2019 Factbook Launch

Media briefing

Ethan Zindler

February 13, 2019

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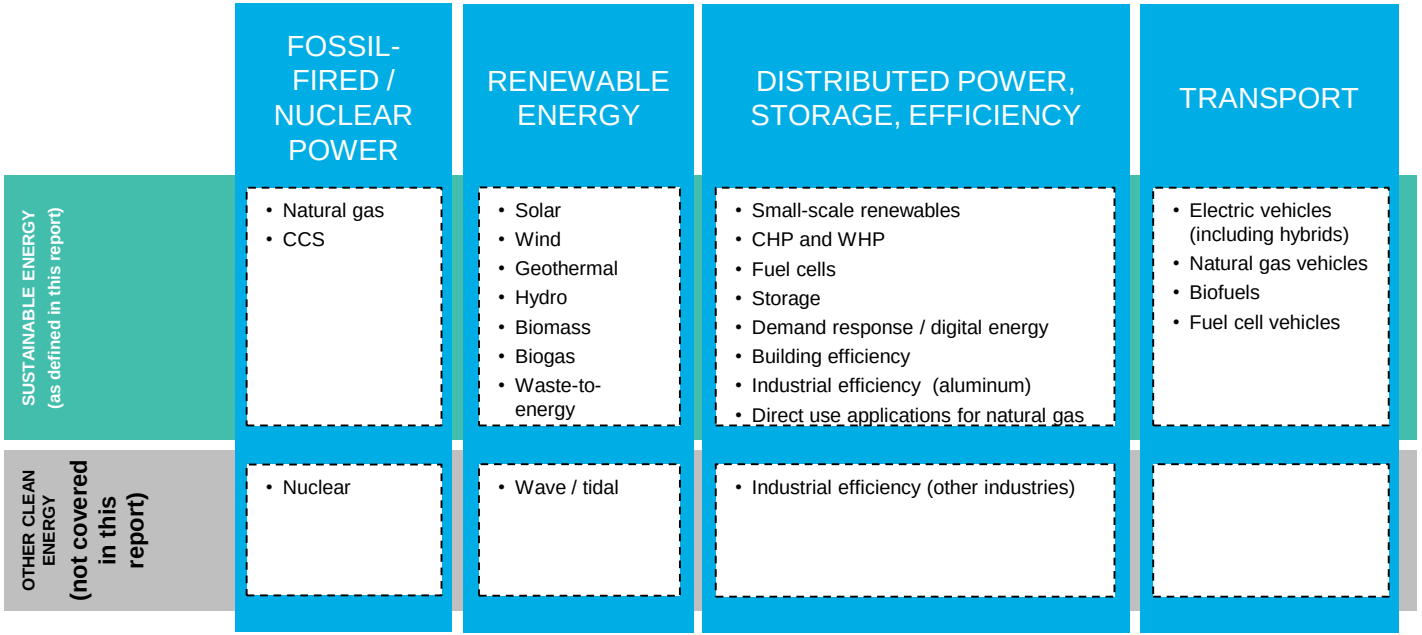
About the Factbook: terminology



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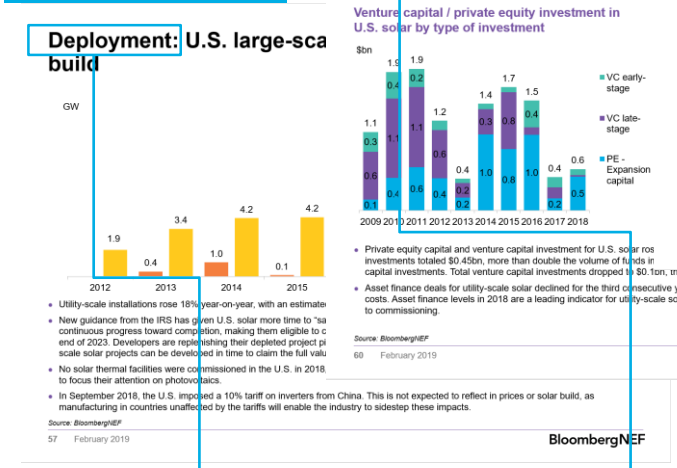
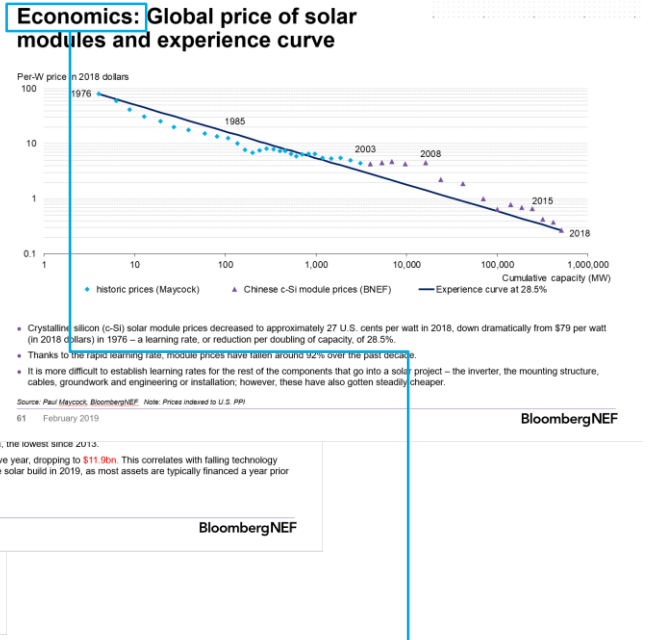
About the Factbook: sector sub-sections

For each sector, the report shows data pertaining to three types of metrics (sometimes multiple charts for each type of metric)





Deployment: captures how much activity is happening in the sector, typically in terms of new build or supply and demand

Financing: captures the amount of investment entering the sector

Economics: captures the costs of implementing projects or adopting technologies in the sector

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Factbook key findings

- U.S. power continued de-carbonizing thanks to gas and renewables growth, coal retirements.
- Employment grew.
- Energy remained affordable by historical standards to consumers.
- Electric vehicle sales gained traction.

But…

- Energy productivity improvements stalled.
- Energy consumption overall went up.
- CO2 emissions rose.

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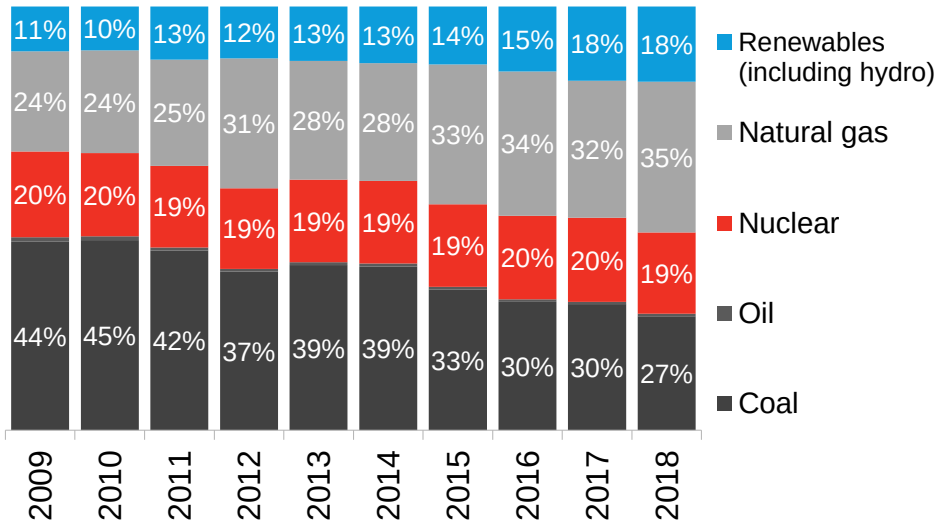
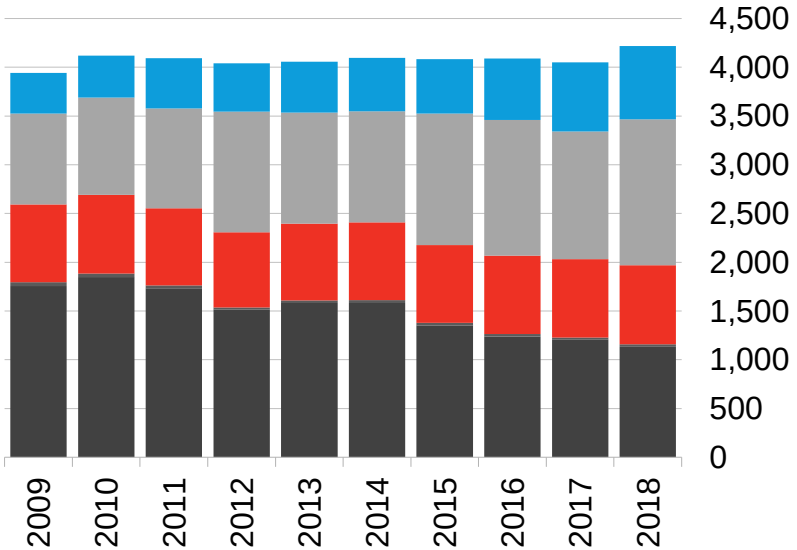
U.S. energy overview: Electricity generation mix

U.S. electricity generation by fuel type (%)



U.S. electricity generation by fuel type (TWh)



Source: U.S. Energy Information Administration, BloombergNEF

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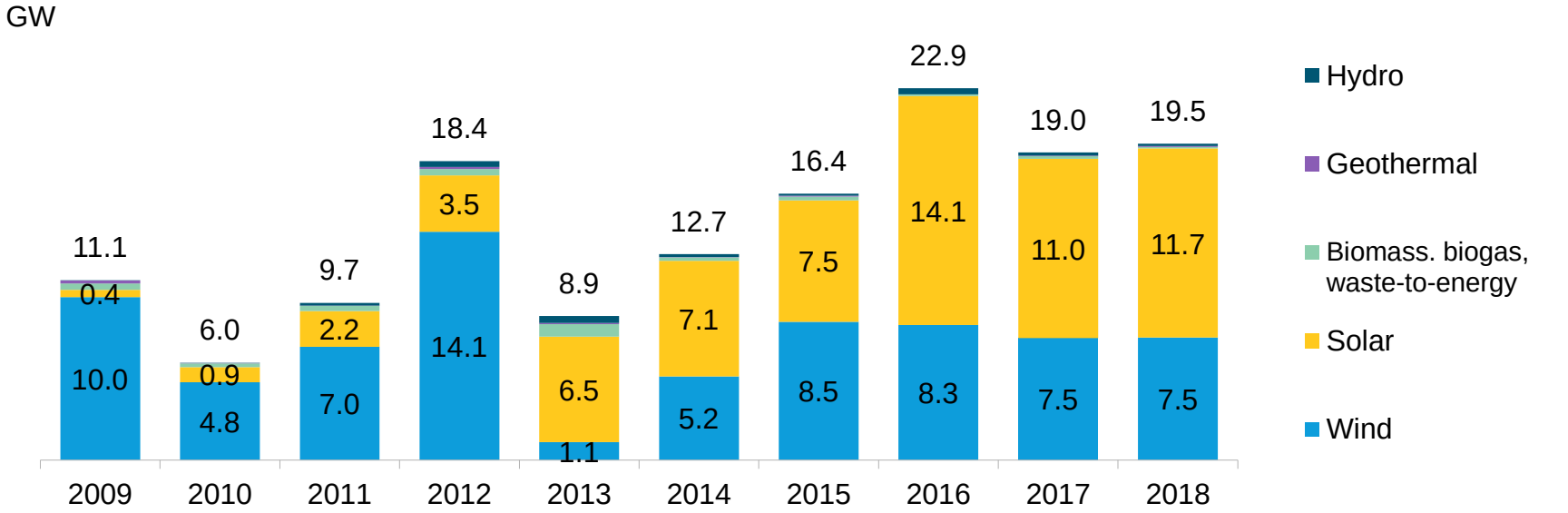
U.S. energy overview: Renewable energy capacity build by technology



Source: BloombergNEF, EIA Notes: All values are shown in AC except solar, which is included as DC capacity. 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 October 2018, as well as BNEF projections.

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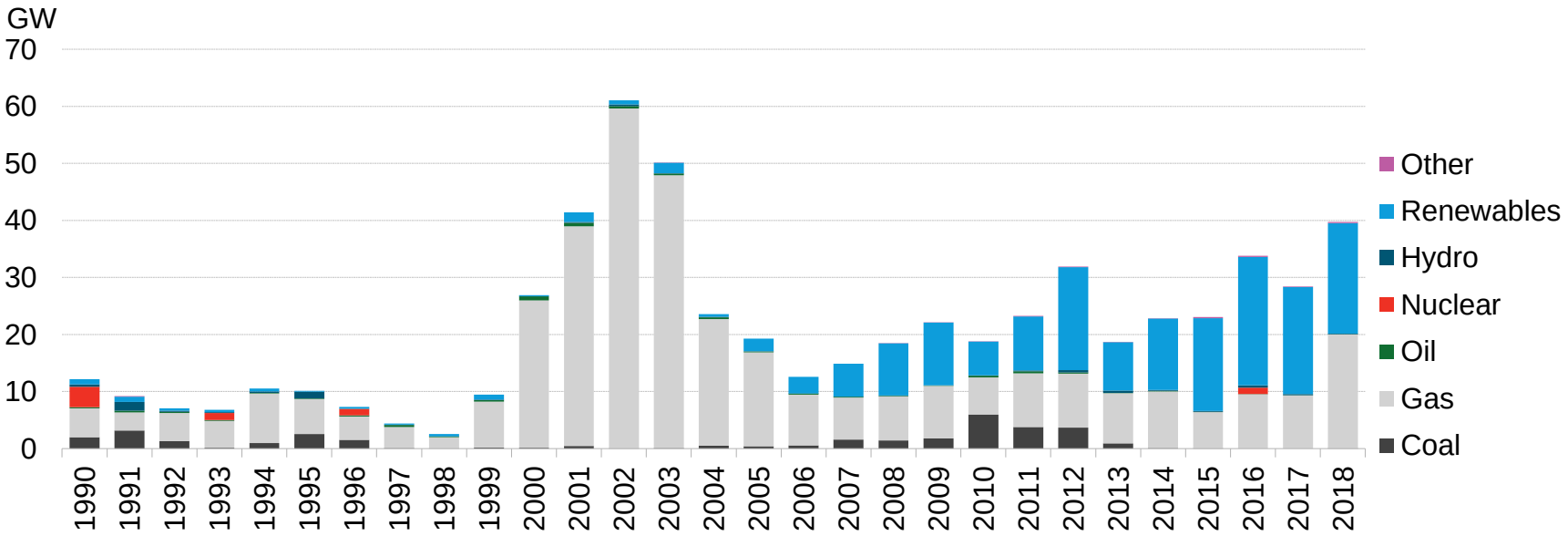
U.S. energy overview: Electric generating capacity build by fuel type



Source: EIA, BloombergNEF Note: All values are shown in AC except solar, which is included as DC capacity. "Renewables" here does not include hydro, which is shown separately. All capacity figures represent summer generating capacity. Includes installations or planned installations reported to the EIA through October 2018, as well as BNEF projections.

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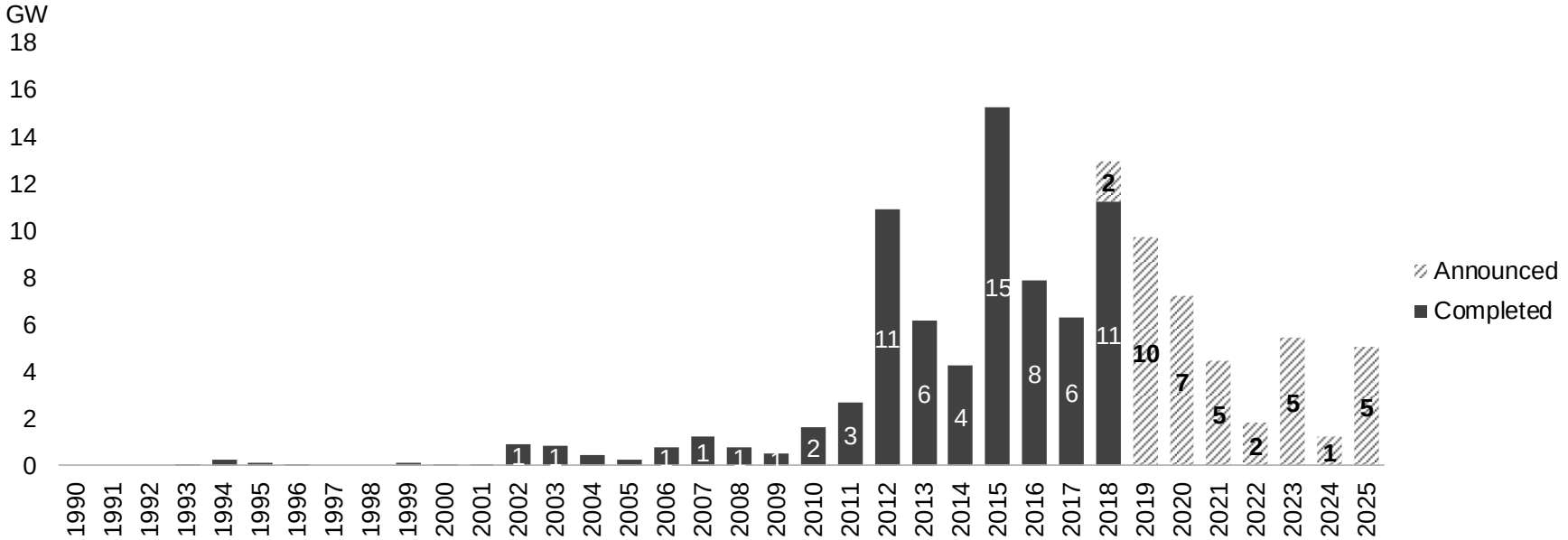
U.S. energy overview: Completed and announced coal-fired plant retirements



Source: EIA, company announcements, BloombergNEF Notes: "Retirements" does not include conversions from coal to natural gas or biomass; includes retirements or announced retirements reported to the EIA through October 2018. All capacity figures represent summer generating capacity.

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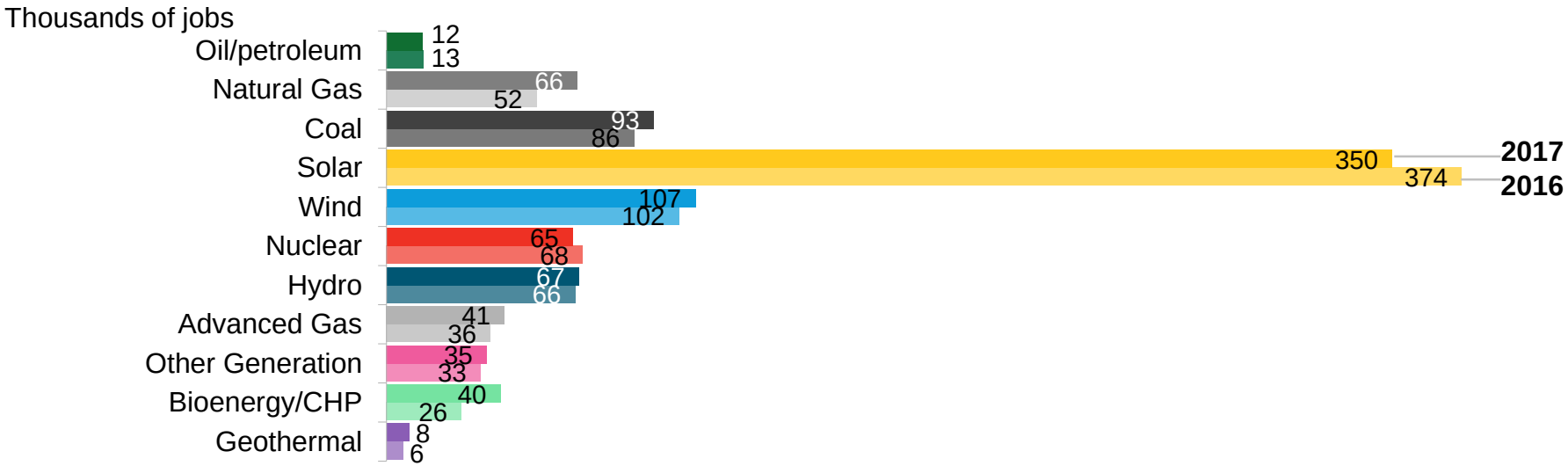
U.S. energy overview: Jobs in electricity generation



Source: The U.S. Energy Employment Report, NASEO and EFI. *Notes: 2016 data is from Q1 2016, 2017 data is from 2Q 2017. "Advanced gas" uses a variety of technologies including high efficiency compressor systems, advanced low NOx combustion technology, first application of closed loop steam cooling in an industrial gas turbine, advanced turbine blade and vane materials, high temperature tbc and abradable coatings, advanced row 4 turbine blades, 3-d aero technology, or advanced brush seal.*

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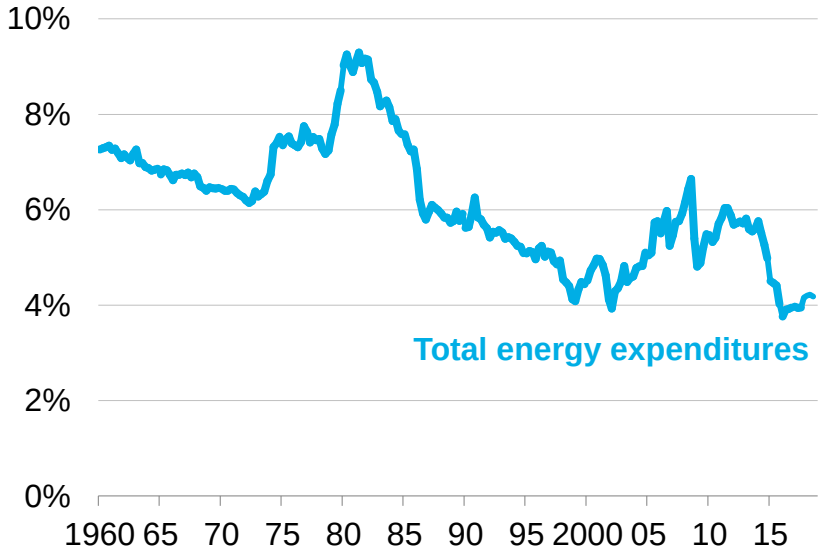
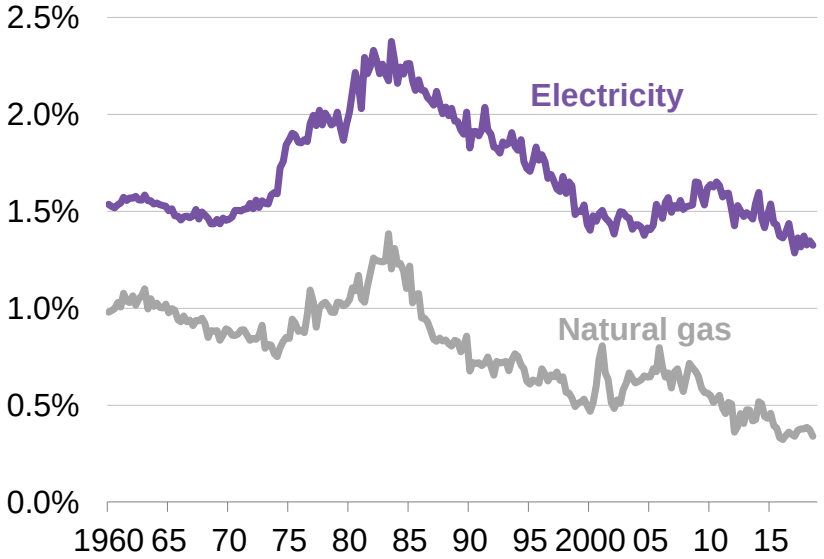
U.S. energy overview: Energy as a share of personal consumption expenditures

Total energy goods and services as share of total consumption expenditure



Electricity and natural gas as share of total consumption expenditure



Source: Bureau of Economic Analysis, BNEF

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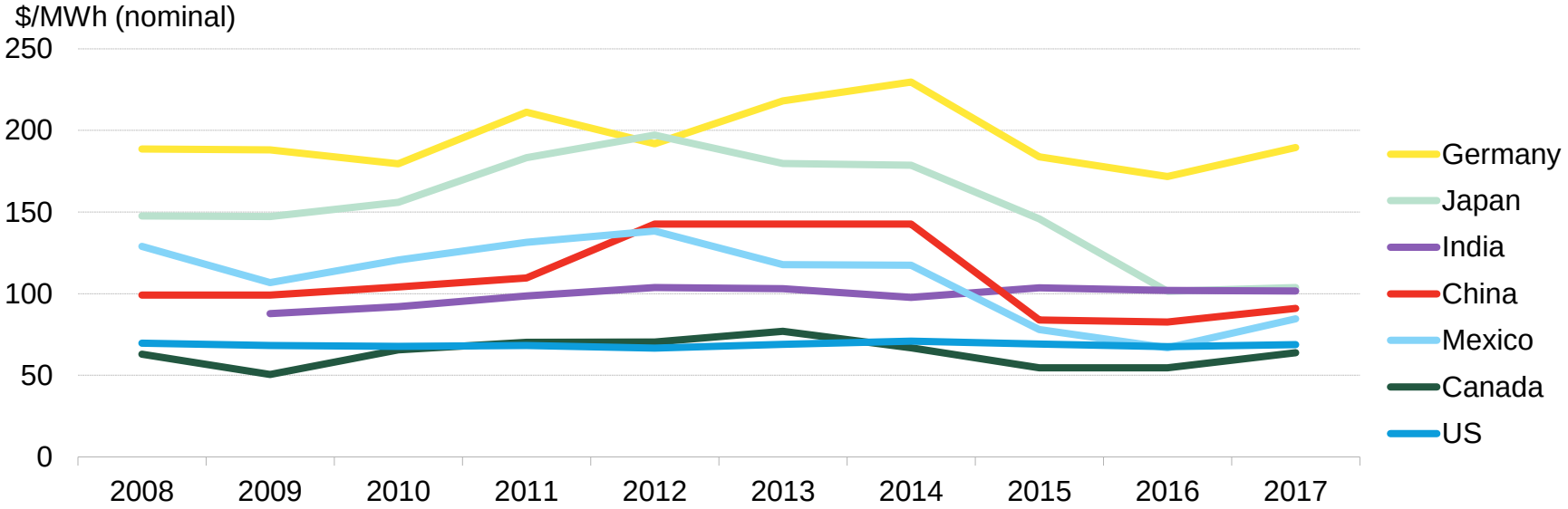
U.S. energy overview: Average electricity rates for industry by country



Source: BloombergNEF, government sources (EIA for the U.S.) Notes: Prices are averages (and in most cases, weighted averages) across all regions within the country. Japanese data is for the C&I segment and 2016 figures come from a different source than preceding years.

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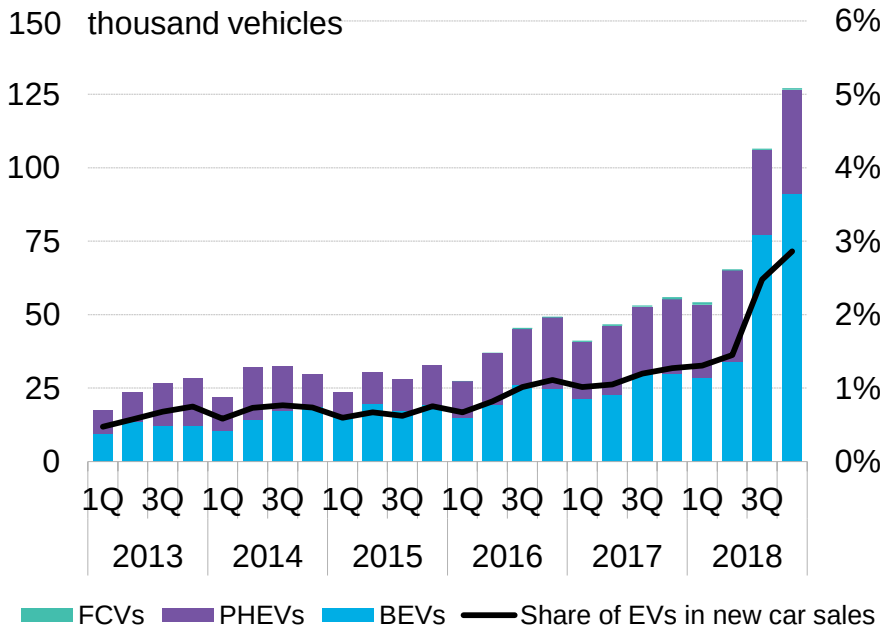
Deployment: Electric vehicle and hybrid electric vehicle sales in the U.S.

U.S. EV and FCV sales



Source: BloombergNEF, Bloomberg Terminal, Marklines, California Fuel Cell Partnership. Note: PHEV stands for plug-in hybrid electric vehicle, BEV stands for battery electric vehicle, HEV stands for hybrid electric vehicle and FCV stands for fuel cell vehicle. EVs includes BEVs and PHEVs. FCV sales data not available prior to 2016. FCV sales numbers too low to be visible.

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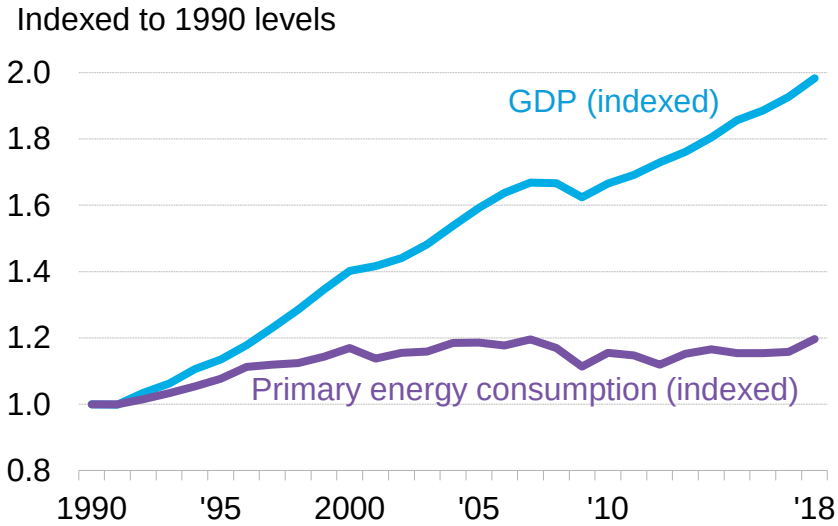
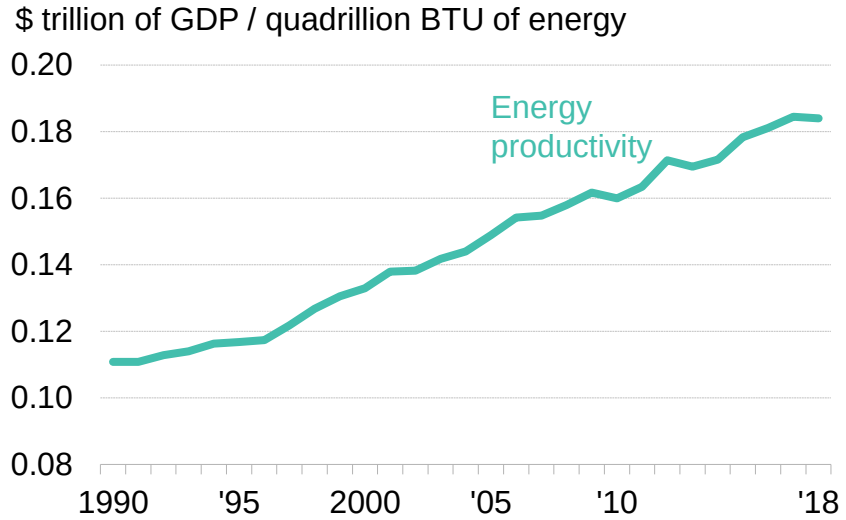
U.S. energy overview: Economy's energy productivity

U.S. GDP and primary energy consumption



U.S. energy productivity



Source: Bureau of Economic Analysis, EIA, Lawrence Berkeley National Laboratory, BNEF Notes: Values for 2018 are projected, accounting for seasonality, based on latest monthly values from EIA (data available through October 2018). 2018 GDP estimate is a projection from economists compiled at ECFC <GO> on the Bloomberg Terminal.

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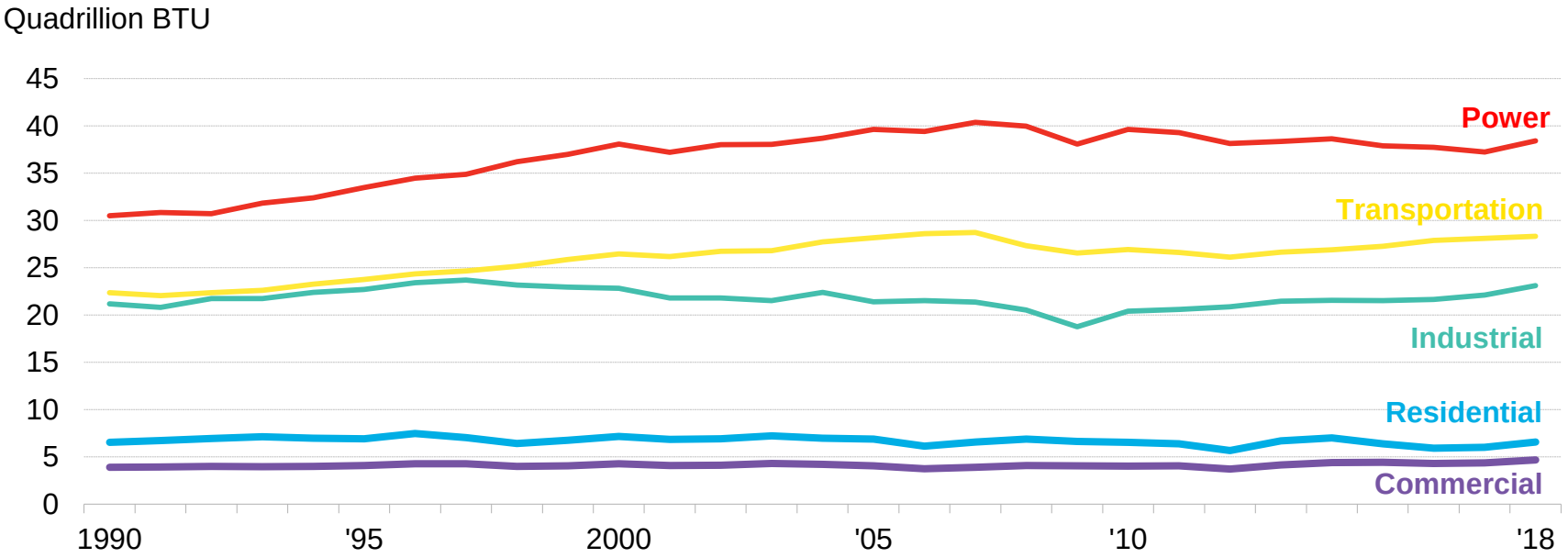
U.S. energy overview: Primary energy consumption by sector



Source: EIA, BNEF Notes: Values for 2018 are projected, accounting for seasonality, based on latest monthly values from EIA (data available through September 2018)

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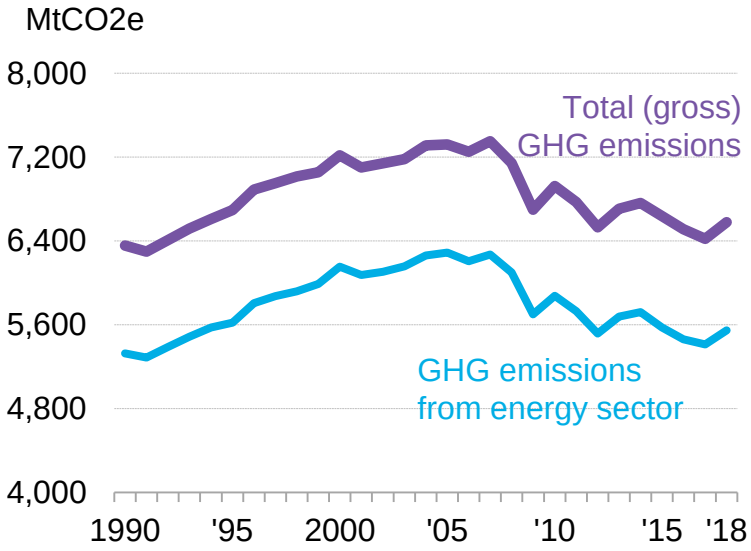
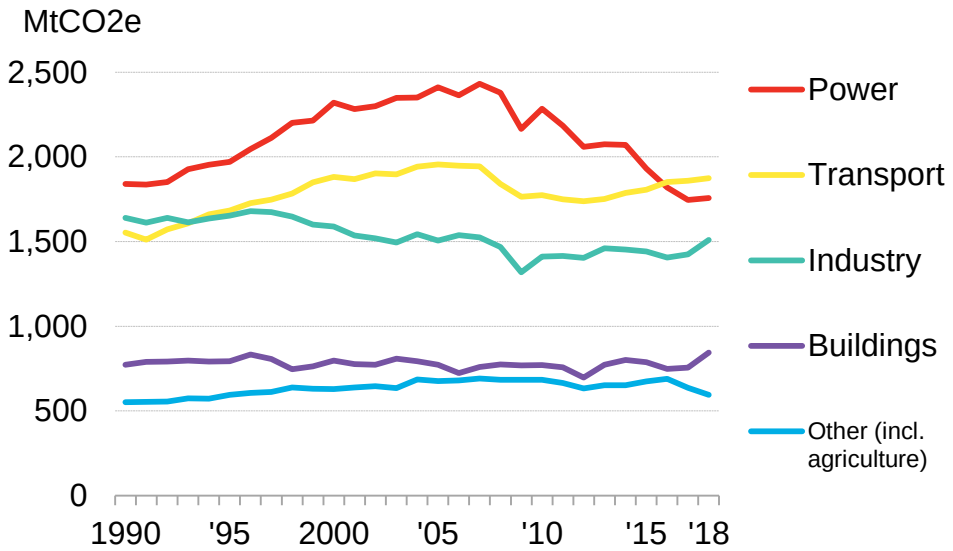
U.S. energy overview: Greenhouse gas (GHG) emissions

Economy-wide and energy sector emissions



Emissions by sector



Source: BloombergNEF, EIA, EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016 Notes: "Sinks" refer to forests and green areas which absorb carbon dioxide. Values for 2018 are projected, accounting for seasonality, based on monthly values from EIA available through September 2018.

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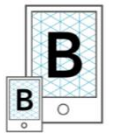

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