bp Energy Outlook 2025

US insights

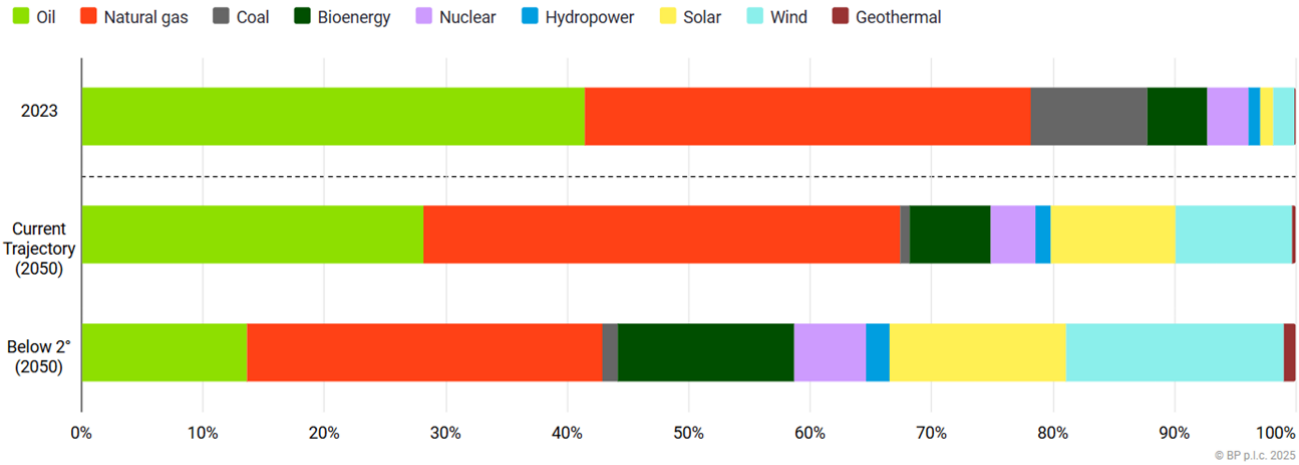
Emissions fall by 40-100% vs 2023 levels by 2050, predominantly in the second half of the Outlook, as the energy mix shifts from oil to natural gas and renewable energy

Fossil fuels share of the energy mix **falls** from almost 90% in 2023 to around **40-70% by 2050**

Wind and solar become the largest contributor to power generation, **growing** to **60% in 2050** in Current Trajectory

The US emerges as a dominant supply hub for LNG with exports **doubling** to over **200Bcm by 2035**

Primary energy consumption mix by source



Summary

- The US economy grows by 1.9% per year from 2023-50, marginally lower than the 2.1% per year of the last decade.
- Total final energy consumption growth slows and peaks by the end of the decade as energy efficiency continues to improve.
- Natural gas production increases by around 240Bcm by 2035 in **Current Trajectory** as exports roughly double over this period. Exports grow to over 300Bcm by 2050 in **Current Trajectory** but fall back to below current levels in **Below 2°** as the world prioritizes renewables.
- Natural gas demand grows by almost 15% by 2035 in **Current Trajectory**, with most of this being used to support power generation.
- Power demand grows at around 2% per year over the next decade with data centres accounting for 40% of this demand.
- Net emissions continue to decline with a 40% reduction by 2050 in **Current Trajectory** and nearly a 100% reduction in **Below 2°**.
- Electricity grows from 21% of total final consumption in 2023 to around 40% in **Current Trajectory** and 60% in **Below 2°**.
- Wind and solar's share of power generation rises from 15% in 2023 to around 60-70% in 2050.
- Tight oil production declines to 10Mb/d by 2050 as falling demand disproportionately impacts non-OPEC+ producers.
- Net oil exports remain around 3Mb/d through 2035 in **Current Trajectory** as domestic demand and production fall at the same pace. In **Below 2°**, net exports decrease 75% vs 2024 levels as OPEC+ gains market share.
- Coal's share in the primary energy mix drops from 9% to 1% by 2050 in both scenarios.
- Nuclear capacity rises to 100GW by 2050 in **Current Trajectory**, driven primarily by lifetime extensions of the existing fleet.
- Low carbon hydrogen production grows to over 10Mt in 2050 in **Current Trajectory** and nearly 60Mt in **Below 2°**.

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	Level in 2050			Shares in 2050 (%)		Change 2023-2050 (% p.a.)	
	2023	Current Trajectory	Below 2°	2023	Current Trajectory	Below 2°	Current Trajectory	Below 2°
Primary energy consumption by energy type (EJ)								
Total	**87**	**79**	**59**	**100%**	**100%**	**100%**	**-0.3%**	**-1.4%**
Oil†	36	22	7.7	41 %	28%	13%	-1.7%	-5.5%
Natural gas	32	31	16	37%	39%	28%	-0.1%	-2.4%
Coal	8.3	0.7	0.7	9.6%	0.8%	1.2%	-8.9%	-8.7%
Nuclear	2.9	2.9	3.3	3.4%	3.7%	5.7%	0%	0.5%
Hydro	0.9	1.0	1.1	1.0%	1.2%	1.9%	0.5%	0.9%
Renewables (incl. biofuels)	6.8	21	29	7.8%	27%	50%	4.3%	5.6%
Primary energy consumption (native units)								
Oil† (Mb/d)	19	13	4.8				-1.5%	-5.0%
Natural gas (Bcm)	882	865	455				-0.1%	-2.4%
Total final consumption by sector (EJ)								
Total	**75**	**71**	**49**	**100%**	**100%**	**100%**	**-0.2%**	**-1.6%**
Transport	27	20	14	36%	28%	28%	-1.1%	-2.4%
Feedstocks	7.3	8.7	6.5	9.7%	12%	13%	0.7%	-0.4%
Buildings	20	22	14	27 %	31%	28%	0.2%	-1.5%
Industry	21	20	15	28%	29%	31%	-0.1%	-1.2%
Generation								
Power (TWh)	4,440	7,902	8,802				2.2%	2.6%
Hydrogen (Mt)	8.9	20	58				2.9%	7.2%
Production								
Liquids† (Mb/d)	20	13	0.0				-1.7%	
Natural gas (Bcm)	1,035	1,212	489				0.6%	-2.7%
Coal (EJ)	12	0.6	0.4				-11%	-12%
Emissions								
Carbon emissions†† (Gt of CO_2e)	5.2	3.0	0.2				-2.1%	-11%
CCS (Mt of CO_2)	-5.1	-145	-997				13%	22%

EJ = exajoules

Primary energy is accounted using the direct equivalent method, which directly equates secondary energy from non-combustible sources to the primary energy used to produce it.

† Oil supply includes crude oil, shale oil, oil sands, natural gas liquids, liquid fuels derived from coal and gas, refinery gains, and biofuels.

†† Carbon emissions include CO_2 emissions from energy use, industrial processes, natural gas flaring, and methane emissions from energy production.

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