

Note 1. Coverage of Electricity Statistics. Data in Section 7 cover the following:

Through 1984, data for electric utilities also include institutions (such as universities) and military facilities that generated electricity primarily for their own use; beginning in 1985, data for electric utilities exclude institutions and military facilities. Beginning in 1989, data for the commercial sector include institutions and military facilities.

The generation, consumption, and stocks data in Section 7 are for utility-scale facilities—those with a combined generation nameplate capacity of 1 megawatt or more. Data exclude small-scale facilities—those with a combined generator nameplate capacity of less than 1 megawatt. For data on small-scale solar photovoltaic (PV) generation in the residential, commercial, and industrial sectors, see Table 10.6.

Note 2. Classification of Power Plants into Energy-Use Sectors. The U.S. Energy Information Administration (EIA) classifies power plants (both electricity-only and combined-heat-and-power plants) into energy-use sectors based on the North American Industry Classification System (NAICS), which replaced the Standard Industrial Classification (SIC) system in 1997. Plants with a NAICS code of 22 are assigned to the Electric Power Sector. Those with NAICS codes beginning with 11 (agriculture, forestry, fishing, and hunting); 21 (mining, including oil and gas extraction); 23 (construction); 31–33 (manufacturing); 2212 (natural gas distribution); and 22131 (water supply and irrigation systems) are assigned to the Industrial Sector. Those with all other codes are assigned to the Commercial Sector. Form EIA-860, "Annual Electric Generator Report," asks respondents to indicate the primary purpose of the facility by assigning a NAICS code from the list at http://www.eia.gov/survey/form/eia_860/instructions.pdf.

Note 3. Electricity Forecast Values. Data values preceded by "F" in this section are forecast values. They are derived from EIA's Short-Term Integrated Forecasting System (STIFS). STIFS is driven primarily by data and assumptions about key macroeconomic variables, energy prices, and weather. The electricity forecast relies on additional variables such as alternative fuel prices (natural gas and oil) and power generation by sources other than fossil fuels, including nuclear, renewables, and hydroelectric power. Each month, EIA staff review the model output and make adjustments, if appropriate, based on their knowledge of developments in the electricity industry.

The STIFS model results are published monthly in EIA's Short-Term Energy Outlook, which is accessible on the Web at <http://www.eia.gov/forecasts/steo/>.

Note 4. Experimental Estimates of Electric Vehicle Use. These are experimental estimates of on-road light-duty electric vehicle (EV) electricity consumption to operate and move the vehicle. These estimates are based on models and are subject to model error. The electricity consumed by light-duty EVs is not identified as a separate class of service by electric utilities. Instead, the electricity consumption by light-duty EVs is accounted for based on the location of where the vehicle is charged. This results in electric utilities reporting light-duty EV consumption as part of the Residential, Commercial, and Industrial Sales to Ultimate Customers. Estimates are for light-duty Battery Electric Vehicles and Plug-in Hybrid Electric Vehicles that weigh less than or equal to 8,500 pounds. Estimates exclude plug-in hybrid motor gasoline consumption, on-road medium- and heavy-duty EVs, and off-road EVs such as golf carts and forklifts. For more information, see the detailed estimation methodology at <https://www.eia.gov/electricity/monthly/pdf/technotes-appendix-d.pdf/>.

Table 7.1 Sources

Net Generation, Electric Power Sector

1949 forward: Table 7.2b.

Net Generation, Commercial and Industrial Sectors

1949 forward: Table 7.2c.

Trade

1949–September 1977: Unpublished Federal Power Commission data.

October 1977–1980: Unpublished Economic Regulatory Administration (ERA) data.

1981: U.S. Department of Energy (DOE), Office of Energy Emergency Operations, "Report on Electric Energy Exchanges with Canada and Mexico for Calendar Year 1981," April 1982 (revised June 1982).

1982 and 1983: DOE, ERA, *Electricity Exchanges Across International Borders*.

1984–1986: DOE, ERA, *Electricity Transactions Across International Borders*.

1987 and 1988: DOE, ERA, Form ERA-781R, "Annual Report of International Electrical Export/Import Data."

1989: DOE, Fossil Energy, Form FE-781R, "Annual Report of International Electrical Export/Import Data."

1990–2000: National Energy Board of Canada; and DOE, Office of Electricity Delivery and Energy Reliability, Form FE-781R, "Annual Report of International Electrical Export/Import Data."

2001–May 2011: National Energy Board of Canada; DOE, Office of Electricity Delivery and Energy Reliability, Form OE-781R, "Monthly Electricity Imports and Exports Report," and predecessor form; and California Independent System Operator.

June 2011–2015: National Energy Board of Canada; California Independent System Operator; and EIA estimates for Texas transfers.

2016 forward: EIA, Form EIA-111, "Quarterly Electricity Imports and Exports Report"; and for forecast values, EIA Short-Term Integrated Forecasting System (STIFS).

T&D Losses and Unaccounted for

1949 forward: Calculated as the sum of total net generation and imports minus end use and exports.

End Use

1949 forward: Table 7.6.

Table 7.2b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."

October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."

1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2003: EIA, Form EIA-906, "Power Plant Report."

2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."

2008 forward: EIA, Form EIA-923, "Power Plant Operations Report".

Table 7.2c Sources

Industrial Sector, Hydroelectric Power, 1949–1988

1949–September 1977: Federal Power Commission (FPC), Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and FPC, Form FPC-12C, "Industrial Electric Generating Capacity," for all other plants.

October 1977–1978: Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and FERC, Form FPC-12C, "Industrial Electric Generating Capacity," for all other plants.

1979: FERC, Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and U.S. Energy Information Administration (EIA) estimates for all other plants.

1980–1988: Estimated by EIA as the average generation over the 6-year period of 1974–1979.

All Data, 1989 Forward

1989–1997: EIA, Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2003: EIA, Form EIA-906, "Power Plant Report."

2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."

2008 forward: EIA, Form EIA-923, "Power Plant Operations Report".

Table 7.3b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."

October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."

1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2003: EIA, Form EIA-906, "Power Plant Report."

2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."

2008 forward: EIA, Form EIA-923, "Power Plant Operations Report".

Table 7.4b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."

October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."

1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2003: EIA, Form EIA-906, "Power Plant Report."

2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."

2008 forward: EIA, Form EIA-923, "Power Plant Operations Report".

Table 7.6 Sources

Sales to Ultimate Customers, Residential and Industrial

1949–September 1977: Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income."

October 1977–February 1980: Federal Energy Regulatory Commission (FERC), Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income."

March 1980–1982: FERC, Form FPC-5, "Electric Utility Company Monthly Statement."

1983: U.S. Energy Information Administration (EIA), Form EIA-826, "Electric Utility Company Monthly Statement."

1984–2003: EIA, Form EIA-861, "Annual Electric Utility Report."

2004 forward: EIA, *Electric Power Monthly (EPM)* March 2024, Table 5.1.

Sales to Ultimate Customers, Commercial

1949–2002: Data are estimates. See estimation methodology at http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf.

2003: EIA, Form EIA-861, "Annual Electric Utility Report."

2004 forward: EIA, EPM, March 2024, Table 5.1.

Sales to Ultimate Customers, Transportation

1949–2002: Data are estimates. See estimation methodology at http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf.

2003: EIA, Form EIA-861, "Annual Electric Utility Report."

2004 forward: EIA, EPM March 2024, Table 5.1.

Direct Use, Annual

1989–1997: EIA, Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2022: EIA, *Electric Power Annual 2023*, October 2023, Table 2.2.

Direct Use, Monthly

1989 forward: Annual shares are calculated as annual direct use divided by annual commercial and industrial net generation (on Table 7.1). Then monthly direct use estimates are calculated as the annual share multiplied by the monthly commercial and industrial net generation values. For 2021, the 2020 annual share is used.

Electric Vehicle Use

2018 forward: EIA, EPM, March 2024, Table D1.

Table 7.7b Sources

Net Summer Capacity, Nuclear Power

1949 forward: Table 8.1.

All Other Data

1949–1984: U.S. Energy Information Administration (EIA) estimates.

1985–1988: EIA, Form EIA-860, "Annual Electric Generator Report."

1989–1997: EIA, Form EIA-860, "Annual Electric Generator Report," and Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-860A, "Annual Electric Generator Report—Utility," and Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2007: EIA, Form EIA-860, "Annual Electric Generator Report."

2008 forward: EIA, Form EIA-860, "Annual Electric Generator Report," and Form EIA-860M, "Monthly Update to the Annual Electric Generator Report."