

Low Price Case Projections:

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

Table E1. World Total Energy Consumption by Region, Low Price 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	126.7	133.9	140.1	145.8	151.4	0.9
United States ^a	84.7	100.1	100.1	103.6	108.5	112.4	116.0	119.4	0.7
Canada	11.0	14.0	14.3	15.7	16.9	17.9	18.9	19.9	1.3
Mexico	5.0	6.5	6.9	7.4	8.6	9.7	10.9	12.1	2.3
OECD Europe	70.0	81.0	81.4	84.1	88.3	90.8	93.2	95.2	0.6
OECD Asia	26.8	37.8	38.2	39.4	42.1	43.9	45.2	46.6	0.8
Japan	18.5	22.7	22.6	22.4	23.3	23.8	24.1	24.3	0.3
South Korea	3.8	9.0	9.3	10.4	11.8	12.8	13.4	14.3	1.7
Australia/New Zealand	4.5	6.1	6.3	6.6	7.0	7.3	7.7	8.0	1.0
Total OECD	197.5	239.4	240.9	250.2	264.4	274.8	284.2	293.2	0.8
Non-OECD									
Non-OECD Europe and Eurasia ..	67.3	49.5	50.7	55.3	60.5	64.7	67.8	71.3	1.4
Russia	39.4	29.9	30.3	32.8	35.5	37.5	38.9	40.9	1.2
Other	28.0	19.6	20.4	22.5	25.0	27.2	28.8	30.5	1.6
Non-OECD Asia	47.4	101.0	109.9	137.1	166.5	194.0	220.5	247.0	3.3
China	27.0	59.9	67.1	87.3	105.2	123.1	140.9	158.5	3.5
India	7.9	15.5	16.2	19.3	23.5	27.3	30.6	34.0	3.0
Other Non-OECD Asia	12.5	25.6	26.6	30.6	37.8	43.6	49.0	54.5	2.9
Middle East	11.2	20.9	22.9	26.5	29.6	33.2	35.8	38.3	2.1
Africa	9.5	14.0	14.4	16.5	19.2	21.5	23.2	24.7	2.2
Central and South America	14.5	22.5	23.4	27.7	31.2	34.4	37.0	39.8	2.1
Brazil	5.7	9.0	9.3	11.1	12.8	14.5	15.9	17.6	2.6
Other Central and South America ..	8.8	13.5	14.1	16.6	18.4	19.9	21.1	22.3	1.8
Total Non-OECD	149.9	207.9	221.3	263.1	307.0	347.8	384.2	421.1	2.6
Total World	347.4	447.3	462.2	513.3	571.4	622.6	668.4	714.3	1.8

^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 LP2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table E2. World Total Energy Consumption by Region and Fuel, Low Price 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	49.5	53.0	55.2	56.8	59.3	0.8
Natural Gas	23.2	28.1	28.0	30.2	32.0	33.5	34.8	35.3	0.9
Coal	20.6	24.5	24.8	25.2	25.9	26.4	27.6	29.6	0.7
Nuclear.....	6.9	9.3	9.3	9.7	9.8	10.4	10.5	10.3	0.5
Other	9.5	9.8	10.2	12.1	13.4	15.0	16.4	17.0	2.1
Total.....	100.7	120.6	121.3	126.7	134.2	140.4	146.1	151.7	0.9
OECD Europe									
Liquids	28.4	32.0	32.1	32.0	34.0	35.0	35.6	36.0	0.5
Natural Gas	11.2	19.4	19.9	21.5	24.0	26.2	27.5	29.0	1.5
Coal	17.7	13.3	13.2	13.6	13.4	12.9	12.4	11.9	-0.4
Nuclear.....	7.9	9.9	9.8	9.6	9.5	8.7	9.0	9.3	-0.2
Other	4.8	6.3	6.5	7.2	7.3	7.9	8.6	9.0	1.3
Total.....	70.0	81.0	81.4	84.1	88.3	90.8	93.2	95.2	0.6
OECD Asia									
Liquids	14.7	17.3	17.5	17.3	18.7	19.6	20.2	20.7	0.7
Natural Gas	2.9	5.6	5.6	6.3	7.0	7.4	7.7	7.9	1.4
Coal	5.2	9.2	9.3	9.5	9.4	9.2	9.2	9.3	0.0
Nuclear.....	2.5	4.0	4.2	4.5	5.0	5.5	5.9	6.3	1.6
Other	1.6	1.8	1.6	1.9	2.0	2.1	2.2	2.4	1.7
Total.....	26.8	37.8	38.2	39.4	42.1	43.9	45.2	46.6	0.8
Total OECD									
Liquids	83.6	98.2	98.7	98.8	105.8	109.9	112.6	116.0	0.6
Natural Gas	37.2	53.1	53.4	58.0	63.1	67.1	70.0	72.3	1.2
Coal	43.5	47.0	47.3	48.3	48.7	48.5	49.2	50.9	0.3
Nuclear.....	17.3	23.1	23.2	23.8	24.3	24.6	25.4	26.0	0.4
Other	15.9	17.9	18.2	21.2	22.7	25.0	27.2	28.4	1.8
Total.....	197.5	239.4	240.9	250.2	264.4	274.8	284.2	293.2	0.8
Non-OECD									
Non-OECD Europe and Eurasia									
Liquids	19.6	9.8	10.0	11.3	12.6	13.7	14.7	15.6	1.8
Natural Gas	27.5	25.1	26.0	28.4	30.8	32.8	34.0	35.8	1.3
Coal	15.1	8.7	8.8	8.7	9.7	9.9	10.0	10.6	0.7
Nuclear.....	2.5	2.9	2.8	3.1	3.5	4.4	5.1	5.2	2.5
Other	2.8	3.0	3.1	3.7	3.8	3.8	4.0	4.1	1.1
Total.....	67.3	49.5	50.7	55.3	60.5	64.7	67.8	71.3	1.4
Non-OECD Asia									
Liquids	14.0	30.5	31.5	37.7	46.0	54.1	61.2	69.3	3.2
Natural Gas	3.0	8.9	9.8	13.7	18.8	23.9	27.7	31.3	4.8
Coal	27.0	54.9	60.9	75.7	89.9	101.7	114.1	126.3	3.0
Nuclear.....	0.4	1.1	1.1	1.6	3.1	4.7	6.0	6.8	7.5
Other	3.0	5.6	6.6	8.4	8.8	9.6	11.5	13.3	2.8
Total.....	47.4	101.0	109.9	137.1	166.5	194.0	220.5	247.0	3.3

See notes at end of table.

Table E2. World Total Energy Consumption by Region and Fuel, Low Price 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	15.3	17.3	19.0	20.6	2.2
Natural Gas	3.8	9.0	10.2	11.8	13.5	15.2	16.1	17.0	2.1
Coal	0.1	0.4	0.4	0.4	0.4	0.4	0.3	0.3	-1.3
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	2.4
Total.....	11.2	20.9	22.9	26.5	29.6	33.2	35.8	38.3	2.1
Africa									
Liquids	4.3	5.8	6.0	7.0	7.9	8.8	9.3	9.9	2.0
Natural Gas	1.5	2.8	3.2	3.9	5.0	6.2	7.0	7.8	3.7
Coal	3.0	4.3	4.2	4.3	4.9	5.0	5.1	5.0	0.7
Nuclear.....	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	2.2
Other	0.6	0.9	0.9	1.1	1.2	1.3	1.5	1.8	2.7
Total.....	9.5	14.0	14.4	16.5	19.2	21.5	23.2	24.7	2.2
Central and South America									
Liquids	7.8	11.0	11.2	13.0	14.2	15.4	16.4	17.6	1.8
Natural Gas	2.2	4.4	4.7	6.1	7.3	8.1	8.9	9.6	2.9
Coal	0.6	0.8	0.9	1.3	1.5	1.5	1.5	1.5	2.2
Nuclear.....	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.4	2.9
Other	3.9	6.1	6.4	7.1	7.9	9.0	9.9	10.8	2.1
Total.....	14.5	22.5	23.4	27.7	31.2	34.4	37.0	39.8	2.1
Total Non-OECD									
Liquids	52.9	68.4	70.8	83.0	96.0	109.3	120.6	132.9	2.6
Natural Gas	38.0	50.2	53.9	64.0	75.5	86.2	93.5	101.5	2.6
Coal	45.7	69.1	75.2	90.4	106.3	118.6	131.1	143.7	2.6
Nuclear.....	3.1	4.3	4.2	5.1	7.1	9.7	11.8	12.6	4.5
Other	10.3	15.9	17.2	20.7	22.1	24.0	27.2	30.3	2.3
Total.....	149.9	207.9	221.3	263.1	307.0	347.8	384.2	421.1	2.6
Total World									
Liquids	136.4	166.6	169.4	181.8	201.8	219.2	233.2	248.9	1.6
Natural Gas	75.2	103.3	107.4	122.0	138.5	153.3	163.6	173.8	1.9
Coal	89.2	116.1	122.5	138.7	155.0	167.1	180.3	194.6	1.9
Nuclear.....	20.4	27.4	27.5	28.8	31.4	34.3	37.2	38.6	1.4
Other	26.2	33.8	35.5	41.9	44.8	49.1	54.4	58.7	2.0
Total.....	347.4	447.3	462.2	513.3	571.4	622.6	668.4	714.3	1.8

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 LP2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table E3. World Gross Domestic Product (GDP) by Region Expressed in Purchasing Power Parity, Low Price 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	14,925	17,183	19,415	21,906	24,786	2.6
United States ^a	7,113	10,676	11,004	12,465	14,292	16,030	17,966	20,228	2.5
Canada	684	1,004	1,034	1,187	1,337	1,493	1,667	1,858	2.4
Mexico	680	1,016	1,045	1,273	1,555	1,892	2,272	2,700	3.9
OECD Europe	8,067	11,197	11,445	13,154	14,754	16,483	18,283	20,122	2.3
OECD Asia	3,621	4,775	4,887	5,567	6,196	6,731	7,202	7,712	1.8
Japan	2,862	3,377	3,440	3,790	4,064	4,246	4,360	4,479	1.1
South Korea	331	715	745	964	1,184	1,380	1,562	1,754	3.5
Australia/New Zealand	429	683	702	814	947	1,104	1,280	1,479	3.0
Total OECD	20,165	28,667	29,415	33,646	38,134	42,629	47,391	52,619	2.4
Non-OECD									
Non-OECD Europe and Eurasia	3,601	3,340	3,563	4,985	6,259	7,477	8,837	10,363	4.4
Russia	2,241	1,907	2,029	2,752	3,414	3,996	4,653	5,399	4.0
Other	1,360	1,433	1,534	2,233	2,844	3,480	4,183	4,964	4.8
Non-OECD Asia	5,792	15,102	16,436	24,791	33,776	43,882	54,667	67,103	5.8
China	1,805	6,961	7,685	12,507	17,352	22,864	29,010	36,067	6.4
India	1,697	3,714	4,056	6,094	8,564	11,254	13,743	16,554	5.8
Other Non-OECD Asia	2,291	4,428	4,695	6,190	7,860	9,764	11,913	14,481	4.6
Middle East	820	1,466	1,550	1,959	2,362	2,888	3,487	4,170	4.0
Africa	1,450	2,182	2,295	3,014	3,810	4,703	5,714	6,898	4.5
Central and South America	2,162	3,372	3,535	4,517	5,505	6,600	7,815	9,268	3.9
Brazil	1,022	1,581	1,627	2,013	2,401	2,842	3,328	3,901	3.6
Other Central and South America	1,140	1,791	1,908	2,504	3,104	3,758	4,487	5,368	4.2
Total Non-OECD	13,824	25,462	27,378	39,266	51,712	65,550	80,520	97,802	5.2
Total World	33,989	54,129	56,793	72,912	89,845	108,179	127,910	150,421	4.0

^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., Global Scenario Model (February 2008); and Energy Information Administration, *Annual Energy Outlook 2008*, DOE/EIA-0383(2008) (Washington DC, June 2008), Table B4.

Table E4. World Liquids Consumption by Region, Low Price 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	25.4	26.9	28.1	28.9	30.0	0.7
United States ^a	17.0	20.7	20.8	20.8	21.9	22.6	23.1	23.7	0.5
Canada	1.7	2.3	2.3	2.4	2.5	2.7	2.8	2.9	0.9
Mexico	1.8	2.0	2.1	2.2	2.5	2.8	3.1	3.4	2.0
OECD Europe	13.7	15.5	15.5	15.5	16.4	16.9	17.2	17.4	0.5
OECD Asia	7.2	8.5	8.6	8.5	9.2	9.6	9.9	10.1	0.7
Japan	5.3	5.3	5.4	5.0	5.3	5.4	5.4	5.5	0.1
South Korea	1.0	2.2	2.2	2.4	2.7	2.9	3.1	3.2	1.6
Australia/New Zealand	0.8	1.0	1.1	1.1	1.2	1.3	1.4	1.4	1.2
Total OECD	41.4	49.0	49.3	49.3	52.6	54.6	56.0	57.6	0.6
Non-OECD									
Non-OECD Europe and Eurasia ..	9.4	4.8	4.8	5.5	6.1	6.7	7.1	7.6	1.8
Russia	5.4	2.8	2.8	3.0	3.3	3.5	3.7	3.8	1.3
Other	3.9	2.0	2.1	2.5	2.8	3.1	3.5	3.8	2.4
Non-OECD Asia	6.6	14.8	15.3	18.2	22.3	26.2	29.6	33.5	3.2
China	2.3	6.4	6.7	8.8	10.4	12.6	14.6	16.9	3.8
India	1.2	2.4	2.4	2.7	3.5	4.2	4.7	5.3	3.2
Other Non-OECD Asia	3.1	6.0	6.1	6.7	8.3	9.4	10.3	11.3	2.5
Middle East	3.5	5.5	5.9	6.8	7.5	8.4	9.2	10.0	2.2
Africa	2.1	2.8	2.9	3.4	3.8	4.3	4.5	4.8	2.0
Central and South America	3.8	5.4	5.5	6.3	6.9	7.5	8.0	8.6	1.8
Brazil	1.5	2.1	2.2	2.5	2.7	3.0	3.3	3.5	2.0
Other Central and South America ..	2.3	3.2	3.3	3.9	4.2	4.5	4.7	5.0	1.7
Total Non-OECD	25.3	33.3	34.3	40.3	46.6	53.0	58.5	64.5	2.6
Total World	66.6	82.3	83.6	89.6	99.2	107.7	114.6	122.0	1.5

^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 LP2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table E5. World Natural Gas Consumption by Region, Low Price 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	29.2	31.0	32.2	33.2	34.0	0.9
United States ^a	19.2	22.4	22.2	23.4	24.5	24.8	24.9	24.8	0.4
Canada	2.4	3.3	3.4	3.7	4.1	4.5	4.8	5.2	1.7
Mexico	0.9	1.7	1.7	2.0	2.4	3.0	3.5	4.1	3.4
OECD Europe	11.6	18.9	19.3	20.9	23.4	25.5	26.8	28.2	1.5
OECD Asia	2.8	5.2	5.2	5.9	6.6	6.9	7.2	7.4	1.4
Japan	1.9	3.1	3.1	3.4	3.6	3.7	3.8	3.8	0.9
South Korea	0.1	1.0	1.1	1.4	1.7	1.8	1.9	1.9	2.4
Australia/New Zealand	0.8	1.1	1.1	1.2	1.3	1.4	1.5	1.7	1.7
Total OECD	36.8	51.6	51.9	56.0	60.9	64.6	67.2	69.6	1.2
Non-OECD									
Non-OECD Europe and Eurasia ..	26.7	24.4	25.3	27.6	30.0	31.9	33.0	34.8	1.3
Russia	17.3	16.0	16.2	17.5	18.9	19.7	20.3	21.4	1.1
Other	9.5	8.4	9.1	10.2	11.1	12.2	12.7	13.4	1.6
Non-OECD Asia	2.9	8.5	9.3	13.0	17.8	22.6	26.2	29.6	4.7
China	0.5	1.4	1.7	2.9	4.3	5.6	6.5	7.4	6.2
India	0.4	1.1	1.3	1.9	2.6	3.3	3.9	4.4	5.1
Other Non-OECD Asia	2.0	6.1	6.4	8.2	10.9	13.8	15.8	17.9	4.2
Middle East	3.6	8.6	9.8	11.3	12.9	14.5	15.3	16.3	2.1
Africa	1.4	2.6	3.0	3.6	4.7	5.7	6.5	7.2	3.7
Central and South America	2.0	4.1	4.4	5.7	6.8	7.6	8.3	9.0	2.9
Brazil	0.1	0.6	0.7	1.0	1.3	1.4	1.6	1.9	4.3
Other Central and South America ..	1.9	3.5	3.7	4.7	5.6	6.2	6.7	7.1	2.6
Total Non-OECD	36.5	48.2	51.8	61.3	72.2	82.4	89.3	96.9	2.5
Total World	73.4	99.8	103.7	117.3	133.0	147.0	156.5	166.5	1.9

^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 LP2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table E6. World Coal Consumption by Region, Low Price 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	25.9	26.4	27.6	29.6	0.7
United States ^a	19.2	22.6	22.8	23.0	23.7	24.2	25.4	27.4	0.7
Canada	1.2	1.6	1.7	1.8	1.8	1.8	1.8	1.8	0.4
Mexico	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	-0.3
OECD Europe	17.7	13.3	13.2	13.6	13.4	12.9	12.4	11.9	-0.4
OECD Asia	5.2	9.2	9.3	9.5	9.4	9.2	9.2	9.3	0.0
Japan	2.7	4.8	4.6	4.5	4.3	4.1	4.0	3.8	-0.8
South Korea	1.0	2.1	2.1	2.4	2.5	2.5	2.5	2.7	0.9
Australia/New Zealand	1.5	2.4	2.6	2.6	2.6	2.7	2.8	2.9	0.4
Total OECD	43.5	47.0	47.3	48.3	48.7	48.5	49.2	50.8	0.3
Non-OECD									
Non-OECD Europe and Eurasia ..	15.1	8.7	8.8	8.7	9.7	9.9	10.0	10.6	0.7
Russia	7.2	4.6	4.8	4.7	4.9	5.1	5.0	5.4	0.5
Other	7.9	4.1	4.0	4.0	4.8	4.8	5.0	5.1	1.0
Non-OECD Asia	27.0	54.9	60.9	75.7	89.9	101.7	114.1	126.3	3.0
China	20.3	41.4	46.9	60.0	71.9	82.5	93.0	102.9	3.2
India	4.2	8.4	8.6	9.7	11.3	12.5	13.5	14.8	2.2
Other Non-OECD Asia	2.6	5.1	5.3	6.0	6.7	6.8	7.6	8.6	1.9
Middle East	0.1	0.4	0.4	0.4	0.4	0.4	0.3	0.3	-1.3
Africa	3.0	4.3	4.2	4.3	4.9	5.0	5.1	5.0	0.7
Central and South America	0.6	0.8	0.9	1.3	1.5	1.5	1.5	1.5	2.2
Brazil	0.3	0.5	0.4	0.8	0.9	1.0	1.1	1.1	3.8
Other Central and South America ..	0.2	0.4	0.4	0.5	0.6	0.5	0.4	0.4	-0.5
Total Non-OECD	45.7	69.1	75.2	90.4	106.3	118.6	131.1	143.7	2.6
Total World	89.2	116.1	122.5	138.7	155.1	167.1	180.3	194.5	1.9

^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 LP2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table E7. World Nuclear Energy Consumption by Region, Low Price 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	917	931	984	997	982	0.4
United States ^a	577	789	782	797	807	854	860	837	0.3
Canada	69	86	87	110	113	120	127	135	1.7
Mexico	3	9	10	11	11	11	11	11	0.1
OECD Europe	743	941	929	916	904	831	856	881	-0.2
OECD Asia	242	392	418	444	498	550	588	629	1.6
Japan	192	268	278	301	321	338	361	384	1.3
South Korea	50	124	139	143	177	212	227	245	2.3
Australia/New Zealand	0	0	0	0	0	0	0	0	—
Total OECD	1,635	2,216	2,227	2,277	2,333	2,365	2,441	2,492	0.5
Non-OECD									
Non-OECD Europe and Eurasia ..	219	263	264	289	327	409	472	485	2.5
Russia	115	137	140	155	190	237	293	306	3.2
Other	104	125	124	134	136	172	180	180	1.5
Non-OECD Asia	38	103	106	150	293	446	573	643	7.5
China	0	48	50	65	164	267	351	410	8.8
India	6	15	16	37	66	104	134	149	9.4
Other Non-OECD Asia	32	40	40	47	64	75	88	84	3.0
Middle East	0	0	0	0	6	6	6	6	—
Africa	8	14	12	14	15	15	21	21	2.2
Central and South America	9	19	16	23	28	34	34	34	3.0
Brazil	2	12	10	15	18	22	22	22	3.3
Other Central and South America ..	7	7	6	8	10	12	11	11	2.4
Total Non-OECD	274	399	399	476	669	910	1,106	1,189	4.5
Total World	1,909	2,615	2,626	2,753	3,002	3,275	3,548	3,680	1.4

^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 LP2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table E8. World Consumption of Hydroelectricity and Other Renewable Energy by Region, Low Price 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	13.5	15.0	16.4	17.1	2.1
United States ^a	6.1	6.0	6.0	7.5	8.4	9.5	10.6	10.9	2.4
Canada	3.1	3.5	3.7	4.1	4.6	4.9	5.2	5.5	1.6
Mexico	0.3	0.4	0.4	0.5	0.6	0.6	0.6	0.6	1.5
OECD Europe	4.8	6.3	6.5	7.2	7.3	7.9	8.6	9.0	1.3
OECD Asia	1.6	1.8	1.6	1.9	2.0	2.1	2.2	2.4	1.7
Japan	1.1	1.2	1.0	1.2	1.3	1.4	1.4	1.5	1.5
South Korea	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	7.7
Australia/New Zealand	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.8
Total OECD	15.9	17.9	18.2	21.3	22.8	25.0	27.2	28.4	1.8
Non-OECD									
Non-OECD Europe and Eurasia . . .	2.8	3.0	3.1	3.7	3.8	3.8	4.0	4.1	1.1
Russia	1.8	1.8	1.8	2.3	2.3	2.3	2.3	2.3	1.1
Other	1.0	1.3	1.3	1.4	1.5	1.5	1.7	1.7	1.1
Non-OECD Asia	3.0	5.6	6.6	8.4	8.8	9.6	11.5	13.3	2.8
China	1.3	3.3	4.0	5.1	5.3	5.5	6.8	8.1	2.8
India	0.7	0.9	1.1	1.5	1.5	1.6	1.8	1.9	2.4
Other Non-OECD Asia	0.9	1.4	1.6	1.8	2.0	2.5	2.9	3.3	3.1
Middle East	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.4	2.4
Africa	0.6	0.9	0.9	1.1	1.2	1.3	1.5	1.8	2.7
Central and South America	3.9	6.1	6.4	7.1	7.9	9.0	9.9	10.8	2.1
Brazil	2.2	3.4	3.5	4.0	4.8	5.5	6.3	7.0	2.8
Other Central and South America . .	1.7	2.8	2.9	3.1	3.2	3.4	3.6	3.8	1.1
Total Non-OECD	10.3	15.9	17.2	20.7	22.1	24.0	27.2	30.3	2.3
Total World	26.2	33.8	35.5	41.9	44.9	49.1	54.5	58.8	2.0

^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 LP2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table E9. World Carbon Dioxide Emissions by Region, Low Price 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	7,128	7,516	7,777	8,059	8,486	0.8
United States ^a	4,989	5,957	5,982	6,032	6,312	6,471	6,654	6,976	0.6
Canada	465	623	628	670	710	746	780	814	1.0
Mexico	300	379	398	427	495	560	625	695	2.3
OECD Europe	4,101	4,373	4,383	4,518	4,761	4,893	4,956	5,009	0.5
OECD Asia	1,541	2,148	2,174	2,205	2,319	2,382	2,424	2,478	0.5
Japan	1,009	1,242	1,230	1,193	1,220	1,229	1,223	1,214	-0.1
South Korea	241	488	500	561	623	651	677	715	1.4
Australia/New Zealand	291	418	444	452	477	501	524	549	0.8
Total OECD	11,396	13,480	13,565	13,851	14,597	15,052	15,439	15,973	0.7
Non-OECD									
Non-OECD Europe and Eurasia	4,198	2,797	2,865	3,071	3,378	3,582	3,714	3,926	1.3
Russia	2,376	1,669	1,696	1,791	1,926	2,022	2,065	2,180	1.0
Other	1,822	1,128	1,169	1,280	1,451	1,559	1,649	1,746	1.6
Non-OECD Asia	3,613	7,517	8,177	10,161	12,276	14,158	15,960	17,804	3.2
China	2,241	4,753	5,323	6,887	8,282	9,624	10,912	12,193	3.4
India	565	1,127	1,164	1,336	1,612	1,843	2,042	2,263	2.7
Other Non-OECD Asia	807	1,637	1,690	1,938	2,382	2,691	3,007	3,348	2.8
Middle East	700	1,290	1,400	1,623	1,806	2,024	2,183	2,340	2.1
Africa	649	943	966	1,087	1,258	1,395	1,484	1,553	1.9
Central and South America	669	1,042	1,078	1,309	1,470	1,599	1,702	1,818	2.1
Brazil	216	350	356	451	510	564	609	666	2.5
Other Central and South America	453	692	722	858	960	1,035	1,093	1,152	1.9
Total Non-OECD	9,830	13,589	14,486	17,251	20,188	22,758	25,043	27,441	2.6
Total World	21,226	27,070	28,051	31,102	34,784	37,810	40,482	43,414	1.8

^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 LP2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table E10. World Carbon Dioxide Emissions from Liquids Use by Region, Low Price 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	3,140	3,367	3,500	3,598	3,799	0.7
United States ^a	2,178	2,597	2,615	2,560	2,723	2,804	2,853	3,002	0.6
Canada	224	291	290	305	322	339	352	365	0.9
Mexico	231	254	264	275	322	357	393	433	2.0
OECD Europe	1,867	2,097	2,103	2,099	2,230	2,296	2,334	2,360	0.5
OECD Asia	914	1,016	1,028	1,010	1,095	1,149	1,180	1,209	0.7
Japan	661	636	643	602	633	649	654	657	0.1
South Korea	144	238	240	263	298	324	341	358	1.6
Australia/New Zealand	110	142	144	146	164	175	185	194	1.2
Total OECD	5,414	6,255	6,300	6,249	6,692	6,945	7,112	7,368	0.6
Non-OECD									
Non-OECD Europe and Eurasia	1,355	666	673	768	855	932	998	1,060	1.8
Russia	783	379	379	416	456	487	508	526	1.3
Other	572	287	294	352	398	445	490	534	2.4
Non-OECD Asia	950	1,979	2,037	2,437	2,979	3,496	3,954	4,474	3.2
China	325	843	880	1,160	1,373	1,656	1,919	2,226	3.8
India	160	302	303	339	438	523	589	666	3.2
Other Non-OECD Asia	464	833	854	939	1,168	1,317	1,446	1,582	2.5
Middle East	488	780	824	959	1,055	1,189	1,305	1,414	2.2
Africa	298	400	413	487	548	612	647	683	2.0
Central and South America	503	734	749	871	947	1,028	1,095	1,173	1.8
Brazil	180	274	279	321	354	391	421	458	2.0
Other Central and South America	323	460	470	550	593	638	674	714	1.7
Total Non-OECD	3,594	4,558	4,697	5,522	6,383	7,258	7,999	8,804	2.5
Total World	9,009	10,813	10,996	11,771	13,075	14,202	15,111	16,172	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 LP2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table E11. World Carbon Dioxide Emissions from Natural Gas Use by Region, Low Price 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	1,587	1,684	1,764	1,833	1,863	0.9
United States ^a	1,026	1,194	1,193	1,272	1,326	1,356	1,376	1,352	0.5
Canada	127	181	185	201	223	241	260	281	1.7
Mexico	54	97	99	114	135	167	197	230	3.4
OECD Europe	590	1,027	1,048	1,137	1,270	1,384	1,454	1,530	1.5
OECD Asia	152	293	294	332	369	389	405	418	1.4
Japan	102	173	170	186	199	207	210	212	0.9
South Korea	6	60	63	80	97	103	109	114	2.4
Australia/New Zealand	44	60	61	66	73	79	86	92	1.7
Total OECD	1,949	2,791	2,819	3,056	3,322	3,537	3,692	3,811	1.2
Non-OECD									
Non-OECD Europe and Eurasia	1,450	1,328	1,375	1,502	1,628	1,732	1,793	1,892	1.3
Russia	928	868	875	946	1,022	1,068	1,100	1,158	1.1
Other	521	460	500	556	605	664	693	734	1.5
Non-OECD Asia	160	469	516	725	991	1,263	1,461	1,653	4.8
China	30	83	101	180	263	345	400	453	6.2
India	24	59	69	105	144	178	214	240	5.1
Other Non-OECD Asia	106	327	345	440	584	740	848	960	4.2
Middle East	199	476	541	625	715	802	849	899	2.1
Africa	80	149	167	206	265	326	368	411	3.7
Central and South America	116	231	249	321	386	429	468	505	2.9
Brazil	6	33	36	56	69	78	89	103	4.3
Other Central and South America	110	197	213	266	317	351	379	403	2.6
Total Non-OECD	2,005	2,651	2,847	3,379	3,984	4,552	4,938	5,360	2.6
Total World	3,954	5,443	5,666	6,435	7,306	8,089	8,630	9,171	1.9

^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 LP2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).

Table E12. World Carbon Dioxide Emissions from Coal Use by Region, Low Price 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	2,390	2,454	2,501	2,616	2,812	0.7
United States ^a	1,784	2,155	2,162	2,188	2,252	2,299	2,412	2,611	0.8
Canada	114	151	153	163	165	166	168	168	0.4
Mexico	15	28	35	38	37	36	35	33	-0.3
OECD Europe	1,644	1,250	1,232	1,282	1,261	1,214	1,168	1,119	-0.4
OECD Asia	475	840	853	863	855	844	839	851	0.0
Japan	246	433	417	405	388	373	359	345	-0.8
South Korea	91	190	196	218	227	224	226	242	0.8
Australia/New Zealand	138	217	239	240	240	247	254	263	0.4
Total OECD	4,032	4,423	4,435	4,535	4,570	4,558	4,624	4,781	0.3
Non-OECD									
Non-OECD Europe and Eurasia ..	1,393	804	817	801	895	918	923	975	0.7
Russia	665	422	442	429	448	468	457	496	0.5
Other	729	381	376	372	447	450	466	478	1.0
Non-OECD Asia	2,503	5,070	5,624	6,998	8,307	9,399	10,544	11,676	3.0
China	1,886	3,827	4,341	5,548	6,646	7,624	8,593	9,513	3.2
India	380	765	791	891	1,031	1,142	1,239	1,357	2.2
Other Non-OECD Asia	237	477	492	559	630	634	713	806	2.0
Middle East	13	35	35	39	36	33	30	26	-1.2
Africa	271	394	386	394	445	457	469	460	0.7
Central and South America	50	78	81	117	138	141	140	140	2.2
Brazil	30	43	41	75	87	95	99	105	3.8
Other Central and South America ..	20	35	40	42	51	46	40	35	-0.5
Total Non-OECD	4,231	6,380	6,943	8,350	9,821	10,949	12,105	13,277	2.6
Total World	8,263	10,803	11,378	12,884	14,391	15,507	16,729	18,058	1.9

^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 LP2008.D031608A, web site www.eia.doe.gov/oiaf/aeo; and World Energy Projection System (2008).