Methodology

Data collection

Ember's collection of national ambitions for renewable deployment for the power sector covers 96 countries and the EU as of November 2024. We define national ambition as national targets expressed in terms of cumulative renewable capacity (GW) and/or share of renewables in total generation (%) that the government aims to achieve by 2030. The 2030 renewable energy capacity targets are summed across 96 countries and regions, including the EU as an individual entity, but excluding individual EU countries and using the EU bloc target).

To collect this data, we reviewed government-issued policy documents of the following types: national laws, national strategy or plans, executive orders and policy proposals undergoing legislative process. If there was no target data available in explicit terms in such a document, we used projections provided by the government or third-party studies that simulate power sector development trajectories based on current policies for renewable development or net zero targets.

Target categorisation

Targets are categorised into three different types depending on how the targets are identified.

- Explicit targets are identified clearly in official government policy documents.
- Implicit targets are identified based on official projections or credible third-party studies. They are used as a proxy for measuring the country's ambition for renewable deployment.
- Derived targets are Ember's estimation for 2030 based on explicit targets for other years.

These targets were then assigned a confidence-level of the country's ambition based on the following criteria:

- Has the source document for the target been updated in the last 1-3 years? (if the target is implicit)
- Is the source study conducted by a government agency?
- If the projections are made by a third-party, how reliable is it?

Countries with no targets

Two countries have no capacity targets (Russia and Austria). 17 countries have no share of generation targets.

Since we have not collected data for every country in the world, not having a data point does not necessarily mean a country has no target.

Reporting of solar capacity in alternating and direct current

Solar capacity reported in DC is about 10 to 30% higher than that reported in AC.However, due to the lack of clarity on the reporting standards and their differences, this analysis used data as reported by the data provider without any conversion. Historical renewable capacity data is from IRENA's Renewable Capacity Statistics 2023, reported as the operating capacity delivered to the grid in alternating current (AC). It is not clear whether national targets are reported in AC or DC.

Bioenergy

The risk of emissions, plus wider social and ecological impacts, constrains the use of bioenergy for decarbonising the power sector.

Although bioenergy is categorised as a renewable source, its climate impact is highly dependent on the type of feedstock used and how it was sourced. Scientific evidence is mounting that in some cases using bioenergy for power contributes to climate change. Wider social and ecological impacts also constrain its use, which renders bioenergy a questionable approach for power sector decarbonisation. Other clean power generation will likely be a more viable option.