0.1	0.8
Coal	3.9	11	30	41	44	42	39	24	38	29	6.7	0.6	-0.3	-1.5	-0.2
Oil	20	26	38	42	46	48	48	54	39	36	2.5	0.8	0.5	0.0	0.5
Natural gas	1.6	1.9	6.0	13	18	24	26	3.8	12	19	10.2	3.3	2.7	1.9	2.8
Nuclear	2.1	8.6	10	11	16	14	14	18	9.9	10	1.2	4.2	-1.7	0.0	0.9
Hydro	0.3	0.5	0.4	0.4	0.3	0.3	0.3	1.1	0.3	0.2	-2.1	-1.1	0.0	0.0	-0.4
Geothermal	-	0.0	-	-	-	-	-	0.0	-	-	-100.0	-	-	-	-
Other renewables	-	0.0	0.7	1.4	2.9	4.6	6.2	0.0	1.3	4.6	24.5	7.2	4.7	6.0	6.0

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	19	29	49	68	77	82	83	100	100	100	4.3	1.3	0.6	0.2	0.8
By sector															
Industry	10	12	19	22	25	27	27	42	33	33	3.0	1.4	0.5	0.4	0.8
Transport	2.9	6.7	12	12	13	14	14	23	18	17	3.0	1.0	0.4	0.1	0.6
Buildings, etc.	3.6	6.4	10	12	16	16	16	22	17	20	3.1	2.9	0.6	-0.1	1.4
Non-energy use	2.2	4.0	7.8	22	23	25	25	14	32	30	8.8	0.5	0.9	0.1	0.6
By energy															
Coal	2.2	3.6	5.0	7.8	8.7	8.7	8.7	12	12	10	4.0	1.0	0.1	-0.2	0.4
Oil	12	18	28	39	42	45	45	62	57	54	3.8	0.9	0.6	0.0	0.6
Natural gas	1.4	0.9	1.6	2.1	3.1	3.7	4.0	3.0	3.1	4.8	4.5	4.0	1.7	1.5	2.6
Electricity	3.2	6.6	14	19	23	25	25	22	28	30	5.4	2.0	0.7	0.4	1.2
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	-	0.0	0.1	0.1	0.3	0.4	0.4	0.1	0.2	0.5	9.2	9.4	3.3	2.6	5.6

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	43	88	181	244	295	314	320	100	100	100	5.2	1.9	0.6	0.3	1.1
Coal	6.0	24	88	125	143	142	131	28	51	41	8.5	1.3	0.0	-1.6	0.2
Oil	26	23	30	11	4.5	3.8	3.6	26	4.5	1.1	-3.8	-8.4	-1.8	-0.9	-4.3
Natural gas	-	1.2	17	57	72	96	106	1.4	24	33	21.1	2.2	3.0	2.0	2.5
Nuclear	8.2	33	39	42	63	53	53	37	17	16	1.2	4.2	-1.7	0.0	0.9
Hydro	2.9	6.4	4.6	4.2	3.7	3.7	3.7	7.2	1.7	1.2	-2.1	-1.1	0.0	0.0	-0.4
Geothermal	-	0.0	-	-	-	-	-	0.0	-	-	-100.0	-	-	-	-
Other renew., etc.	-	-	1.7	4.4	10	16	22	-	1.8	7.0	-	8.6	4.6	7.2	6.7

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	81	169	309	450	687	866	945	5.0	4.3	2.3	1.8	3.0
Population (million)	18	20	22	23	24	24	24	0.6	0.3	0.0	-0.2	0.1
CO <sub>2</sub> emissions (Mt)	74	117	226	257	286	294	286	4.0	1.1	0.3	-0.5	0.4
GDP per capita (\$2000)	4,529	8,269	13,861	19,441	28,906	36,355	40,145	4.4	4.0	2.3	2.0	2.9
Primary energy consump. per capita (toe)	1.56	2.37	3.83	4.72	5.35	5.57	5.66	3.5	1.3	0.4	0.3	0.7
Primary energy consumption per GDP <sup>*2</sup>	345	286	276	243	185	153	141	-0.8	-2.7	-1.9	-1.6	-2.1
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	913	691	732	571	416	339	302	-1.0	-3.1	-2.0	-2.3	-2.5
CO <sub>2</sub> per primary energy consumption <sup>*4</sup>	2.64	2.42	2.65	2.35	2.25	2.21	2.14	-0.1	-0.5	-0.1	-0.6	-0.4
Automobile ownership (million)	0.5	2.9	5.5	6.8	9.3	11	11	4.4	3.1	1.4	0.8	2.0
Automobile ownership <sup>*5</sup>	27	141	249	295	391	448	471	3.7	2.9	1.4	1.0	1.9

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 27 Indonesia

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	25	55	106	154	239	344	406	100	100	100	5.3	4.5	3.7	3.3	3.9
Coal	0.2	3.5	12	30	68	107	133	6.4	20	33	11.4	8.4	4.6	4.5	6.1
Oil	20	33	58	67	94	121	135	60	43	33	3.5	3.4	2.6	2.2	2.9
Natural gas	4.9	16	27	39	51	70	82	29	25	20	4.6	2.8	3.2	3.2	3.0
Nuclear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	0.1	0.5	0.9	1.5	1.7	2.0	2.0	0.9	1.0	0.5	5.8	1.2	1.3	0.7	1.2
Geothermal	-	1.9	8.4	16	24	41	49	3.5	10	12	11.2	3.9	5.6	3.9	4.6
Other renewables	-	-	0.0	0.2	1.2	3.3	4.0	-	0.1	1.0	-	18.8	10.6	3.9	12.4

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	20	38	72	103	154	217	253	100	100	100	5.2	4.1	3.5	3.1	3.6
By sector															
Industry	6.7	11	22	40	58	83	98	29	38	39	6.7	4.0	3.7	3.3	3.7
Transport	6.0	11	22	36	48	63	71	28	35	28	6.2	2.9	2.8	2.3	2.7
Buildings, etc.	6.4	8.9	18	19	33	50	60	24	18	24	3.9	5.7	4.1	3.9	4.7
Non-energy use	1.2	7.4	9.9	8.9	15	20	24	19	8.6	9.4	1.0	5.1	3.3	3.0	4.0
By energy															
Coal	0.1	2.1	4.7	13	30	41	48	5.6	12	19	9.4	8.7	3.4	3.1	5.4
Oil	17	27	49	62	77	102	115	72	60	45	4.2	2.2	2.8	2.5	2.5
Natural gas	2.4	6.0	12	16	21	29	34	16	15	13	5.0	2.6	3.4	3.2	3.0
Electricity	0.6	2.4	6.8	13	26	42	53	6.4	12	21	8.6	7.3	5.1	4.6	5.9
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	-	-	-	0.0	0.9	2.8	3.3	-	0.0	1.3	-	38.7	12.0	3.4	20.1

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	7.5	33	93	170	348	570	715	100	100	100	8.6	7.4	5.1	4.6	5.9
Coal	-	9.8	34	68	158	288	381	30	40	53	10.2	8.8	6.2	5.8	7.1
Oil	6.2	15	18	35	58	71	74	47	20	10	4.1	5.2	2.1	0.9	3.1
Natural gas	-	0.7	26	40	84	140	177	2.2	24	25	22.1	7.7	5.2	4.9	6.1
Nuclear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	1.3	5.7	10	18	20	23	24	17	10	3.3	5.8	1.2	1.3	0.7	1.2
Geothermal	-	1.1	4.9	9.4	27	47	57	3.4	5.5	8.0	11.2	11.3	5.6	3.9	7.5
Other renew., etc.	-	-	0.0	0.1	0.8	1.4	2.2	-	0.1	0.3	-	24.4	5.2	9.4	13.4

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	59	109	165	275	491	777	962	4.7	6.0	4.7	4.4	5.1
Population (million)	151	184	213	240	262	278	284	1.3	0.9	0.6	0.4	0.7
CO <sub>2</sub> emissions (Mt)	71	134	263	393	637	904	1,069	5.5	4.9	3.6	3.4	4.1
GDP per capita (\$2000)	390	592	773	1,146	1,874	2,791	3,385	3.4	5.0	4.1	3.9	4.4
Primary energy consump. per capita (toe)	0.17	0.30	0.50	0.64	0.91	1.24	1.43	3.9	3.6	3.1	2.9	3.2
Primary energy consumption per GDP <sup>2</sup>	433	505	642	561	487	443	422	0.5	-1.4	-0.9	-1.0	-1.1
CO <sub>2</sub> emissions per GDP <sup>3</sup>	1,215	1,227	1,595	1,430	1,297	1,164	1,112	0.8	-1.0	-1.1	-0.9	-1.0
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	2.81	2.43	2.48	2.55	2.66	2.63	2.64	0.2	0.4	-0.1	0.1	0.1
Automobile ownership (million)	1.3	2.8	5.2	9.4	18	32	42	6.3	6.4	6.1	5.8	6.2
Automobile ownership <sup>5</sup>	8.6	15	24	39	67	115	149	4.9	5.5	5.5	5.4	5.5

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 28 Malaysia

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	10	19	44	70	94	128	148	100	100	100	6.7	3.1	3.1	2.9	3.1
Coal	0.1	1.4	2.3	15	20	30	36	7.1	21	24	12.6	3.2	4.1	3.8	3.7
Oil	7.9	11	19	26	30	36	40	59	37	27	4.2	1.4	1.9	2.1	1.8
Natural gas	2.0	6.1	22	28	43	56	62	32	40	42	7.9	4.3	2.7	2.2	3.2
Nuclear	-	-	-	-	-	2.6	5.1	-	-	3.4	-	-	-	14.9	-
Hydro	0.1	0.3	0.6	0.6	1.2	2.8	3.6	1.8	0.8	2.5	2.4	8.0	8.9	5.2	7.8
Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other renewables	-	-	-	0.4	0.5	0.9	1.1	-	0.6	0.8	-	0.5	7.2	3.8	3.8

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	6.1	12	28	42	59	80	92	100	100	100	6.2	3.5	3.2	2.8	3.2
By sector															
Industry	2.9	5.3	11	13	19	27	31	42	31	34	4.7	4.0	3.4	2.8	3.5
Transport	2.1	4.8	10	14	18	21	22	38	35	24	5.7	2.5	1.3	0.9	1.7
Buildings, etc.	0.8	1.6	4.0	8.0	13	21	25	13	19	27	8.3	5.3	4.4	4.1	4.7
Non-energy use	0.3	0.8	2.1	6.1	7.5	12	14	6.3	15	15	10.9	2.0	4.5	4.1	3.4
By energy															
Coal	0.1	0.5	1.0	1.8	2.3	3.6	4.3	4.1	4.4	4.6	6.6	2.4	4.4	3.6	3.4
Oil	5.3	9.2	18	25	27	32	35	74	59	38	5.1	0.9	1.8	2.0	1.5
Natural gas	0.0	1.0	3.5	5.6	14	20	22	7.9	14	24	9.1	9.6	3.4	2.1	5.6
Electricity	0.7	1.7	5.3	9.5	15	25	30	14	23	33	9.0	4.8	4.9	4.3	4.7
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	-	-	-	0.0	0.2	0.4	0.4	-	0.0	0.5	-	42.5	11.0	0.9	20.3

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	10	23	69	125	196	308	378	100	100	100	8.8	4.6	4.6	4.2	4.5
Coal	-	2.9	7.7	43	73	114	141	13	34	37	14.4	5.4	4.6	4.2	4.9
Oil	8.5	11	3.6	3.7	3.7	3.7	3.7	48	2.9	1.0	-5.4	0.0	0.0	0.0	0.0
Natural gas	0.1	5.0	51	71	104	144	166	22	57	44	14.2	3.9	3.3	3.0	3.5
Nuclear	-	-	-	-	-	9.8	20	-	-	5.2	-	-	-	14.9	-
Hydro	1.4	4.0	7.0	6.5	15	35	45	17	5.2	12	2.4	8.7	8.9	5.2	8.1
Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other renew., etc.	-	-	-	1.3	1.0	1.6	2.2	-	1.0	0.6	-	-2.5	4.9	6.3	2.2

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	26	47	94	147	233	354	425	5.8	4.7	4.3	3.7	4.3
Population (million)	14	18	23	28	32	35	37	2.2	1.3	0.9	0.9	1.1
CO <sub>2</sub> emissions (Mt)	28	53	115	186	250	328	372	6.5	3.0	2.7	2.6	2.8
GDP per capita (\$2000)	1,910	2,593	4,006	5,176	7,192	9,979	11,469	3.5	3.3	3.3	2.8	3.2
Primary energy consump. per capita (toe)	0.73	1.05	1.89	2.45	2.91	3.62	4.01	4.3	1.7	2.2	2.0	2.0
Primary energy consumption per GDP <sup>*2</sup>	381	406	472	474	405	363	349	0.8	-1.6	-1.1	-0.8	-1.2
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	1,071	1,114	1,221	1,264	1,075	928	876	0.6	-1.6	-1.5	-1.1	-1.5
CO <sub>2</sub> per primary energy consumption <sup>*4</sup>	2.81	2.74	2.59	2.67	2.65	2.56	2.51	-0.1	0.0	-0.4	-0.4	-0.2
Automobile ownership (million)	0.9	2.4	5.2	10	14	16	17	7.4	3.1	1.4	1.1	2.0
Automobile ownership <sup>*5</sup>	65	133	224	354	421	442	446	5.0	1.7	0.5	0.2	0.9

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 29 Philippines

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	13	18	32	34	46	60	69	100	100	100	3.3	3.1	2.7	2.8	2.9
Coal	0.5	1.4	5.0	7.7	11	16	19	8.1	23	27	8.8	3.8	3.5	3.5	3.6
Oil	10	11	16	14	18	23	26	61	40	38	1.1	2.7	2.5	2.6	2.6
Natural gas	-	-	0.0	3.0	6.1	9.5	12	-	9.0	17	-	7.2	4.5	4.0	5.5
Nuclear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	0.3	0.5	0.7	0.7	1.0	1.2	1.3	2.9	2.0	1.9	1.3	4.1	1.9	1.5	2.7
Geothermal	1.8	4.7	10.0	8.5	9.2	9.9	10	27	25	15	3.0	0.7	0.8	0.7	0.8
Other renewables	-	0.2	-	0.2	0.7	1.0	1.2	1.1	0.7	1.8	0.7	12.1	3.6	4.1	7.0

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	8.7	11	17	18	26	35	41	100	100	100	2.8	3.6	3.0	2.9	3.2
By sector															
Industry	3.0	3.7	4.3	5.0	6.8	8.7	9.9	35	27	24	1.4	3.2	2.5	2.5	2.8
Transport	3.5	4.5	8.1	8.0	11	15	17	42	44	43	2.9	3.4	3.0	3.0	3.1
Buildings, etc.	2.0	2.1	4.3	5.2	7.8	11	13	19	28	32	4.7	4.1	3.4	3.2	3.6
Non-energy use	0.3	0.4	0.4	0.2	0.4	0.4	0.4	3.7	1.2	1.0	-2.9	5.4	0.8	0.8	2.6
By energy															
Coal	0.2	0.8	0.9	2.0	2.4	2.5	2.6	7.1	11	6.3	4.9	1.8	0.5	0.7	1.0
Oil	7.0	8.1	13	11	15	20	23	76	62	58	1.7	3.1	2.8	2.8	2.9
Natural gas	-	-	-	0.1	0.7	1.4	1.7	-	0.4	4.2	-	26.3	6.7	4.4	13.7
Electricity	1.5	1.8	3.1	4.8	7.1	10	12	17	26	30	4.9	4.1	3.6	3.5	3.8
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	-	-	-	0.2	0.5	0.7	0.9	-	1.1	2.2	-	10.0	3.2	3.3	5.9

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	18	26	45	68	100	141	167	100	100	100	4.8	4.0	3.5	3.4	3.7
Coal	0.2	1.9	17	23	38	58	71	7.3	34	43	13.3	5.0	4.4	4.1	4.6
Oil	12	12	9.2	7.1	7.1	7.1	7.1	47	10	4.3	-2.8	0.0	0.0	0.0	0.0
Natural gas	-	-	0.0	20	32	50	60	-	29	36	-	5.2	4.4	4.1	4.6
Nuclear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	3.5	6.1	7.8	7.8	12	14	15	23	12	9.0	1.3	4.1	1.9	1.5	2.7
Geothermal	2.1	5.5	12	9.9	11	12	12	21	15	7.2	3.0	0.7	0.8	0.7	0.7
Other renew., etc.	-	0.4	-	0.1	0.6	1.0	1.4	1.6	0.1	0.8	-8.3	23.2	4.6	7.7	12.3

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	52	61	81	129	201	310	383	3.8	4.6	4.4	4.3	4.4
Population (million)	47	62	77	93	109	122	129	2.1	1.6	1.2	1.2	1.3
CO <sub>2</sub> emissions (Mt)	33	38	68	79	112	154	180	3.8	3.6	3.2	3.2	3.4
GDP per capita (\$2000)	1,098	991	1,048	1,383	1,850	2,535	2,957	1.7	3.0	3.2	3.1	3.1
Primary energy consump. per capita (toe)	0.28	0.29	0.41	0.36	0.42	0.49	0.53	1.2	1.6	1.6	1.6	1.6
Primary energy consumption per GDP <sup>2</sup>	251	290	392	262	229	195	181	-0.5	-1.4	-1.6	-1.5	-1.5
CO <sub>2</sub> emissions per GDP <sup>3</sup>	641	615	838	610	557	496	469	0.0	-0.9	-1.1	-1.1	-1.0
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	2.55	2.12	2.14	2.33	2.43	2.55	2.60	0.5	0.4	0.5	0.4	0.4
Automobile ownership (million)	0.9	1.2	2.4	3.1	4.7	7.2	8.9	4.8	4.2	4.3	4.4	4.3
Automobile ownership <sup>5</sup>	18	20	31	33	43	59	69	2.7	2.6	3.1	3.2	2.9

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 30 Thailand

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	11	27	58	98	149	212	252	100	100	100	6.6	4.3	3.6	3.5	3.9
Coal	0.5	3.8	7.7	16	27	40	48	14	17	19	7.5	5.0	4.0	4.0	4.4
Oil	11	18	32	45	57	70	78	66	46	31	4.6	2.5	2.1	2.2	2.3
Natural gas	-	5.0	17	33	58	86	103	18	34	41	9.9	5.7	4.1	3.8	4.7
Nuclear	-	-	-	-	-	2.6	5.1	-	-	2.0	-	-	-	14.9	-
Hydro	0.1	0.4	0.5	0.5	0.5	0.5	0.5	1.6	0.5	0.2	0.5	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	0.0	3.5	11.4	5.6	3.9	7.5
Other renewables	-	-	0.5	3.0	5.9	10.0	13	-	3.0	5.3	-	7.2	5.3	5.9	6.2

Final energy consumption	Mtoe							Shares (%)			AAGR (%)					
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035	
Total	8.5	20	41	71	101	136	158	100	100	100	6.6	3.6	3.0	3.1	3.3	
By sector																
Industry	2.7	5.8	12	19	30	43	53	29	27	33	6.3	4.5	3.7	3.9	4.1	
Transport	3.2	9.0	15	19	23	27	29	46	28	18	3.9	1.8	1.3	1.5	1.5	
Buildings, etc.	2.4	4.5	8.5	14	21	34	43	23	19	27	5.7	4.6	4.8	4.5	4.6	
Non-energy use	0.2	0.4	5.6	18	26	31	34	2.2	26	22	20.6	3.6	2.0	1.8	2.6	
By energy																
Coal	0.1	1.3	3.5	9.2	15	22	27	6.7	13	17	10.2	4.7	4.1	4.3	4.4	
Oil	7.3	15	29	44	56	69	76	76	61	48	5.5	2.6	2.1	2.1	2.3	
Natural gas	-	0.1	1.1	4.6	6.5	8.5	9.8	0.7	6.5	6.2	19.1	3.5	2.7	2.9	3.1	
Electricity	1.1	3.3	7.6	13	23	35	43	17	18	27	7.0	5.8	4.5	4.3	5.0	
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Renewables	-	-	-	0.7	0.9	1.3	1.6	-	0.9	1.0	-	3.6	3.4	3.5	3.5	

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	14	44	96	160	282	435	535	100	100	100	6.6	5.9	4.4	4.3	5.0
Coal	1.4	11	18	30	53	81	97	25	19	18	5.1	5.9	4.2	3.8	4.8
Oil	12	10	10	1.2	2.1	3.2	3.8	23	0.7	0.7	-10.3	5.9	4.2	3.8	4.8
Natural gas	-	18	62	119	212	320	387	40	75	72	10.0	5.9	4.2	3.8	4.8
Nuclear	-	-	-	-	-	9.8	20	-	-	3.7	-	-	-	14.9	-
Hydro	1.3	5.0	6.0	5.5	5.5	5.5	5.5	11	3.5	1.0	0.5	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	0.0	3.5	11.4	5.6	3.9	7.5
Other renew., etc.	-	-	0.5	3.4	8.6	15	22	-	2.1	4.1	-	9.7	5.7	8.2	7.8

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	37	79	123	187	302	448	545	4.4	4.9	4.0	4.0	4.4
Population (million)	47	57	63	69	72	74	75	1.0	0.4	0.2	0.2	0.3
CO <sub>2</sub> emissions (Mt)	34	81	152	224	338	480	570	5.2	4.2	3.5	3.5	3.8
GDP per capita (\$2000)	785	1,391	1,943	2,712	4,186	6,055	7,284	3.4	4.4	3.8	3.8	4.0
Primary energy consump. per capita (toe)	0.24	0.48	0.92	1.41	2.06	2.87	3.37	5.6	3.8	3.4	3.3	3.5
Primary energy consumption per GDP <sup>*2</sup>	305	343	474	522	493	474	463	2.1	-0.6	-0.4	-0.5	-0.5
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	913	1,017	1,239	1,195	1,119	1,071	1,047	0.8	-0.7	-0.4	-0.5	-0.5
CO <sub>2</sub> per primary energy consumption <sup>*4</sup>	3.00	2.96	2.61	2.29	2.27	2.26	2.26	-1.3	-0.1	0.0	0.0	-0.1
Automobile ownership (million)	0.9	2.8	6.1	11	14	18	20	6.9	2.5	2.5	2.6	2.5
Automobile ownership <sup>*5</sup>	19	49	97	155	190	238	268	5.9	2.1	2.3	2.3	2.2

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 31 Vietnam

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	4.2	5.4	15	45	82	135	166	100	100	100	11.1	6.3	5.1	4.2	5.4
Coal	2.3	2.2	4.4	15	35	63	81	41	33	49	9.9	9.0	6.1	5.1	7.1
Oil	1.8	2.7	7.8	19	29	43	51	50	43	31	10.2	4.5	3.9	3.4	4.0
Natural gas	-	0.0	1.1	8.1	13	15	17	0.1	18	10	49.2	4.8	1.8	2.3	3.1
Nuclear	-	-	-	-	-	6.6	9.1	-	-	5.5	-	-	-	6.8	-
Hydro	0.1	0.5	1.3	2.4	4.1	5.9	6.9	8.6	5.3	4.1	8.5	5.6	3.8	2.9	4.3
Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other renewables	-	-	-	0.0	0.1	0.4	0.4	-	0.0	0.3	-	21.5	13.2	3.7	14.4

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	3.4	4.2	12	35	61	95	115	100	100	100	11.1	5.7	4.6	3.9	4.9
By sector															
Industry	1.5	1.7	4.7	15	27	42	50	41	43	43	11.4	6.0	4.6	3.7	5.0
Transport	0.6	1.4	3.5	10	16	24	28	33	29	25	10.5	5.0	3.9	3.3	4.2
Buildings, etc.	1.2	1.1	3.4	7.1	13	24	30	25	21	26	10.0	6.6	5.8	4.9	5.9
Non-energy use	0.0	0.0	0.1	2.6	4.0	5.9	7.0	0.7	7.4	6.1	25.4	4.6	4.0	3.5	4.1
By energy															
Coal	1.5	1.3	3.2	9.8	17	26	31	32	28	27	10.5	5.3	4.6	3.7	4.7
Oil	1.7	2.3	6.5	17	28	41	49	56	49	43	10.4	5.0	4.1	3.5	4.4
Natural gas	-	-	0.0	0.5	0.7	0.9	1.0	-	1.4	0.9	-	3.0	3.0	3.0	3.0
Electricity	0.2	0.5	1.9	7.5	16	27	34	13	22	29	14.1	7.7	5.6	4.7	6.2
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	-	-	-	-	0.1	0.3	0.4	-	-	0.3	-	-	15.8	3.1	-

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	3.6	8.7	27	95	202	348	438	100	100	100	12.7	7.8	5.6	4.7	6.3
Coal	1.4	2.0	3.1	20	80	167	226	23	21	52	12.1	15.0	7.7	6.2	10.3
Oil	0.7	1.3	4.5	4.0	3.6	3.3	3.1	15	4.2	0.7	5.8	-1.0	-1.0	-1.0	-1.0
Natural gas	-	0.0	4.4	44	70	83	93	0.1	46	21	56.0	4.9	1.7	2.3	3.1
Nuclear	-	-	-	-	-	25	35	-	-	8.0	-	-	-	6.8	-
Hydro	1.5	5.4	15	28	48	69	80	62	29	18	8.5	5.6	3.8	2.9	4.3
Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other renew., etc.	-	-	-	0.1	0.2	0.3	0.4	-	0.1	0.1	-	13.2	4.4	8.3	8.6

Energy and economic indicators										AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035		
GDP (\$2000 billion)	8.6	15	31	63	120	213	271	7.4	6.7	5.9	5.0	6.0		
Population (million)	54	66	78	87	95	100	102	1.4	0.9	0.5	0.3	0.6		
CO <sub>2</sub> emissions (Mt)	15	17	43	127	246	400	495	10.6	6.8	5.0	4.4	5.6		
GDP per capita (\$2000)	161	227	402	723	1,261	2,120	2,659	6.0	5.7	5.3	4.6	5.3		
Primary energy consump. per capita (toe)	0.08	0.08	0.19	0.51	0.86	1.34	1.63	9.6	5.3	4.6	3.9	4.7		
Primary energy consumption per GDP <sup>*2</sup>	493	359	467	709	681	633	612	3.5	-0.4	-0.7	-0.7	-0.6		
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	1,686	1,135	1,395	2,029	2,048	1,877	1,826	2.9	0.1	-0.9	-0.6	-0.4		
CO <sub>2</sub> per primary energy consumption <sup>*4</sup>	3.42	3.16	2.99	2.86	3.01	2.96	2.98	-0.5	0.5	-0.1	0.1	0.2		
Automobile ownership (million)	0.2	0.2	0.4	1.2	4.7	13	18	8.4	14.7	10.7	6.5	11.4		
Automobile ownership <sup>*5</sup>	4.0	3.6	4.8	14	49	129	174	6.9	13.6	10.1	6.2	10.7		

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 32 North Americas

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	1,997	2,124	2,525	2,468	2,524	2,612	2,617	100	100	100	0.8	0.2	0.3	0.0	0.2
Coal	397	484	565	525	524	543	530	23	21	20	0.4	0.0	0.4	-0.5	0.0
Oil	885	833	958	891	810	795	792	39	36	30	0.3	-1.0	-0.2	-0.1	-0.5
Natural gas	522	493	622	635	688	718	719	23	26	27	1.3	0.8	0.4	0.0	0.5
Nuclear	80	179	227	242	268	272	265	8.4	9.8	10	1.5	1.0	0.2	-0.5	0.4
Hydro	46	49	53	53	55	57	58	2.3	2.1	2.2	0.4	0.4	0.4	0.4	0.4
Geothermal	4.6	14	13	8.4	14	19	22	0.7	0.3	0.8	-2.6	4.9	3.6	2.8	4.0
Other renewables	62	71	87	113	166	208	231	3.3	4.6	8.8	2.4	3.9	2.2	2.2	2.9

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	1,466	1,453	1,736	1,696	1,711	1,757	1,767	100	100	100	0.8	0.1	0.3	0.1	0.2
By sector															
Industry	437	331	387	334	330	322	315	23	20	18	0.0	-0.1	-0.2	-0.4	-0.2
Transport	470	531	640	643	617	614	617	37	38	35	1.0	-0.4	-0.1	0.1	-0.2
Buildings, etc.	446	457	535	563	616	661	668	31	33	38	1.0	0.9	0.7	0.2	0.7
Non-energy use	114	134	173	157	148	160	167	9.2	9.3	9.4	0.8	-0.6	0.8	0.8	0.2
By energy															
Coal	61	59	36	30	35	35	35	4.1	1.8	2.0	-3.3	1.7	0.0	-0.2	0.6
Oil	769	752	874	839	766	753	751	52	49	43	0.5	-0.9	-0.2	0.0	-0.4
Natural gas	374	346	413	371	389	388	385	24	22	22	0.3	0.5	0.0	-0.2	0.1
Electricity	200	262	342	367	409	457	465	18	22	26	1.7	1.1	1.1	0.4	0.9
Heat	1.0	2.8	6.1	7.0	7.0	7.0	6.8	0.2	0.4	0.4	4.7	-0.1	0.0	-0.4	-0.1
Renewables	62	30	64	82	105	117	124	2.1	4.8	7.0	5.1	2.5	1.1	1.2	1.7

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	2,801	3,685	4,631	4,962	5,523	6,145	6,252	100	100	100	1.5	1.1	1.1	0.3	0.9
Coal	1,303	1,782	2,247	2,082	2,145	2,319	2,305	48	42	37	0.8	0.3	0.8	-0.1	0.4
Oil	277	147	133	55	25	19	17	4.0	1.1	0.3	-4.8	-7.7	-2.4	-2.1	-4.5
Natural gas	380	391	668	1,070	1,226	1,368	1,383	11	22	22	5.2	1.4	1.1	0.2	1.0
Nuclear	304	685	871	930	1,027	1,044	1,016	19	19	16	1.5	1.0	0.2	-0.5	0.4
Hydro	530	570	612	614	638	664	678	15	12	11	0.4	0.4	0.4	0.4	0.4
Geothermal	5.4	16	15	18	29	41	47	0.4	0.4	0.8	0.5	5.0	3.6	2.8	4.0
Other renew., etc.	1.8	94	87	194	434	689	806	2.6	3.9	13	3.7	8.4	4.7	3.2	5.9

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	5,554	7,608	10,624	12,572	16,156	20,548	22,712	2.5	2.5	2.4	2.0	2.4
Population (million)	252	277	313	343	372	399	411	1.1	0.8	0.7	0.6	0.7
CO <sub>2</sub> emissions (Mt)	5,172	5,235	6,125	5,834	5,733	5,794	5,715	0.5	-0.2	0.1	-0.3	-0.1
GDP per capita (\$2000)	22,056	27,423	33,948	36,635	43,402	51,455	55,212	1.5	1.7	1.7	1.4	1.7
Primary energy consump. per capita (toe)	7.93	7.65	8.07	7.19	6.78	6.54	6.36	-0.3	-0.6	-0.4	-0.6	-0.5
Primary energy consumption per GDP <sup>*2</sup>	360	279	238	196	156	127	115	-1.7	-2.3	-2.0	-1.9	-2.1
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	931	688	577	464	355	282	252	-2.0	-2.6	-2.3	-2.3	-2.4
CO <sub>2</sub> per primary energy consumption <sup>*4</sup>	2.59	2.47	2.43	2.36	2.27	2.22	2.18	-0.2	-0.4	-0.2	-0.3	-0.3
Automobile ownership (million)	169	205	239	263	301	336	352	1.2	1.4	1.1	0.9	1.2
Automobile ownership <sup>*5</sup>	671	740	764	767	810	842	855	0.2	0.5	0.4	0.3	0.4

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people



Table 33 Latin Americas

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	320	396	532	701	941	1,198	1,315	100	100	100	2.9	3.0	2.4	1.9	2.5
Coal	13	20	27	34	46	64	73	5.2	4.8	5.5	2.6	3.1	3.3	2.6	3.1
Oil	223	237	303	367	462	540	566	60	52	43	2.2	2.3	1.6	1.0	1.7
Natural gas	51	76	117	183	260	350	398	19	26	30	4.5	3.6	3.0	2.6	3.2
Nuclear	0.6	3.2	5.3	7.2	12	17	19	0.8	1.0	1.5	4.1	5.6	3.3	2.3	4.0
Hydro	19	33	50	63	75	93	102	8.4	9.0	7.8	3.2	1.8	2.1	1.9	2.0
Geothermal	1.2	5.1	6.3	8.5	25	43	52	1.3	1.2	3.9	2.6	11.4	5.6	3.8	7.5
Other renewables	13	21	24	39	61	91	106	5.4	5.5	8.0	3.0	4.6	4.1	3.1	4.1

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	232	290	398	498	676	862	944	100	100	100	2.7	3.1	2.5	1.8	2.6
By sector															
Industry	79	88	119	140	202	271	306	30	28	32	2.4	3.7	3.0	2.5	3.2
Transport	85	103	142	197	273	346	372	36	40	39	3.3	3.3	2.4	1.5	2.6
Buildings, etc.	53	74	97	116	150	187	204	25	23	22	2.3	2.6	2.2	1.8	2.3
Non-energy use	16	26	40	45	51	58	62	8.8	9.0	6.6	2.8	1.2	1.4	1.4	1.3
By energy															
Coal	6.4	8.5	11	12	18	24	26	2.9	2.4	2.8	1.6	4.4	2.7	2.0	3.2
Oil	159	179	241	289	368	438	461	62	58	49	2.4	2.5	1.8	1.1	1.9
Natural gas	28	39	57	74	106	145	168	14	15	18	3.2	3.6	3.2	3.0	3.3
Electricity	27	44	70	96	140	190	215	15	19	23	3.9	3.8	3.1	2.5	3.3
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	11	19	19	27	43	65	74	6.4	5.4	7.8	1.9	4.9	4.1	2.5	4.1

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	380	623	1,003	1,400	2,000	2,692	3,035	100	100	100	4.1	3.6	3.0	2.4	3.1
Coal	7.8	23	44	72	108	181	219	3.8	5.1	7.2	5.7	4.2	5.3	3.9	4.6
Oil	110	128	194	188	293	378	407	21	13	13	1.9	4.6	2.6	1.5	3.1
Natural gas	35	60	138	322	566	815	932	9.6	23	31	8.8	5.8	3.7	2.7	4.3
Nuclear	2.3	12	20	28	47	66	74	2.0	2.0	2.4	4.1	5.6	3.3	2.3	4.0
Hydro	218	386	584	731	875	1,081	1,186	62	52	39	3.2	1.8	2.1	1.9	2.0
Geothermal	1.4	5.9	7.8	9.9	29	50	60	1.0	0.7	2.0	2.6	11.3	5.6	3.8	7.5
Other renew., etc.	4.0	7.6	14	50	82	121	158	1.2	3.6	5.2	9.9	4.9	4.0	5.5	4.7

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	1,333	1,509	2,067	2,866	4,313	5,923	6,727	3.3	4.2	3.2	2.6	3.5
Population (million)	358	439	516	585	647	696	715	1.4	1.0	0.7	0.5	0.8
CO <sub>2</sub> emissions (Mt)	808	913	1,197	1,566	2,070	2,574	2,791	2.7	2.8	2.2	1.6	2.3
GDP per capita (\$2000)	3,721	3,439	4,002	4,900	6,667	8,509	9,411	1.8	3.1	2.5	2.0	2.6
Primary energy consump. per capita (toe)	0.89	0.90	1.03	1.20	1.45	1.72	1.84	1.4	1.9	1.7	1.4	1.7
Primary energy consumption per GDP <sup>*2</sup>	240	263	258	245	218	202	196	-0.4	-1.1	-0.8	-0.7	-0.9
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	606	605	579	546	480	435	415	-0.5	-1.3	-1.0	-0.9	-1.1
CO <sub>2</sub> per primary energy consumption <sup>*4</sup>	2.53	2.30	2.25	2.23	2.20	2.15	2.12	-0.2	-0.1	-0.2	-0.3	-0.2
Automobile ownership (million)	28	38	56	94	157	214	233	4.6	5.3	3.1	1.8	3.7
Automobile ownership <sup>*5</sup>	79	88	108	161	243	307	326	3.1	4.2	2.3	1.2	2.9

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 34 OECD Europe

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	1,494	1,619	1,747	1,816	1,832	1,867	1,876	100	100	100	0.6	0.1	0.2	0.1	0.1
Coal	464	449	331	300	270	259	259	28	17	14	-2.0	-1.0	-0.4	0.0	-0.6
Oil	688	606	650	603	547	520	504	37	33	27	0.0	-1.0	-0.5	-0.6	-0.7
Natural gas	206	260	393	465	503	530	540	16	26	29	2.9	0.8	0.5	0.4	0.6
Nuclear	60	205	245	239	235	219	203	13	13	11	0.8	-0.2	-0.7	-1.5	-0.7
Hydro	36	38	47	48	49	51	52	2.4	2.6	2.8	1.1	0.3	0.4	0.2	0.3
Geothermal	3.0	4.7	7.2	11	19	27	32	0.3	0.6	1.7	4.5	5.2	3.8	2.9	4.2
Other renewables	36	55	73	148	208	258	286	3.4	8.2	15	5.1	3.5	2.2	2.0	2.7

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	1,081	1,123	1,226	1,273	1,287	1,304	1,306	100	100	100	0.6	0.1	0.1	0.0	0.1
By sector															
Industry	356	322	324	296	299	303	306	29	23	23	-0.4	0.1	0.1	0.2	0.1
Transport	209	265	317	334	327	326	320	24	26	25	1.1	-0.2	0.0	-0.3	-0.2
Buildings, etc.	425	436	472	530	544	554	557	39	42	43	1.0	0.3	0.2	0.1	0.2
Non-energy use	90	100	112	113	116	121	123	8.9	8.9	9.4	0.6	0.3	0.4	0.3	0.3
By energy															
Coal	156	125	62	54	49	42	40	11	4.3	3.0	-4.1	-1.0	-1.4	-1.3	-1.2
Oil	551	518	568	535	494	471	456	46	42	35	0.2	-0.8	-0.5	-0.7	-0.6
Natural gas	161	201	268	281	298	305	306	18	22	23	1.7	0.6	0.2	0.1	0.3
Electricity	147	192	233	267	293	318	328	17	21	25	1.7	0.9	0.8	0.6	0.8
Heat	35	40	40	51	50	50	50	3.5	4.0	3.9	1.3	-0.2	0.0	0.0	-0.1
Renewables	31	47	54	84	102	118	125	4.2	6.6	9.6	2.9	2.0	1.4	1.3	1.6

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	2,049	2,662	3,225	3,608	3,983	4,308	4,443	100	100	100	1.5	1.0	0.8	0.6	0.8
Coal	887	1,030	967	874	806	814	831	39	24	19	-0.8	-0.8	0.1	0.4	-0.2
Oil	364	206	179	79	70	61	60	7.7	2.2	1.3	-4.6	-1.3	-1.3	-0.6	-1.1
Natural gas	138	168	512	847	973	1,091	1,137	6.3	23	26	8.4	1.4	1.1	0.8	1.2
Nuclear	230	787	939	916	900	839	778	30	25	18	0.8	-0.2	-0.7	-1.5	-0.7
Hydro	416	446	548	556	570	593	601	17	15	14	1.1	0.3	0.4	0.2	0.3
Geothermal	2.7	3.6	6.2	11	22	35	41	0.1	0.3	0.9	5.6	7.5	4.6	3.4	5.5
Other renew., etc.	11	22	73	325	641	874	996	0.8	9.0	22	14.4	7.0	3.2	2.6	4.6

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	5,700	7,249	9,096	10,436	12,386	14,597	15,629	1.8	1.7	1.7	1.4	1.6
Population (million)	476	499	521	552	571	583	586	0.5	0.3	0.2	0.1	0.2
CO <sub>2</sub> emissions (Mt)	4,164	3,952	3,893	3,792	3,581	3,503	3,470	-0.2	-0.6	-0.2	-0.2	-0.4
GDP per capita (\$2000)	11,971	14,535	17,449	18,912	21,676	25,032	26,676	1.3	1.4	1.5	1.3	1.4
Primary energy consump. per capita (toe)	3.14	3.25	3.35	3.29	3.21	3.20	3.20	0.1	-0.3	0.0	0.0	-0.1
Primary energy consumption per GDP <sup>*2</sup>	262	223	192	174	148	128	120	-1.2	-1.6	-1.4	-1.3	-1.5
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	731	545	428	363	289	240	222	-2.0	-2.3	-1.8	-1.5	-2.0
CO <sub>2</sub> per primary energy consumption <sup>*4</sup>	2.79	2.44	2.23	2.09	1.95	1.88	1.85	-0.8	-0.7	-0.4	-0.3	-0.5
Automobile ownership (million)	126	182	238	290	324	353	362	2.3	1.1	0.9	0.5	0.9
Automobile ownership <sup>*5</sup>	265	366	457	525	567	605	617	1.8	0.8	0.7	0.4	0.6

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 35 Non-OECD Europe

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	1,221	1,521	985	1,114	1,267	1,392	1,448	100	100	100	-1.5	1.3	0.9	0.8	1.1
Coal	362	367	209	218	232	243	244	24	20	17	-2.6	0.6	0.4	0.1	0.4
Oil	464	470	200	223	247	270	277	31	20	19	-3.7	1.0	0.9	0.5	0.9
Natural gas	355	602	488	568	644	705	723	40	51	50	-0.3	1.3	0.9	0.5	1.0
Nuclear	21	59	64	76	105	124	138	3.9	6.8	9.6	1.2	3.3	1.7	2.2	2.4
Hydro	20	23	24	27	28	29	30	1.5	2.4	2.1	0.8	0.6	0.4	0.4	0.5
Geothermal	-	0.0	0.1	0.6	1.4	2.4	2.8	0.0	0.1	0.2	17.0	9.7	5.2	3.7	6.7
Other renewables	-	0.1	1.7	3.1	11	19	34	0.0	0.3	2.4	16.8	13.1	6.2	12.1	10.1

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	849	1,045	637	700	802	900	939	100	100	100	-2.0	1.4	1.2	0.9	1.2
By sector															
Industry	394	392	205	208	248	274	285	38	30	30	-3.1	1.7	1.0	0.8	1.3
Transport	107	162	107	143	182	221	237	16	20	25	-0.6	2.5	2.0	1.4	2.1
Buildings, etc.	281	424	277	272	296	322	333	41	39	36	-2.2	0.8	0.9	0.7	0.8
Non-energy use	67	66	49	77	76	82	83	6.3	11	8.8	0.7	0.0	0.7	0.3	0.3
By energy															
Coal	152	114	37	46	57	65	69	11	6.6	7.3	-4.4	2.1	1.4	1.1	1.6
Oil	310	266	140	174	191	217	225	26	25	24	-2.1	0.9	1.3	0.7	1.0
Natural gas	215	261	201	227	284	332	352	25	32	37	-0.7	2.3	1.6	1.2	1.8
Electricity	95	127	87	104	126	145	153	12	15	16	-1.0	1.9	1.4	1.1	1.6
Heat	78	277	172	148	143	140	139	26	21	15	-3.1	-0.3	-0.2	-0.2	-0.2
Renewables	-	-	0.1	0.5	0.6	0.7	0.7	-	0.1	0.1	-	2.4	1.3	0.3	1.5

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	1,461	1,894	1,430	1,696	2,001	2,256	2,372	100	100	100	-0.6	1.7	1.2	1.0	1.4
Coal	471	429	338	396	454	501	508	23	23	21	-0.4	1.4	1.0	0.3	1.0
Oil	357	271	70	22	37	51	58	14	1.3	2.4	-11.7	5.3	3.2	2.6	3.9
Natural gas	295	702	503	673	751	831	831	37	40	35	-0.2	1.1	1.0	0.0	0.8
Nuclear	79	226	242	289	400	474	528	12	17	22	1.2	3.3	1.7	2.2	2.4
Hydro	232	266	275	310	329	342	349	14	18	15	0.8	0.6	0.4	0.4	0.5
Geothermal	-	0.0	0.1	0.5	1.5	2.6	3.1	0.0	0.0	0.1	15.6	11.3	5.6	3.9	7.5
Other renew., etc.	27	0.1	2.7	5.7	29	54	95	0.0	0.3	4.0	24.2	17.5	6.6	11.8	11.9

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	561	684	478	788	1,188	1,633	1,855	0.7	4.2	3.2	2.6	3.5
Population (million)	319	344	341	338	341	337	333	-0.1	0.1	-0.1	-0.2	-0.1
CO <sub>2</sub> emissions (Mt)	3,497	4,127	2,452	2,680	2,987	3,227	3,292	-2.1	1.1	0.8	0.4	0.8
GDP per capita (\$2000)	3,600	1,991	1,403	2,329	3,484	4,848	5,570	0.8	4.1	3.4	2.8	3.5
Primary energy consump. per capita (toe)	3.82	4.43	2.89	3.29	3.71	4.13	4.35	-1.5	1.2	1.1	1.0	1.1
Primary energy consumption per GDP <sup>*2</sup>	2,176	2,223	2,062	1,414	1,066	852	781	-2.2	-2.8	-2.2	-1.7	-2.3
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	6,233	6,032	5,131	3,401	2,515	1,977	1,775	-2.8	-3.0	-2.4	-2.1	-2.6
CO <sub>2</sub> per primary energy consumption <sup>*4</sup>	2.86	2.71	2.49	2.41	2.36	2.32	2.27	-0.6	-0.2	-0.2	-0.4	-0.2
Automobile ownership (million)	22	33	47	82	110	132	139	4.6	2.9	1.8	1.1	2.1
Automobile ownership <sup>*5</sup>	69	97	137	243	321	391	417	4.7	2.8	2.0	1.3	2.2

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 36 Africa

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	129	198	249	354	486	615	683	100	100	100	3.0	3.2	2.4	2.1	2.7
Coal	52	74	90	109	133	149	159	37	31	23	1.9	2.1	1.1	1.3	1.5
Oil	61	87	100	143	190	233	254	44	41	37	2.5	2.8	2.1	1.7	2.3
Natural gas	12	30	47	87	137	194	224	15	25	33	5.5	4.7	3.5	3.0	3.9
Nuclear	-	2.2	3.4	3.2	3.1	6.7	6.7	1.1	0.9	1.0	1.8	-0.1	8.0	0.0	3.1
Hydro	4.1	4.8	6.4	9.1	15	20	24	2.5	2.6	3.4	3.2	5.3	3.0	3.0	3.9
Geothermal	-	0.3	0.4	1.3	3.7	6.4	7.8	0.1	0.4	1.1	7.8	11.3	5.6	3.9	7.5
Other renewables	0.1	0.1	0.3	0.6	2.8	4.7	6.9	0.1	0.2	1.0	8.9	16.8	5.3	8.2	10.4

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	92	121	153	212	299	384	429	100	100	100	2.8	3.5	2.5	2.3	2.9
By sector															
Industry	38	44	45	56	72	91	102	36	26	24	1.2	2.5	2.4	2.4	2.5
Transport	27	36	53	75	97	117	127	30	35	29	3.6	2.7	1.9	1.6	2.1
Buildings, etc.	21	29	41	64	107	148	170	24	30	40	4.0	5.3	3.3	2.8	4.0
Non-energy use	5.4	11	15	18	23	28	30	9.3	8.3	7.0	2.3	2.8	1.9	1.6	2.2
By energy															
Coal	21	20	19	16	24	28	29	16	7.5	6.8	-1.1	4.3	1.5	1.0	2.5
Oil	54	71	88	121	160	196	214	58	57	50	2.7	2.8	2.0	1.8	2.3
Natural gas	2.8	8.6	14	27	41	60	71	7.1	13	17	5.9	4.5	3.8	3.4	4.0
Electricity	14	22	32	48	73	100	114	18	23	27	4.0	4.3	3.2	2.8	3.5
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	-	0.0	0.0	0.1	0.1	0.2	0.2	0.0	0.0	0.0	27.7	4.4	5.0	5.0	4.8

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	184	316	441	664	995	1,349	1,540	100	100	100	3.8	4.1	3.1	2.7	3.4
Coal	100	165	208	260	337	397	434	52	39	28	2.3	2.6	1.7	1.8	2.1
Oil	22	41	52	81	116	150	161	13	12	10	3.5	3.6	2.6	1.5	2.8
Natural gas	14	45	91	201	333	502	588	14	30	38	7.7	5.2	4.2	3.2	4.4
Nuclear	-	8.4	13	12	12	26	26	2.7	1.8	1.7	1.8	-0.1	8.0	0.0	3.1
Hydro	47	56	75	105	176	236	274	18	16	18	3.2	5.3	3.0	3.0	3.9
Geothermal	-	0.3	0.4	1.5	4.3	7.4	9.0	0.1	0.2	0.6	7.8	11.3	5.6	3.9	7.5
Other renew., etc.	0.2	0.2	1.0	3.5	16	30	49	0.1	0.5	3.2	14.1	16.5	6.4	10.2	11.1

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	358	455	595	942	1,453	2,261	2,788	3.7	4.4	4.5	4.3	4.4
Population (million)	481	633	809	1,020	1,278	1,562	1,713	2.4	2.3	2.0	1.9	2.1
CO <sub>2</sub> emissions (Mt)	402	594	727	1,025	1,366	1,683	1,852	2.8	2.9	2.1	1.9	2.4
GDP per capita (\$2000)	745	720	735	923	1,137	1,448	1,628	1.3	2.1	2.4	2.4	2.3
Primary energy consump. per capita (toe)	0.27	0.31	0.31	0.35	0.38	0.39	0.40	0.5	0.9	0.4	0.3	0.6
Primary energy consumption per GDP <sup>2</sup>	361	434	419	376	334	272	245	-0.7	-1.2	-2.0	-2.1	-1.7
CO <sub>2</sub> emissions per GDP <sup>3</sup>	1,124	1,304	1,222	1,088	940	744	664	-0.9	-1.4	-2.3	-2.3	-2.0
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	3.11	3.01	2.92	2.89	2.81	2.74	2.71	-0.2	-0.3	-0.3	-0.2	-0.3
Automobile ownership (million)	9.8	14	20	26	34	45	52	3.0	2.5	3.0	3.0	2.8
Automobile ownership <sup>5</sup>	20	23	24	26	26	29	30	0.6	0.2	0.9	1.1	0.7

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 37 Middle East

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	121	222	375	628	839	1,046	1,144	100	100	100	5.3	2.9	2.2	1.8	2.4
Coal	1.2	3.0	8.0	9.8	9.5	9.0	8.8	1.3	1.6	0.8	6.1	-0.3	-0.6	-0.3	-0.4
Oil	90	145	216	304	418	518	563	65	48	49	3.8	3.2	2.2	1.7	2.5
Natural gas	29	72	150	312	405	496	544	33	50	48	7.6	2.6	2.0	1.9	2.2
Nuclear	-	-	-	-	3.8	19	24	-	-	2.1	-	-	17.5	4.8	-
Hydro	0.8	1.0	0.7	1.5	1.6	1.6	1.6	0.5	0.2	0.1	2.0	0.3	0.3	0.3	0.3
Geothermal	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Other renewables	-	0.4	0.7	1.3	2.2	3.1	3.7	0.2	0.2	0.3	5.9	5.3	3.5	3.8	4.3

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	84	153	243	410	537	675	740	100	100	100	5.1	2.7	2.3	1.9	2.4
By sector															
Industry	30	43	65	111	142	178	197	28	27	27	4.9	2.5	2.3	2.0	2.3
Transport	26	50	74	119	155	200	220	33	29	30	4.4	2.6	2.6	1.9	2.5
Buildings, etc.	22	40	76	119	160	196	212	26	29	29	5.6	3.0	2.1	1.6	2.3
Non-energy use	5.7	20	29	60	80	100	110	13	15	15	5.8	2.9	2.2	1.9	2.5
By energy															
Coal	0.3	0.2	0.4	1.2	1.2	1.2	1.2	0.1	0.3	0.2	9.6	0.0	0.0	0.0	0.0
Oil	67	107	151	215	283	353	386	70	53	52	3.6	2.8	2.3	1.8	2.4
Natural gas	9.8	28	60	132	162	198	214	19	32	29	8.0	2.1	2.0	1.6	2.0
Electricity	6.5	17	32	61	89	120	137	11	15	18	6.7	4.0	3.0	2.6	3.3
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	-	0.4	0.7	1.3	1.8	2.2	2.5	0.3	0.3	0.3	5.8	3.3	2.3	2.3	2.7

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	95	240	465	882	1,289	1,714	1,945	100	100	100	6.7	3.9	2.9	2.6	3.2
Coal	0.1	11	30	35	34	31	30	4.4	3.9	1.6	6.1	-0.2	-0.8	-0.4	-0.5
Oil	49	112	194	285	419	528	575	47	32	30	4.8	3.9	2.3	1.7	2.8
Natural gas	36	106	232	544	798	1,053	1,213	44	62	62	8.5	3.9	2.8	2.9	3.3
Nuclear	-	-	-	-	15	74	93	-	-	4.8	-	-	17.5	4.8	-
Hydro	9.7	12	8.0	18	18	19	19	5.0	2.0	1.0	2.0	0.3	0.3	0.3	0.3
Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other renew., etc.	-	0.0	0.0	0.3	4.7	9.9	14	0.0	0.0	0.7	33.7	30.3	7.7	7.2	16.1

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	552	621	930	1,477	2,129	2,856	3,231	4.4	3.7	3.0	2.5	3.2
Population (million)	92	131	167	212	254	292	311	2.4	1.8	1.4	1.2	1.5
CO <sub>2</sub> emissions (Mt)	332	573	964	1,538	2,048	2,510	2,733	5.1	2.9	2.1	1.7	2.3
GDP per capita (\$2000)	6,005	4,739	5,580	6,970	8,393	9,768	10,403	1.9	1.9	1.5	1.3	1.6
Primary energy consump. per capita (toe)	1.32	1.70	2.25	2.96	3.31	3.58	3.68	2.8	1.1	0.8	0.6	0.9
Primary energy consumption per GDP <sup>2</sup>	219	358	404	425	394	366	354	0.9	-0.8	-0.7	-0.7	-0.7
CO <sub>2</sub> emissions per GDP <sup>3</sup>	601	923	1,036	1,041	962	879	846	0.6	-0.8	-0.9	-0.8	-0.8
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	2.74	2.58	2.57	2.45	2.44	2.40	2.39	-0.3	0.0	-0.2	-0.1	-0.1
Automobile ownership (million)	5.8	10	14	29	45	67	77	5.3	4.5	4.1	2.9	4.0
Automobile ownership <sup>5</sup>	-	-	0.4	0.4	0.6	0.6	0.6	-	3.5	0.2	0.0	1.4

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 38 Oceania

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	79	99	125	143	156	168	174	100	100	100	1.8	0.9	0.8	0.6	0.8
Coal	28	36	49	53	53	54	52	36	37	30	1.9	0.1	0.1	-0.5	0.0
Oil	34	35	40	46	50	54	55	35	32	32	1.4	0.9	0.7	0.6	0.8
Natural gas	8.3	19	24	30	34	38	39	19	21	22	2.4	1.3	1.0	0.4	1.0
Nuclear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	2.7	3.2	3.5	3.2	3.5	3.5	3.5	3.2	2.2	2.0	0.0	0.8	0.2	0.2	0.4
Geothermal	1.0	1.5	1.9	3.6	4.4	5.2	5.6	1.5	2.5	3.3	4.6	1.9	1.7	1.6	1.8
Other renewables	4.2	4.8	6.2	7.3	10.0	14	18	4.8	5.1	10	2.1	3.3	3.4	4.9	3.6

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	54	67	82	88	98	108	113	100	100	100	1.4	1.1	1.0	0.8	1.0
By sector															
Industry	20	23	28	26	29	32	33	35	30	29	0.7	0.9	1.0	0.8	0.9
Transport	19	24	30	33	36	38	39	36	38	35	1.6	0.9	0.6	0.4	0.7
Buildings, etc.	11	15	19	23	26	31	33	22	26	29	2.1	1.4	1.6	1.3	1.5
Non-energy use	3.1	4.6	6.1	6.0	6.9	7.6	7.9	6.9	6.8	7.0	1.3	1.5	0.9	0.7	1.1
By energy															
Coal	5.3	5.4	4.7	3.6	3.5	3.6	3.7	8.1	4.1	3.2	-1.9	-0.5	0.4	0.4	0.0
Oil	31	33	40	44	48	52	54	50	50	47	1.4	0.9	0.8	0.6	0.8
Natural gas	5.4	10	14	15	16	17	17	16	17	15	1.8	0.8	0.6	0.4	0.7
Electricity	8.5	14	18	21	24	29	31	20	23	27	2.1	1.7	1.6	1.4	1.6
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	4.0	4.1	5.6	5.0	5.9	6.9	7.4	6.2	5.6	6.5	0.9	1.7	1.5	1.4	1.6

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	118	187	249	286	339	399	427	100	100	100	2.2	1.7	1.6	1.4	1.6
Coal	70	122	176	183	200	211	209	65	64	49	2.0	0.9	0.5	-0.1	0.5
Oil	5.2	3.6	1.8	3.2	3.0	3.0	2.9	1.9	1.1	0.7	-0.6	-0.5	-0.1	-0.8	-0.4
Natural gas	8.7	20	26	46	64	83	86	11	16	20	4.2	3.4	2.5	0.9	2.5
Nuclear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	32	37	41	37	40	41	41	20	13	9.6	0.0	0.8	0.2	0.2	0.4
Geothermal	1.2	2.1	2.9	5.9	7.1	8.4	9.1	1.1	2.1	2.1	5.2	1.9	1.7	1.5	1.8
Other renew., etc.	0.7	1.3	2.0	11	24	53	79	0.7	3.9	18	11.3	7.8	8.3	8.1	8.1

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	232	316	438	587	820	1,031	1,120	3.1	3.4	2.3	1.7	2.6
Population (million)	18	20	23	26	30	33	34	1.3	1.2	0.9	0.7	1.0
CO <sub>2</sub> emissions (Mt)	227	280	357	403	425	445	446	1.8	0.5	0.5	0.0	0.4
GDP per capita (\$2000)	12,989	15,461	19,046	22,167	27,446	31,448	32,978	1.8	2.2	1.4	1.0	1.6
Primary energy consump. per capita (toe)	4.41	4.84	5.44	5.40	5.21	5.13	5.11	0.5	-0.4	-0.1	-0.1	-0.2
Primary energy consumption per GDP <sup>2</sup>	339	313	286	244	190	163	155	-1.3	-2.5	-1.5	-1.0	-1.8
CO <sub>2</sub> emissions per GDP <sup>3</sup>	979	886	815	687	518	432	398	-1.3	-2.8	-1.8	-1.6	-2.2
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	2.89	2.83	2.85	2.82	2.73	2.64	2.57	0.0	-0.3	-0.3	-0.6	-0.4
Automobile ownership (million)	8.8	12	15	18	21	24	25	2.4	1.4	1.2	0.9	1.2
Automobile ownership <sup>5</sup>	494	565	650	697	711	730	737	1.1	0.2	0.3	0.2	0.2

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 39 OECD

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	4,060	4,511	5,274	5,383	5,547	5,742	5,780	100	100	100	0.9	0.3	0.3	0.1	0.3
Coal	966	1,078	1,094	1,079	1,055	1,072	1,062	24	20	18	0.0	-0.2	0.2	-0.2	-0.1
Oil	1,938	1,861	2,103	1,951	1,810	1,760	1,736	41	36	30	0.2	-0.8	-0.3	-0.3	-0.5
Natural gas	778	843	1,156	1,313	1,446	1,544	1,576	19	24	27	2.2	1.0	0.7	0.4	0.7
Nuclear	162	451	586	596	633	623	587	10	11	10	1.4	0.6	-0.2	-1.2	-0.1
Hydro	94	102	116	116	121	126	128	2.3	2.2	2.2	0.7	0.4	0.4	0.3	0.4
Geothermal	10	26	30	32	60	93	109	0.6	0.6	1.9	0.9	6.7	4.4	3.3	5.1
Other renewables	111	149	188	294	420	522	581	3.3	5.5	10	3.5	3.6	2.2	2.2	2.8

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	2,937	3,102	3,635	3,676	3,757	3,850	3,872	100	100	100	0.9	0.2	0.2	0.1	0.2
By sector															
Industry	940	828	912	827	853	862	863	27	22	22	0.0	0.3	0.1	0.0	0.2
Transport	781	938	1,143	1,176	1,155	1,151	1,146	30	32	30	1.1	-0.2	0.0	-0.1	-0.1
Buildings, etc.	972	1,046	1,209	1,310	1,390	1,461	1,477	34	36	38	1.1	0.6	0.5	0.2	0.5
Non-energy use	243	290	370	364	358	378	386	9.3	9.9	10.0	1.1	-0.1	0.5	0.4	0.2
By energy															
Coal	259	236	141	128	129	120	115	7.6	3.5	3.0	-3.0	0.1	-0.7	-0.8	-0.4
Oil	1,570	1,587	1,843	1,757	1,638	1,596	1,574	51	48	41	0.5	-0.7	-0.3	-0.3	-0.4
Natural gas	559	589	746	737	791	804	804	19	20	21	1.1	0.7	0.2	0.0	0.4
Electricity	408	550	714	803	899	1,000	1,032	18	22	27	1.9	1.1	1.1	0.6	1.0
Heat	36	43	49	63	67	69	70	1.4	1.7	1.8	2.0	0.5	0.4	0.3	0.4
Renewables	105	97	141	188	233	261	277	3.1	5.1	7.2	3.4	2.2	1.1	1.2	1.6

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	5,656	7,608	9,687	10,796	12,110	13,441	13,859	100	100	100	1.8	1.2	1.0	0.6	1.0
Coal	2,319	3,082	3,762	3,712	3,769	4,037	4,083	41	34	29	0.9	0.2	0.7	0.2	0.4
Oil	980	687	582	307	275	255	249	9.0	2.8	1.8	-3.9	-1.1	-0.7	-0.5	-0.8
Natural gas	618	770	1,538	2,522	2,947	3,399	3,574	10	23	26	6.1	1.6	1.4	1.0	1.4
Nuclear	621	1,729	2,249	2,288	2,430	2,392	2,252	23	21	16	1.4	0.6	-0.2	-1.2	-0.1
Hydro	1,093	1,182	1,343	1,351	1,403	1,463	1,487	16	13	11	0.7	0.4	0.4	0.3	0.4
Geothermal	11	29	33	43	85	131	154	0.4	0.4	1.1	2.1	6.9	4.4	3.3	5.2
Other renew., etc.	14	129	180	572	1,201	1,763	2,060	1.7	5.3	15	7.7	7.7	3.9	3.2	5.3

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	14,625	20,072	26,016	30,230	37,471	45,818	49,826	2.1	2.2	2.0	1.7	2.0
Population (million)	981	1,061	1,147	1,228	1,291	1,336	1,351	0.7	0.5	0.3	0.2	0.4
CO <sub>2</sub> emissions (Mt)	10,865	11,095	12,397	12,249	12,051	12,139	12,074	0.5	-0.2	0.1	-0.1	-0.1
GDP per capita (\$2000)	14,901	18,920	22,686	24,615	29,018	34,282	36,869	1.3	1.7	1.7	1.5	1.6
Primary energy consump. per capita (toe)	4.14	4.25	4.60	4.38	4.30	4.30	4.28	0.2	-0.2	0.0	-0.1	-0.1
Primary energy consumption per GDP <sup>2</sup>	278	225	203	178	148	125	116	-1.2	-1.8	-1.7	-1.5	-1.7
CO <sub>2</sub> emissions per GDP <sup>3</sup>	743	553	477	405	322	265	242	-1.5	-2.3	-1.9	-1.8	-2.0
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	2.68	2.46	2.35	2.28	2.17	2.11	2.09	-0.4	-0.5	-0.3	-0.2	-0.3
Automobile ownership (million)	348	470	592	698	789	864	892	2.0	1.2	0.9	0.6	1.0
Automobile ownership <sup>5</sup>	354	443	516	569	611	647	660	1.3	0.7	0.6	0.4	0.6

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 40 Non-OECD

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	2,348	3,323	3,720	6,005	8,142	10,187	11,162	100	100	100	3.0	3.1	2.3	1.8	2.5
Coal	822	1,153	1,285	2,397	2,997	3,550	3,808	35	40	34	3.7	2.3	1.7	1.4	1.9
Oil	986	1,171	1,281	1,802	2,444	3,011	3,262	35	30	29	2.2	3.1	2.1	1.6	2.4
Natural gas	456	825	916	1,415	1,991	2,609	2,894	25	24	26	2.7	3.5	2.7	2.1	2.9
Nuclear	24	74	89	122	279	422	493	2.2	2.0	4.4	2.5	8.6	4.2	3.2	5.7
Hydro	54	83	110	179	232	274	294	2.5	3.0	2.6	3.9	2.6	1.7	1.4	2.0
Geothermal	2.2	7.6	22	33	51	80	94	0.2	0.5	0.8	7.6	4.5	4.6	3.3	4.3
Other renewables	4.1	11	17	57	150	246	321	0.3	0.9	2.9	8.7	10.2	5.1	5.4	7.2

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	1,674	2,279	2,396	3,742	5,168	6,464	7,072	100	100	100	2.5	3.3	2.3	1.8	2.6
By sector															
Industry	781	899	894	1,472	1,899	2,221	2,387	39	39	34	2.5	2.6	1.6	1.4	2.0
Transport	289	431	540	840	1,251	1,627	1,795	19	22	25	3.4	4.1	2.7	2.0	3.1
Buildings, etc.	493	761	718	996	1,430	1,895	2,105	33	27	30	1.4	3.7	2.9	2.1	3.0
Non-energy use	111	188	245	434	589	720	785	8.2	12	11	4.3	3.1	2.0	1.7	2.4
By energy															
Coal	453	537	439	725	860	880	894	24	19	13	1.5	1.7	0.2	0.3	0.8
Oil	699	807	1,003	1,458	2,024	2,533	2,763	35	39	39	3.0	3.3	2.3	1.7	2.6
Natural gas	257	353	369	581	892	1,193	1,314	15	16	19	2.5	4.4	2.9	2.0	3.3
Electricity	178	283	377	733	1,100	1,515	1,736	12	20	25	4.9	4.1	3.3	2.8	3.5
Heat	85	291	198	213	233	244	247	13	5.7	3.5	-1.5	0.9	0.5	0.2	0.6
Renewables	2.6	7.7	10	32	60	98	117	0.3	0.9	1.7	7.3	6.6	5.0	3.6	5.3

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	2,626	4,211	5,723	10,635	15,654	21,317	24,268	100	100	100	4.7	3.9	3.1	2.6	3.4
Coal	821	1,343	2,240	4,985	6,857	9,410	10,661	32	47	44	6.8	3.2	3.2	2.5	3.1
Oil	675	649	625	682	1,033	1,336	1,455	15	6.4	6.0	0.2	4.2	2.6	1.7	3.1
Natural gas	379	957	1,195	2,246	3,443	4,864	5,641	23	21	23	4.4	4.4	3.5	3.0	3.8
Nuclear	93	283	341	468	1,070	1,616	1,888	6.7	4.4	7.8	2.5	8.6	4.2	3.2	5.7
Hydro	624	962	1,279	2,086	2,699	3,190	3,427	23	20	14	3.9	2.6	1.7	1.4	2.0
Geothermal	2.6	7.8	19	25	55	88	104	0.2	0.2	0.4	6.0	8.3	4.8	3.5	5.9
Other renew., etc.	31	7.6	25	143	498	814	1,093	0.2	1.3	4.5	15.8	13.3	5.0	6.1	8.5

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	3,217	4,317	6,336	11,483	20,166	30,231	35,885	5.0	5.8	4.1	3.5	4.7
Population (million)	3,451	4,204	4,924	5,600	6,369	6,977	7,247	1.4	1.3	0.9	0.8	1.0
CO <sub>2</sub> emissions (Mt)	7,025	9,539	10,444	17,074	22,307	27,273	29,521	3.0	2.7	2.0	1.6	2.2
GDP per capita (\$2000)	932	1,027	1,287	2,051	3,166	4,333	4,951	3.5	4.4	3.2	2.7	3.6
Primary energy consump. per capita (toe)	0.68	0.79	0.76	1.07	1.28	1.46	1.54	1.5	1.8	1.3	1.1	1.5
Primary energy consumption per GDP <sup>2</sup>	730	770	587	523	404	337	311	-1.9	-2.6	-1.8	-1.6	-2.1
CO <sub>2</sub> emissions per GDP <sup>3</sup>	2,184	2,210	1,648	1,487	1,106	902	823	-2.0	-2.9	-2.0	-1.8	-2.3
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	2.99	2.87	2.81	2.84	2.74	2.68	2.64	0.0	-0.4	-0.2	-0.2	-0.3
Automobile ownership (million)	69	111	174	345	603	883	1,034	5.8	5.8	3.9	3.2	4.5
Automobile ownership <sup>5</sup>	20	26	35	62	95	127	143	4.3	4.4	2.9	2.4	3.4

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people



Table 41 Asia excluding Japan

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>1</sup>	703	1,215	1,937	3,667	5,156	6,556	7,223	100	100	100	5.7	3.5	2.4	2.0	2.7
Coal	412	720	1,002	2,113	2,666	3,180	3,421	59	58	47	5.5	2.4	1.8	1.5	1.9
Oil	244	368	662	971	1,355	1,687	1,842	30	26	26	5.0	3.4	2.2	1.8	2.6
Natural gas	29	71	165	362	661	1,003	1,155	5.9	9.9	16	8.5	6.2	4.3	2.9	4.8
Nuclear	3.8	24	48	77	224	343	400	2.0	2.1	5.5	6.0	11.3	4.4	3.1	6.8
Hydro	12	24	34	85	118	136	144	2.0	2.3	2.0	6.5	3.3	1.5	1.1	2.2
Geothermal	1.8	6.6	20	28	38	57	67	0.5	0.8	0.9	7.5	2.9	4.2	3.2	3.5
Other renewables	0.0	1.1	5.6	30	95	153	198	0.1	0.8	2.7	18.2	12.2	4.9	5.2	7.8

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	522	831	1,210	2,217	3,201	4,024	4,413	100	100	100	5.0	3.7	2.3	1.9	2.8
By sector															
Industry	275	381	533	1,038	1,333	1,517	1,612	46	47	37	5.1	2.5	1.3	1.2	1.8
Transport	73	125	233	395	652	858	956	15	18	22	5.9	5.1	2.8	2.2	3.6
Buildings, etc.	149	243	295	502	805	1,142	1,290	29	23	29	3.7	4.8	3.6	2.5	3.8
Non-energy use	26	82	149	282	411	507	555	9.9	13	13	6.4	3.8	2.1	1.8	2.7
By energy															
Coal	285	409	382	662	771	774	780	49	30	18	2.4	1.5	0.0	0.2	0.7
Oil	171	285	534	826	1,210	1,526	1,675	34	37	38	5.5	3.9	2.3	1.9	2.9
Natural gas	15	32	65	157	343	508	560	3.8	7.1	13	8.3	8.1	4.0	2.0	5.2
Electricity	44	91	196	485	752	1,060	1,227	11	22	28	8.7	4.5	3.5	3.0	3.8
Heat	7.4	14	29	69	95	110	115	1.7	3.1	2.6	8.3	3.2	1.5	0.7	2.0
Renewables	-	0.8	4.0	17	29	45	56	0.1	0.8	1.3	16.7	5.4	4.5	4.3	4.8

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	622	1,377	2,917	6,821	10,452	14,644	16,844	100	100	100	8.3	4.4	3.4	2.8	3.7
Coal	247	747	1,759	4,492	6,223	8,637	9,825	54	66	58	9.4	3.3	3.3	2.6	3.2
Oil	206	181	245	177	240	308	334	13	2.6	2.0	-0.1	3.1	2.5	1.6	2.6
Natural gas	9.2	68	311	761	1,321	2,082	2,552	5.0	11	15	12.8	5.7	4.6	4.2	5.0
Nuclear	15	92	183	294	860	1,316	1,535	6.7	4.3	9.1	6.0	11.3	4.4	3.1	6.8
Hydro	143	280	394	984	1,369	1,589	1,680	20	14	10.0	6.5	3.4	1.5	1.1	2.2
Geothermal	2.1	6.6	16	19	39	61	72	0.5	0.3	0.4	5.6	7.3	4.5	3.3	5.4
Other renew., etc.	0.0	0.7	9.1	93	400	651	847	0.0	1.4	5.0	28.0	15.7	5.0	5.4	9.2

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	914	1,797	3,457	7,017	13,410	20,663	24,794	7.0	6.7	4.4	3.7	5.2
Population (million)	2,319	2,799	3,253	3,624	4,045	4,296	4,385	1.3	1.1	0.6	0.4	0.8
CO <sub>2</sub> emissions (Mt)	2,372	3,891	5,933	11,327	15,003	18,541	20,157	5.5	2.9	2.1	1.7	2.3
GDP per capita (\$2000)	394	642	1,063	1,936	3,315	4,810	5,654	5.7	5.5	3.8	3.3	4.4
Primary energy consump. per capita (toe)	0.30	0.43	0.60	1.01	1.27	1.53	1.65	4.3	2.3	1.8	1.5	2.0
Primary energy consumption per GDP <sup>2</sup>	769	676	560	523	384	317	291	-1.3	-3.0	-1.9	-1.7	-2.3
CO <sub>2</sub> emissions per GDP <sup>3</sup>	2,596	2,165	1,716	1,614	1,119	897	813	-1.5	-3.6	-2.2	-2.0	-2.7
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	3.37	3.20	3.06	3.09	2.91	2.83	2.79	-0.2	-0.6	-0.3	-0.3	-0.4
Automobile ownership (million)	10	28	67	165	328	509	620	9.2	7.1	4.5	4.0	5.4
Automobile ownership <sup>5</sup>	4.5	10	21	46	81	118	141	7.8	5.9	3.9	3.6	4.6

<sup>1</sup> Trade of electricity and heat are not shown, <sup>2</sup> toe/\$2000 million, <sup>3</sup> t/\$2000 million

<sup>4</sup> t/toe, <sup>5</sup> vehicles per 1,000 people

Table 42 ASEAN

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	72	140	280	439	670	956	1,124	100	100	100	5.9	4.3	3.6	3.3	3.8
Coal	3.6	12	32	84	161	257	319	8.9	19	28	10.0	6.7	4.8	4.4	5.5
Oil	58	88	153	197	265	339	379	63	45	34	4.1	3.0	2.5	2.3	2.6
Natural gas	8.4	29	71	122	192	268	310	21	28	28	7.4	4.6	3.4	2.9	3.8
Nuclear	-	-	-	-	-	12	19	-	-	1.7	-	-	-	10.6	-
Hydro	0.8	2.3	4.1	6.0	12	18	20	1.7	1.4	1.8	4.8	6.8	4.5	2.0	4.9
Geothermal	1.8	6.6	18	25	33	51	60	4.8	5.6	5.3	6.8	2.9	4.5	3.3	3.6
Other renewables	-	0.3	0.6	4.3	9.1	17	22	0.2	1.0	1.9	15.2	7.9	6.2	5.3	6.7

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	51	91	182	297	439	610	710	100	100	100	6.1	4.0	3.3	3.1	3.5
By sector															
Industry	18	28	59	101	155	221	260	31	34	37	6.6	4.4	3.6	3.3	3.8
Transport	17	32	62	92	123	156	174	35	31	25	5.4	2.9	2.5	2.2	2.6
Buildings, etc.	13	19	41	56	94	145	177	21	19	25	5.6	5.2	4.4	4.1	4.7
Non-energy use	2.4	11	21	47	67	88	99	13	16	14	7.4	3.6	2.7	2.4	3.0
By energy															
Coal	2.1	6.1	14	36	65	95	113	6.7	12	16	9.3	6.2	3.8	3.5	4.7
Oil	41	67	125	179	230	296	333	73	60	47	5.1	2.5	2.5	2.4	2.5
Natural gas	2.5	7.4	17	29	48	66	76	8.1	9.8	11	7.0	5.1	3.3	2.7	3.9
Electricity	4.7	11	28	52	93	147	181	12	17	26	8.0	6.0	4.7	4.3	5.1
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	-	-	-	0.9	2.6	5.6	6.6	-	0.3	0.9	-	11.2	8.0	3.2	8.3

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	62	154	370	674	1,256	2,007	2,449	100	100	100	7.7	6.4	4.8	4.1	5.3
Coal	3.0	28	79	185	404	716	926	18	27	38	10.0	8.1	5.9	5.3	6.7
Oil	47	66	72	59	84	97	100	43	8.8	4.1	-0.6	3.6	1.5	0.5	2.1
Natural gas	0.7	26	154	335	580	856	1,012	17	50	41	13.7	5.7	4.0	3.4	4.5
Nuclear	-	-	-	-	-	45	74	-	-	3.0	-	-	-	10.6	-
Hydro	9.8	27	47	70	137	212	235	18	10	9.6	4.8	6.9	4.5	2.0	5.0
Geothermal	2.1	6.6	16	19	38	59	69	4.3	2.9	2.8	5.5	7.0	4.5	3.3	5.2
Other renew., etc.	-	0.6	1.0	6.1	13	23	33	0.4	0.9	1.4	12.3	8.2	5.4	7.9	7.0

Energy and economic indicators										AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035		
GDP (\$2000 billion)	214	367	601	992	1,643	2,507	3,043	5.1	5.2	4.3	4.0	4.6		
Population (million)	348	430	504	571	628	671	689	1.4	1.0	0.7	0.5	0.8		
CO <sub>2</sub> emissions (Mt)	205	358	705	1,086	1,706	2,427	2,864	5.7	4.6	3.6	3.4	4.0		
GDP per capita (\$2000)	615	855	1,193	1,738	2,615	3,736	4,417	3.6	4.2	3.6	3.4	3.8		
Primary energy consump. per capita (toe)	0.21	0.32	0.55	0.77	1.07	1.42	1.63	4.4	3.3	2.9	2.7	3.0		
Primary energy consumption per GDP <sup>2</sup>	338	380	465	443	408	381	369	0.8	-0.8	-0.7	-0.6	-0.7		
CO <sub>2</sub> emissions per GDP <sup>3</sup>	956	974	1,172	1,094	1,038	968	941	0.6	-0.5	-0.7	-0.6	-0.6		
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	2.83	2.57	2.52	2.47	2.55	2.54	2.55	-0.2	0.3	0.0	0.1	0.1		
Automobile ownership (million)	4.5	10	20	36	56	88	108	6.6	4.6	4.6	4.3	4.5		
Automobile ownership <sup>5</sup>	13	23	40	63	89	131	157	5.1	3.6	3.9	3.8	3.7		

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 43 United States

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	1,805	1,915	2,273	2,216	2,242	2,320	2,324	100	100	100	0.7	0.1	0.3	0.0	0.2
Coal	376	460	534	503	503	523	511	24	23	22	0.4	0.0	0.4	-0.5	0.1
Oil	797	757	871	805	719	706	706	40	36	30	0.3	-1.1	-0.2	0.0	-0.5
Natural gas	477	438	548	556	592	612	610	23	25	26	1.2	0.6	0.3	-0.1	0.4
Nuclear	69	159	208	219	240	247	240	8.3	9.9	10	1.6	0.9	0.3	-0.6	0.4
Hydro	24	23	22	23	23	23	23	1.2	1.0	1.0	-0.2	0.0	0.0	0.0	0.0
Geothermal	4.6	14	13	8.4	14	19	22	0.7	0.4	1.0	-2.6	4.9	3.6	2.8	4.0
Other renewables	54	63	75	100	149	188	211	3.3	4.5	9.1	2.4	4.0	2.4	2.3	3.0

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	1,311	1,294	1,546	1,500	1,496	1,538	1,548	100	100	100	0.7	0.0	0.3	0.1	0.1
By sector															
Industry	387	284	332	280	272	264	257	22	19	17	-0.1	-0.3	-0.3	-0.5	-0.3
Transport	425	488	588	583	554	552	556	38	39	36	0.9	-0.5	0.0	0.2	-0.2
Buildings, etc.	397	403	473	502	547	588	594	31	33	38	1.1	0.9	0.7	0.2	0.7
Non-energy use	102	119	153	135	123	135	141	9.2	9.0	9.1	0.6	-0.9	0.9	0.9	0.2
By energy															
Coal	56	56	33	27	32	32	32	4.3	1.8	2.1	-3.6	1.7	0.1	-0.2	0.7
Oil	689	683	793	749	669	658	658	53	50	43	0.5	-1.1	-0.2	0.0	-0.5
Natural gas	337	303	360	319	331	329	325	23	21	21	0.3	0.4	-0.1	-0.2	0.1
Electricity	174	226	301	327	363	407	413	18	22	27	1.9	1.0	1.2	0.3	0.9
Heat	-	2.2	5.3	6.6	6.6	6.6	6.4	0.2	0.4	0.4	5.8	-0.1	0.0	-0.4	-0.1
Renewables	54	23	54	72	94	106	113	1.8	4.8	7.3	5.9	2.7	1.2	1.3	1.8

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	2,427	3,203	4,026	4,354	4,825	5,396	5,480	100	100	100	1.5	1.0	1.1	0.3	0.9
Coal	1,243	1,700	2,129	1,994	2,063	2,238	2,228	53	46	41	0.8	0.3	0.8	-0.1	0.4
Oil	263	131	118	48	16	11	8.8	4.1	1.1	0.2	-4.9	-10.3	-4.2	-3.5	-6.6
Natural gas	370	382	634	1,018	1,146	1,269	1,278	12	23	23	5.0	1.2	1.0	0.1	0.9
Nuclear	266	612	798	839	922	948	919	19	19	17	1.6	0.9	0.3	-0.6	0.4
Hydro	279	273	253	262	263	264	265	8.5	6.0	4.8	-0.2	0.0	0.0	0.0	0.0
Geothermal	5.4	16	15	18	29	41	47	0.5	0.4	0.9	0.5	5.0	3.6	2.8	4.0
Other renew., etc.	0.5	90	78	175	386	626	734	2.8	4.0	13	3.4	8.2	4.9	3.2	5.9

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	5,142	7,064	9,899	11,698	15,065	19,215	21,252	2.6	2.6	2.5	2.0	2.4
Population (million)	227	250	282	309	335	359	370	1.1	0.8	0.7	0.6	0.7
CO <sub>2</sub> emissions (Mt)	4,743	4,820	5,617	5,362	5,219	5,269	5,195	0.5	-0.3	0.1	-0.3	-0.1
GDP per capita (\$2000)	22,630	28,299	35,081	37,851	44,959	53,452	57,372	1.5	1.7	1.7	1.4	1.7
Primary energy consump. per capita (toe)	7.94	7.67	8.06	7.17	6.69	6.45	6.27	-0.3	-0.7	-0.4	-0.6	-0.5
Primary energy consumption per GDP <sup>2</sup>	351	271	230	189	149	121	109	-1.8	-2.4	-2.1	-2.0	-2.2
CO <sub>2</sub> emissions per GDP <sup>3</sup>	922	682	567	458	346	274	244	-2.0	-2.8	-2.3	-2.3	-2.5
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	2.63	2.52	2.47	2.42	2.33	2.27	2.24	-0.2	-0.4	-0.2	-0.3	-0.3
Automobile ownership (million)	156	189	221	242	278	310	324	1.3	1.4	1.1	0.9	1.2
Automobile ownership <sup>5</sup>	686	756	785	783	828	862	875	0.2	0.6	0.4	0.3	0.4

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 44 European Union

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	-	1,631	1,675	1,701	1,731	1,762	1,768	100	100	100	0.2	0.2	0.2	0.1	0.2
Coal	-	455	321	281	258	248	247	28	17	14	-2.4	-0.8	-0.4	-0.1	-0.5
Oil	-	601	618	569	522	499	484	37	33	27	-0.3	-0.8	-0.5	-0.6	-0.6
Natural gas	-	295	394	441	479	509	520	18	26	29	2.0	0.8	0.6	0.4	0.7
Nuclear	-	207	246	239	234	219	203	12.7	14.0	11	0.7	-0.2	-0.7	-1.5	-0.6
Hydro	-	25	30	31	32	33	34	1.5	1.9	1.9	1.2	0.2	0.4	0.3	0.3
Geothermal	-	3.2	4.7	5.9	7.3	8.9	9.7	0.2	0.3	0.5	3.1	2.1	2.0	1.8	2.0
Other renewables	-	45	63	139	197	246	273	2.8	8.2	15.4	5.8	3.6	2.2	2.1	2.7

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	-	1,122	1,164	1,187	1,210	1,231	1,234	100	100	100	0.3	0.2	0.2	0.1	0.2
By sector															
Industry	-	341	306	272	276	281	283	30	23	23	-1.1	0.1	0.2	0.2	0.2
Transport	-	257	303	319	317	316	311	23	27	25	1.1	-0.1	0.0	-0.3	-0.1
Buildings, etc.	-	426	445	490	508	520	524	38	41	42	0.7	0.4	0.2	0.2	0.3
Non-energy use	-	98	110	106	109	114	116	8.7	8.9	9.4	0.4	0.3	0.4	0.3	0.4
By energy															
Coal	-	123	52	41	37	33	31	10.9	3.4	2.5	-5.4	-0.9	-1.2	-1.1	-1.1
Oil	-	499	536	501	467	446	432	45	42	35	0.0	-0.7	-0.5	-0.7	-0.6
Natural gas	-	224	271	274	291	298	299	20	23	24	1.0	0.6	0.2	0.1	0.4
Electricity	-	185	217	244	269	293	303	16	21	25	1.4	1.0	0.9	0.7	0.9
Heat	-	54	44	53	53	53	53	4.8	4.5	4.3	-0.1	-0.1	0.0	0.0	0.0
Renewables	-	37	44	74	93	108	115	3.3	6.2	9.4	3.6	2.3	1.5	1.4	1.8

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	-	2,565	2,992	3,310	3,702	4,039	4,183	100	100	100	1.3	1.1	0.9	0.7	0.9
Coal	-	1,050	966	862	814	822	836	41	26	20	-1.0	-0.6	0.1	0.3	-0.1
Oil	-	221	180	86	88	91	94	8.6	2.6	2.3	-4.6	0.2	0.4	0.7	0.4
Natural gas	-	191	478	758	889	1,023	1,078	7	23	26	7.1	1.6	1.4	1.1	1.4
Nuclear	-	795	945	917	899	840	780	31	28	19	0.7	-0.2	-0.7	-1.5	-0.6
Hydro	-	286	353	366	373	388	393	11.2	11.1	9.4	1.2	0.2	0.4	0.3	0.3
Geothermal	-	3.2	4.8	5.6	7.1	8.8	9.6	0.1	0.2	0.2	2.8	2.4	2.1	1.8	2.2
Other renew., etc.	-	18	66	314	633	867	992	0.7	9.5	24	15.4	7.3	3.2	2.7	4.7

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	-	6,807	8,485	9,649	11,443	13,501	14,468	1.8	1.7	1.7	1.4	1.6
Population (million)	-	473	483	502	517	525	526	0.3	0.3	0.2	0.1	0.2
CO <sub>2</sub> emissions (Mt)	-	4,049	3,766	3,577	3,422	3,366	3,338	-0.6	-0.4	-0.2	-0.2	-0.3
GDP per capita (\$2000)	-	14,397	17,552	19,217	22,147	25,732	27,503	1.5	1.4	1.5	1.3	1.4
Primary energy consump. per capita (toe)	-	3.45	3.47	3.39	3.35	3.36	3.36	-0.1	-0.1	0.0	0.0	0.0
Primary energy consumption per GDP <sup>2</sup>	-	240	197	176	151	130	122	-1.5	-1.5	-1.5	-1.3	-1.5
CO <sub>2</sub> emissions per GDP <sup>3</sup>	-	595	444	371	299	249	231	-2.3	-2.1	-1.8	-1.5	-1.9
CO <sub>2</sub> per primary energy consumption <sup>4</sup>	-	2.48	2.25	2.10	1.98	1.91	1.89	-0.8	-0.6	-0.3	-0.2	-0.4
Automobile ownership (million)	-	177	235	285	319	348	356	2.4	1.1	0.9	0.5	0.9
Automobile ownership <sup>5</sup>	-	373	486	568	618	663	677	2.1	0.9	0.7	0.4	0.7

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 45 World, Advanced Technologies Scenario

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	6,585	8,035	9,266	11,743	13,380	14,602	15,023	100	100	100	1.9	1.3	0.9	0.6	1.0
Coal	1,788	2,231	2,379	3,476	3,530	3,386	3,256	28	30	22	2.2	0.2	-0.4	-0.8	-0.3
Oil	3,101	3,232	3,655	4,107	4,457	4,697	4,754	40	35	32	1.2	0.8	0.5	0.2	0.6
Natural gas	1,234	1,668	2,072	2,728	3,165	3,488	3,567	21	23	24	2.5	1.5	1.0	0.5	1.1
Nuclear	186	526	676	719	1,003	1,325	1,454	6.5	6.1	9.7	1.6	3.4	2.8	1.9	2.9
Hydro	148	184	226	296	375	428	454	2.3	2.5	3.0	2.4	2.4	1.3	1.2	1.7
Geothermal	12	34	52	65	170	305	370	0.4	0.6	2.5	3.3	10.2	6.0	3.9	7.2
Other renewables	115	159	205	351	680	976	1,172	2.0	3.0	7.8	4.0	6.8	3.7	3.7	4.9

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	4,788	5,582	6,302	7,773	8,963	9,809	10,135	100	100	100	1.7	1.4	0.9	0.7	1.1
By sector															
Industry	1,722	1,727	1,806	2,299	2,610	2,760	2,827	31	30	28	1.4	1.3	0.6	0.5	0.8
Transport	1,247	1,569	1,954	2,370	2,761	3,014	3,108	28	30	31	2.1	1.5	0.9	0.6	1.1
Buildings, etc.	1,465	1,808	1,927	2,306	2,651	2,950	3,046	32	30	30	1.2	1.4	1.1	0.6	1.1
Non-energy use	354	478	615	797	941	1,085	1,154	8.6	10	11	2.6	1.7	1.4	1.2	1.5
By energy															
Coal	712	773	580	853	939	907	899	14	11	8.9	0.5	1.0	-0.4	-0.2	0.2
Oil	2,445	2,595	3,117	3,570	3,923	4,180	4,268	46	46	42	1.6	0.9	0.6	0.4	0.7
Natural gas	816	942	1,116	1,318	1,601	1,805	1,867	17	17	18	1.7	2.0	1.2	0.7	1.4
Electricity	586	833	1,091	1,536	1,879	2,224	2,381	15	20	23	3.1	2.0	1.7	1.4	1.8
Heat	121	333	247	276	287	282	274	6.0	3.5	2.7	-0.9	0.4	-0.2	-0.5	0.0
Renewables	108	105	151	220	334	411	447	1.9	2.8	4.4	3.8	4.3	2.1	1.7	2.9

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	8,282	11,819	15,410	21,431	26,048	30,505	32,401	100	100	100	3.0	2.0	1.6	1.2	1.7
Coal	3,141	4,426	6,001	8,698	8,772	8,804	8,429	37	41	26	3.4	0.1	0.0	-0.9	-0.1
Oil	1,656	1,336	1,207	987	1,096	1,151	1,146	11	4.6	3.5	-1.5	1.1	0.5	-0.1	0.6
Natural gas	997	1,727	2,732	4,768	5,537	6,044	6,147	15	22	19	5.2	1.5	0.9	0.3	1.0
Nuclear	713	2,013	2,591	2,756	3,847	5,082	5,575	17	13	17	1.6	3.4	2.8	1.9	2.9
Hydro	1,717	2,144	2,623	3,437	4,365	4,984	5,279	18	16	16	2.4	2.4	1.3	1.2	1.7
Geothermal	14	36	52	68	218	394	479	0.3	0.3	1.5	3.2	12.3	6.1	4.0	8.1
Other renew., etc.	45	137	205	717	2,213	4,046	5,347	1.2	3.3	17	8.6	11.9	6.2	5.7	8.4

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	17,842	24,389	32,352	41,713	57,638	76,049	85,711	2.7	3.3	2.8	2.4	2.9
Population (million)	4,432	5,265	6,071	6,828	7,661	8,313	8,599	1.3	1.2	0.8	0.7	0.9
CO <sub>2</sub> emissions (Mt)	18,433	21,250	23,673	30,411	32,293	32,739	32,326	1.8	0.6	0.1	-0.3	0.2
GDP per capita (\$2000)	4,025	4,632	5,329	6,109	7,524	9,148	9,968	1.4	2.1	2.0	1.7	2.0
Primary energy supply per capita (toe)	1.49	1.53	1.53	1.72	1.75	1.76	1.75	0.6	0.2	0.1	-0.1	0.1
Primary energy supply per GDP <sup>*2</sup>	369	329	286	282	232	192	175	-0.8	-1.9	-1.9	-1.8	-1.9
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	1,033	871	732	729	560	430	377	-0.9	-2.6	-2.6	-2.6	-2.6
CO <sub>2</sub> emissions per primary energy supply <sup>*4</sup>	2.80	2.64	2.55	2.59	2.41	2.24	2.15	-0.1	-0.7	-0.7	-0.8	-0.7
Automobile ownership (million)	417	581	766	1,043	1,392	1,747	1,926	3.0	2.9	2.3	2.0	2.5
Automobile ownership <sup>*5</sup>	94	110	126	153	182	210	224	1.6	1.8	1.5	1.3	1.5

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 46 Asia, Advanced Technologies Scenario

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	1,047	1,655	2,456	4,163	5,268	6,067	6,360	100	100	100	4.7	2.4	1.4	0.9	1.7
Coal	471	796	1,099	2,228	2,428	2,424	2,380	48	54	37	5.3	0.9	0.0	-0.4	0.3
Oil	478	619	917	1,174	1,447	1,615	1,652	37	28	26	3.3	2.1	1.1	0.5	1.4
Natural gas	51	116	231	448	704	952	1,036	7.0	11	16	7.0	4.6	3.1	1.7	3.4
Nuclear	25	77	132	152	340	548	647	4.6	3.6	10	3.5	8.4	4.9	3.4	6.0
Hydro	20	32	41	92	142	164	174	1.9	2.2	2.7	5.4	4.4	1.5	1.1	2.6
Geothermal	2.6	8.2	23	31	65	120	145	0.5	0.7	2.3	6.8	7.7	6.3	3.9	6.4
Other renewables	0.0	7.2	12	38	144	249	330	0.4	0.9	5.2	8.7	14.1	5.6	5.8	9.0

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	754	1,131	1,555	2,542	3,337	3,864	4,081	100	100	100	4.1	2.8	1.5	1.1	1.9
By sector															
Industry	366	484	633	1,128	1,345	1,422	1,459	43	44	36	4.3	1.8	0.6	0.5	1.0
Transport	127	197	321	472	690	817	865	17	19	21	4.5	3.9	1.7	1.1	2.5
Buildings, etc.	207	334	411	619	860	1,095	1,182	30	24	29	3.1	3.3	2.4	1.5	2.6
Non-energy use	54	117	191	322	441	531	575	10	13	14	5.2	3.2	1.9	1.6	2.3
By energy															
Coal	310	441	409	690	757	722	713	39	27	17	2.3	0.9	-0.5	-0.2	0.1
Oil	328	469	744	998	1,287	1,471	1,536	41	39	38	3.9	2.6	1.3	0.9	1.7
Natural gas	21	47	88	191	366	495	527	4.1	7.5	13	7.3	6.7	3.0	1.3	4.1
Electricity	88	156	277	571	790	1,012	1,122	14	22	27	6.7	3.3	2.5	2.1	2.7
Heat	7.5	14	30	70	93	97	96	1.3	2.8	2.4	8.2	2.9	0.5	-0.3	1.3
Renewables	-	4.7	7.7	21	44	68	87	0.4	0.8	2.1	7.8	7.6	4.5	5.3	5.9

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	1,195	2,212	3,966	7,932	10,838	13,644	14,906	100	100	100	6.6	3.2	2.3	1.8	2.6
Coal	302	864	1,991	4,797	5,366	5,832	5,774	39	60	39	8.9	1.1	0.8	-0.2	0.7
Oil	470	429	382	272	291	300	299	19	3.4	2.0	-2.2	0.7	0.3	-0.1	0.4
Natural gas	90	235	562	1,066	1,510	2,058	2,347	11	13	16	7.8	3.5	3.1	2.7	3.2
Nuclear	97	294	505	582	1,304	2,103	2,481	13	7.3	17	3.5	8.4	4.9	3.4	6.0
Hydro	232	370	481	1,067	1,649	1,914	2,024	17	13	14	5.4	4.5	1.5	1.1	2.6
Geothermal	3.0	8.3	20	22	71	134	163	0.4	0.3	1.1	5.0	12.3	6.6	4.0	8.3
Other renew., etc.	0.0	11	25	127	648	1,303	1,818	0.5	1.6	12	12.9	17.7	7.2	6.9	11.2

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	3,552	5,947	8,124	12,046	19,192	27,200	31,648	3.6	4.8	3.5	3.1	3.9
Population (million)	2,436	2,923	3,381	3,751	4,167	4,411	4,496	1.3	1.1	0.6	0.4	0.7
CO <sub>2</sub> emissions (Mt)	3,288	4,960	7,126	12,485	14,350	15,106	15,058	4.7	1.4	0.5	-0.1	0.8
GDP per capita (\$2000)	1,458	2,035	2,403	3,211	4,605	6,167	7,039	2.3	3.7	3.0	2.7	3.2
Primary energy supply per capita (toe)	0.43	0.57	0.73	1.11	1.26	1.38	1.41	3.4	1.3	0.8	0.6	1.0
Primary energy supply per GDP <sup>*2</sup>	295	278	302	346	274	223	201	1.1	-2.3	-2.1	-2.1	-2.1
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	926	834	877	1,036	748	555	476	1.1	-3.2	-2.9	-3.0	-3.1
CO <sub>2</sub> emissions per primary energy supply <sup>*4</sup>	3.14	3.00	2.90	3.00	2.72	2.49	2.37	0.0	-1.0	-0.9	-1.0	-0.9
Automobile ownership (million)	47	85	138	240	401	577	686	5.3	5.2	3.7	3.5	4.3
Automobile ownership <sup>*5</sup>	19	29	41	64	96	131	153	4.0	4.1	3.1	3.1	3.5

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 47 People's Republic of China, Advanced Technologies Scenario

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	418	672	980	2,216	2,858	3,161	3,181	100	100	100	6.2	2.6	1.0	0.1	1.5
Coal	313	528	712	1,595	1,668	1,582	1,481	79	72	47	5.7	0.4	-0.5	-1.3	-0.3
Oil	89	120	221	431	628	701	686	18	19	22	6.6	3.8	1.1	-0.4	1.9
Natural gas	12	13	21	89	236	370	394	1.9	4.0	12	10.2	10.3	4.6	1.3	6.1
Nuclear	-	-	4.4	19	137	252	309	-	0.9	9.7	-	21.7	6.3	4.2	11.7
Hydro	5.0	11	19	62	99	107	111	1.6	2.8	3.5	9.1	4.8	0.8	0.6	2.3
Geothermal	-	-	1.6	3.7	4.7	5.7	6.2	-	0.2	0.2	-	2.2	2.0	1.8	2.1
Other renewables	-	0.0	1.8	17	86	146	197	0.0	0.8	6.2	36.8	17.3	5.4	6.2	10.2

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	315	466	612	1,313	1,831	2,062	2,100	100	100	100	5.3	3.4	1.2	0.4	1.9
By sector															
Industry	188	244	329	712	817	780	747	52	54	36	5.5	1.4	-0.5	-0.9	0.2
Transport	24	34	83	182	357	446	468	7.3	14	22	8.8	6.9	2.3	1.0	3.8
Buildings, etc.	92	144	139	287	447	575	599	31	22	29	3.5	4.5	2.6	0.8	3.0
Non-energy use	11	44	61	131	210	260	286	9.5	10	14	5.6	4.8	2.1	1.9	3.2
By energy															
Coal	220	320	304	512	525	460	429	69	39	20	2.4	0.2	-1.3	-1.4	-0.7
Oil	59	85	179	369	597	693	707	18	28	34	7.6	4.9	1.5	0.4	2.6
Natural gas	6.4	8.9	12	57	188	282	297	1.9	4.4	14	9.8	12.6	4.1	1.0	6.8
Electricity	21	39	89	297	413	499	526	8.4	23	25	10.7	3.4	1.9	1.1	2.3
Heat	7.4	13	25	64	83	84	82	2.8	4.9	3.9	8.2	2.5	0.2	-0.6	1.0
Renewables	-	0.0	2.5	13	26	43	59	0.0	1.0	2.8	35.1	7.0	5.3	6.5	6.2

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	301	621	1,356	4,208	5,689	6,725	6,972	100	100	100	10.0	3.1	1.7	0.7	2.0
Coal	164	443	1,062	3,273	3,431	3,489	3,159	71	78	45	10.5	0.5	0.2	-2.0	-0.1
Oil	78	49	46	13	16	16	15	7.8	0.3	0.2	-6.3	1.8	-0.2	-0.2	0.6
Natural gas	0.7	2.8	5.8	69	166	283	317	0.4	1.6	4.5	17.5	9.2	5.5	2.3	6.3
Nuclear	-	-	17	74	526	965	1,185	-	1.8	17	-	21.7	6.3	4.2	11.7
Hydro	58	127	222	722	1,150	1,247	1,285	20	17	18	9.1	4.8	0.8	0.6	2.3
Geothermal	-	-	-	0.2	0.8	1.6	1.9	-	0.0	0.0	-	17.6	6.6	4.3	10.4
Other renew., etc.	-	0.0	3.1	57	398	723	1,009	0.0	1.4	14	61.3	21.5	6.1	6.9	12.2

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	183	445	1,199	3,246	6,942	10,831	12,864	10.5	7.9	4.5	3.5	5.7
Population (million)	981	1,135	1,263	1,338	1,388	1,393	1,382	0.8	0.4	0.0	-0.2	0.1
CO <sub>2</sub> emissions (Mt)	1,505	2,337	3,346	7,425	8,414	8,400	7,875	6.0	1.3	0.0	-1.3	0.2
GDP per capita (\$2000)	186	392	949	2,426	5,002	7,775	9,311	9.5	7.5	4.5	3.7	5.5
Primary energy supply per capita (toe)	0.43	0.59	0.78	1.66	2.06	2.27	2.30	5.3	2.2	1.0	0.3	1.3
Primary energy supply per GDP <sup>*2</sup>	2,288	1,511	818	683	412	292	247	-3.9	-4.9	-3.4	-3.3	-4.0
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	8,230	5,256	2,792	2,287	1,212	776	612	-4.1	-6.2	-4.4	-4.6	-5.1
CO <sub>2</sub> emissions per primary energy supply <sup>*4</sup>	3.60	3.48	3.41	3.35	2.94	2.66	2.48	-0.2	-1.3	-1.0	-1.4	-1.2
Automobile ownership (million)	1.8	5.5	16	78	184	272	315	14.2	8.9	4.0	3.0	5.7
Automobile ownership <sup>*5</sup>	1.8	4.8	13	58	132	195	228	13.3	8.5	4.0	3.2	5.6

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 48 India, Advanced Technologies Scenario

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	89	183	309	524	723	951	1,085	100	100	100	5.4	3.3	2.8	2.7	3.0
Coal	49	103	161	288	369	408	442	56	55	41	5.3	2.5	1.0	1.6	1.7
Oil	33	61	113	162	204	268	304	34	31	28	5.0	2.3	2.8	2.5	2.5
Natural gas	1.3	11	23	53	79	125	154	5.8	10	14	8.4	4.1	4.7	4.3	4.4
Nuclear	0.8	1.6	4.4	6.8	41	97	116	0.9	1.3	11	7.5	19.6	9.0	3.5	12.0
Hydro	4.0	6.2	6.4	9.8	14	18	20	3.4	1.9	1.9	2.4	3.6	2.5	2.5	2.9
Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other renewables	-	0.0	1.0	3.4	15	34	47	0.0	0.6	4.3	33.8	16.5	8.2	6.7	11.1

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	63	118	171	289	421	577	677	100	100	100	4.6	3.8	3.2	3.2	3.5
By sector															
Industry	24	48	62	123	167	219	258	40	43	38	4.8	3.1	2.8	3.3	3.0
Transport	17	27	32	55	77	107	125	23	19	19	3.6	3.4	3.3	3.1	3.3
Buildings, etc.	16	32	48	72	120	179	214	27	25	32	4.2	5.2	4.1	3.7	4.4
Non-energy use	5.2	12	29	38	57	72	79	9.9	13	12	6.1	4.1	2.4	1.9	3.0
By energy															
Coal	28	42	33	76	104	112	122	35	26	18	3.0	3.3	0.7	1.6	1.9
Oil	27	53	96	128	174	237	272	44	44	40	4.6	3.1	3.1	2.8	3.0
Natural gas	0.7	5.6	9.7	23	30	40	46	4.8	7.9	6.9	7.3	2.7	3.0	3.1	2.9
Electricity	7.7	18	32	61	111	184	232	15	21	34	6.2	6.2	5.2	4.7	5.5
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	-	0.0	0.1	0.5	1.5	3.9	4.7	0.0	0.2	0.7	22.9	12.4	9.8	3.9	9.6

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	119	289	561	960	1,640	2,533	3,070	100	100	100	6.2	5.5	4.4	3.9	4.8
Coal	61	192	387	653	928	1,190	1,369	66	68	45	6.3	3.6	2.5	2.8	3.0
Oil	7.6	10	24	26	22	24	26	3.5	2.8	0.8	5.0	-2.0	0.9	1.5	-0.1
Natural gas	0.6	10.0	56	118	247	453	591	3.4	12	19	13.1	7.7	6.2	5.5	6.7
Nuclear	3.0	6.1	17	26	158	373	444	2.1	2.7	14	7.5	19.6	9.0	3.5	12.0
Hydro	47	72	74	114	163	208	236	25	12	7.7	2.4	3.6	2.5	2.5	2.9
Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other renew., etc.	-	0.0	3.0	22	123	285	405	0.0	2.3	13	38.6	18.8	8.8	7.3	12.4

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	160	275	468	995	2,077	3,663	4,776	6.6	7.6	5.8	5.5	6.5
Population (million)	687	850	1,016	1,171	1,387	1,523	1,580	1.6	1.7	0.9	0.7	1.2
CO <sub>2</sub> emissions (Mt)	285	591	958	1,657	2,109	2,524	2,818	5.3	2.4	1.8	2.2	2.1
GDP per capita (\$2000)	233	324	460	850	1,497	2,404	3,023	4.9	5.8	4.9	4.7	5.2
Primary energy supply per capita (toe)	0.13	0.22	0.30	0.45	0.52	0.62	0.69	3.7	1.5	1.8	1.9	1.7
Primary energy supply per GDP <sup>*2</sup>	554	667	661	526	348	260	227	-1.2	-4.0	-2.9	-2.6	-3.3
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	1,779	2,149	2,047	1,664	1,016	689	590	-1.3	-4.8	-3.8	-3.1	-4.1
CO <sub>2</sub> emissions per primary energy supply <sup>*4</sup>	3.21	3.22	3.10	3.16	2.92	2.65	2.60	-0.1	-0.8	-0.9	-0.4	-0.8
Automobile ownership (million)	1.7	4.3	9.4	21	50	103	147	8.3	8.8	7.6	7.3	8.0
Automobile ownership <sup>*5</sup>	2.4	5.1	9.3	18	36	68	93	6.6	6.9	6.6	6.6	6.7

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people



Table 49 Japan, Advanced Technologies Scenario

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	345	439	519	497	464	424	404	100	100	100	0.6	-0.7	-0.9	-1.0	-0.8
Coal	60	77	97	115	103	92	85	17	23	21	2.0	-1.1	-1.2	-1.5	-1.2
Oil	234	250	255	203	164	133	119	57	41	29	-1.0	-2.1	-2.1	-2.2	-2.1
Natural gas	21	44	66	86	90	84	80	10	17	20	3.4	0.5	-0.7	-1.0	-0.3
Nuclear	22	53	84	75	77	62	58	12	15	14	1.8	0.3	-2.2	-1.5	-1.1
Hydro	7.6	7.7	7.5	7.1	8.5	10	11	1.7	1.4	2.6	-0.4	1.9	1.6	1.1	1.6
Geothermal	0.8	1.6	3.1	2.5	6.4	19	23	0.4	0.5	5.7	2.3	10.0	11.6	3.9	9.3
Other renewables	-	6.2	6.7	8.2	14	25	28	1.4	1.7	7.0	1.5	5.5	5.8	2.7	5.0

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	232	300	345	325	299	270	256	100	100	100	0.4	-0.8	-1.0	-1.1	-1.0
By sector															
Industry	91	103	100	90	97	93	90	34	28	35	-0.7	0.7	-0.4	-0.6	0.0
Transport	54	72	88	77	62	48	43	24	24	17	0.4	-2.1	-2.5	-2.4	-2.3
Buildings, etc.	58	91	116	118	106	96	90	30	36	35	1.3	-1.1	-1.0	-1.2	-1.1
Non-energy use	28	35	42	40	35	33	33	12	12	13	0.7	-1.4	-0.4	-0.5	-0.8
By energy															
Coal	25	32	27	29	29	27	26	11	8.8	10	-0.6	0.2	-0.6	-0.9	-0.3
Oil	157	184	210	171	134	107	96	61	53	38	-0.4	-2.4	-2.2	-2.3	-2.3
Natural gas	5.8	15	23	34	41	38	36	5.1	11	14	4.2	1.8	-0.9	-1.1	0.1
Electricity	44	64	81	86	85	86	85	21	27	33	1.5	-0.1	0.0	-0.1	-0.1
Heat	0.1	0.2	0.5	0.6	3.8	5.9	7.0	0.1	0.2	2.7	5.5	20.6	4.5	3.4	10.4
Renewables	-	3.9	3.7	3.5	5.7	6.1	5.7	1.3	1.1	2.2	-0.5	5.0	0.6	-1.3	1.9

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	573	836	1,049	1,111	1,101	1,106	1,099	100	100	100	1.4	-0.1	0.0	-0.1	0.0
Coal	55	117	232	304	250	209	191	14	27	17	4.9	-2.0	-1.8	-1.8	-1.9
Oil	265	248	137	97	89	62	51	30	8.8	4.6	-4.6	-1.0	-3.4	-4.0	-2.6
Natural gas	81	167	251	305	296	285	275	20	27	25	3.0	-0.3	-0.4	-0.7	-0.4
Nuclear	83	202	322	288	297	239	221	24	26	20	1.8	0.3	-2.2	-1.5	-1.1
Hydro	88	89	87	82	99	117	123	11	7.4	11	-0.4	1.9	1.6	1.1	1.6
Geothermal	0.9	1.7	3.3	2.6	7.2	22	27	0.2	0.2	2.4	2.1	10.6	11.8	3.9	9.7
Other renew., etc.	-	11	16	31	63	173	212	1.3	2.8	19	5.6	7.3	10.6	4.2	8.0

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	2,638	4,150	4,667	5,029	5,782	6,537	6,854	1.0	1.4	1.2	0.9	1.2
Population (million)	118	124	127	127	123	115	111	0.1	-0.4	-0.6	-0.8	-0.6
CO <sub>2</sub> emissions (Mt)	916	1,070	1,194	1,158	1,018	865	790	0.4	-1.3	-1.6	-1.8	-1.5
GDP per capita (\$2000)	22,424	33,491	36,709	39,530	47,104	56,733	61,921	0.8	1.8	1.9	1.8	1.8
Primary energy supply per capita (toe)	2.93	3.55	4.08	3.91	3.78	3.68	3.65	0.5	-0.3	-0.3	-0.2	-0.3
Primary energy supply per GDP <sup>*2</sup>	131	106	111	99	80	65	59	-0.3	-2.1	-2.1	-1.9	-2.0
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	347	258	256	230	176	132	115	-0.6	-2.6	-2.8	-2.7	-2.7
CO <sub>2</sub> emissions per primary energy supply <sup>*4</sup>	2.66	2.43	2.30	2.33	2.19	2.04	1.96	-0.2	-0.6	-0.7	-0.8	-0.7
Automobile ownership (million)	37	56	71	75	73	69	67	1.5	-0.4	-0.5	-0.6	-0.5
Automobile ownership <sup>*5</sup>	317	457	559	592	591	597	602	1.3	0.0	0.1	0.2	0.1

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 50 Asia excluding Japan, Advanced Technologies Scenario

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	703	1,215	1,937	3,667	4,804	5,643	5,956	100	100	100	5.7	2.7	1.6	1.1	2.0
Coal	412	720	1,002	2,113	2,325	2,332	2,295	59	58	39	5.5	1.0	0.0	-0.3	0.3
Oil	244	368	662	971	1,283	1,482	1,533	30	26	26	5.0	2.8	1.5	0.7	1.8
Natural gas	29	71	165	362	614	868	956	5.9	9.9	16	8.5	5.4	3.5	2.0	4.0
Nuclear	3.8	24	48	77	262	486	589	2.0	2.1	9.9	6.0	13.1	6.4	3.9	8.5
Hydro	12	24	34	85	133	154	163	2.0	2.3	2.7	6.5	4.6	1.5	1.1	2.7
Geothermal	1.8	6.6	20	28	59	101	122	0.5	0.8	2.1	7.5	7.5	5.6	3.9	6.0
Other renewables	0.0	1.1	5.6	30	130	224	302	0.1	0.8	5.1	18.2	15.7	5.6	6.2	9.7

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	522	831	1,210	2,217	3,037	3,594	3,825	100	100	100	5.0	3.2	1.7	1.3	2.2
By sector															
Industry	275	381	533	1,038	1,248	1,329	1,369	46	47	36	5.1	1.9	0.6	0.6	1.1
Transport	73	125	233	395	628	769	822	15	18	21	5.9	4.7	2.0	1.4	3.0
Buildings, etc.	149	243	295	502	755	999	1,091	29	23	29	3.7	4.2	2.8	1.8	3.2
Non-energy use	26	82	149	282	407	497	542	9.9	13	14	6.4	3.7	2.0	1.8	2.6
By energy															
Coal	285	409	382	662	727	694	686	49	30	18	2.4	1.0	-0.5	-0.2	0.1
Oil	171	285	534	826	1,153	1,364	1,440	34	37	38	5.5	3.4	1.7	1.1	2.2
Natural gas	15	32	65	157	325	457	491	3.8	7.1	13	8.3	7.6	3.5	1.5	4.7
Electricity	44	91	196	485	705	926	1,037	11	22	27	8.7	3.8	2.8	2.3	3.1
Heat	7.4	14	29	69	89	92	89	1.7	3.1	2.3	8.3	2.5	0.3	-0.5	1.0
Renewables	-	0.8	4.0	17	38	61	82	0.1	0.8	2.1	16.7	8.1	5.0	5.9	6.4

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	622	1,377	2,917	6,821	9,738	12,538	13,807	100	100	100	8.3	3.6	2.6	1.9	2.9
Coal	247	747	1,759	4,492	5,116	5,623	5,583	54	66	40	9.4	1.3	0.9	-0.1	0.9
Oil	206	181	245	175	203	238	248	13	2.6	1.8	-0.2	1.5	1.6	0.9	1.4
Natural gas	9.2	68	311	761	1,214	1,774	2,072	5.0	11	15	12.8	4.8	3.9	3.2	4.1
Nuclear	15	92	183	294	1,007	1,864	2,260	6.7	4.3	16	6.0	13.1	6.4	3.9	8.5
Hydro	143	280	394	984	1,550	1,797	1,900	20	14	14	6.5	4.6	1.5	1.1	2.7
Geothermal	2.1	6.6	16	19	64	112	137	0.5	0.3	1.0	5.6	12.6	5.9	4.0	8.1
Other renew., etc.	0.0	0.7	9.1	95	585	1,131	1,606	0.0	1.4	12	28.2	19.9	6.8	7.3	12.0

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	914	1,797	3,457	7,017	13,410	20,663	24,794	7.0	6.7	4.4	3.7	5.2
Population (million)	2,319	2,799	3,253	3,624	4,045	4,296	4,385	1.3	1.1	0.6	0.4	0.8
CO <sub>2</sub> emissions (Mt)	2,372	3,891	5,933	11,327	13,332	14,241	14,268	5.5	1.6	0.7	0.0	0.9
GDP per capita (\$2000)	394	642	1,063	1,936	3,315	4,810	5,654	5.7	5.5	3.8	3.3	4.4
Primary energy supply per capita (toe)	0.30	0.43	0.60	1.01	1.19	1.31	1.36	4.3	1.6	1.0	0.7	1.2
Primary energy supply per GDP <sup>*2</sup>	769	676	560	523	358	273	240	-1.3	-3.7	-2.7	-2.5	-3.1
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	2,596	2,165	1,716	1,614	994	689	575	-1.5	-4.7	-3.6	-3.5	-4.0
CO <sub>2</sub> emissions per primary energy supply <sup>*4</sup>	3.37	3.20	3.06	3.09	2.78	2.52	2.40	-0.2	-1.1	-0.9	-1.0	-1.0
Automobile ownership (million)	10	28	67	165	328	509	620	9.2	7.1	4.5	4.0	5.4
Automobile ownership <sup>*5</sup>	4.5	10	21	46	81	118	141	7.8	5.9	3.9	3.6	4.6

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 51 ASEAN, Advanced Technologies Scenario

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	72	140	280	439	655	908	1,050	100	100	100	5.9	4.1	3.3	2.9	3.5
Coal	3.6	12	32	84	145	208	245	8.9	19	23	10.0	5.6	3.7	3.4	4.4
Oil	58	88	153	197	253	306	335	63	45	32	4.1	2.5	1.9	1.8	2.1
Natural gas	8.4	29	71	122	178	233	257	21	28	24	7.4	3.8	2.7	2.0	3.0
Nuclear	-	-	-	-	-	30	50	-	-	4.8	-	-	-	11.1	-
Hydro	0.8	2.3	4.1	6.0	12	18	20	1.7	1.4	1.9	4.8	6.8	4.5	2.0	4.9
Geothermal	1.8	6.6	18	25	53	93	113	4.8	5.6	11	6.8	7.9	5.8	4.0	6.3
Other renewables	-	0.3	0.6	4.3	17	26	34	0.2	1.0	3.3	15.2	14.7	4.4	5.9	8.7

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	51	91	182	297	422	560	641	100	100	100	6.1	3.6	2.9	2.7	3.1
By sector															
Industry	18	28	59	101	147	202	233	31	34	36	6.6	3.8	3.2	2.9	3.4
Transport	17	32	62	92	120	139	151	35	31	24	5.4	2.7	1.5	1.6	2.0
Buildings, etc.	13	19	41	56	88	132	159	21	19	25	5.6	4.6	4.1	3.9	4.3
Non-energy use	2.4	11	21	47	67	87	98	13	16	15	7.4	3.6	2.6	2.3	3.0
By energy															
Coal	2.1	6.1	14	36	63	88	103	6.7	12	16	9.3	5.7	3.5	3.1	4.3
Oil	41	67	125	179	222	269	295	73	60	46	5.1	2.2	2.0	1.8	2.0
Natural gas	2.5	7.4	17	29	45	61	69	8.1	9.8	11	7.0	4.6	3.0	2.5	3.5
Electricity	4.7	11	28	52	86	133	162	12	17	25	8.0	5.3	4.4	4.0	4.7
Heat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewables	-	-	-	0.9	6.2	9.2	12	-	0.3	1.9	-	21.3	3.9	6.2	11.0

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	62	154	370	674	1,170	1,823	2,193	100	100	100	7.7	5.7	4.5	3.8	4.8
Coal	3.0	28	79	185	350	554	687	18	27	31	10.0	6.6	4.7	4.4	5.4
Oil	47	66	72	57	71	76	76	43	8.4	3.5	-0.8	2.3	0.7	-0.1	1.2
Natural gas	0.7	26	154	335	527	714	804	17	50	37	13.7	4.6	3.1	2.4	3.6
Nuclear	-	-	-	-	-	114	192	-	-	8.8	-	-	-	11.1	-
Hydro	9.8	27	47	70	137	212	235	18	10	11	4.8	6.9	4.5	2.0	5.0
Geothermal	2.1	6.6	16	19	61	108	131	4.3	2.9	6.0	5.5	12.2	5.8	4.0	8.0
Other renew., etc.	-	0.6	1.0	8.6	25	44	68	0.4	1.3	3.1	14.2	11.4	5.8	8.9	8.6

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	214	367	601	992	1,643	2,507	3,043	5.1	5.2	4.3	4.0	4.6
Population (million)	348	430	504	571	628	671	689	1.4	1.0	0.7	0.5	0.8
CO <sub>2</sub> emissions (Mt)	205	358	705	1,086	1,572	2,053	2,316	5.7	3.8	2.7	2.4	3.1
GDP per capita (\$2000)	615	855	1,193	1,738	2,615	3,736	4,417	3.6	4.2	3.6	3.4	3.8
Primary energy supply per capita (toe)	0.21	0.32	0.55	0.77	1.04	1.35	1.52	4.4	3.1	2.6	2.4	2.8
Primary energy supply per GDP <sup>*2</sup>	338	380	465	443	399	362	345	0.8	-1.0	-1.0	-1.0	-1.0
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	956	974	1,172	1,094	957	819	761	0.6	-1.3	-1.5	-1.5	-1.4
CO <sub>2</sub> emissions per primary energy supply <sup>*4</sup>	2.83	2.57	2.52	2.47	2.40	2.26	2.21	-0.2	-0.3	-0.6	-0.5	-0.5
Automobile ownership (million)	4.5	10	20	36	56	88	108	6.6	4.6	4.6	4.3	4.5
Automobile ownership <sup>*5</sup>	13	23	40	63	89	131	157	5.1	3.6	3.9	3.8	3.7

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 52 United States, Advanced Technologies Scenario

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	1,805	1,915	2,273	2,216	2,127	2,008	1,925	100	100	100	0.7	-0.4	-0.6	-0.8	-0.6
Coal	376	460	534	503	442	367	308	24	23	16	0.4	-1.3	-1.8	-3.4	-1.9
Oil	797	757	871	805	676	602	579	40	36	30	0.3	-1.7	-1.1	-0.8	-1.3
Natural gas	477	438	548	556	539	486	447	23	25	23	1.2	-0.3	-1.0	-1.7	-0.9
Nuclear	69	159	208	219	242	249	253	8.3	9.9	13	1.6	1.0	0.3	0.3	0.6
Hydro	24	23	22	23	23	23	23	1.2	1.0	1.2	-0.2	0.0	0.0	0.0	0.0
Geothermal	4.6	14	13	8.4	21	34	41	0.7	0.4	2.1	-2.6	9.4	5.2	3.7	6.5
Other renewables	54	63	75	100	183	245	272	3.3	4.5	14	2.4	6.2	2.9	2.2	4.1

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	1,311	1,294	1,546	1,500	1,425	1,349	1,305	100	100	100	0.7	-0.5	-0.5	-0.7	-0.6
By sector															
Industry	387	284	332	280	262	241	229	22	19	18	-0.1	-0.7	-0.8	-1.0	-0.8
Transport	425	488	588	583	536	478	457	38	39	35	0.9	-0.8	-1.1	-0.9	-1.0
Buildings, etc.	397	403	473	502	504	495	477	31	33	37	1.1	0.0	-0.2	-0.7	-0.2
Non-energy use	102	119	153	135	123	135	141	9.2	9.0	11	0.6	-0.9	0.9	0.9	0.2
By energy															
Coal	56	56	33	27	30	29	28	4.3	1.8	2.2	-3.6	1.3	-0.4	-0.7	0.2
Oil	689	683	793	749	627	558	535	53	50	41	0.5	-1.8	-1.2	-0.8	-1.3
Natural gas	337	303	360	319	306	278	263	23	21	20	0.3	-0.4	-1.0	-1.1	-0.8
Electricity	174	226	301	327	339	357	353	18	22	27	1.9	0.4	0.5	-0.2	0.3
Heat	-	2.2	5.3	6.6	6.3	5.8	5.5	0.2	0.4	0.4	5.8	-0.6	-0.7	-1.1	-0.7
Renewables	54	23	54	72	116	122	119	1.8	4.8	9.1	5.9	4.9	0.5	-0.5	2.1

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	2,427	3,203	4,026	4,354	4,523	4,745	4,704	100	100	100	1.5	0.4	0.5	-0.2	0.3
Coal	1,243	1,700	2,129	1,994	1,793	1,532	1,295	53	46	28	0.8	-1.1	-1.6	-3.3	-1.7
Oil	263	131	118	48	14	7.0	4.9	4.1	1.1	0.1	-4.9	-11.6	-6.7	-7.0	-8.7
Natural gas	370	382	634	1,018	996	869	743	12	23	16	5.0	-0.2	-1.4	-3.1	-1.3
Nuclear	266	612	798	839	927	957	970	19	19	21	1.6	1.0	0.3	0.3	0.6
Hydro	279	273	253	262	263	264	265	8.5	6.0	5.6	-0.2	0.0	0.0	0.0	0.0
Geothermal	5.4	16	15	18	44	73	88	0.5	0.4	1.9	0.5	9.6	5.2	3.7	6.6
Other renew., etc.	0.5	90	78	175	486	1,044	1,338	2.8	4.0	28	3.4	10.7	7.9	5.1	8.5

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	5,142	7,064	9,899	11,698	15,065	19,215	21,252	2.6	2.6	2.5	2.0	2.4
Population (million)	227	250	282	309	335	359	370	1.1	0.8	0.7	0.6	0.7
CO <sub>2</sub> emissions (Mt)	4,743	4,820	5,617	5,362	4,718	4,035	3,620	0.5	-1.3	-1.6	-2.1	-1.6
GDP per capita (\$2000)	22,630	28,299	35,081	37,851	44,959	53,452	57,372	1.5	1.7	1.7	1.4	1.7
Primary energy supply per capita (toe)	7.94	7.67	8.06	7.17	6.35	5.59	5.20	-0.3	-1.2	-1.3	-1.4	-1.3
Primary energy supply per GDP <sup>*2</sup>	351	271	230	189	141	104	91	-1.8	-2.9	-3.0	-2.8	-2.9
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	922	682	567	458	313	210	170	-2.0	-3.7	-3.9	-4.1	-3.9
CO <sub>2</sub> emissions per primary energy supply <sup>*4</sup>	2.63	2.52	2.47	2.42	2.22	2.01	1.88	-0.2	-0.9	-1.0	-1.3	-1.0
Automobile ownership (million)	156	189	221	242	278	310	324	1.3	1.4	1.1	0.9	1.2
Automobile ownership <sup>*5</sup>	686	756	785	783	828	862	875	0.2	0.6	0.4	0.3	0.4

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people

Table 53 European Union, Advanced Technologies Scenario

Primary energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total <sup>*1</sup>	-	1,631	1,675	1,701	1,655	1,588	1,536	100	100	100	0.2	-0.3	-0.4	-0.7	-0.4
Coal	-	455	321	281	204	151	130	28	17	8	-2.4	-3.1	-3.0	-2.9	-3.0
Oil	-	601	618	569	497	431	395	37	33	26	-0.3	-1.3	-1.4	-1.7	-1.4
Natural gas	-	295	394	441	448	419	393	18	26	26	2.0	0.2	-0.7	-1.2	-0.5
Nuclear	-	207	246	239	245	260	251	12.7	14.0	16	0.7	0.3	0.6	-0.7	0.2
Hydro	-	25	30	31	32	33	34	1.5	1.9	2.2	1.2	0.2	0.4	0.3	0.3
Geothermal	-	3.2	4.7	5.9	9.9	14	17	0.2	0.3	1.1	3.1	5.3	3.8	3.0	4.2
Other renewables	-	45	63	139	218	284	320	2.8	8.2	21	5.8	4.6	2.6	2.5	3.4

Final energy consumption	Mtoe							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	-	1,122	1,164	1,187	1,161	1,111	1,078	100	100	100	0.3	-0.2	-0.4	-0.6	-0.4
By sector															
Industry	-	341	306	272	265	259	257	30	23	24	-1.1	-0.3	-0.2	-0.1	-0.2
Transport	-	257	303	319	302	271	250	23	27	23	1.1	-0.6	-1.1	-1.6	-1.0
Buildings, etc.	-	426	445	490	484	467	455	38	41	42	0.7	-0.1	-0.4	-0.5	-0.3
Non-energy use	-	98	110	106	109	114	116	8.7	8.9	11	0.4	0.3	0.4	0.3	0.4
By energy															
Coal	-	123	52	41	34	27	24	10.9	3.4	2.2	-5.4	-1.7	-2.4	-2.3	-2.1
Oil	-	499	536	501	445	385	351	45	42	33	0.0	-1.2	-1.4	-1.8	-1.4
Natural gas	-	224	271	274	276	268	261	20	23	24	1.0	0.1	-0.3	-0.5	-0.2
Electricity	-	185	217	244	262	275	280	16	21	26	1.4	0.7	0.5	0.3	0.5
Heat	-	54	44	53	50	48	46	4.8	4.5	4.3	-0.1	-0.6	-0.5	-0.5	-0.5
Renewables	-	37	44	74	94	109	116	3.3	6.2	10.7	3.6	2.4	1.6	1.2	1.8

Electricity generated	TWh							Shares (%)			AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990	2010	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
Total	-	2,565	2,992	3,310	3,600	3,804	3,874	100	100	100	1.3	0.8	0.6	0.4	0.6
Coal	-	1,050	966	862	599	429	355	41	26	9	-1.0	-3.6	-3.3	-3.7	-3.5
Oil	-	221	180	86	74	62	58	8.6	2.6	1.5	-4.6	-1.5	-1.7	-1.3	-1.6
Natural gas	-	191	478	758	797	696	601	7	23	16	7.1	0.5	-1.4	-2.9	-0.9
Nuclear	-	795	945	917	940	997	964	31	28	25	0.7	0.3	0.6	-0.7	0.2
Hydro	-	286	353	366	373	388	393	11.2	11.1	10.1	1.2	0.2	0.4	0.3	0.3
Geothermal	-	3.2	4.8	5.6	9.9	15	17	0.1	0.2	0.4	2.8	5.9	4.0	3.1	4.6
Other renew., etc.	-	18	66	314	805	1,218	1,485	0.7	9.5	38	15.4	9.9	4.2	4.0	6.4

Energy and economic indicators								AAGR (%)				
	1980	1990	2000	2010	2020	2030	2035	1990-2010	2010-2020	2020-2030	2030-2035	2010-2035
GDP (\$2000 billion)	-	6,807	8,485	9,649	11,443	13,501	14,468	1.8	1.7	1.7	1.4	1.6
Population (million)	-	473	483	502	517	525	526	0.3	0.3	0.2	0.1	0.2
CO <sub>2</sub> emissions (Mt)	-	4,049	3,766	3,577	3,060	2,560	2,304	-0.6	-1.6	-1.8	-2.1	-1.7
GDP per capita (\$2000)	-	14,397	17,552	19,217	22,147	25,732	27,503	1.5	1.4	1.5	1.3	1.4
Primary energy supply per capita (toe)	-	3.45	3.47	3.39	3.20	3.03	2.92	-0.1	-0.6	-0.6	-0.7	-0.6
Primary energy supply per GDP <sup>*2</sup>	-	240	197	176	145	118	106	-1.5	-2.0	-2.0	-2.0	-2.0
CO <sub>2</sub> emissions per GDP <sup>*3</sup>	-	595	444	371	267	190	159	-2.3	-3.2	-3.4	-3.4	-3.3
CO <sub>2</sub> emissions per primary energy supply <sup>*4</sup>	-	2.48	2.25	2.10	1.85	1.61	1.50	-0.8	-1.3	-1.4	-1.4	-1.3
Automobile ownership (million)	-	177	235	285	319	348	356	2.4	1.1	0.9	0.5	0.9
Automobile ownership <sup>*5</sup>	-	373	486	568	618	663	677	2.1	0.9	0.7	0.4	0.7

\*1 Trade of electricity and heat are not shown, \*2 toe/\$2000 million, \*3 t/\$2000 million

\*4 t/toe, \*5 vehicles per 1,000 people