



# BP Energy Outlook

## Country and regional insights – European Union

We project that by 2035 renewables account for 40% of EU's power generation.

### Fast facts

1. The share of fossil fuels in primary energy demand is expected to fall by nearly 10% to 65% by 2035.
2. Renewables (including biofuels) are expected to double by 2035 and account for 20% of consumption.
3. The decline in primary energy demand is expected to accelerate over the Outlook, declining by 0.4% p.a. from 2015 to 2035 compared with a decline of 0.1% p.a. over the past 20 years.

## -8%

Growth in EU energy consumption

## 9%

Share of global energy consumption in 2035

## -11%

Growth in EU energy production

## 4%

Share of global energy production in 2035

- Primary energy demand declines by 0.4% p.a. over the Outlook, as growth in renewables (including biofuels) (+100%), natural gas (+15%), and hydro (+9%), are outweighed by declines in coal (-55%), oil (-24%) and nuclear (-29%).
- The fuel mix continues to evolve as renewables gain market share. The share of oil in the fuel mix drops to 30% in 2035, from 36% today, however oil remains the dominant fuel.
- Natural gas consumption grows by 0.7% p.a., nearly twice as fast as its historical growth trend of 0.4% p.a..
- Power is the only growth sector over the Outlook. The building sector experiences the slowest decline of 0.3% p.a. from 2015 to 2035.
- Energy consumed in power generation increases by 0.1% p.a. from 2015 to 2035. Renewables are expected to replace coal as the dominant fuel source in power around 2019, followed by nuclear and natural gas.
- Apart from renewables and hydro, all other sources of production decline over the Outlook, with coal down by 61%, natural gas by 52%, oil by 41%, and nuclear by 29%.
- Within renewables, the fastest growing source is wind (+141%), accounting for 56% of renewables (including biofuels) supply by 2035 up from 47% today.
- By 2035 EU wind generation (169 Mtoe) is greater than production of liquids, coal, and natural gas combined (158 Mtoe).
- Russia remains the largest source for the EU's natural gas imports as Russia expands its market share from 33% of EU natural gas consumption today to 40% by 2035.
- EU's energy intensity (the amount of energy required per unit of GDP) declines by 32% over the next 20 years, falling to its lowest level on record by 2035.
- The EU is the only region where both demand and supply of primary energy is expected to decline over the Outlook.



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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	1,631	1,508			-31	-123	-2%	-8%	-0.1%	-0.4%
Oil† (Mb/d)	12	9	36%	30%	-2	-3	-13%	-24%	-0.7%	-1.4%
Gas (Bcf/d)	39	45	22%	28%	3	6	8%	15%	0.4%	0.7%
Coal	262	117	16%	8%	-101	-145	-28%	-55%	-1.6%	-3.9%
Nuclear	194	138	12%	9%	-5	-56	-3%	-29%	-0.1%	-1.7%
Hydro	76	84	5%	6%	1	7	1%	9%	0.1%	0.5%
Renewables (including biofuels)	150	300	9%	20%	143	150	>1000%	100%	>10%	3.5%
Power	702	714			65	12	10%	2%	0.5%	0.1%
Supply										
Oil (Mb/d)	2	1			-2	-0.8	-52%	-41%	-3.6%	-2.6%
Gas (Bcf/d)	12	6			-9	-6	-44%	-52%	-2.8%	-3.6%
Coal	145	56			-136	-89	-48%	-61%	-3.3%	-4.6%

\*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.