

Low Economic Growth Case Projections:

- **World Energy Consumption**
- **Gross Domestic Product**
- **Carbon Dioxide Emissions**

Table C1. World Total Energy Consumption by Region, Low Economic Growth Case, 1990-2030
(Quadrillion Btu)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America	100.7	120.6	121.3	125.1	128.4	131.4	134.2	136.1	0.5
United States ^a	84.7	100.1	100.1	102.2	104.2	105.8	107.4	108.2	0.3
Canada	11.0	14.0	14.3	15.6	16.2	16.8	17.3	17.6	0.8
Mexico	5.0	6.5	6.9	7.4	8.0	8.8	9.5	10.2	1.6
OECD Europe	70.0	81.0	81.4	83.2	84.6	84.9	85.4	85.4	0.2
OECD Asia	26.8	37.8	38.2	39.1	40.3	40.7	40.8	41.0	0.3
Japan	18.5	22.7	22.6	22.3	22.3	22.2	21.9	21.7	-0.2
South Korea	3.8	9.0	9.3	10.2	11.2	11.7	11.9	12.3	1.1
Australia/New Zealand	4.5	6.1	6.3	6.6	6.7	6.8	7.0	7.1	0.5
Total OECD	197.5	239.4	240.9	247.4	253.3	257.0	260.3	262.5	0.3
Non-OECD									
Non-OECD Europe and Eurasia . . .	67.3	49.5	50.7	54.6	57.6	60.0	61.1	62.3	0.8
Russia	39.4	29.9	30.3	32.4	33.9	34.9	35.4	36.0	0.7
Other	28.0	19.6	20.4	22.2	23.8	25.1	25.7	26.3	1.0
Non-OECD Asia	47.4	101.0	109.9	135.0	157.8	178.5	198.9	218.2	2.8
China	27.0	59.9	67.1	85.7	99.7	113.6	127.7	141.3	3.0
India	7.9	15.5	16.2	19.1	22.3	25.2	27.8	30.3	2.5
Other Non-OECD Asia	12.5	25.6	26.6	30.2	35.7	39.7	43.3	46.7	2.3
Middle East	11.2	20.9	22.9	26.2	28.5	30.7	31.8	32.7	1.4
Africa	9.5	14.0	14.4	16.4	18.3	19.7	20.6	21.3	1.6
Central and South America	14.5	22.5	23.4	27.4	29.5	31.3	32.8	34.2	1.5
Brazil	5.7	9.0	9.3	11.0	12.2	13.3	14.2	15.1	2.0
Other Central and South America . .	8.8	13.5	14.1	16.4	17.3	18.0	18.6	19.0	1.2
Total Non-OECD	149.9	207.9	221.3	259.7	291.6	320.2	345.2	368.7	2.1
Total World	347.4	447.3	462.2	507.1	544.9	577.2	605.6	631.3	1.3

^aIncludes the 50 States and the District of Columbia.

Notes: Energy totals include net imports of coal coke and electricity generated from biomass in the United States. Totals may not equal sum of components due to independent rounding. The electricity portion of the national fuel consumption values consists of generation for domestic use plus an adjustment for electricity trade based on a fuel's share of total generation in the exporting country.

Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2005* (June-October 2007), web site www.eia.doe.gov/iea. **Projections:** EIA, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington, DC, June 2008), AEO2008 National Energy Modeling System, run LM2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table C2. World Total Energy Consumption by Region and Fuel, Low Economic Growth Case, 1990-2030
(Quadrillion Btu)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America									
Liquids	40.5	48.9	49.1	48.8	49.6	49.6	49.6	50.1	0.1
Natural Gas	23.2	28.1	28.0	29.4	29.8	30.2	30.5	30.3	0.3
Coal	20.6	24.5	24.8	25.2	26.0	26.8	27.9	29.3	0.7
Nuclear.....	6.9	9.3	9.3	9.6	9.8	10.3	10.4	10.2	0.4
Other	9.5	9.8	10.2	12.1	13.3	14.6	15.8	16.1	1.9
Total.....	100.7	120.6	121.3	125.1	128.4	131.4	134.1	136.1	0.5
OECD Europe									
Liquids	28.4	32.0	32.1	31.8	32.0	31.6	31.1	30.6	-0.2
Natural Gas	11.2	19.4	19.9	21.1	23.0	24.5	25.3	26.1	1.1
Coal	17.7	13.3	13.2	13.7	13.4	12.8	12.3	11.7	-0.5
Nuclear.....	7.9	9.9	9.8	9.5	9.3	8.4	8.5	8.7	-0.5
Other	4.8	6.3	6.5	7.1	7.1	7.6	8.1	8.4	1.1
Total.....	70.0	81.0	81.4	83.2	84.6	84.9	85.4	85.5	0.2
OECD Asia									
Liquids	14.7	17.3	17.5	17.1	17.4	17.3	17.1	16.9	-0.1
Natural Gas	2.9	5.6	5.6	6.1	6.6	6.8	6.9	6.9	0.9
Coal	5.2	9.2	9.3	9.5	9.4	9.2	9.1	9.1	-0.1
Nuclear.....	2.5	4.0	4.2	4.4	4.9	5.3	5.6	5.8	1.3
Other	1.6	1.8	1.6	1.9	2.0	2.1	2.1	2.2	1.4
Total.....	26.8	37.8	38.2	39.1	40.3	40.7	40.8	41.0	0.3
Total OECD									
Liquids	83.6	98.2	98.7	97.7	98.9	98.5	97.8	97.6	0.0
Natural Gas	37.2	53.1	53.4	56.6	59.4	61.5	62.7	63.3	0.7
Coal	43.5	47.0	47.3	48.4	48.7	48.8	49.3	50.1	0.2
Nuclear.....	17.3	23.1	23.2	23.6	23.9	24.0	24.5	24.7	0.2
Other	15.9	17.9	18.2	21.1	22.4	24.2	26.0	26.8	1.5
Total.....	197.5	239.4	240.9	247.4	253.3	257.0	260.3	262.5	0.3
Non-OECD									
Non-OECD Europe and Eurasia									
Liquids	19.6	9.8	10.0	11.2	11.7	12.1	12.5	12.7	1.0
Natural Gas	27.5	25.1	26.0	27.8	29.2	30.2	30.4	30.9	0.7
Coal	15.1	8.7	8.8	8.8	9.7	9.8	9.8	10.1	0.5
Nuclear.....	2.5	2.9	2.8	3.1	3.4	4.2	4.8	4.8	2.1
Other	2.8	3.0	3.1	3.7	3.7	3.7	3.7	3.7	0.8
Total.....	67.3	49.5	50.7	54.6	57.7	60.0	61.1	62.3	0.8
Non-OECD Asia									
Liquids	14.0	30.5	31.5	37.2	42.1	47.1	51.8	57.0	2.4
Natural Gas	3.0	8.9	9.8	13.1	17.2	21.2	23.9	26.0	4.0
Coal	27.0	54.9	60.9	74.8	87.0	96.6	106.9	116.9	2.6
Nuclear.....	0.4	1.1	1.1	1.6	3.0	4.5	5.6	6.2	7.2
Other	3.0	5.6	6.6	8.3	8.5	9.1	10.7	12.2	2.5
Total.....	47.4	101.0	109.9	135.0	157.8	178.5	198.9	218.2	2.8

See notes at end of table.

Table C2. World Total Energy Consumption by Region and Fuel, Low Economic Growth Case, 1990-2030
(Continued)
 (Quadrillion Btu)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
Non-OECD (Continued)									
Middle East									
Liquids	7.2	11.3	12.0	13.9	14.7	15.8	16.5	17.2	1.5
Natural Gas	3.8	9.0	10.2	11.6	13.0	14.1	14.5	14.7	1.5
Coal	0.1	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4
Nuclear.....	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	—
Other	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.4	2.1
Total.....	11.2	20.9	22.9	26.2	28.5	30.7	31.8	32.8	1.4
Africa									
Liquids	4.3	5.8	6.0	6.9	7.2	7.6	7.7	7.9	1.1
Natural Gas	1.5	2.8	3.2	3.8	4.7	5.6	6.2	6.6	3.0
Coal	3.0	4.3	4.2	4.4	5.0	5.1	5.2	5.0	0.7
Nuclear.....	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	1.8
Other	0.6	0.9	0.9	1.1	1.2	1.2	1.4	1.6	2.2
Total.....	9.5	14.0	14.4	16.4	18.3	19.8	20.7	21.3	1.6
Central and South America									
Liquids	7.8	11.0	11.2	12.9	12.9	13.3	13.7	14.1	0.9
Natural Gas	2.2	4.4	4.7	6.0	6.9	7.5	7.9	8.3	2.3
Coal	0.6	0.8	0.9	1.3	1.6	1.6	1.7	1.7	2.6
Nuclear.....	0.1	0.2	0.2	0.2	0.3	0.4	0.3	0.3	2.5
Other	3.9	6.1	6.4	7.1	7.7	8.5	9.2	9.7	1.7
Total.....	14.5	22.5	23.4	27.4	29.5	31.3	32.8	34.2	1.5
Total Non-OECD									
Liquids	52.9	68.4	70.8	82.1	88.6	96.0	102.3	108.9	1.7
Natural Gas	38.0	50.2	53.9	62.3	71.0	78.5	82.8	86.5	1.9
Coal	45.7	69.1	75.2	89.8	103.7	113.6	123.9	134.2	2.3
Nuclear.....	3.1	4.3	4.2	5.0	6.9	9.2	11.0	11.6	4.1
Other	10.3	15.9	17.2	20.5	21.4	22.8	25.3	27.5	1.9
Total.....	149.9	207.9	221.3	259.7	291.6	320.2	345.3	368.7	2.1
Total World									
Liquids	136.4	166.6	169.4	179.8	187.5	194.5	200.1	206.5	0.8
Natural Gas	75.2	103.3	107.4	118.9	130.3	140.0	145.5	149.9	1.3
Coal	89.2	116.1	122.5	138.2	152.4	162.4	173.2	184.3	1.6
Nuclear.....	20.4	27.4	27.5	28.6	30.8	33.2	35.5	36.3	1.1
Other	26.2	33.8	35.5	41.6	43.8	47.1	51.3	54.3	1.7
Total.....	347.4	447.3	462.2	507.1	544.9	577.2	605.6	631.3	1.3

Notes: Energy totals include net imports of coal coke and electricity generated from biomass in the United States. Totals may not equal sum of components due to independent rounding. The electricity portion of the national fuel consumption values consists of generation for domestic use plus an adjustment for electricity trade based on a fuel's share of total generation in the exporting country.

Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2005* (June-October 2007), web site www.eia.doe.gov/iea. **Projections:** EIA, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington, DC, June 2008), AEO2008 National Energy Modeling System, run LM2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table C3. World Gross Domestic Product (GDP) by Region Expressed in Purchasing Power Parity, Low Economic Growth Case, 1990-2030
(Billion 2000 Dollars)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America	8,477	12,696	13,083	14,530	16,129	17,922	19,644	21,505	2.0
United States ^a	7,113	10,676	11,004	12,106	13,350	14,747	16,039	17,432	1.9
Canada	684	1,004	1,034	1,170	1,288	1,405	1,528	1,660	1.9
Mexico	680	1,016	1,045	1,255	1,491	1,770	2,078	2,412	3.4
OECD Europe	8,067	11,197	11,445	12,958	14,145	15,383	16,648	17,934	1.8
OECD Asia	3,621	4,775	4,887	5,484	5,931	6,262	6,559	6,871	1.4
Japan	2,862	3,377	3,440	3,732	3,889	3,949	3,967	3,985	0.6
South Korea	331	715	745	950	1,131	1,278	1,421	1,565	3.0
Australia/New Zealand	429	683	702	802	912	1,035	1,171	1,321	2.6
Total OECD	20,165	28,667	29,415	32,972	36,205	39,567	42,852	46,310	1.8
Non-OECD									
Non-OECD Europe and Eurasia	3,601	3,340	3,563	4,915	6,034	7,036	8,107	9,275	3.9
Russia	2,241	1,907	2,029	2,715	3,304	3,777	4,282	4,836	3.5
Other	1,360	1,433	1,534	2,200	2,730	3,259	3,825	4,439	4.3
Non-OECD Asia	5,792	15,102	16,436	24,438	32,236	40,674	49,884	60,025	5.3
China	1,805	6,961	7,685	12,332	16,554	21,199	26,468	32,264	5.9
India	1,697	3,714	4,056	6,008	8,165	10,381	12,533	14,814	5.3
Other Non-OECD Asia	2,291	4,428	4,695	6,099	7,516	9,094	10,883	12,947	4.1
Middle East	820	1,466	1,550	1,933	2,323	2,748	3,213	3,736	3.6
Africa	1,450	2,182	2,295	2,971	3,656	4,390	5,219	6,171	4.0
Central and South America	2,162	3,372	3,535	4,451	5,258	6,136	7,137	8,285	3.5
Brazil	1,022	1,581	1,627	1,984	2,302	2,651	3,043	3,486	3.1
Other Central and South America	1,140	1,791	1,908	2,467	2,956	3,485	4,094	4,800	3.8
Total Non-OECD	13,824	25,462	27,378	38,708	49,508	60,985	73,561	87,493	4.8
Total World	33,989	54,129	56,793	71,680	85,713	100,552	116,413	133,802	3.5

^aIncludes the 50 States and the District of Columbia.

Notes: Totals may not equal sum of components due to independent rounding. GDP growth rates for China and India were adjusted, based on the analyst's judgment.

Sources: **History:** Global Insight, Inc., *World Overview* (Lexington, MA, various issues). **Projections:** Global Insight, Inc., *World Overview*, Fourth Quarter 2007 (Lexington, MA, January 2008); and Energy Information Administration, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington DC, June 2008), Table B4.

Table C4. World Liquids Consumption by Region, Low Economic Growth Case, 1990-2030
(Million Barrels Oil Equivalent per Day)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America	20.5	25.0	25.2	25.0	25.3	25.3	25.2	25.4	0.0
United States ^a	17.0	20.7	20.8	20.4	20.6	20.5	20.3	20.3	-0.1
Canada	1.7	2.3	2.3	2.4	2.4	2.4	2.4	2.4	0.2
Mexico	1.8	2.0	2.1	2.1	2.3	2.4	2.6	2.7	1.1
OECD Europe	13.7	15.5	15.5	15.4	15.4	15.3	15.0	14.8	-0.2
OECD Asia	7.2	8.5	8.6	8.4	8.5	8.5	8.4	8.3	-0.1
Japan	5.3	5.3	5.4	5.0	4.9	4.8	4.6	4.5	-0.7
South Korea	1.0	2.2	2.2	2.3	2.5	2.6	2.6	2.6	0.8
Australia/New Zealand	0.8	1.0	1.1	1.1	1.1	1.2	1.2	1.2	0.5
Total OECD	41.4	49.0	49.3	48.7	49.3	49.1	48.6	48.5	-0.1
Non-OECD									
Non-OECD Europe and Eurasia . . .	9.4	4.8	4.8	5.4	5.6	5.9	6.0	6.2	1.0
Russia	5.4	2.8	2.8	3.0	3.1	3.1	3.2	3.1	0.5
Other	3.9	2.0	2.1	2.4	2.6	2.7	2.9	3.0	1.5
Non-OECD Asia	6.6	14.8	15.3	18.0	20.4	22.8	25.1	27.6	2.4
China	2.3	6.4	6.7	8.7	9.6	11.0	12.5	14.1	3.0
India	1.2	2.4	2.4	2.7	3.2	3.6	4.0	4.4	2.4
Other Non-OECD Asia	3.1	6.0	6.1	6.6	7.6	8.1	8.6	9.1	1.6
Middle East	3.5	5.5	5.9	6.8	7.2	7.7	8.1	8.4	1.5
Africa	2.1	2.8	2.9	3.4	3.5	3.7	3.8	3.8	1.1
Central and South America	3.8	5.4	5.5	6.3	6.3	6.5	6.7	6.9	0.9
Brazil	1.5	2.1	2.2	2.5	2.5	2.6	2.7	2.9	1.1
Other Central and South America . .	2.3	3.2	3.3	3.8	3.8	3.9	3.9	4.0	0.8
Total Non-OECD	25.3	33.3	34.3	39.8	43.0	46.6	49.6	52.9	1.7
Total World	66.6	82.3	83.6	88.6	92.3	95.6	98.3	101.3	0.8

^aIncludes the 50 States and the District of Columbia.

Note: Totals may not equal sum of components due to independent rounding.

Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2005* (June-October 2007), web site www.eia.doe.gov/iea. **Projections:** EIA, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington, DC, June 2008), AEO2008 National Energy Modeling System, run LM2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table C5. World Natural Gas Consumption by Region, Low Economic Growth Case, 1990-2030
(Trillion Cubic Feet)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America	22.5	27.4	27.4	28.5	28.9	29.2	29.5	29.4	0.3
United States ^a	19.2	22.4	22.2	22.8	22.7	22.3	22.0	21.3	-0.2
Canada	2.4	3.3	3.4	3.6	3.9	4.1	4.4	4.6	1.2
Mexico	0.9	1.7	1.7	2.0	2.3	2.7	3.1	3.5	2.8
OECD Europe	11.6	18.9	19.3	20.5	22.3	23.8	24.6	25.3	1.1
OECD Asia	2.8	5.2	5.2	5.8	6.2	6.4	6.5	6.5	0.9
Japan	1.9	3.1	3.1	3.3	3.5	3.5	3.5	3.5	0.5
South Korea	0.1	1.0	1.1	1.3	1.6	1.6	1.7	1.7	1.8
Australia/New Zealand	0.8	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.0
Total OECD	36.8	51.6	51.9	54.7	57.4	59.4	60.6	61.2	0.7
Non-OECD									
Non-OECD Europe and Eurasia ..	26.7	24.4	25.3	27.0	28.3	29.3	29.5	30.0	0.7
Russia	17.3	16.0	16.2	17.1	17.9	18.2	18.3	18.5	0.6
Other	9.5	8.4	9.1	9.9	10.4	11.1	11.3	11.5	0.9
Non-OECD Asia	2.9	8.5	9.3	12.5	16.3	20.1	22.6	24.7	4.0
China	0.5	1.4	1.7	2.7	3.8	4.8	5.4	5.9	5.2
India	0.4	1.1	1.3	1.8	2.3	2.8	3.3	3.6	4.2
Other Non-OECD Asia	2.0	6.1	6.4	8.0	10.2	12.5	14.0	15.2	3.5
Middle East	3.6	8.6	9.8	11.1	12.4	13.5	13.8	14.0	1.5
Africa	1.4	2.6	3.0	3.5	4.4	5.3	5.8	6.2	3.0
Central and South America	2.0	4.1	4.4	5.6	6.5	7.0	7.4	7.8	2.3
Brazil	0.1	0.6	0.7	1.0	1.2	1.3	1.5	1.6	3.7
Other Central and South America ..	1.9	3.5	3.7	4.6	5.3	5.7	6.0	6.1	2.0
Total Non-OECD	36.5	48.2	51.8	59.7	67.9	75.0	79.1	82.6	1.9
Total World	73.4	99.8	103.7	114.4	125.3	134.5	139.7	143.8	1.3

^aIncludes the 50 States and the District of Columbia.

Note: Totals may not equal sum of components due to independent rounding.

Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2005* (June-October 2007), web site www.eia.doe.gov/iea. **Projections:** EIA, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington, DC, June 2008), AEO2008 National Energy Modeling System, run LM2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table C6. World Coal Consumption by Region, Low Economic Growth Case, 1990-2030
(Quadrillion Btu)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America	20.6	24.5	24.8	25.2	26.0	26.8	27.9	29.3	0.7
United States ^a	19.2	22.6	22.8	23.0	23.7	24.5	25.6	27.0	0.7
Canada	1.2	1.6	1.7	1.8	1.8	1.8	1.8	1.8	0.3
Mexico	0.2	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.8
OECD Europe	17.7	13.3	13.2	13.6	13.3	12.8	12.3	11.7	-0.5
OECD Asia	5.2	9.2	9.3	9.5	9.4	9.2	9.1	9.1	-0.1
Japan	2.7	4.8	4.6	4.5	4.3	4.1	4.0	3.9	-0.7
South Korea	1.0	2.1	2.1	2.4	2.5	2.4	2.4	2.5	0.7
Australia/New Zealand	1.5	2.4	2.6	2.6	2.6	2.7	2.7	2.7	0.2
Total OECD	43.5	47.0	47.3	48.4	48.7	48.8	49.3	50.1	0.2
Non-OECD									
Non-OECD Europe and Eurasia . . .	15.1	8.7	8.8	8.8	9.7	9.8	9.8	10.1	0.5
Russia	7.2	4.6	4.8	4.7	4.9	5.1	4.9	5.3	0.4
Other	7.9	4.1	4.0	4.1	4.8	4.8	4.9	4.9	0.8
Non-OECD Asia	27.0	54.9	60.9	74.8	87.0	96.6	106.9	116.9	2.6
China	20.3	41.4	46.9	59.0	69.0	77.6	86.2	94.3	2.8
India	4.2	8.4	8.6	9.8	11.2	12.2	13.1	14.2	2.0
Other Non-OECD Asia	2.6	5.1	5.3	6.1	6.8	6.9	7.6	8.4	1.8
Middle East	0.1	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4
Africa	3.0	4.3	4.2	4.4	5.0	5.1	5.2	5.0	0.7
Central and South America	0.6	0.8	0.9	1.3	1.6	1.6	1.7	1.7	2.6
Brazil	0.3	0.5	0.4	0.8	0.9	1.0	1.0	1.1	3.6
Other Central and South America . .	0.2	0.4	0.4	0.5	0.7	0.6	0.6	0.6	1.4
Total Non-OECD	45.7	69.1	75.2	89.8	103.7	113.6	123.9	134.2	2.3
Total World	89.2	116.1	122.5	138.2	152.4	162.4	173.2	184.3	1.6

^aIncludes the 50 States and the District of Columbia.

Notes: Totals may not equal sum of components due to independent rounding.

Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2005* (June-October 2007), web site www.eia.doe.gov/iea. **Projections:** EIA, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington, DC, June 2008), AEO2008 National Energy Modeling System, run LM2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table C7. World Nuclear Energy Consumption by Region, Low Economic Growth Case, 1990-2030
(Billion Kilowatthours)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America	649	883	880	916	928	978	989	970	0.4
United States ^a	577	789	782	797	807	854	860	837	0.3
Canada	69	86	87	109	111	115	120	124	1.4
Mexico	3	9	10	11	10	10	10	9	-0.3
OECD Europe	743	941	929	905	879	797	811	824	-0.5
OECD Asia	242	392	418	439	485	526	553	580	1.3
Japan	192	268	278	298	313	326	344	361	1.0
South Korea	50	124	139	141	171	200	209	218	1.8
Australia/New Zealand	0	0	0	0	0	0	0	0	—
Total OECD	1,635	2,216	2,227	2,261	2,292	2,302	2,352	2,373	0.3
Non-OECD									
Non-OECD Europe and Eurasia ..	219	263	264	286	317	389	440	443	2.1
Russia	115	137	140	154	185	226	276	284	2.9
Other	104	125	124	132	132	162	164	159	1.0
Non-OECD Asia	38	103	106	148	284	423	534	589	7.1
China	0	48	50	65	158	253	327	377	8.4
India	6	15	16	37	64	99	126	137	9.1
Other Non-OECD Asia	32	40	40	47	62	71	81	75	2.5
Middle East	0	0	0	0	6	6	5	5	—
Africa	8	14	12	14	15	15	20	19	1.8
Central and South America	9	19	16	23	28	33	31	31	2.5
Brazil	2	12	10	15	18	21	21	20	2.9
Other Central and South America ..	7	7	6	8	10	12	11	10	2.0
Total Non-OECD	274	399	399	471	648	865	1,031	1,087	4.1
Total World	1,909	2,615	2,626	2,731	2,940	3,167	3,383	3,460	1.1

^aIncludes the 50 States and the District of Columbia.

Note: Totals may not equal sum of components due to independent rounding.

Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2005* (June-October 2007), web site www.eia.doe.gov/iea. **Projections:** EIA, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington, DC, June 2008), AEO2008 National Energy Modeling System, run LM2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table C8. World Consumption of Hydroelectricity and Other Renewable Energy by Region, Low Economic Growth Case, 1990-2030
(Quadrillion Btu)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America	9.5	9.8	10.2	12.1	13.3	14.6	15.8	16.1	1.9
United States ^a	6.1	6.0	6.0	7.5	8.3	9.3	10.3	10.5	2.2
Canada	3.1	3.5	3.7	4.1	4.5	4.7	4.9	5.1	1.3
Mexico	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	1.0
OECD Europe	4.8	6.3	6.5	7.1	7.1	7.6	8.1	8.4	1.1
OECD Asia	1.6	1.8	1.6	1.9	2.0	2.1	2.1	2.2	1.4
Japan	1.1	1.2	1.0	1.2	1.3	1.3	1.4	1.4	1.3
South Korea	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	7.2
Australia/New Zealand	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5
Total OECD	15.9	17.9	18.2	21.1	22.4	24.2	26.0	26.8	1.5
Non-OECD									
Non-OECD Europe and Eurasia . . .	2.8	3.0	3.1	3.7	3.7	3.7	3.7	3.7	0.8
Russia	1.8	1.8	1.8	2.3	2.3	2.2	2.2	2.2	0.9
Other	1.0	1.3	1.3	1.4	1.4	1.4	1.5	1.5	0.6
Non-OECD Asia	3.0	5.6	6.6	8.3	8.5	9.1	10.7	12.2	2.5
China	1.3	3.3	4.0	5.0	5.1	5.3	6.4	7.4	2.5
India	0.7	0.9	1.1	1.5	1.5	1.5	1.7	1.8	2.1
Other Non-OECD Asia	0.9	1.4	1.6	1.8	2.0	2.3	2.7	3.0	2.7
Middle East	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	2.1
Africa	0.6	0.9	0.9	1.1	1.2	1.2	1.4	1.6	2.2
Central and South America	3.9	6.1	6.4	7.1	7.7	8.5	9.2	9.7	1.7
Brazil	2.2	3.4	3.5	4.0	4.7	5.3	5.8	6.3	2.3
Other Central and South America . .	1.7	2.8	2.9	3.1	3.1	3.3	3.4	3.5	0.7
Total Non-OECD	10.3	15.9	17.2	20.4	21.4	22.9	25.3	27.6	1.9
Total World	26.2	33.8	35.5	41.6	43.8	47.1	51.4	54.3	1.7

^aIncludes the 50 States and the District of Columbia.

Notes: Totals may not equal sum of components due to independent rounding. U.S. totals include net electricity imports, methanol, and liquid hydrogen.

Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2005* (June-October 2007), web site www.eia.doe.gov/iea. **Projections:** EIA, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington, DC, June 2008), AEO2008 National Energy Modeling System, run LM2008.D031608A, web site www.eia.doe.gov/oi/af/aeo; and World Energy Projection System (2008).

Table C9. World Carbon Dioxide Emissions by Region, Low Economic Growth Case, 1990-2030
(Million Metric Tons Carbon Dioxide)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America	5,754	6,959	7,008	7,043	7,190	7,278	7,394	7,566	0.3
United States ^a	4,989	5,957	5,982	5,953	6,046	6,077	6,141	6,264	0.2
Canada	465	623	628	665	679	694	705	714	0.5
Mexico	300	379	398	425	465	507	548	588	1.6
OECD Europe	4,101	4,373	4,383	4,481	4,559	4,566	4,528	4,479	0.1
OECD Asia	1,541	2,148	2,174	2,193	2,224	2,213	2,198	2,190	0.0
Japan	1,009	1,242	1,230	1,188	1,172	1,145	1,113	1,079	-0.5
South Korea	241	488	500	555	592	596	604	619	0.9
Australia/New Zealand	291	418	444	450	460	471	481	492	0.4
Total OECD	11,396	13,480	13,565	13,718	13,973	14,057	14,120	14,235	0.2
Non-OECD									
Non-OECD Europe and Eurasia	4,198	2,797	2,865	3,040	3,227	3,323	3,352	3,432	0.7
Russia	2,376	1,669	1,696	1,774	1,844	1,884	1,875	1,920	0.5
Other	1,822	1,128	1,169	1,267	1,383	1,439	1,477	1,512	1.0
Non-OECD Asia	3,613	7,517	8,177	10,016	11,671	13,094	14,484	15,855	2.7
China	2,241	4,753	5,323	6,763	7,869	8,915	9,938	10,931	2.9
India	565	1,127	1,164	1,329	1,546	1,719	1,875	2,043	2.3
Other Non-OECD Asia	807	1,637	1,690	1,923	2,256	2,460	2,672	2,881	2.2
Middle East	700	1,290	1,400	1,610	1,739	1,870	1,940	1,999	1.4
Africa	649	943	966	1,082	1,202	1,289	1,333	1,354	1.4
Central and South America	669	1,042	1,078	1,299	1,376	1,436	1,488	1,535	1.4
Brazil	216	350	356	448	478	505	529	559	1.8
Other Central and South America	453	692	722	851	898	930	958	976	1.2
Total Non-OECD	9,830	13,589	14,486	17,045	19,215	21,011	22,597	24,176	2.1
Total World	21,226	27,070	28,051	30,764	33,188	35,068	36,717	38,411	1.3

^aIncludes the 50 States and the District of Columbia.

Note: The U.S. numbers include carbon dioxide emissions attributable to renewable energy sources.

Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2005* (June-October 2007), web site www.eia.doe.gov/iea. **Projections:** EIA, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington, DC, June 2008), AEO2008 National Energy Modeling System, run LM2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table C10. World Carbon Dioxide Emissions from Liquids Use by Region, Low Economic Growth Case, 1990-2030
(Million Metric Tons Carbon Dioxide)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America	2,633	3,142	3,169	3,098	3,149	3,141	3,133	3,177	0.0
United States ^a	2,178	2,597	2,615	2,523	2,555	2,529	2,505	2,530	-0.1
Canada	224	291	290	303	301	302	301	302	0.2
Mexico	231	254	264	272	294	310	326	345	1.1
OECD Europe	1,867	2,097	2,103	2,084	2,093	2,070	2,038	2,003	-0.2
OECD Asia	914	1,016	1,028	1,001	1,017	1,013	1,002	990	-0.2
Japan	661	636	643	597	590	574	555	536	-0.7
South Korea	144	238	240	258	274	282	287	292	0.8
Australia/New Zealand	110	142	144	146	153	157	159	162	0.5
Total OECD	5,414	6,255	6,300	6,183	6,260	6,224	6,173	6,170	-0.1
Non-OECD									
Non-OECD Europe and Eurasia	1,355	666	673	760	791	823	845	864	1.0
Russia	783	379	379	414	426	434	435	433	0.5
Other	572	287	294	346	365	388	410	430	1.5
Non-OECD Asia	950	1,979	2,037	2,410	2,725	3,047	3,349	3,680	2.4
China	325	843	880	1,148	1,260	1,453	1,642	1,856	3.0
India	160	302	303	338	399	452	498	547	2.4
Other Non-OECD Asia	464	833	854	923	1,066	1,143	1,209	1,277	1.6
Middle East	488	780	824	954	1,010	1,083	1,137	1,184	1.5
Africa	298	400	413	480	501	528	536	545	1.1
Central and South America	503	734	749	861	865	890	915	942	0.9
Brazil	180	274	279	318	326	341	354	370	1.1
Other Central and South America	323	460	470	543	539	550	561	572	0.8
Total Non-OECD	3,594	4,558	4,697	5,464	5,891	6,372	6,782	7,215	1.7
Total World	9,009	10,813	10,996	11,648	12,151	12,596	12,955	13,385	0.8

^aIncludes the 50 States and the District of Columbia.

Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2005* (June-October 2007), web site www.eia.doe.gov/iea. **Projections:** EIA, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington, DC, June 2008), AEO2008 National Energy Modeling System, run LM2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table C11. World Carbon Dioxide Emissions from Natural Gas Use by Region, Low Economic Growth Case, 1990-2030
(Million Metric Tons Carbon Dioxide)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America	1,207	1,471	1,476	1,543	1,567	1,588	1,605	1,600	0.3
United States ^a	1,026	1,194	1,193	1,234	1,226	1,209	1,191	1,155	-0.1
Canada	127	181	185	197	212	224	236	247	1.2
Mexico	54	97	99	112	128	155	177	199	2.8
OECD Europe	590	1,027	1,048	1,115	1,212	1,295	1,337	1,375	1.1
OECD Asia	152	293	294	324	350	359	365	366	0.9
Japan	102	173	170	182	191	195	194	191	0.5
South Korea	6	60	63	78	92	94	97	98	1.8
Australia/New Zealand	44	60	61	64	68	70	74	77	1.0
Total OECD	1,949	2,791	2,819	2,981	3,129	3,242	3,306	3,341	0.7
Non-OECD									
Non-OECD Europe and Eurasia	1,450	1,328	1,375	1,470	1,540	1,592	1,604	1,632	0.7
Russia	928	868	875	926	969	985	989	1,004	0.6
Other	521	460	500	543	571	607	616	628	0.9
Non-OECD Asia	160	469	516	692	906	1,118	1,259	1,373	4.0
China	30	83	101	165	231	293	331	362	5.2
India	24	59	69	98	126	151	178	195	4.2
Other Non-OECD Asia	106	327	345	429	549	674	750	816	3.5
Middle East	199	476	541	613	686	744	763	776	1.5
Africa	80	149	167	201	249	298	327	350	3.0
Central and South America	116	231	249	315	365	393	419	438	2.3
Brazil	6	33	36	54	66	72	80	89	3.7
Other Central and South America	110	197	213	260	299	321	339	348	2.0
Total Non-OECD	2,005	2,651	2,847	3,290	3,746	4,145	4,372	4,568	1.9
Total World	3,954	5,443	5,666	6,271	6,875	7,387	7,678	7,909	1.3

^aIncludes the 50 States and the District of Columbia.

Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2005* (June-October 2007), web site www.eia.doe.gov/iea. **Projections:** EIA, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington, DC, June 2008), AEO2008 National Energy Modeling System, run LM2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table C12. World Carbon Dioxide Emissions from Coal Use by Region, Low Economic Growth Case, 1990-2030
(Million Metric Tons Carbon Dioxide)

Region/Country	History			Projections					Average Annual Percent Change, 2005-2030
	1990	2004	2005	2010	2015	2020	2025	2030	
OECD									
OECD North America	1,913	2,333	2,351	2,391	2,462	2,537	2,645	2,776	0.7
United States ^a	1,784	2,155	2,162	2,185	2,253	2,327	2,433	2,567	0.7
Canada	114	151	153	165	166	168	168	166	0.3
Mexico	15	28	35	41	43	43	45	44	0.9
OECD Europe	1,644	1,250	1,232	1,282	1,254	1,201	1,153	1,101	-0.4
OECD Asia	475	840	853	868	857	841	831	834	-0.1
Japan	246	433	417	409	391	377	364	352	-0.7
South Korea	91	190	196	219	226	220	219	230	0.6
Australia/New Zealand	138	217	239	240	239	244	248	252	0.2
Total OECD	4,032	4,423	4,435	4,541	4,573	4,579	4,629	4,711	0.2
Non-OECD									
Non-OECD Europe and Eurasia	1,393	804	817	811	897	909	902	936	0.5
Russia	665	422	442	433	449	465	451	483	0.4
Other	729	381	376	378	447	444	451	454	0.8
Non-OECD Asia	2,503	5,070	5,624	6,914	8,040	8,928	9,876	10,802	2.6
China	1,886	3,827	4,341	5,450	6,378	7,170	7,965	8,713	2.8
India	380	765	791	893	1,021	1,116	1,199	1,300	2.0
Other Non-OECD Asia	237	477	492	571	641	643	712	788	1.9
Middle East	13	35	35	42	42	42	40	39	0.4
Africa	271	394	386	401	452	463	470	460	0.7
Central and South America	50	78	81	123	146	152	154	156	2.7
Brazil	30	43	41	75	87	93	96	100	3.6
Other Central and South America	20	35	40	48	60	59	58	56	1.4
Total Non-OECD	4,231	6,380	6,943	8,291	9,577	10,494	11,443	12,393	2.3
Total World	8,263	10,803	11,378	12,833	14,150	15,073	16,071	17,104	1.6

^aIncludes the 50 States and the District of Columbia.

Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2005* (June-October 2007), web site www.eia.doe.gov/iea. **Projections:** EIA, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington, DC, June 2008), AEO2008 National Energy Modeling System, run LM2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).