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## Seven countries with the dirtiest electricity in 2030 will undermine EU climate goals

In the next decade renewables are set to double and coal power to halve - but seven countries will cause the EU to miss its emissions targets.

Analysis by climate think tank Ember reveals the seven countries that are blocking Europe's electricity transition. Together they will be responsible for 80% of the EU's power sector emissions by 2030 due to their reliance on coal and fossil gas and insufficient deployment of zero-carbon electricity. As a result, the EU is not on track to deliver the Commission's recommended 55% reduction in total emissions by 2030, let alone the EU Parliament's target of 60%.

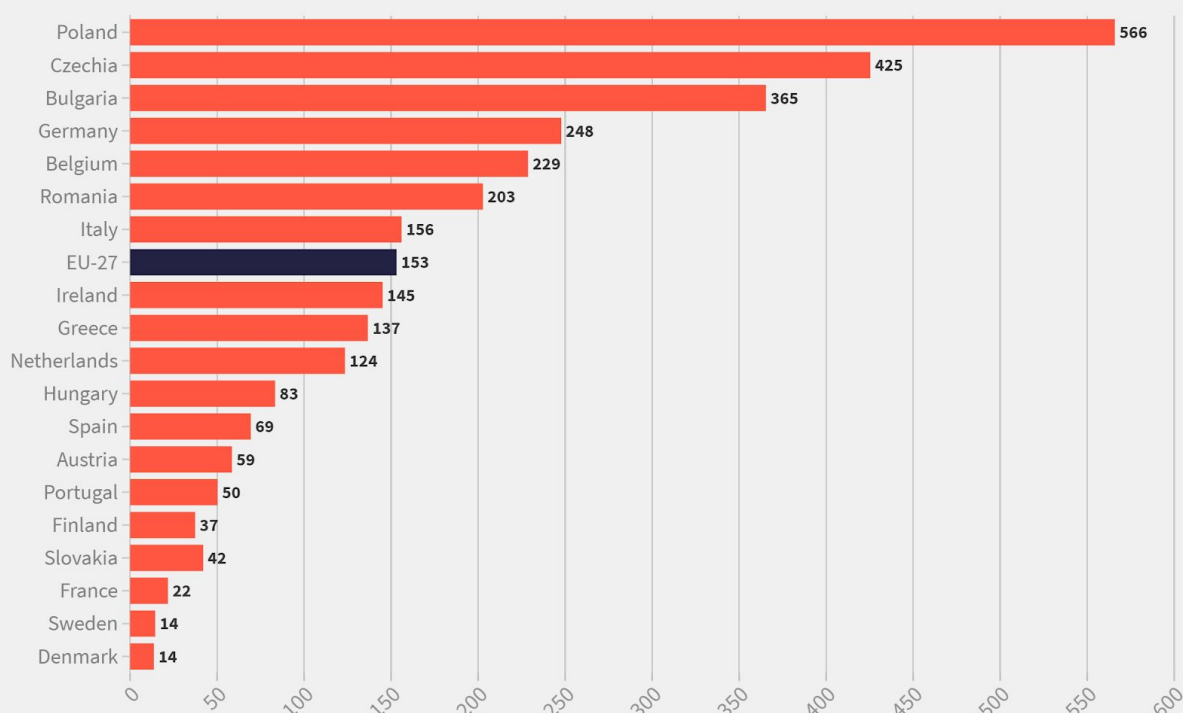
The **seven dirtiest electricity grids** in 2030\*

**Poland, Czechia, Bulgaria, Germany, Belgium, Romania, Italy**

### Progress needs to be made in seven key countries with the dirtiest electricity in 2030



Expected emissions intensity of electricity production in 2030 [gCO<sub>2</sub>/kWh]



Source: National Energy & Climate Plans (NECPs), Ember calculations. The 19 countries displayed account for > 97% of EU-27 electricity consumption

[\[Graphic\]](#)

The analysis by Ember reviewed every EU country's National Energy and Climate Plan, which sets out how each country expects to generate its electricity by 2030 as the EU moves towards net zero emissions by 2050.

The analysis reveals that renewables will double in the next decade to deliver 60% of EU electricity demand in 2030, driven largely by growth in wind and solar. Across the EU, 40% of electricity will be generated by wind and solar, with leading countries Denmark, the Netherlands and Spain targeting more than 60%.

Despite this progress, fossil fuels are still expected to generate 25% of EU electricity by 2030 and Europe is not on track for a Paris-aligned coal phase-out by 2030. Coal generation is expected to fall by just 53% by 2030 compared to 2018, with nearly all (~90%) of coal generation by 2030 occurring in Poland, Germany and Czechia. Fossil gas generation sees even less progress, with little change in the next decade, as countries including Italy, Germany and Belgium plan an increasing role for fossil gas.

**Charles Moore**, Ember's European Programme Lead, said:

"The 2020s are a key decade for action on climate change. Clean electricity is essential for the transition to a sustainable economy. Although our analysis finds that many EU countries already have ambitious plans to decarbonise their electricity systems, we also identified seven key countries that are blocking overall progress in the EU. Unless they change course, reaching a 55% emissions reduction will be extremely challenging - let alone 60%."

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[Media Pack](#) includes:

- Press release
- Report and factsheets of the 7 countries
- Data tables
- Graphics

#### **Notes**

\*The **seven dirtiest electricity grids** in 2030, among the top EU electricity consumers. This chart displays the 19 EU countries that are the largest electricity consumers and account for more than 97% of EU electricity consumption.

## About this report

In this report, Ember uses the National Energy & Climate Plans (NECPs) of every EU country to assess the planned progress in the power sector over the coming decade. The report compares each EU country on a wide range of power sector metrics and identifies which countries are the main barriers to reducing emissions from electricity generation in the EU.

[Link to the report](#) (EMBARGO 9 NOV)

## About Ember

Ember is an independent, not-for-profit energy think tank that produces cutting-edge research and high impact policies that aim to accelerate the global electricity transition from coal to clean.

[@EmberClimate](#)  
[Ember-climate.org](#)

## About the seven countries

Country factsheets: [Belgium](#), [Bulgaria](#), [Czechia](#), [Germany](#), [Italy](#), [Poland](#), [Romania](#)

### Belgium

Belgium is one of only two countries in the EU where emissions from the power sector are *rising* between 2018 and 2030. During this time period, it plans the largest increase in electricity generation from fossil gas in the EU, caused by the phase-out of nuclear power. Belgium's share of renewable electricity by 2030 will be significantly below the EU average.

### Bulgaria

By 2030, Bulgaria will have one of the dirtiest electricity grids in the EU. It will be one of only three countries with shares of coal - the most carbon-intensive fossil fuel - above a third of the electricity mix. Its reliance on fossil fuels for electricity barely changes between 2018 and 2030 with renewable electricity deployment amongst the lowest in the EU and slower than last decade. In 2030, the Bulgarian electricity mix will have one of the lowest shares of wind and solar in the EU.

### Czechia

By 2030, Czechia will have the 2nd dirtiest electricity grid in the EU, and it will be the EU's 4th biggest power sector emitter. It will be one of only three countries with shares of coal - the most carbon-intensive fossil fuel - above a third of the electricity mix. Czechia plans the lowest deployment of renewable electricity in the EU.

**Germany**

In 2030 Germany will have one of the dirtiest electricity grids in the EU and will still be the EU's biggest power sector emitter, responsible for ~30% of the EU-27's power sector emissions. It will be responsible for over a third of the EU's remaining electricity generation from coal. Germany is only planning average levels of renewable electricity deployment in the coming decade - despite the large declines in nuclear power output and the high share of fossil fuels in the mix.

**Italy**

By 2030 Italy will be the 3rd biggest power sector emitter, responsible for ~10% of the EU-27's power sector emissions. It will be one of the EU countries most reliant on fossil fuels for electricity. Between 2018 and 2025, Italy is planning the largest expansion of fossil gas use in the electricity sector in the EU, primarily driven by a switch from coal to fossil gas-fired electricity. Italy's deployment of renewable electricity is below the EU-27 average.

**Poland**

By 2030, Poland will have the dirtiest electricity grid in the EU and it will be the EU's 2nd biggest power sector emitter, responsible for ~22% of the EU-27's power sector emissions. It will be the EU's top coal generator, responsible for over 40% of the EU's remaining electricity generation from coal. Its deployment of wind and solar is significantly below the EU average.

**Romania**

In 2030, Romania will have one of the dirtiest electricity grids in the EU, due to a higher than average reliance on fossil fuels and a notable role for coal. Romania is planning one of the lowest deployment rates of renewable electricity in the EU over the coming decade. The planned deployment rate of renewable electricity is slower than last decade - despite huge cost reductions in wind and solar.