Sustainable Energy in America 2025 Factbook

Tracking Market & Policy Trends

BloombergNEF

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The Business Council for Sustainable Energy®

The Business Council for Sustainable Energy (BCSE) is a coalition of companies and trade associations from the energy efficiency, natural gas and renewable energy sectors.

BCSE advocates for policies that promote clean, efficient, and sustainable energy products, technologies and services.

BCSE supports business development, networking and knowledge exchange among its members and networks.

BCSE provides a credible, broad-based business coalition on clean energy market trends and policy impacts.

Sustainable Energy in America Factbook

What it means for state energy officials

Lisa Jacobson, Business Council on Sustainable Energy
Derrick Flakoll, Bloomberg NEF

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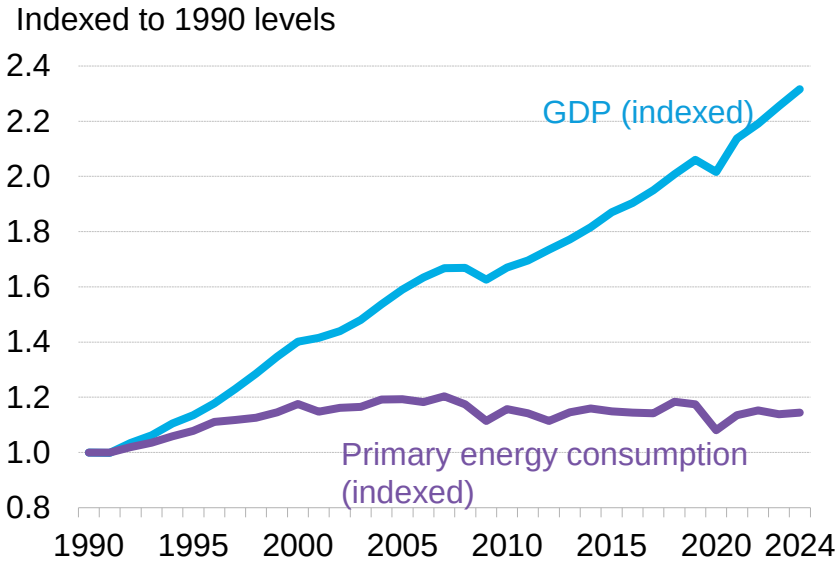
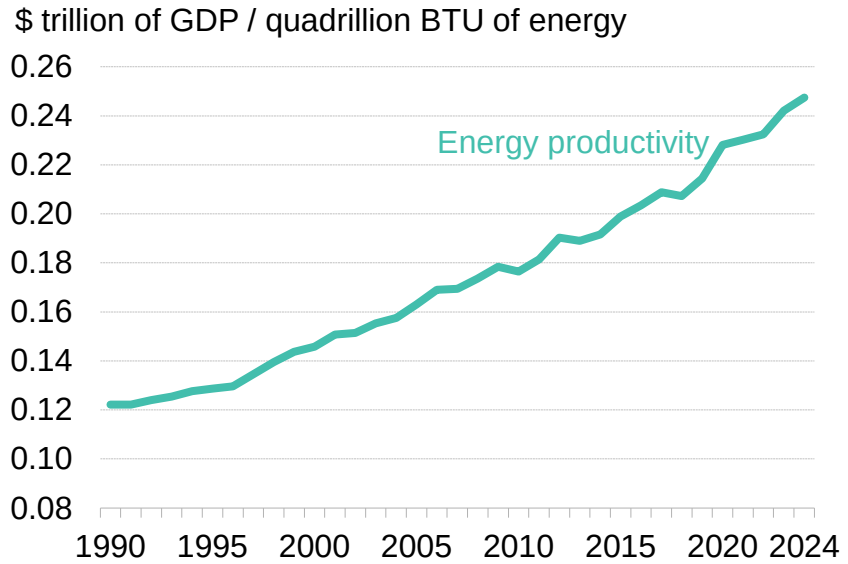
Energy Productivity

US GDP (real) and primary energy consumption



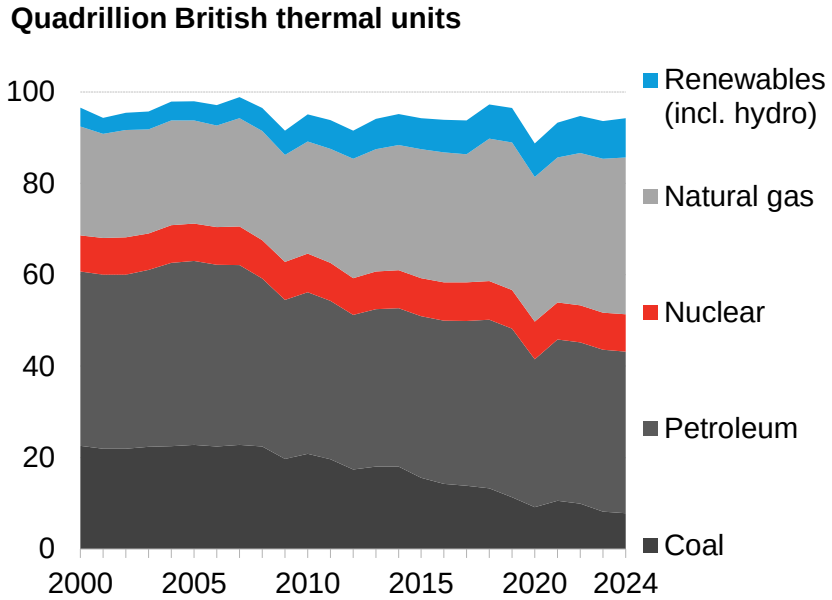
US energy productivity



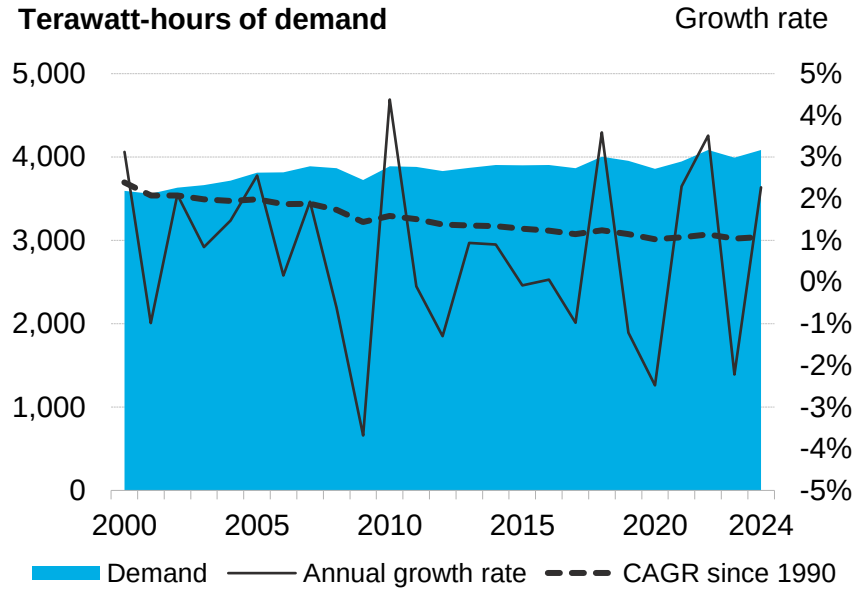
Source: Bureau of Economic Analysis, EIA, BloombergNEF. Note: Values for 2024 are projected, accounting for seasonality, based on latest monthly values from EIA (data available through September 2024). The 2024 GDP estimate is a projection from economists compiled at ECFC <GO> on the Bloomberg Terminal.

Energy and electricity consumption

US primary energy consumption, by fuel



US electricity demand



Source: EIA, BloombergNEF. Notes: "CAGR" in the right-hand chart is compound annual growth rate. Values for 2024 are projected, accounting for seasonality, based on the latest monthly values from EIA (data available through September 2024). BTU stands for British thermal units.

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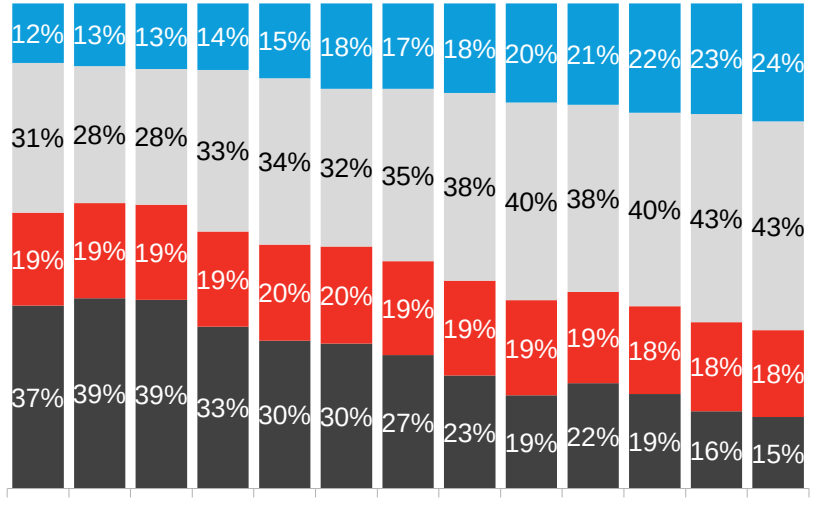
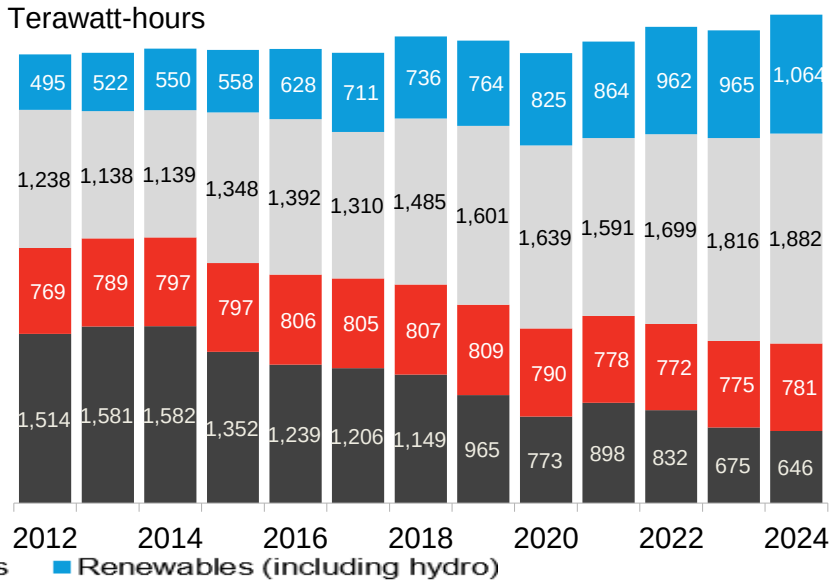
Electricity generation mix

Share of US electricity generation, by fuel



US electricity generation, by fuel



Source: EIA, BloombergNEF. Note: Values for 2024 are projected, accounting for seasonality, based on latest monthly values from EIA (data available through October 2024).

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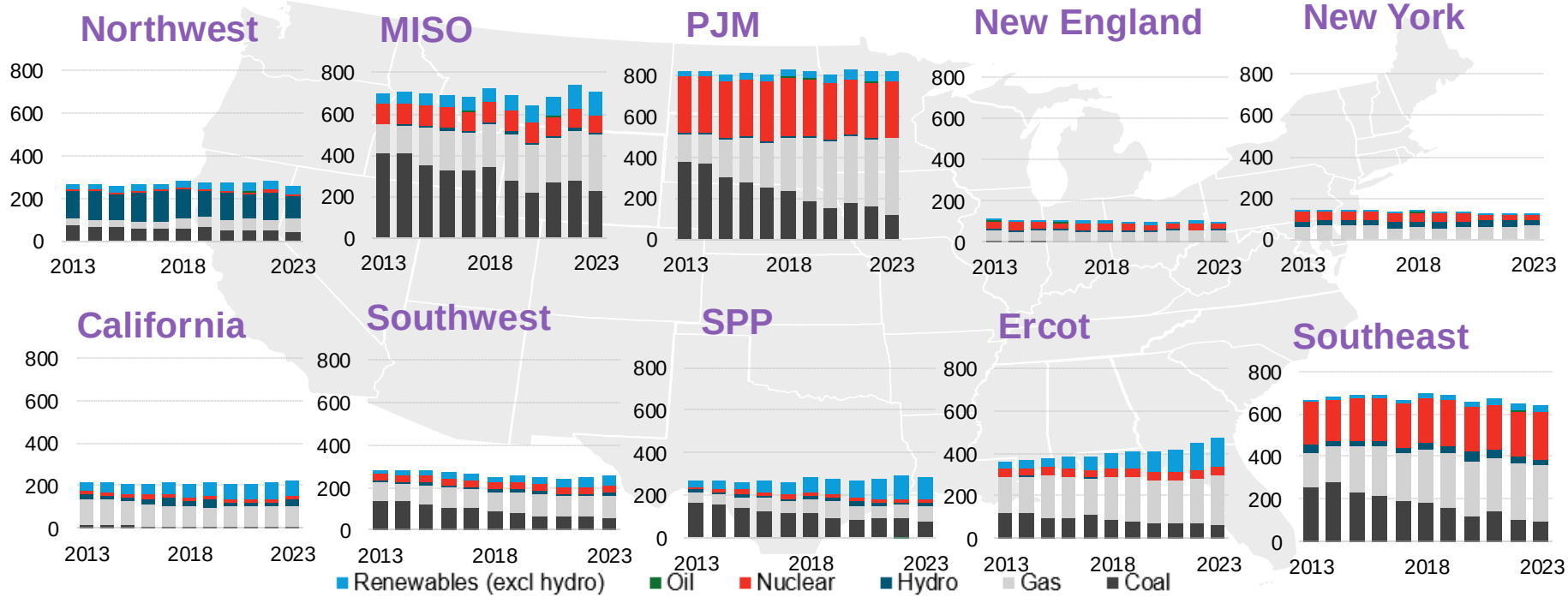
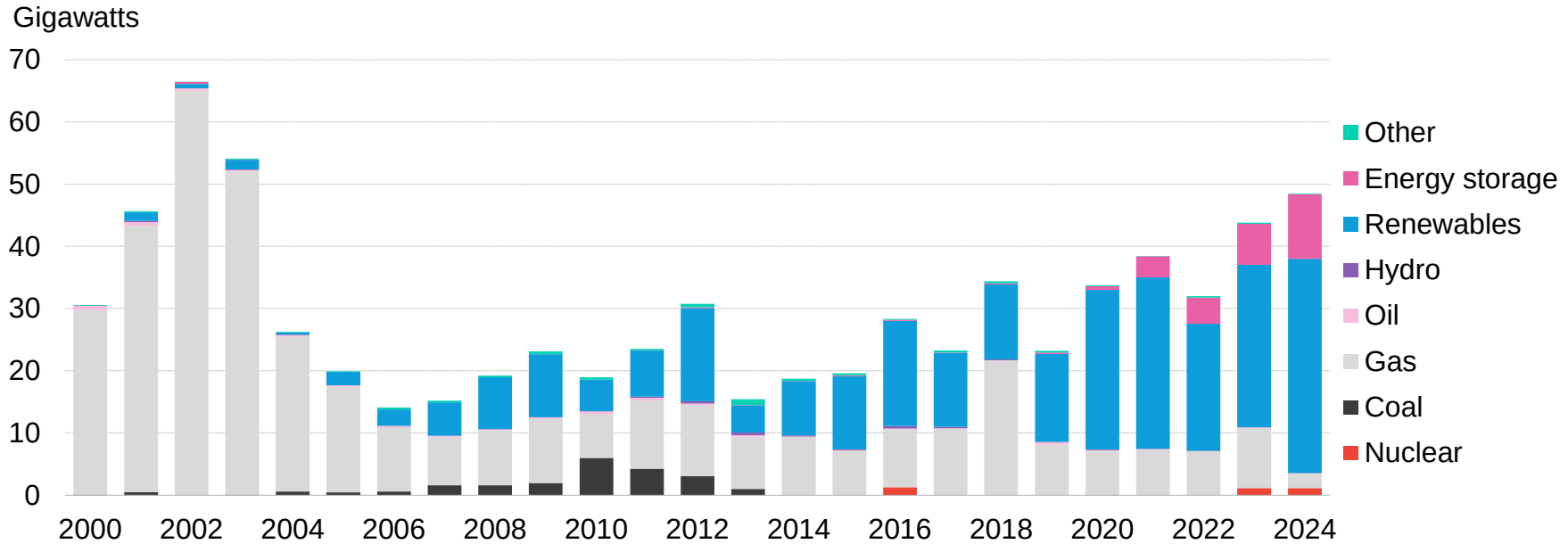
Electricity generation mix by power market (TWh)



Source: EIA, BloombergNEF. Notes: MISO is the Midwest region; PJM is the Mid-Atlantic region; SPP (Southwest Power Pool) covers the central southern US; Ercot covers most of Texas.

Electric generating capacity build, by fuel type

US new electric generating capacity build, by fuel type



Source: EIA, BloombergNEF. Note: Solar capacity counted in alternating current (AC) terms to enable a comparison to other grid-facing technology. Distributed rooftop solar not included.

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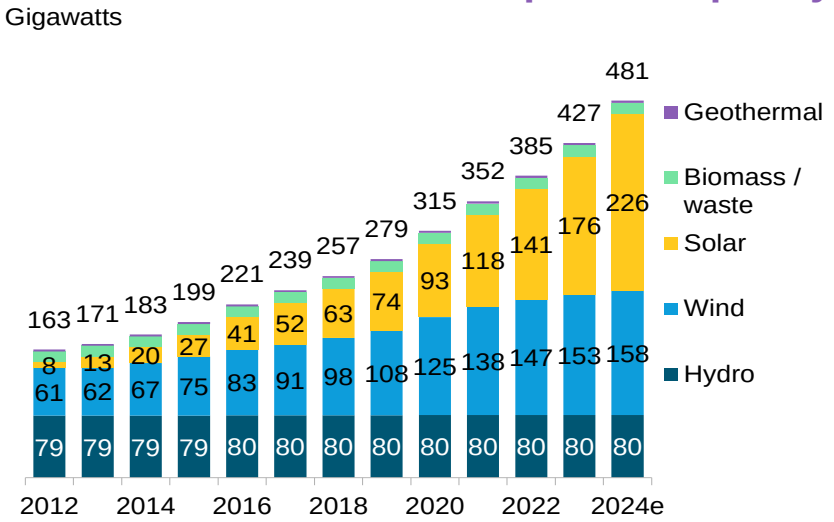
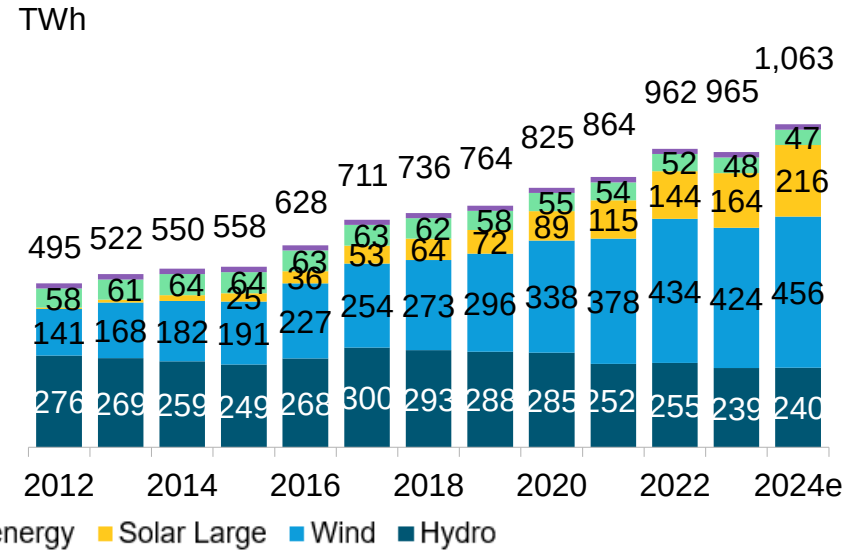
Cumulative renewable energy

US cumulative renewable power capacity



US renewable generation, by technology



Source: BloombergNEF, EIA. Note: All values are shown in alternating current (AC) except solar, which is in direct current (DC) capacity using a 1.34 conversion factor. Totals may not sum due to rounding. Values for 2024 are projected, accounting for seasonality, based on latest monthly values from EIA (data available through October 2024).

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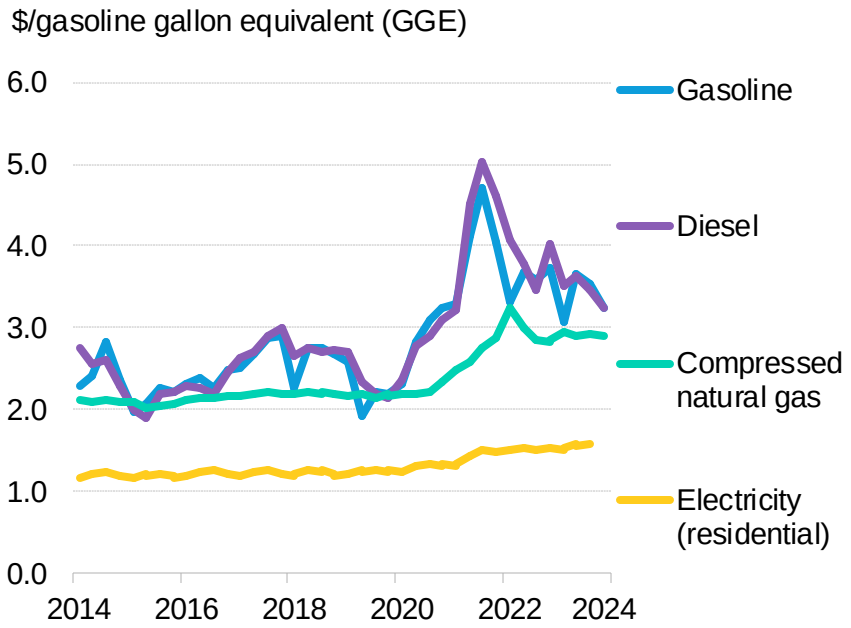
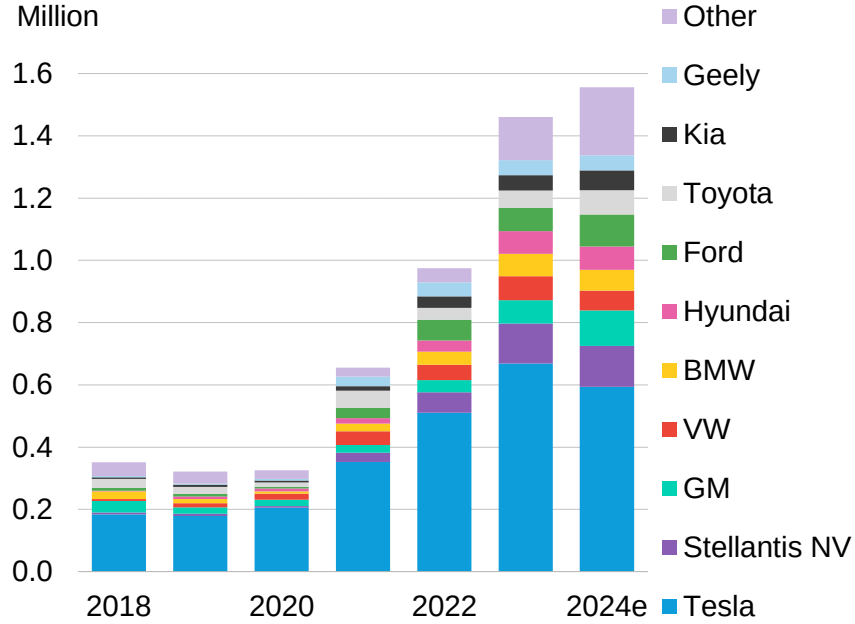
Transportation: Vehicle fuel prices and EV sales

Average vehicle fuel prices



US electric vehicle sales



Source: BloombergNEF, Marklines, US Department of Energy, EIA. Note: Electricity was converted from residential prices to $/gasoline gallon equivalent (GGE). Efficiency metrics used included 1 kilowatt-hour = 3.54 miles driven and 1 kilowatt-hour = 33.7 GGE.

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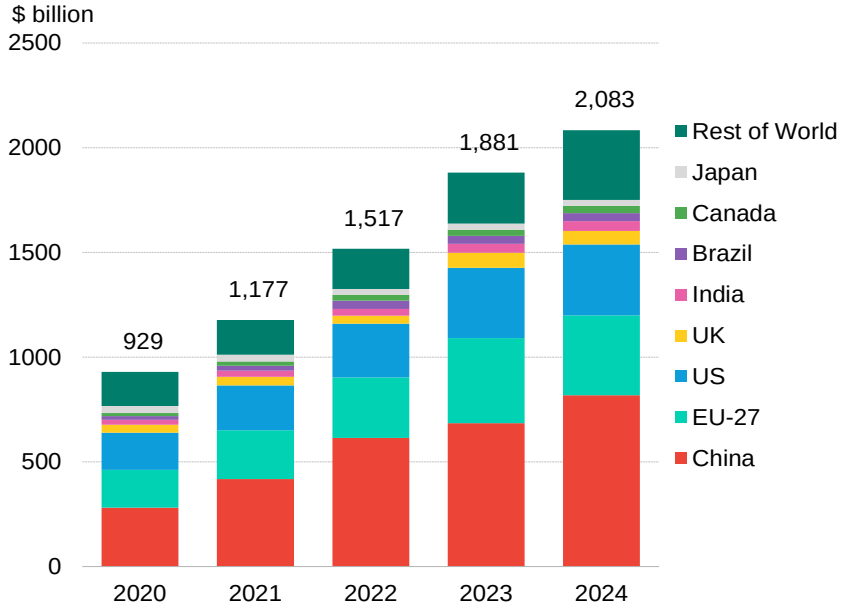
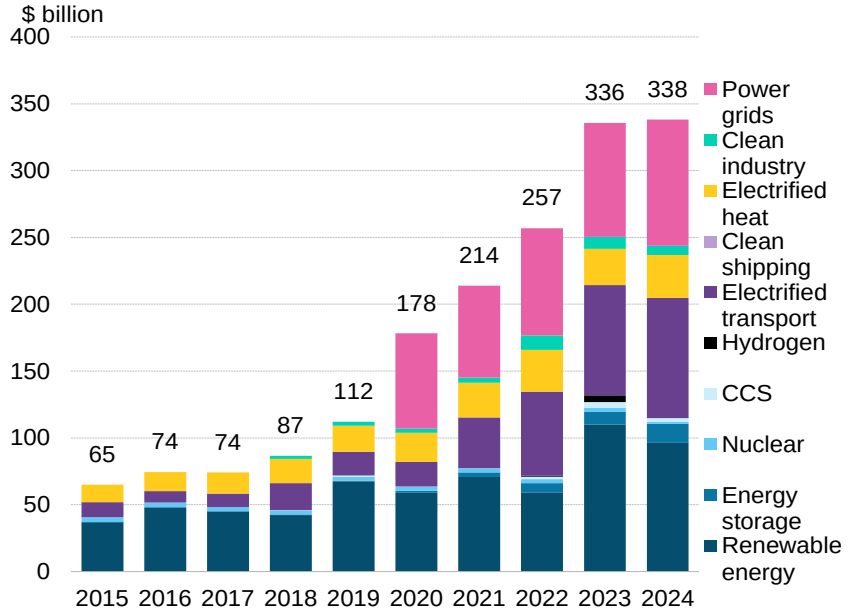
Energy transition investment

Energy transition investment, by market



US energy transition investment, by sector



Source: BloombergNEF Energy Transition Investment Trends database. Note: Start years differ by sector, but all sectors are present from 2020 onwards. Most notably, nuclear figures start in 2015 and power grids in 2020. CCS refers to carbon capture and storage.

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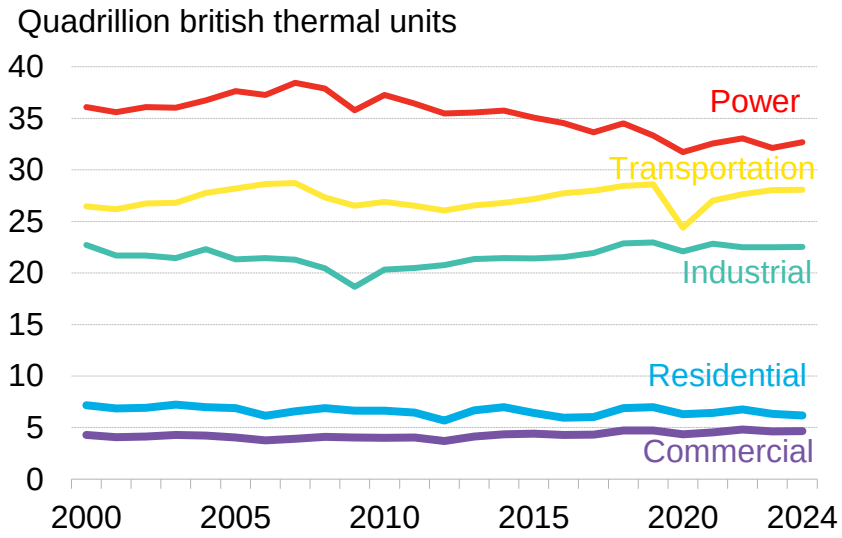
Appendix

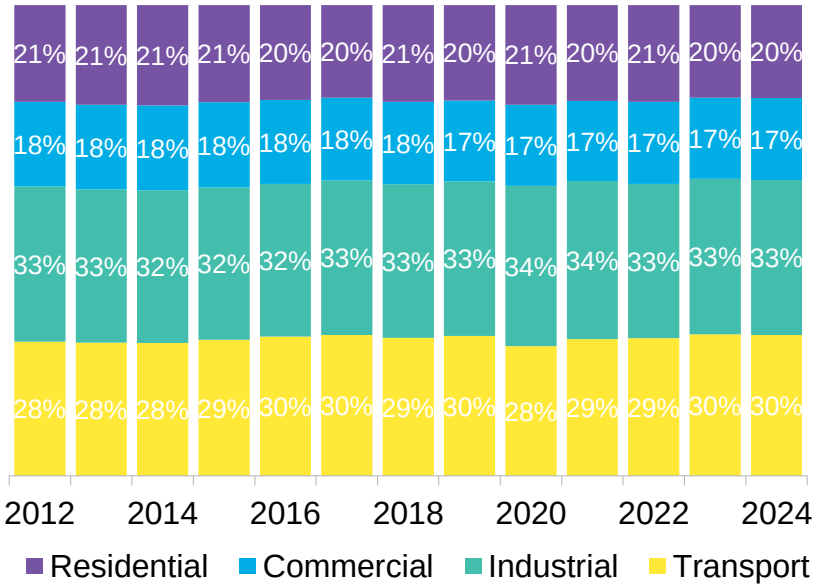
Extra slides as needed

Primary energy consumption by sector

US primary energy consumption



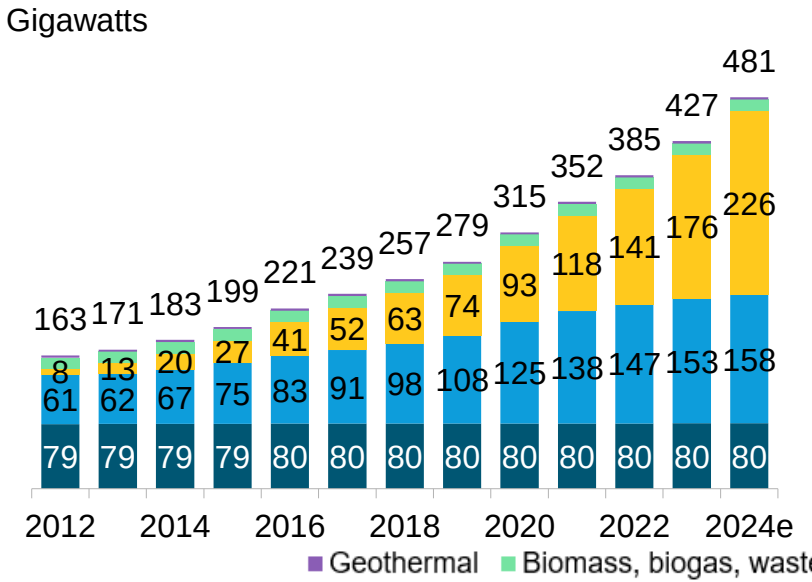
US end-use energy consumption



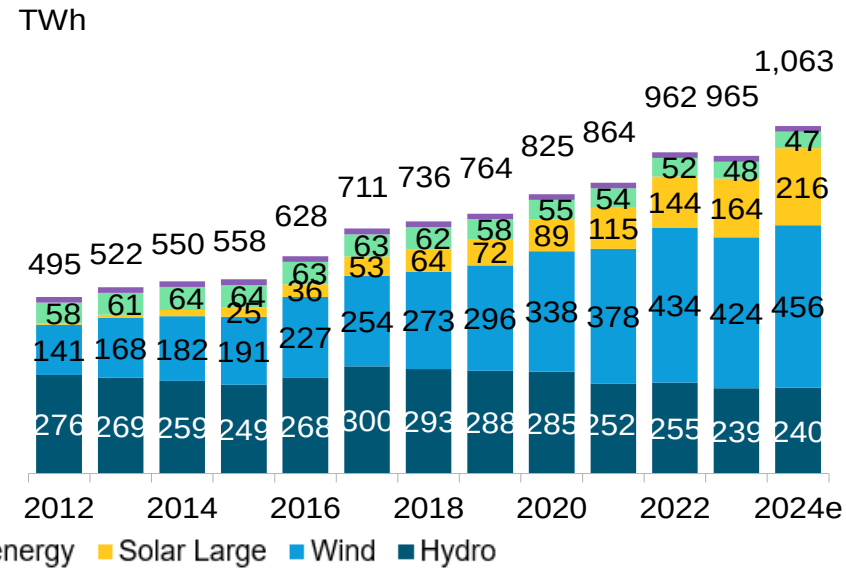
Source: EIA, EPA, BloombergNEF. Note: Values for 2024 are projected, accounting for seasonality, based on latest monthly values from the EIA (data available through September 2024). Electricity is excluded from industrial, residential, commercial and transportation sectors and aggregated in "power" in the left-hand chart. In the right-hand chart, sector end uses include electricity use

Cumulative renewable energy

US cumulative renewable power capacity



US renewable generation, by technology



Source: BloombergNEF, EIA. Note: All values are shown in alternating current (AC) except solar, which is in direct current (DC) capacity using a 1.34 conversion factor. Totals may not sum due to rounding. Values for 2024 are projected, accounting for seasonality, based on latest monthly values from EIA (data available through October 2024).

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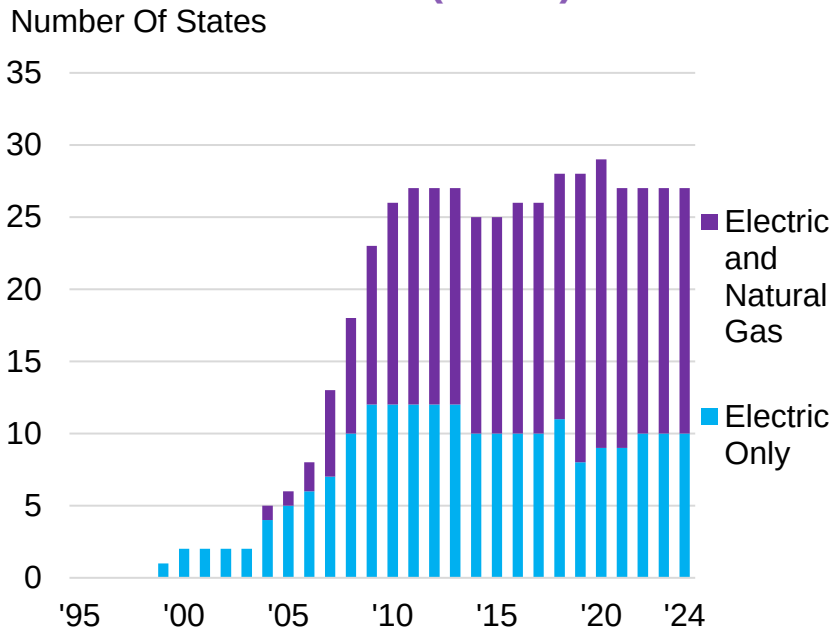
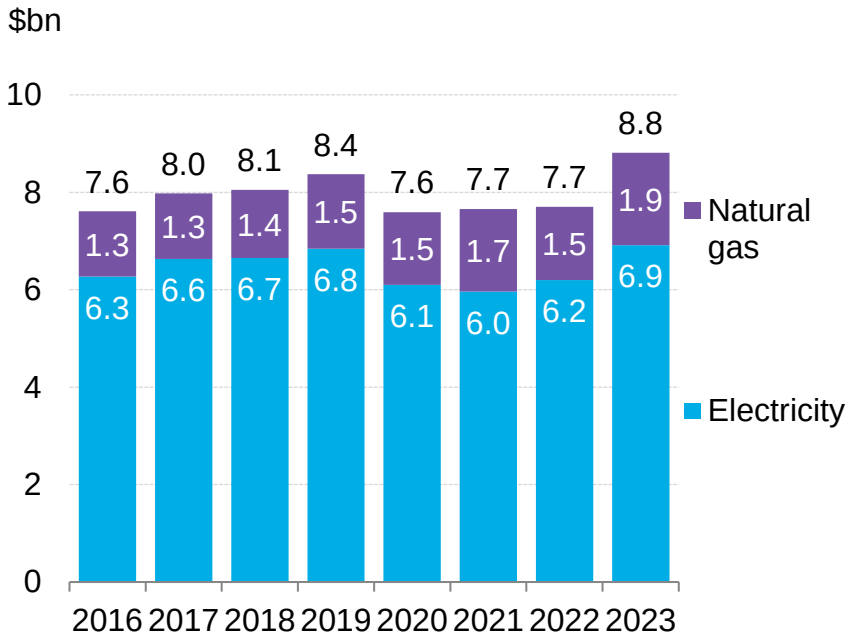
Energy efficiency

US states with Energy Efficiency Resource Standards (EERS)



Utility energy efficiency spending



Source: American Council for an Energy Efficient Economy (ACEEE) Next Generation Energy Efficiency Resource Standards Update(January 2025).

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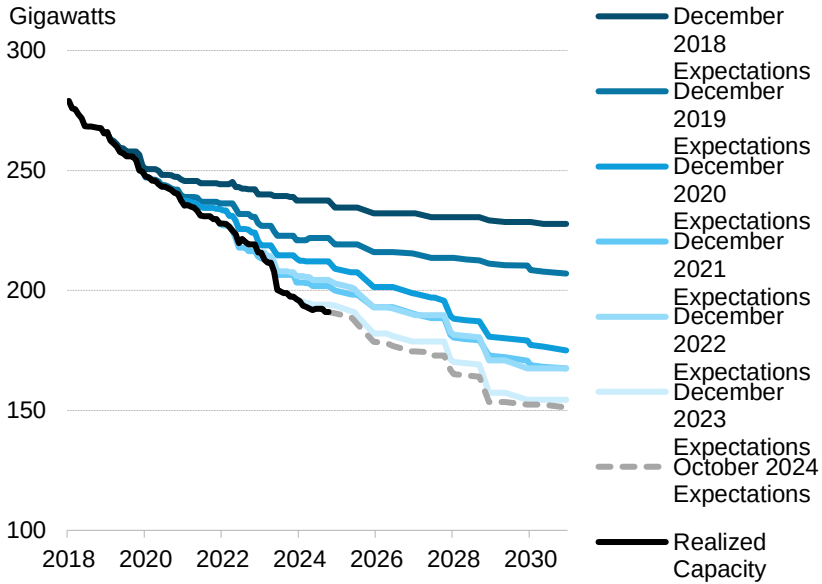
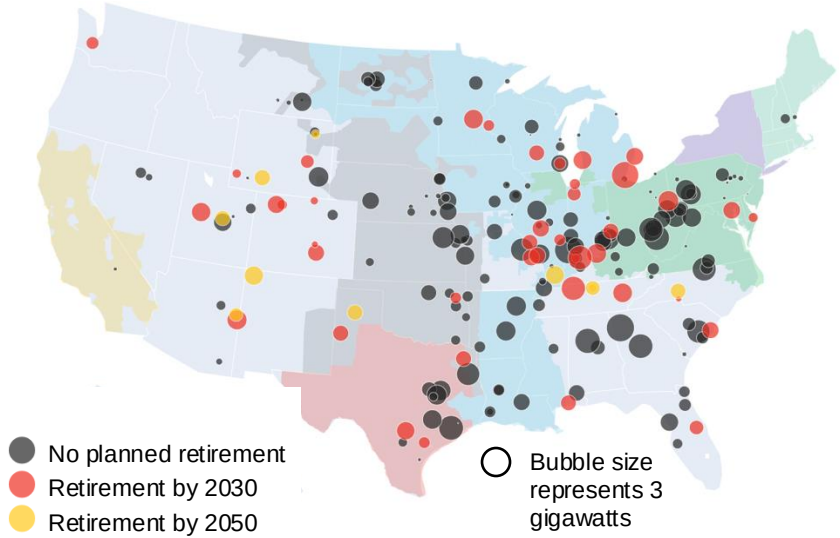
Trends in coal retirement expectations

Realized and planned coal fleet expectations



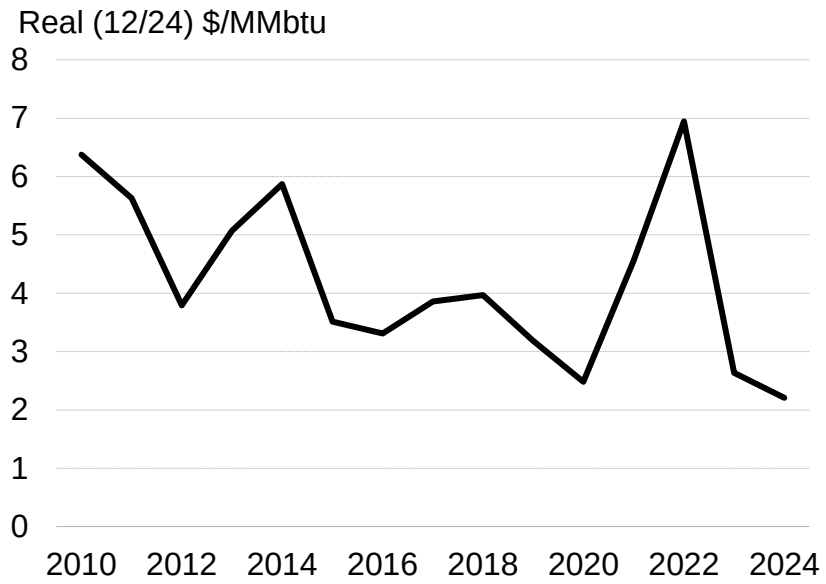
Operating and planned coal retirements



Source: EIA, BloombergNEF. Note: Map figure and 2024 expectations use October EIA data. Prior year expectations use December EIA data.

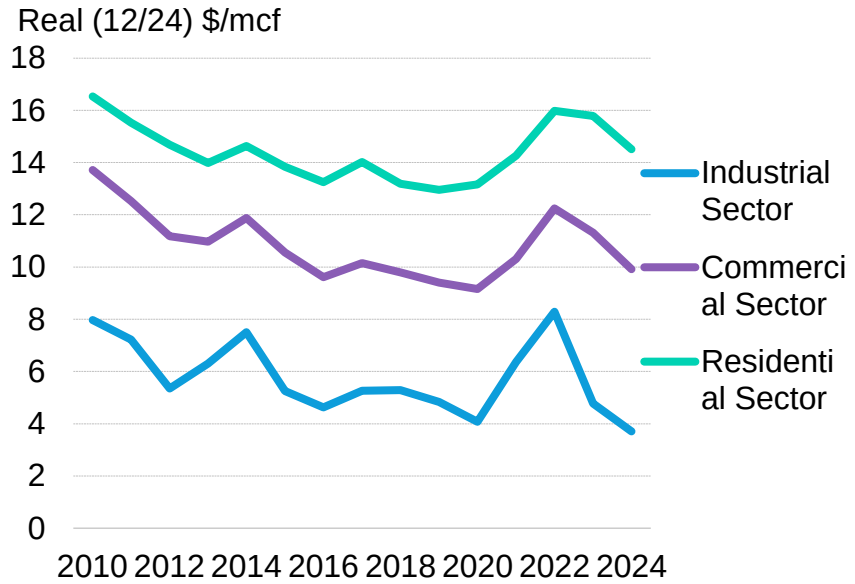
US energy overview: US natural gas pricing, wholesale and by end use

Natural gas wholesale prices at Henry Hub, LA



Source: BloombergNEF, EIA Short Term Energy Outlook. LA is Louisiana

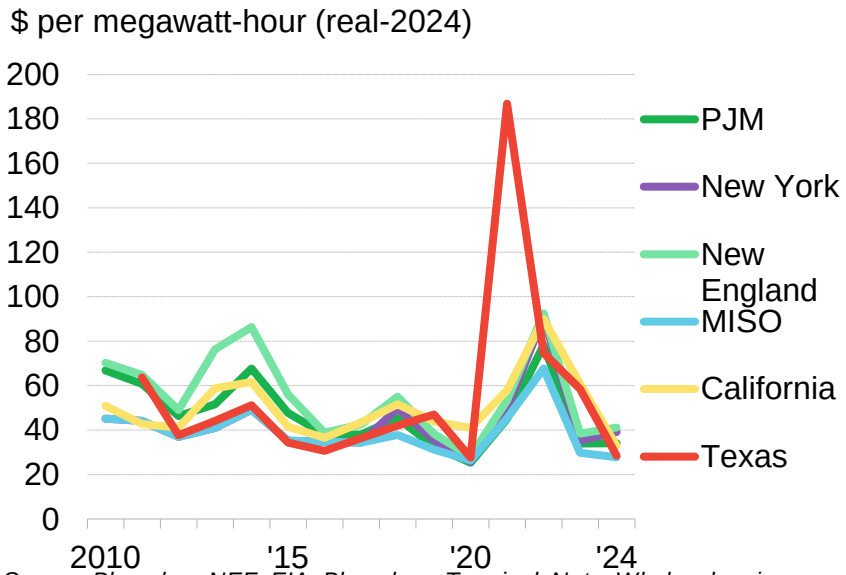
Natural gas prices to end users, US average



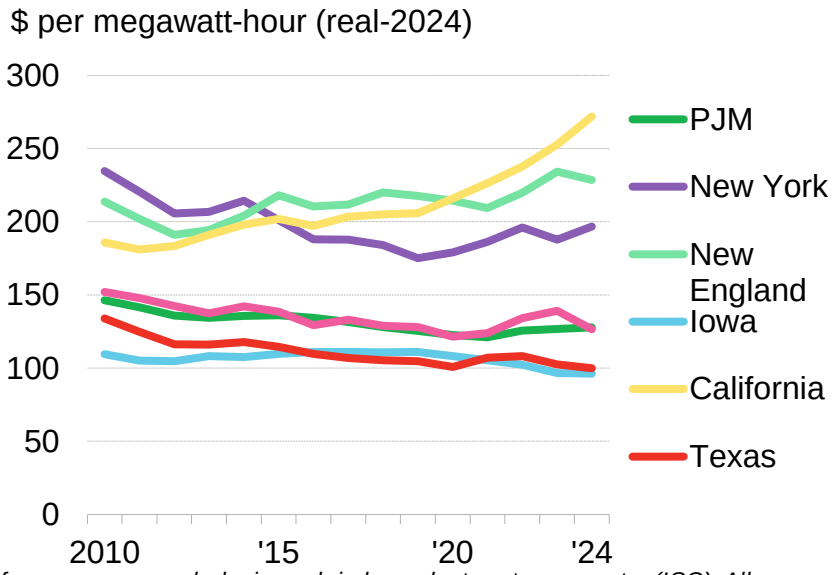
Source: BloombergNEF, EIA Short Term Energy Outlook.

Retail and wholesale power prices

Wholesale power prices



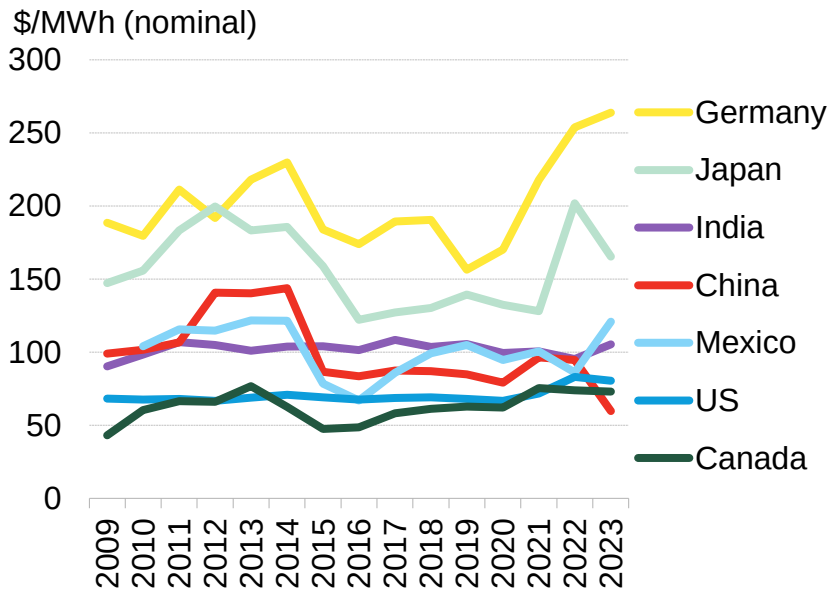
Retail power prices



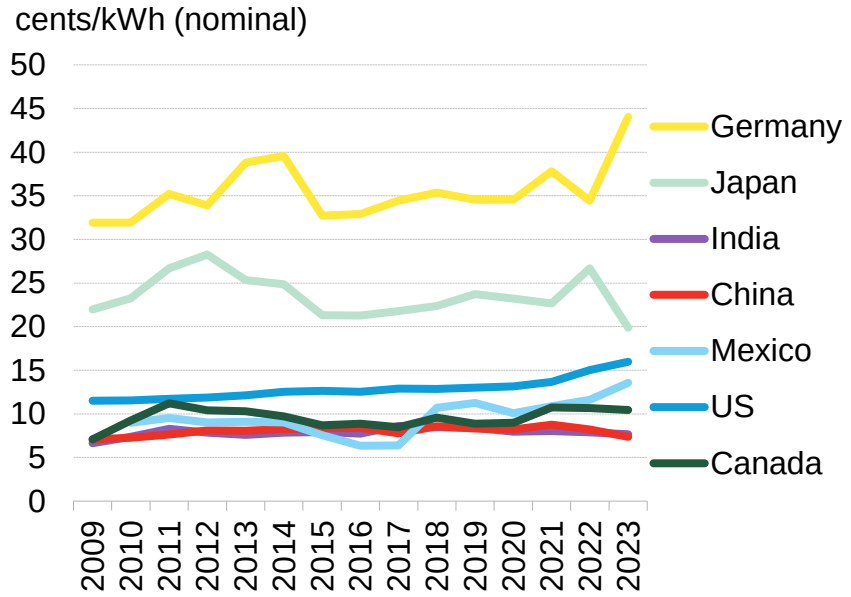
Source: BloombergNEF, EIA, Bloomberg Terminal. Note: Wholesale prices are taken from proxy power hubs in each independent system operator (ISO). All prices are in real 2024USD. Retail power prices shown here are not exact retail rates but weighted averages across all rate classes by state, as published by the EIA. Retail prices are updated through September 2024. MISO is the Midwest region; PJM is the Mid-Atlantic region.

Average electricity rates by country

Industrial power prices



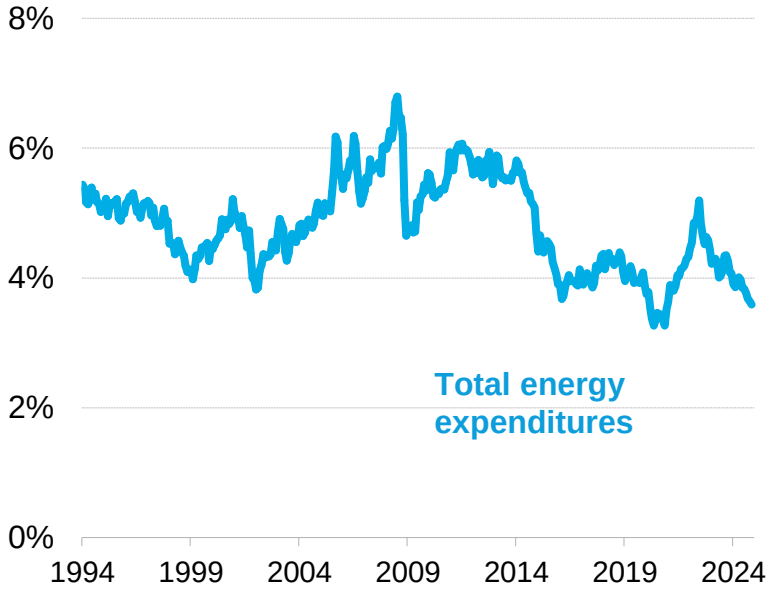
Residential power prices



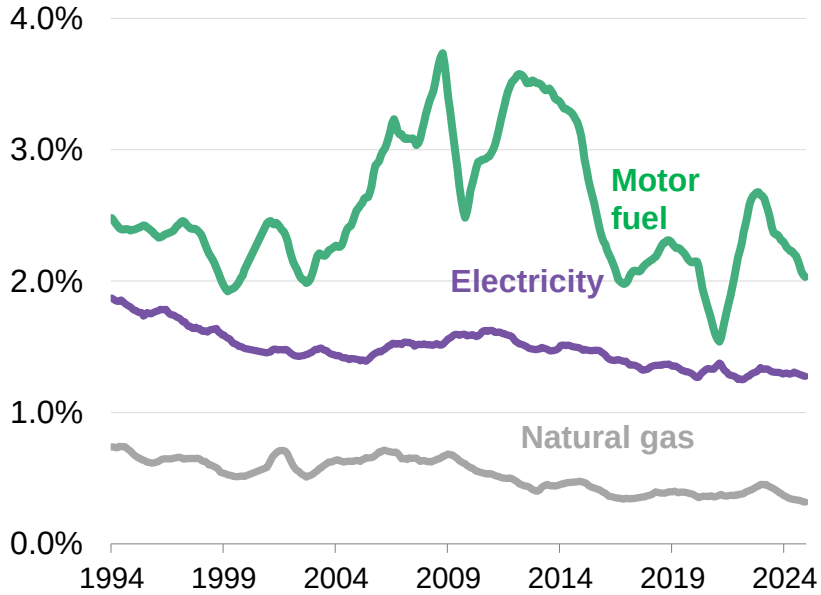
Source: BloombergNEF, government sources (EIA for the US). Note: Prices are averages (and in most cases, weighted averages) across all regions within the country. Japanese data are for the commercial and industrial (C&I) segment.

Energy as a share of personal consumption expenditures

Total energy goods and services as share of total consumption expenditure



Components of total consumption expenditure, 12-month rolling average



Source: Bureau of Economic Analysis "Table 2.4.5U. Personal Consumption Expenditures by Type of Product" , BloombergNEF.

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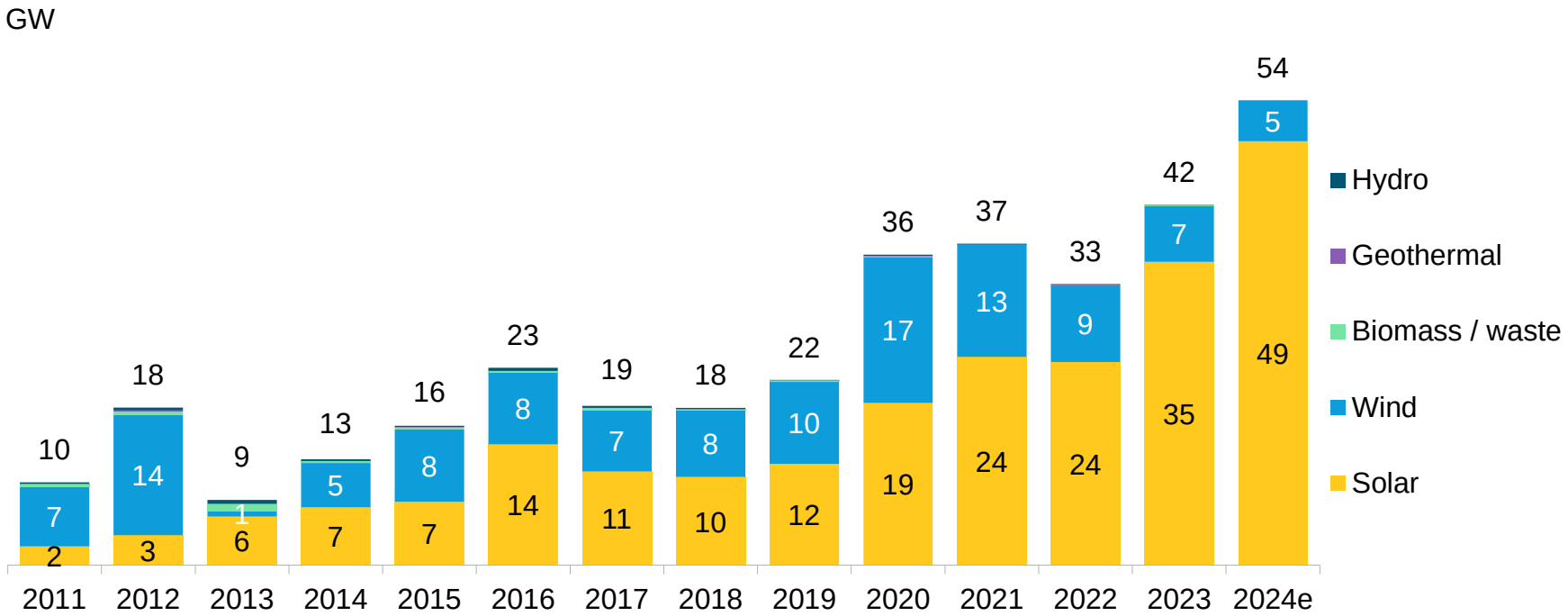
Renewable energy capacity build by technology



Source: BloombergNEF. Note: All values are shown in alternating current (AC) except solar, which is included as direct current (DC) capacity using a 1.34 conversion factor. Numbers include utility-scale (>1MW) projects of all types, rooftop solar, and small- and medium-sized wind. Includes installations or planned installations reported to the EIA through December 2024, as well as BloombergNEF projections.

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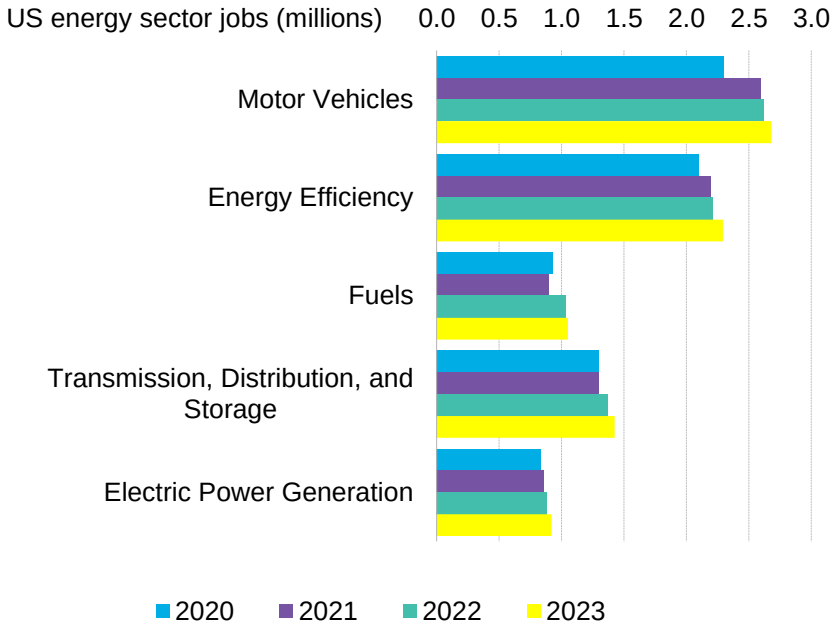
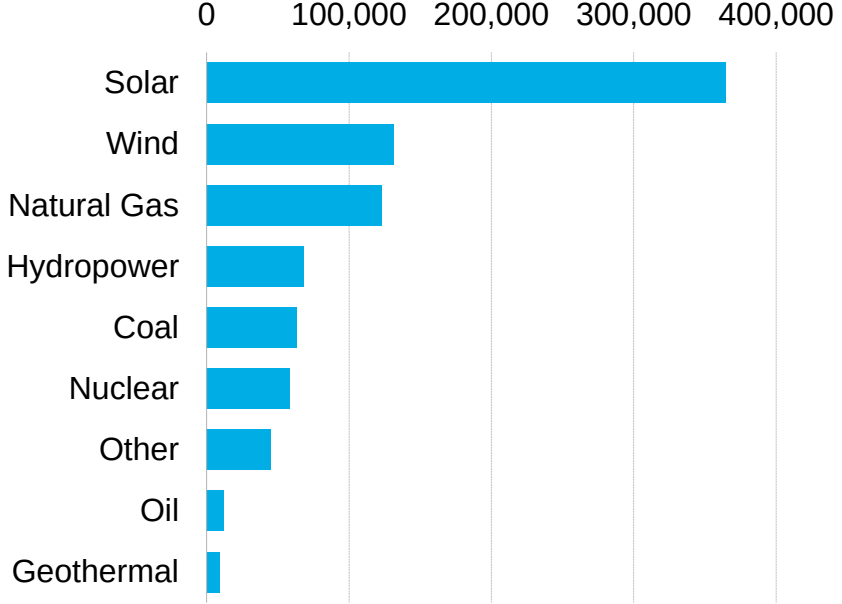
Jobs in select segments of the energy sector

Jobs in select energy segments, 2019-22



Jobs by power-generating technology, 2023



Source: US Department of Energy's 2024 Energy & Employment Report

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Our expert coverage assesses pathways for the power, transport, industry, buildings and agriculture sectors to adapt to the energy transition.

We help commodity trading, corporate strategy, finance and policy professionals navigate change and generate opportunities.

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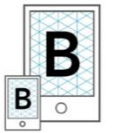

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