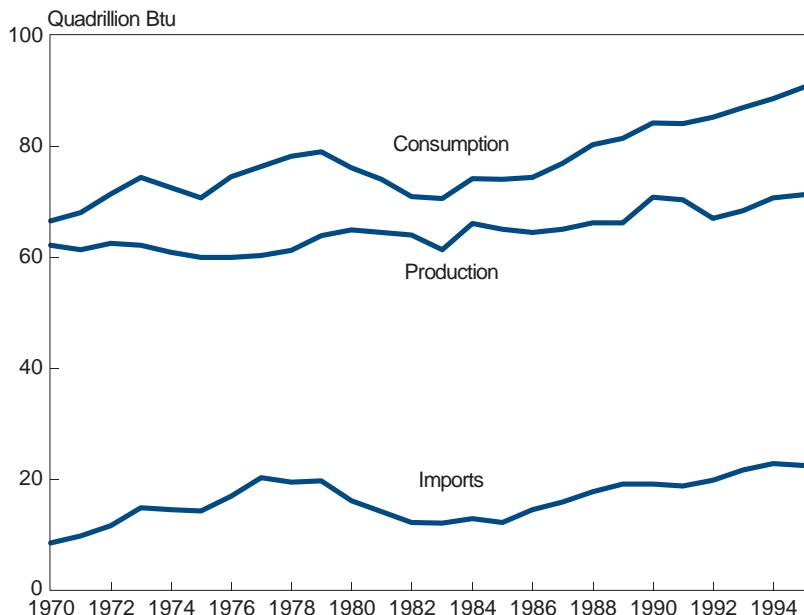
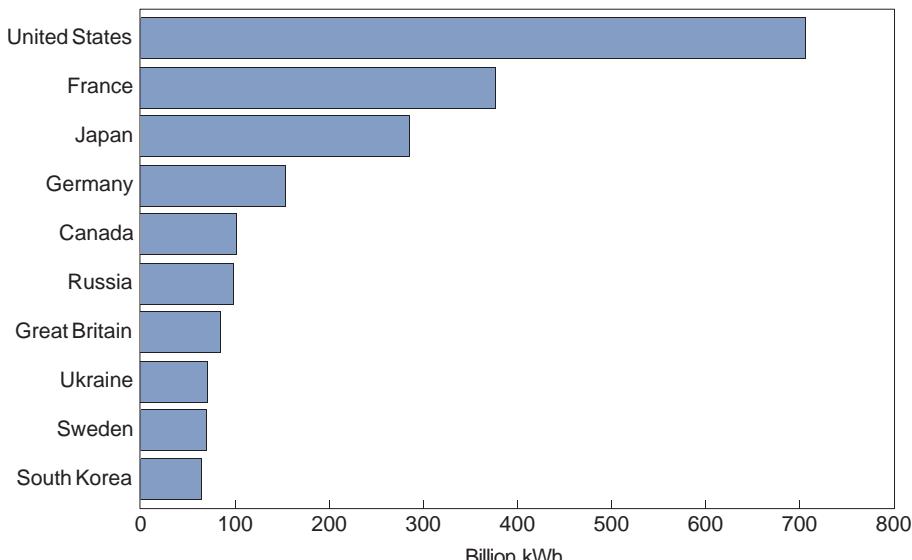


Figure 19.1
Energy Supply and Disposition: 1970 to 1995



Source: Chart prepared by U.S. Bureau of the Census. For data, see table 921.

Figure 19.2
**Commercial Nuclear Power Generation—
Top 10 Countries: 1995**



Source: Chart prepared by U.S. Bureau of the Census. For data, see table 950.

Section 19

Energy

This section presents statistics on fuel resources, energy production and consumption, electric energy, hydroelectric power, nuclear power, solar energy, wood energy and the electric and gas utility industries. The principal sources are the U.S. Department of Energy's Energy Information Administration (EIA), the Edison Electric Institute, Washington, DC, and the American Gas Association, Arlington, VA. For additional data on transportation, see section 21; on fuels, see section 24; and on energy-related housing characteristics, see section 25.

The EIA, in its *Annual Energy Review*, provides statistics and trend data on energy supply, demand, and prices. Information is included on petroleum and natural gas, coal, electricity, hydroelectric power, nuclear power, solar, wood, and geothermal energy. Among its annual reports are *Annual Energy Review*, *Electric Power Annual*, *Natural Gas Annual*, *Petroleum Supply Annual*, *State Energy Data Report*, *State Energy Price and Expenditure Report*, *Financial Statistics of Selected Electric Utilities*, *Performance Profiles of Major Energy Producers*, *Annual Energy Outlook*, and *International Energy Annual*. These various publications contain State, national, and international data on production of electricity, net summer capability of generating plants, fuels used in energy production, energy sales and consumption, and hydroelectric power. The EIA also issues the *Monthly Energy Review*, which presents current supply, disposition, and price data, and monthly publications on petroleum, coal, natural gas, and electric power. Data on residential energy consumption, expenditures, and conservation activities are available from EIA's Residential Energy Consumption Survey and are published triennially in *Residential Energy Consumption Survey: Consumption and Expenditures*, and *Residential Energy Consumption Survey: Housing Characteristics*, and several other reports.

The Edison Electric Institute's monthly bulletin and annual *Statistical Year Book of the Electric Utility Industry for the Year* contain data on the distribution of electric energy by public utilities; information on the

In Brief

Renewable energy sources provided 6.7 quadrillion Btu's in 1995, which represented 7.3 percent of U.S. consumption.

Crude oil imports surpassed domestic production for the third year in a row in 1996 with 7.5 million barrels per day compared to 6.5 for production.

Net generation of electric energy by utilities reached a record 3.0 trillion kWh in 1995.

electric power supply, expansion of electric generating facilities, and the manufacture of heavy electric power equipment is presented in the annual *Year End Summary of the Electric Power Situation in the United States*. The American Gas Association, in its monthly and quarterly bulletins and its yearbook, *Gas Facts*, presents data on gas utilities, including sales, revenues, customers, prices, and other financial and operating statistics.

Btu conversion factors.—Various energy sources are converted from original units (e.g., short tons, cubic feet, barrels, kilowatt-hours) to the thermal equivalent using British thermal units (Btu). A Btu is the amount of energy required to raise the temperature of 1 pound of water 1 degree Fahrenheit (F) at or near 39.2 degrees F. Factors are calculated annually from the latest final annual data available; some are revised as a result. The following list provides conversion factors used in 1995 for production and consumption, in that order, for various fuels: Petroleum, 5.800 and 5.358 mil. Btu per barrel; total coal, 21.278 and 20.852 mil. Btu per short ton; and natural gas (dry), 1,028 Btu per cubic foot for both. The factors for the production of nuclear power and geothermal power were 10,676 and 20,914 Btu per kilowatt-hour, respectively. The fossil fuel steam-electric power plant generation factor of 10,272 Btu per kilowatt-hour was used for hydroelectric power generation and for wood and waste, wind, photovoltaic, and solar thermal energy consumed at electric utilities.

No. 933. Fossil Fuel Prices in Current and Constant (1992) Dollars: 1970 to 1995

[In cents per million British thermal units (Btu), except as indicated. All fuel prices taken as close to the point of production as possible. See text, section 19, for explanation of Btu conversions from mineral fuels]

FUEL	1970	1973	1975	1980	1985	1988	1989	1990	1991	1992	1993	1994	1995
CURRENT DOLLARS													
Composite ¹	0.32	0.40	0.82	2.04	2.51	1.53	1.67	1.84	1.67	1.66	1.67	1.54	1.49
Crude oil.	0.55	0.67	1.32	3.72	4.15	2.17	2.73	3.45	2.85	2.76	2.46	2.27	2.52
Natural gas	0.15	0.20	0.40	1.45	2.26	1.52	1.53	1.55	1.48	1.57	1.84	1.70	1.44
Bituminous coal ²	0.26	0.36	0.84	1.09	1.15	1.01	1.00	0.99	0.99	0.97	0.93	0.91	0.89
Anthracite coal.	0.49	0.62	1.50	1.86	2.04	1.90	1.84	1.75	1.61	1.52	1.46	1.60	1.62
CONSTANT (1992) DOLLARS													
Composite ¹	1.04	1.12	1.95	3.38	3.20	1.78	1.86	1.97	1.72	1.66	1.63	1.47	1.39
Crude oil.	1.79	1.90	3.13	6.16	5.30	2.52	3.05	3.69	2.93	2.76	2.40	2.17	2.35
Natural gas	0.50	0.57	0.95	2.40	2.88	1.77	1.70	1.65	1.52	1.57	1.80	1.62	1.34
Bituminous coal ²	0.86	1.03	1.99	1.81	1.46	1.17	1.11	1.06	1.02	0.97	0.90	0.86	0.83
Anthracite coal.	1.59	1.74	3.54	3.08	2.60	2.20	2.05	1.86	1.66	1.52	1.42	1.52	1.50

¹ Weighted by relative importance of individual fuels in total fuels production. ² Includes subbituminous and lignite.

Source: U.S. Energy Information Administration, *Annual Energy Review*.

No. 934. World Energy Consumption, by Region and Energy Source: 1970 to 1994

[The complete publication including this copyright table is available from the U.S. Government Printing Office and the National Technical Information Service]

No. 935. World Primary Energy Production, by Region and Type: 1980 to 1994

[In quadrillion Btu. Btu=British thermal units. For Btu conversion factors, see source]

REGION AND TYPE	1980	1985	1987	1988	1989	1990	1991	1992	1993	1994
World total	286.38	304.16	321.71	333.99	340.29	348.68	346.08	347.15	349.87	355.49
North America	80.85	84.55	84.73	86.83	86.85	88.80	89.31	89.12	88.52	(NA)
United States	64.76	64.87	64.95	66.10	66.13	70.75	70.41	69.96	68.32	70.62
Central and South America	12.11	13.59	14.44	15.29	15.86	16.81	17.64	17.73	18.32	(NA)
Western Europe	30.66	37.30	38.54	38.75	38.40	38.14	38.54	38.80	39.42	40.27
Eastern Europe and former USSR	66.72	74.96	79.67	82.02	80.83	78.93	72.53	68.25	64.15	59.67
Middle East	42.17	25.77	32.21	36.12	39.72	41.04	40.33	43.59	45.80	47.39
Africa	18.05	19.29	19.45	20.57	21.41	22.42	23.41	23.50	23.46	24.05
Far East and Oceania	35.82	48.69	52.62	54.37	57.17	59.45	61.11	62.39	66.19	68.98
Crude oil.	128.12	115.40	121.16	125.93	127.98	129.50	128.77	129.12	129.72	(NA)
Natural gas	52.65	61.38	65.61	68.78	71.20	72.91	73.99	73.80	75.34	(NA)
Natural gas liquids	5.10	5.82	6.32	6.63	6.68	6.85	7.16	7.34	7.63	(NA)
Coal.	74.48	85.77	90.27	91.92	93.92	94.97	90.43	88.62	86.67	(NA)
Hydroelectric power	18.05	20.56	21.03	21.81	21.62	22.46	22.80	22.67	23.51	(NA)
Nuclear electric power	7.58	15.37	17.80	19.30	19.82	20.30	21.27	21.30	22.10	(NA)
Geothermal, solar and wind	0.40	0.60	0.75	0.75	0.75	0.75	0.77	0.79	0.79	(NA)

NA Not available.

Source: U.S. Energy Information Administration, *International Energy Annual*.

Energy

No. 949. Nuclear Power Plants—Number, Capacity, and Generation: 1980 to 1996

ITEM	1980	1985	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Operable generating units ¹	70	95	107	108	110	111	111	109	109	109	109	110
Net summer capability ^{1,2} (mil. kW)	51.8	79.4	93.6	94.7	98.2	99.6	99.6	99.0	99.0	99.1	99.5	100.7
Net generation (bil. kWh)	251.1	383.7	455.3	527.0	529.4	576.9	612.6	618.8	610.3	640.4	673.4	674.8
Percent of total electric utility generation ³	11.0	15.5	17.7	19.5	19.0	20.5	21.7	22.1	21.2	22.0	22.5	21.9
Capacity factor ³	56.3	58.0	57.4	63.5	62.2	66.0	70.2	70.9	70.5	73.8	77.4	76.4

NA Not available. ¹ As of yearend. ² Net summer capability is the peak steady hourly output that generating equipment is expected to supply to system load, exclusive of auxiliary and other powerplant, as demonstrated by test at the time of summer peak demand. ³ Weighted average of monthly capacity factors. Monthly factors are derived by dividing actual monthly generation by the maximum possible generation for the month (hours in month times net maximum dependable capacity).

Source: U.S. Energy Information Administration, *Annual Energy Review* and *Monthly Energy Review* March 1996.

No. 950. Commercial Nuclear Power Generation, by Country: 1980 to 1995

[The complete publication including this copyright table is available from the U.S. Government Printing Office and the National Technical Information Service]

No. 951. Uranium Supply and Discharged Commercial Reactor Fuel: 1980 to 1995

[Years ending Dec. 31, except as noted. For additional data on uranium, see section 25 on mining]

ITEM	Unit	1980	1985	1989	1990	1991	1992	1993	1994	1995
URANIUM CONCENTRATE										
Production	Mil. lb	43.70	11.31	13.84	8.89	7.95	5.65	3.06	3.35	6.04
Exports	Mil. lb	5.80	5.30	2.10	2.00	3.50	2.80	3.00	17.74	9.84
Imports	Mil. lb	3.60	11.70	13.10	23.70	16.30	23.30	21.00	36.62	41.30
Utility purchases from domestic suppliers	Mil. lb	(NA)	21.7	18.4	20.5	26.8	23.4	15.5	22.7	22.3
Loaded into U.S. Nuclear reactors	Mil. lb	(NA)	(NA)	(NA)	(NA)	34.6	43.0	45.1	40.4	51.1
Inventories, total	Mil. lb	(NA)	176.9	138.1	129.1	118.7	117.3	105.7	86.9	70.1
At domestic suppliers	Mil. lb	(NA)	23.7	22.2	26.4	20.7	25.2	24.5	21.5	13.9
At electric utilities	Mil. lb	(NA)	153.2	115.8	102.7	98.0	92.1	81.2	65.4	56.2
Average prices:										
Purchased imports	Dol. per lb	(NA)	20.08	16.75	12.55	15.55	11.34	10.53	8.95	10.2
Domestic purchases	Dol. per lb	(NA)	31.43	19.56	15.70	13.66	13.45	13.14	10.30	11.1
DISCHARGED COMMERCIAL REACTOR FUEL²										
Annual discharge	Metric tons	1,193	1,330	1,853	2,084	1,716	2,192	2,102	1,809	2,292
Inventory, year-end ³	Metric tons	6,434	12,481	18,945	21,029	22,745	24,937	27,039	28,848	31,140

NA Not available. ¹ Does not include any fuel rods removed from reactors and later reloaded into the reactor. ² Uranium content. Source: Nuclear Assurance Corporation, Atlanta, GA. ³ Reprocessed fuel not included as inventory.

Source: Except as noted, U.S. Energy Information Administration, *Annual Energy Review*, *Uranium Industry Annual* and unpublished data.

