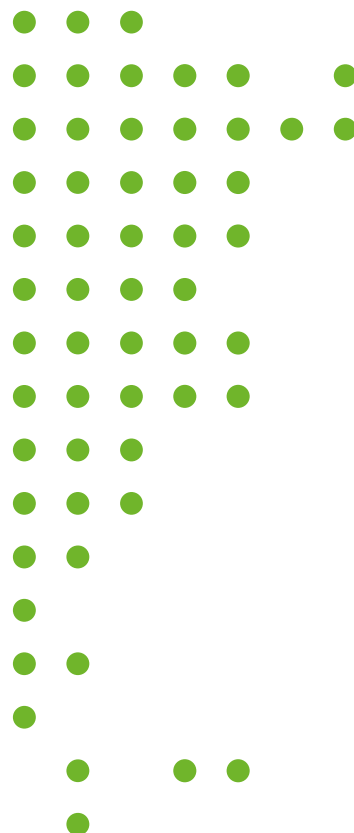


COUNTRY STUDY

Argentina

Argentina currently has 3,300 MW of installed onshore wind capacity, and is forecast by GWEC to install around 300 MW per year under a business-as-usual scenario from 2023 to 2027.



Current situation

Argentina has some of the best wind resources in the world, with high wind speeds and extremely high potential capacity factors of up to 70%, as well as large amounts of open space for wind farm development.

The largest contributors to Argentina's electricity mix are currently natural gas and hydropower. On average, Argentina produces 500,000 barrels per day (bpd) of oil, of which around 20% is exported. Despite this, Argentina is a net importer of fossil fuels.

Inflation in Argentina has been rising for several years and is forecast to average 98% for the year 2023, causing economic uncertainty. These macroeconomic conditions, as well as turbulent financial markets, dampen investor confidence. Appetite for investment is still present, however, due to Argentina's huge technical potential and growing energy demand. The move to renewable energy will reduce the dependence on fossil fuels for power generation and the rising costs associated with natural gas and oil, as well as unleash international investor confidence in the growing renewables sector.

Argentina currently has 3,300 MW of installed onshore wind capacity, and is forecast by GWEC to install around 300 MW per year under a business-as-usual scenario from 2023 to 2027. Under an accelerated transition scenario, if barriers to policy frameworks, transmission infrastructure and permitting schemes were resolved, Argentina could install 31% more onshore wind energy capacity in the next five years.

Energy mix and targets

Argentina ratified the Paris agreement on the 21st of September 2016. It has an NDC to reach net-zero carbon emissions by 2050.

It has set the goal of not exceeding the net emission of 349 MtCO_{2e} in 2030, which is a 19% reduction compared to peak levels set in 2007.

In 2015, the Government passed Law 27.191, which sets a non-hydro renewable energy target of 20% by 2025 with the potential of 25% by 2030. Of this, 65% will be wind power. Relevant targets are shown in Table 2.

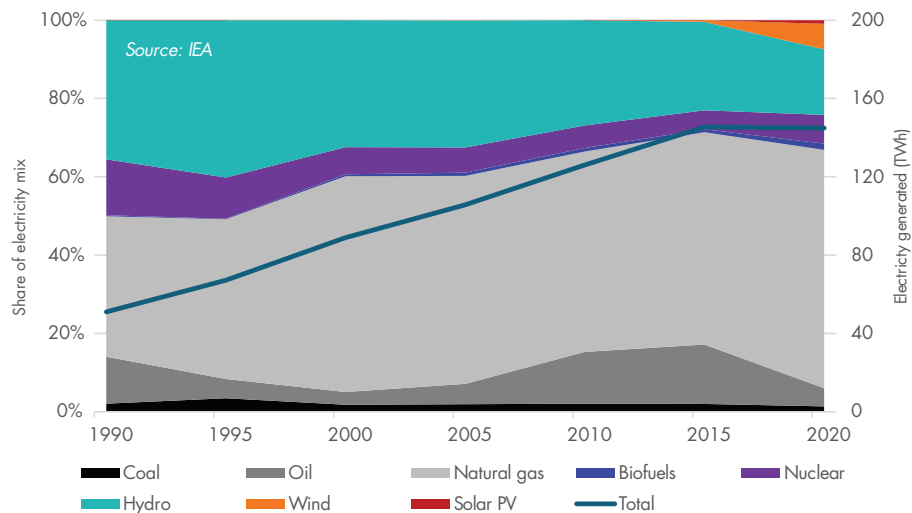
Table 2 Argentina targets.

Parameter	2030 target
Reduction of emissions intensity compared to 2007 levels (NDC as of November 2021)	19%
Share of non-fossil fuel sources (non-hydro) in installed electricity capacity mix	20% (2025)
Share of wind power in installed electricity capacity mix	13%

With increased focus these targets are realistic, as wind energy has been steadily increasing as a proportion of the total mix over the past five years. Continuation of this progress depends on the state of the local economy, however.

Argentina's electricity energy mix and dependence on natural gas and oil is shown in Figure 2. In 2020 (most recent data available), the share of non-hydro renewables was 7.4% of the total mix.

Figure 2 Argentina electricity energy mix by source.





Economic stimulus and laws for clean energy

Vital to wind development in Argentina is Law 27.191 (2015), which established a framework for renewable energy development. Central to this was the creation of the Renewable Energy Trust Fund (FODER) which is used to provide payment guarantees and project finance to renewable energy developers. This law grants multiple tax incentives to wind developers. These include:

- Accelerated depreciation of assets
- VAT refunds on pre-COD purchases
- Tax deduction of all financial expenses
- Extension of income tax loss credits to 10 years, and
- 20% tax credit available to local independent power producers that achieve 30% local content.

The Ministry of Energy and Mines (MINEM) sets energy sector policies and oversees their implementation. The local wholesale market, Mercado Electrico Mayorista (MEM) is administered by state utility CAMMESA which is owned by MINEM (20%) and private sector companies (80%).

To reduce the production of GHG associated with its energy generation, the Government created the RenovAr program in 2016, which aims to increase the development of renewable energy projects through competitive auctions and to establish 20-year power purchase agreements (PPAs) between renewables projects and CAMMESA. This programme seeks to increase the bankability of projects through a few measures:

- Payment and liquidity guarantee from FODER
- Provision of dispatch priority to renewables projects, and
- Issue of PPA tariffs in \$USD that are payable in ARS.

Since its launch in 2016, the RenovAr program has awarded 244 renewable energy projects, achieving 6.3 GW of installed capacity throughout its auction rounds of which 74% has been wind.

In response to recent political and economic uncertainty that saw several large-scale projects fail to reach financial close, and in a bid to better utilise Argentina's medium voltage grid network, Round 3 of the RenovAr aimed at incentivising small-scale decentralised projects up to 10 MW in capacity.

Current barriers to wind energy

Grid development

A programme of expansion across the country's high voltage and medium voltage grid networks is urgently required to support the planned expansion of wind energy. Though proposals have been brought forward by regulators, substantial progress in this area has been slow, mostly due to embedded government bureaucracy and lack of government focus.

Investment environment

Inflation in Argentina for 2022 averaged approximately 75% and has been over 40% since 2019. This has created an unstable environment for investors. Developers have been able to help account for these inflationary pressures through contracting strategies, but problems are compounded by foreign exchange limitations that are enforced as a legacy of recent financial instability. These limitations prevent investment dollars from being expatriated outside Argentina to preserve the financial strength of the Argentine Peso, and severely dampen investor appetite in the region as any profits or

revenue cannot be converted to other currencies.

This restricts the amount of foreign investment in the country, the financing options available to developers, and the extent to which equipment can be purchased overseas. It has limited involvement in the market to smaller national power providers and limits the scope for private overseas investment in critical high-voltage network upgrades needed to accommodate future growth.

Changes to auction eligibility

Large wind projects (larger than 10 MW) were excluded from the latest round of the RenovAr programme, which is targeted at small scale de-centralised generation projects. Wind projects are less attractive at this scale as economies of scale during maintenance are not possible. Although large scale wind projects can still find a route to market via the MATER framework, which seeks to incentives corporate PPAs between developers and large users of power with average demand more than 0.3 MW, the rate of project development under this framework has historically been slow.

