



Phasing-out coal in the Philippines

Status quo

The Philippines have an installed coal capacity of 10.5 GW, while the share of coal in the electricity generation amounts to roughly 50%. In addition, the Philippines still invest into new coal plants with another 1.6 GW under construction and 3.4 GW planned.

Total greenhouse gas emissions in the Philippines grew from 37 MtCO₂e in 1990 to 123 MtCO₂e in 2018 (4.4% annually), with coal accounting for more than half of the current emissions. The emissions are projected to increase further to 346 MtCO₂e in 2040 under the government’s clean energy scenario and to 397 MtCO₂e in the business as usual case, largely driven by coal plants.

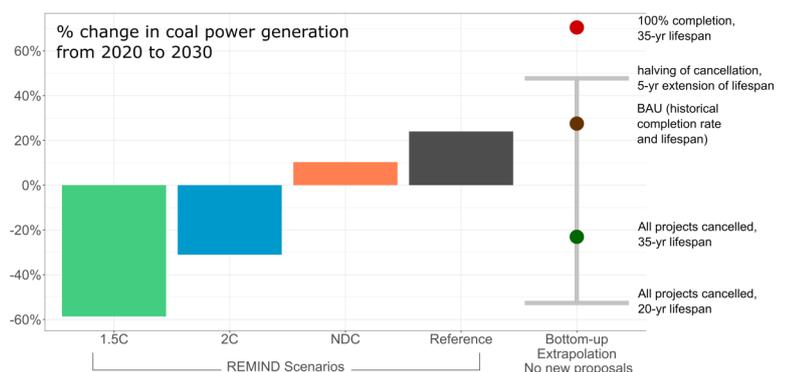
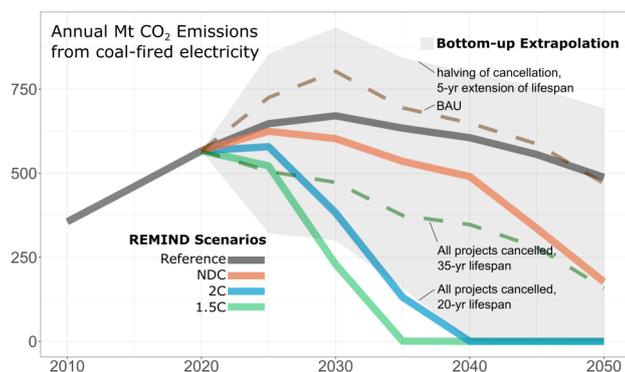
Electricity generation has grown by 4.5% per year on average since 1990. To meet future demand, the electricity supply from coal is expected to increase by 6% annually, while that of renewables is projected to increase by 1.5% per year.

Coal phase-out scenarios

To limit global warming, the Paris Agreement from 2015—signed and ratified by the Philippines—requires keeping the average temperature increase to well below 2°C and possibly 1.5°C above pre-industrial levels.

Scenarios on carbon emission pathways project that emissions from coal-fired electricity generation need to reach net-zero by 2035 to remain below 1.5°C and by 2040 to remain below 2°C (see left figure below). Achieving the 1.5°C target implies that, by 2030, electricity generation from coal in South-East Asia needs to decrease by almost 60% compared to today’s levels. Allowing for 2°C warming would still require the region’s current generation to decrease by 30% by 2030 (see right figure below).

Achieving the 1.5°C target does not allow for any additional coal development, but instead implies even reducing the lifespans of operating plants to 20 years.



REMIND model results and bottom-up extrapolation for coal in South-East Asia.

Left: CO₂ emissions for different scenarios (1.5C, 2C, NDC and Reference). “NDC” represents the first-round Nationally Determined Contributions, “Reference” the currently implemented national policies. The grey area shows bottom-up extrapolation assuming no new coal project proposals. **Right:** coal phase-out in 2030 in percentage of the 2020 generation for different scenarios and bottom-up extrapolation with varying assumptions on completion rates of new coal plant projects and lifetimes of existing plants. Extrapolation is conducted using the Global Coal Plant Tracker January 2021 release and the IEA World Energy Balances 2017 edition.

Political economy

Political economy factors can possibly impede a rapid coal phase-out in the Philippines. Most of them relate to conflicting societal and political objectives, including challenges to meet the growing electricity demand to support economic development. In addition, large conglomerates safeguard private profits from coal.

In the last fifteen years, the Philippines' additional electricity supply to meet rapid demand increases has almost exclusively been provided by coal. Many influential actors, including President Duterte consider coal power a prerequisite for economic development. This narrative is taken up by the Department of Energy and is in line with its focus on large baseload capacity, for which there are few alternatives to coal. The Department of Energy therefore envisages satisfying the increasing electricity demand with new investments in coal power.

The ongoing energy sector liberalization in the Philippines began in 2001 and led to an oligopoly in the power sector. Few large conglomerates including the San Miguel Corporation and the Aboitiz group with strong ties to politics dominate the entire electricity supply chain. They have an interest in coal out of several reasons. Coal projects generally hold larger investment volumes as compared to wind and solar and can thus generate larger profits. Existing regulations also benefit coal power over other energy sources. For example, coal price fluctuations can be passed to consumers. In addition, clean investments face regulatory uncertainty, e.g. the tight deadlines of the Feed-In Tariffs for renewable electricity, which discourages investments in renewables.

Other political objectives rather support the phase-out of coal and the uptake of renewables, such as reducing dependence on energy imports, expanding electricity access and ecological sustainability. Civil society actors and the Department of Environment and Natural Resources pursue these goals. However, the objectives supporting the construction of coal-fired power plants seem currently to prevail. Therefore policies supporting a clean transition are needed, some of which are discussed hereafter.

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Solutions

Achieving a coal phase-out requires policies that take political economy factors into account. The government's coal moratorium related to COVID-19 may only last until the Department of Energy determines the need for new capacity. We therefore propose **four policy mechanisms to phase-out coal** and safeguard the transition to cleaner alternatives:

- i) **Reduce incentives for new coal investments:** Adjusting the power market structure in favor of renewable energies, and specifically, removing the pass-through provisions for price fluctuations of coal are key.
- ii) **Drop the baseload focus:** The energy planning should shift from a focus on non-intermittent baseload capacity to a more flexible approach incorporating variable plants. The current large baseload requirements clearly favor coal due to a lack of alternatives. The large share of coal in the energy mix furthermore reduces the need for variable renewable plants. The Department of Energy should therefore lower the baseload requirements and incorporate more variable power in the system.
- iii) **Reduce regulatory uncertainty for investors:** The ramp-up of renewable energies requires a reduced regulatory uncertainty for investors. Long-term policy planning by the Department of Energy may support this goal, as well as implementing the delayed Renewable Portfolio Standards from the Renewable Energy Act in 2008 that requires utilities to produce a specified minimum percentage of their electricity from renewable sources.
- iv) **Reduce the financing costs for renewables:** Investments in renewables are currently often less profitable due to high financing costs because of high presumed risks by banks. Investments in renewables can be incentivized through de-risking mechanisms. One option are governmental collaterals, where a governmental institution as a third party takes over risks.

