



# BP Energy Outlook

## Country and regional insights – US

We project that the US becomes energy self-sufficient in 2023 and maintains its position as the world's largest liquids and natural gas producer.

### Fast facts

1. The share of renewables in the fuel mix grows from 5% today to 13% in 2035.
2. By 2019 the US becomes a net exporter of natural gas and by 2027 a net exporter of liquids.
3. US energy production as a share of consumption rises from 91% in 2015 to 112% in 2035.

## +1%

Growth in US energy consumption

## 13%

Share of global energy consumption in 2035

## +24%

Growth in US energy production

## 15%

Share of global energy production in 2035

- Increasing consumption of natural gas (+25%), renewables (including biofuels) (+182%), and hydro (+15%), outweigh declines in coal (-50%), oil (-17%) and nuclear (-2%).
- Natural gas replaces oil as the leading fuel in US energy consumption around 2023 – increasing its share from 31% today to 39% in 2035. Oil's share of the fuel mix falls to 29% by 2035, the lowest level on record.
- The share of fossil fuels consumption falls to 77% by 2035, down from 85% today. Coal's share in the fuel mix drops to just 9% in 2035, compared to 17% in 2015, the lowest level on record.
- Renewables consumption (including biofuels) grows by 5% p.a. from 2015 to 2035, a slowdown in growth compared to the previous 20 year period of 9% p.a. from 1995-2015. Their share in the fuel mix grows from just 5% in 2015 to 13% in 2035.
- Energy consumed in power generation increases by 4% and by 2020 gas overtakes coal as the dominant fuel.
- Rising US production of gas (+55%) and oil (+26%) offset declines in coal (-39%).
- The US remains the world's largest producer of natural gas, accounting for 25% of global output in 2035. The US produces 70% of the world's shale gas by 2035.
- The US became the world's largest liquids producer (including biofuels) starting in 2013 and remains so through 2035.
- US tight oil output grows by 3 Mb/d to around 7 Mb/d. Shale gas production grows by 107% to 83 Bcf/d accounting for 72% of total US gas production.
- Slower demand growth (0.1% p.a.) and strong production growth (1.1% p.a.) allows the US to become energy self-sufficient in 2023.
- Energy intensity (the amount of energy required per unit of GDP) declines by 31% by 2035. Per capita energy use reaches its lowest level since at least 1965.



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	Level		Shares		Change (abs.)		Change (%)		Change (annual)*	
	2015	2035	2015	2035	1995-2015	2015-2035	1995-2015	2015-2035	1995-2015	2015-2035
Primary energy consumption (units in Mtoe unless otherwise noted)										
Total	2281	2312			160	31	8%	1%	0.4%	0.1%
Oil† (Mb/d)	18	15	36%	29%	1	-3	4%	-17%	0.2%	-1.0%
Gas (Bcf/d)	75	94	31%	39%	14	19	24%	25%	1.1%	1.1%
Coal	396	198	17%	9%	-110	-198	-22%	-50%	-1.2%	-3.4%
Nuclear	190	186	8%	8%	29	-4	18%	-2%	0.8%	-0.1%
Hydro	57	66	3%	3%	-14	8	-19%	15%	-1.1%	0.7%
Renewables (including biofuels)	103	289	5%	13%	84	187	448%	182%	8.9%	5.3%
Power	967	1008			97	41	11%	4%	0.5%	0.2%
Supply										
Oil (Mb/d)	14	17			5	4	50%	26%	2.0%	1.2%
Gas (Bcf/d)	74	115			23	41	46%	55%	1.9%	2.2%
Coal	455	278			-100	-178	-18%	-39%	-1.0%	-2.4%

\*Compound annual growth rate

†Oil supply includes crude oil, shale oil, oil sands, natural gas liquids, liquid fuels derived from coal and gas, and refinery gains, but excludes biofuels. Oil demand includes consumption of all liquid hydrocarbons, but excludes biofuels.