

# Draft national targets put EU just short of REPowerEU

National targets need a final boost to deliver towards the EU's renewable energy targets and emissions reduction commitments.

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## About

This analysis uses the near-complete set of draft National Energy and Climate Plans (NECPs) to assess whether the latest EU member state ambitions are sufficient to achieve key EU energy targets, primarily regarding the power sector, as described by the REPowerEU plan. This is an update to a [previous analysis of draft NECPs](#) in November 2023.

Explore more detailed data in our [Live EU NECP data explorer](#).

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# Tracking the EU's national targets

National ambition is nearing what's needed for the EU's energy targets, but a further push is needed to close the remaining gap and accelerate deployment.

National Energy and Climate Plans (NECPs) are the principal documents produced by EU Member States to detail their key climate targets and actions for the next decade and beyond. The previous full set of plans was finalised in 2019, and the next set is due to be completed by the end of June 2024. Member states had until June 2023 to submit their draft updated NECPs to the European Commission, but the majority missed this deadline; a pattern which is likely to be repeated with the final versions.

So far 26 draft NECPs have been submitted, and are considered here alongside nationally announced policies from Austria which is yet to submit. Together, this near-complete set of drafts provides an indication of whether national targets are sufficient to achieve the EU's own energy goals, set out in the [Fit-for-55 package](#) and [REPowerEU plan](#). Progress in the power sector this decade is particularly critical, as the IEA finds [Europe's power system must be decarbonised in the 2030s](#) on a pathway to net zero compatible with the Paris Agreement.

The EU's progress on power sector targets also has global implications. The EU championed an initiative agreed at COP28 to [triple global renewable capacity](#) and double the rate of efficiency improvements by 2030. The NECP documents will be the first major sign of whether the EU will deliver its fair share of this global initiative. At the very least, this means delivering on agreed renewable energy and efficiency goals, as set out by the REPowerEU plan and subsequent revisions to binding targets.

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**The EU must ensure its Member State's plans are sufficient to deliver on common EU energy goals, which represent the very minimum contribution to global efforts to triple renewable electricity capacity by 2030.**

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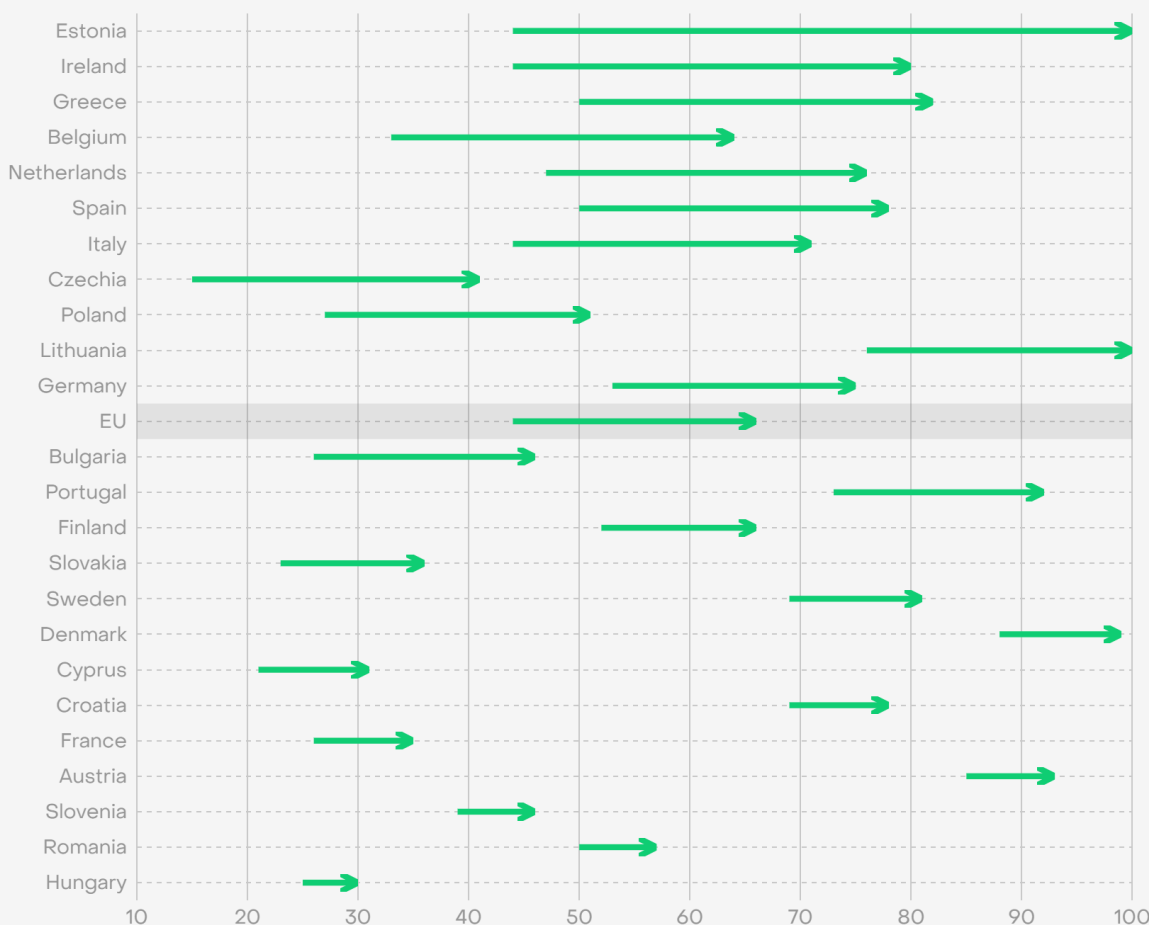
## Progress towards REPowerEU

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Renewable electricity is set to dominate the EU power sector by 2030. We estimate that renewables are on course to generate 66% of EU electricity by 2030. This is a rapid and significant increase on the level in 2023 (44%) but falls short of the 72% REPowerEU target.

## EU targets put the bloc on track for two-thirds renewable electricity by 2030, falling short of the REPowerEU target of 72%

Renewable share in electricity generation (%), ranked from smallest to biggest increase, 2023 - 2030



Source: European Commission (draft NECPs). Full dataset available via Ember's live NECP tracker · REPowerEU is the energy plan set out in 2022 to wean the EU off Russian gas.

At the national level, almost all Member States see an expanded role for renewable power compared to targets set in 2019. (See a breakdown by Member State in our [live EU NECP tracker](#).) Five Member States are planning to exceed a 90% renewable share of electricity supply by 2030. The fastest moving countries by this measure between now and 2030 include Estonia, Ireland and Greece, which all plan for renewables to cover an additional third of the electricity supply compared to today. Some of the slowest movers include Hungary,

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Romania and Slovenia, although it should be noted that Romania plans a significant increase in electricity consumption by 2030.

While significant progress has been made in raising ambition since 2019, more ambitious targets are needed to put the EU on track for a predominantly decarbonised power system in the mid 2030s, as required by global climate commitments.

## Soaring capacity targets

Wind and solar targets have been dramatically elevated in the past four years as [growth has defied expectations](#).

Reflecting the [shockwaves of the energy crisis](#), we estimate that since 2019 (NECPs), 22 EU Member States have used draft NECPs (or other announcements) to raise wind capacity targets for 2030, while 23 have raised solar capacity targets. Consequently, national targets for 2030 have been increased by an average of 45% for wind capacity and around 70% for solar.

## EU Member States have stepped up wind and solar ambition since 2019

↑ 45%

Average increase in installed capacity targets (GW)

Wind

↑ 70%

Average increase in installed capacity targets (GW)

Solar

Source: European Commission, Ember analysis of 2023/24 draft National Energy and Climate Plans, compared to 2019 equivalents.

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This updated ambition puts the EU on course for approximately 650 GW solar by 2030, more than triple the 2022 capacity of 195 GW. Wind is set to reach 450 GW, more than double the 2022 capacity of 204 GW. However, these expected totals still fall short of what the European Commission [estimates](#) will be required to reach EU energy goals, namely 750 GW solar and 500 GW wind power by 2030.

The EU solar fleet will grow on average 14% per year between 2023 and 2030 according to the reported targets. Among Member States, Germany and Spain have made some of the most striking increases in solar targets, adding a huge 139 GW combined. Several countries with previously very low targets are now planning for a more significant role for solar by 2030, such as Poland, Lithuania and Ireland, who have increased their targets by factors of 4,

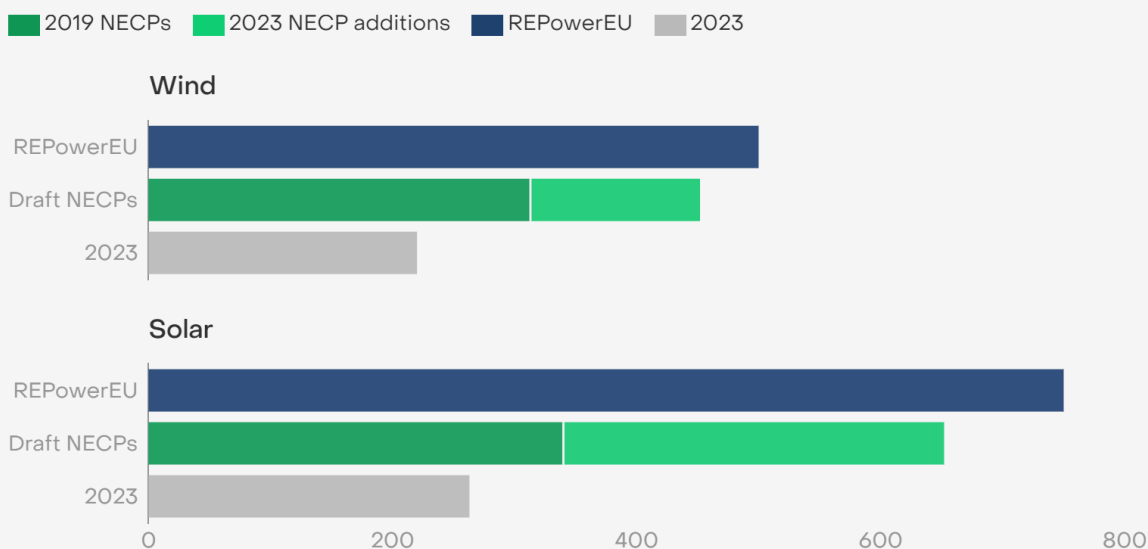
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6 and 20 respectively. Portugal also foresees strong growth, with the fleet increasing 6-fold compared to 2023. The Netherlands, currently a solar leader, is the only large power producer not to increase its solar capacity target at all compared with 2019 - a target they are only 3 GW (approximately one year of installations) from achieving. Estonia's target essentially implies no further growth between 2023 and 2030. Greece's ambition is also lacking for a country of such high potential, with foreseen growth of only 11% year-on-year, below the EU average. This would require average annual installations of 900 MW, while additions in 2023 were already nearly double this (1.7 GW). Other countries already nearing their 2030 targets are Croatia, Bulgaria, Hungary, and Sweden, all of which could realistically aim higher.

Several countries have significantly increased wind power ambition, including Bulgaria, Estonia, Denmark, Lithuania, and Sweden, who have all approximately doubled (or more) their targets set in 2019. France, however, has not increased its wind capacity target in this five year period. Several countries where wind growth has been stagnant have set targets that signal a return to activity, such as Latvia, Romania, Czechia, Bulgaria, and Portugal. Europe's largest wind power producers, Germany and Spain, will need to increase average annual deployment between 4-5 times to reach their ambitious targets. In contrast, despite strong recent growth, Finland and Sweden are the only significant wind power producers where annual deployment would slow in coming years. This is particularly dramatic in Finland, where the 2030 target of 7.2 GW has almost already been achieved in 2023 (6.9 GW). This ambition is unrealistically low given the pipeline of existing projects, even considering the number is based on a scenario with existing measures only.

## Upgraded national wind and solar ambitions bring EU targets within reach

Installed capacities of wind and solar in 2030 (GW)



Source: European Commission (REPowerEU and NECPs), SolarPower Europe and WindEurope (2023 capacities). Missing wind and solar target data has been filled-in for one outstanding draft NECP (Austria) and draft NECPs that do not provide capacity data (BE, LV, LU, MT). REPowerEU: the plan released in 2022 to wean the EU off Russian gas. NECP: National Energy and Climate Plan.



Two major offshore wind pledges have been signed by Member States in recent years concerning two key sea basins: the North Sea and the Baltic Sea. In the Ostend [declaration](#), nine North Sea countries (including the UK and Norway) pledged to jointly deliver 120 GW of offshore wind power in the North Sea by 2030. The EU signatories' share of this amounts to 59 GW according to the declaration (Belgium, Netherlands, Denmark, Germany, France). We estimate that offshore wind ambition in these countries' NECPs for the North Sea amounts to 54 GW, close to delivering on the pledge.

Baltic Sea countries have [committed](#) to deliver 19.6 GW by 2030, and we estimate that offshore wind ambition in these countries' NECPs (Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Sweden) in the Baltic Sea amounts to approximately 21 GW.



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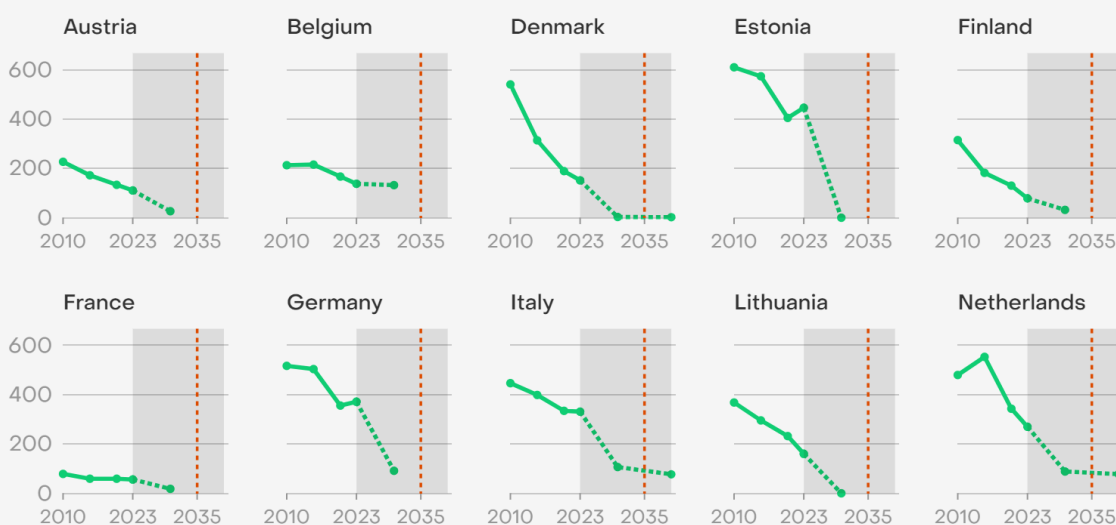
## Clean power 2035

Eleven EU Member States have made [some form of commitment](#) to decarbonise their power sectors by 2035. These include members of the G7 Italy, Germany, and France, who along with the rest of the group [have committed](#) to phase out unabated coal and achieve 'fully or predominantly' decarbonised power sectors by 2035. Further to this, the seven members of the Pentalateral Forum (Austria, Belgium, France, Germany, Luxembourg, the Netherlands and Switzerland) [pledged in December 2023](#) to decarbonise their interconnected electricity system by 2035.

While these commitments are to be welcomed, some of the pledges are insufficient in the way they are defined. For example, references to 'net zero' or 'decarbonised' power sectors leave the door open for negative emissions, abated fossil power or increases in nuclear power that are infeasible given the timeline. To be credible, these pledges must be followed through with detailed plans, and NECPs are the perfect opportunity to provide these.

## Most EU member states that have pledged to reach clean power before 2035 fail to fully reflect this in plans.

Emissions intensity of electricity generation (kgCO<sub>2</sub>/MWh)



Source: European Commission (draft NECPs) · Of the 11 pledging Member States, only ten are shown. Luxembourg is omitted due to its high dependence on imports. Emissions intensity is estimated by assuming intensities by source: hard coal (830), lignite (1100), gas (370), and other fossil (700) in units of kgCO<sub>2</sub>/MWh. Coal generation in Italy and other fossil generation in France are assumed to be negligible from 2030.

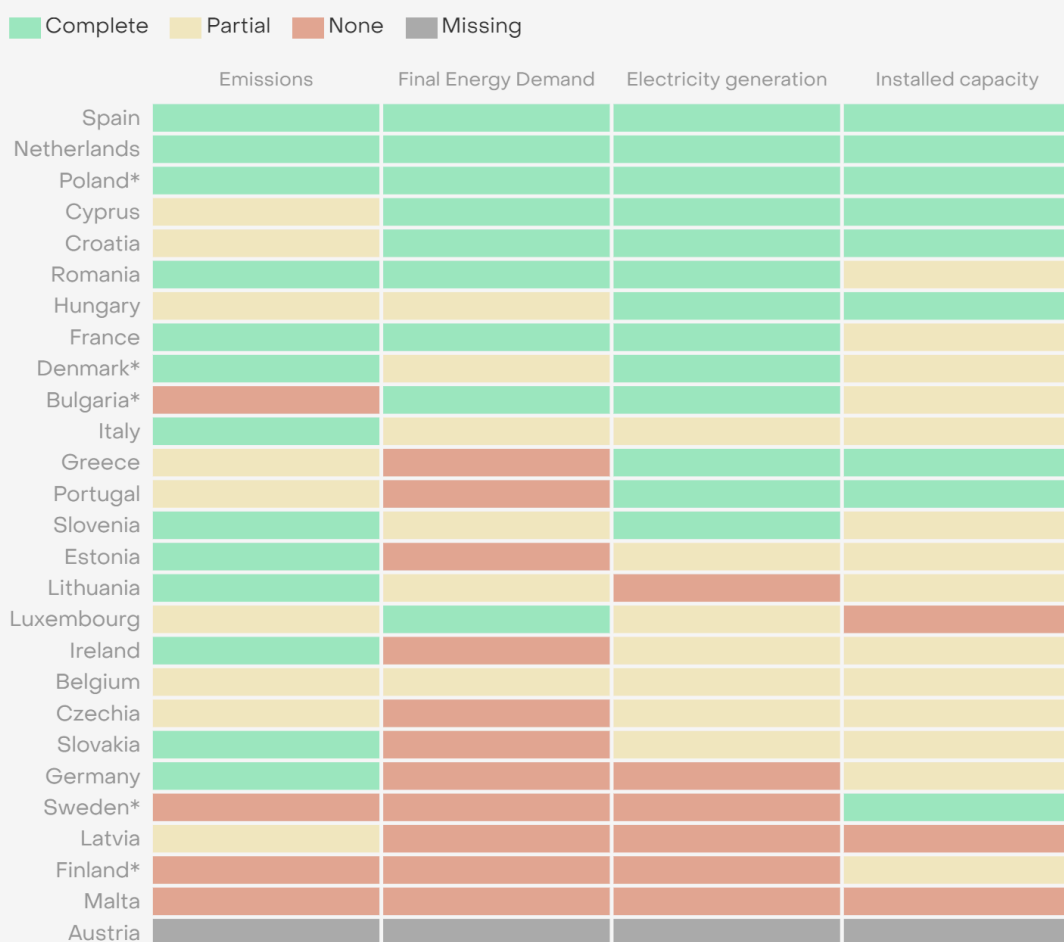


Our analysis finds that draft NECP documents in many cases fail to provide the adequate scenarios or data to explain how the 2035 clean power targets will be achieved. In many cases, data beyond 2030 is not reported. Of the ten Member States analysed, only Denmark, Italy and the Netherlands provide sufficient data to estimate carbon intensity of electricity production post-2030. The only three countries out of the ten analysed which have draft NECPs aligned with their 2035 power sector pledges are Denmark, Lithuania, and Estonia, assuming the latter two remain at zero after 2030. The remaining Member States must provide detailed scenarios with additional measures in their final NECPs, showing how they plan to fully decarbonise their power sectors by 2035.

## Flexibility plans and missing data

Almost all NECPs are lacking clear data to track key metrics related to the power sector transition. We specifically assess the availability of data covering: GHG emissions, final energy demand, electricity generation, and installed generation capacity. Only three Member States provide a full set of data across these dimensions with sufficient granularity. Of these three, Poland only provides this data on the basis of a scenario with existing measures, rather than with additional measures. Data availability is poorest in the draft NECPs of Malta, Finland, Latvia, Sweden, with Austria yet to submit a document.

### The availability of key energy data is highly inconsistent across draft NECPs from EU Member States.



Source: European Commission, Ember analysis of draft NECPs (National Energy and Climate Plans). · An asterisk indicates that data is available based on a scenario with existing measures only.

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Beyond these four key components, the draft plans also lack sufficient data and details about how power system storage and flexibility will be scaled-up this decade. This will be critical in order to continue the rapid growth of renewables and bring the full benefits of clean electricity to consumers. While the vast majority of documents acknowledge an important role for energy storage, only eleven draft NECPs quantify deployment by 2030 for either pumped hydro storage or battery storage, or storage technologies in general. Only Spain has an explicit technology-neutral storage target in its draft NECP, supported by a dedicated energy storage strategy. Eight Member States (Belgium, Bulgaria, Cyprus, Greece, Hungary, Italy, Portugal and Romania) quantify battery deployment by 2030 or 2025 in their draft NECPs, but with varying levels of political commitment. Regarding demand-side flexibility, another important source of short term flexibility, only four countries provide a quantitative target in the form of smart-meter roll-out or a volume of demand.

These issues demonstrate the poor overall quality of the draft NECPs, particularly regarding data transparency. The accountability provided by these plans, as well as their effectiveness as an investment signal, will suffer if the coverage and accessibility of data is not dramatically improved in the final versions.

# Supporting Information

## Methodology

Data behind these charts, as well as details on the methodology behind this analysis can be found in our [Live EU NECP tracker](#).

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