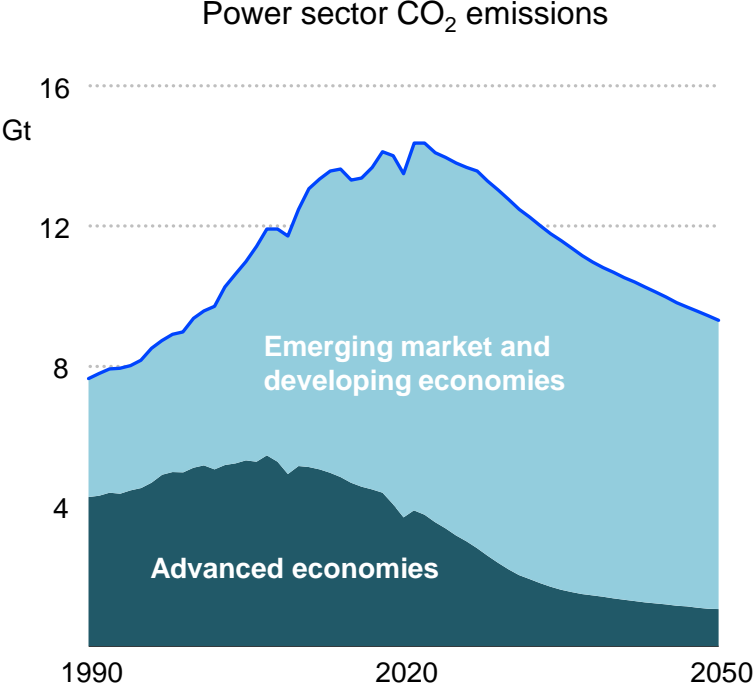
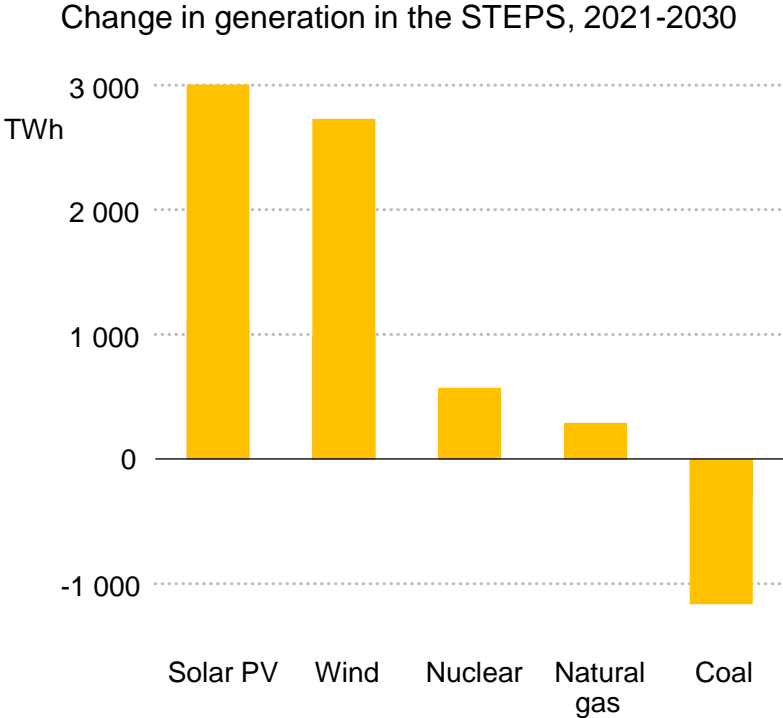




Dialogue on IPP Just Energy Transition Initiatives

Coal in the net-zero transition: Indonesia's perspective

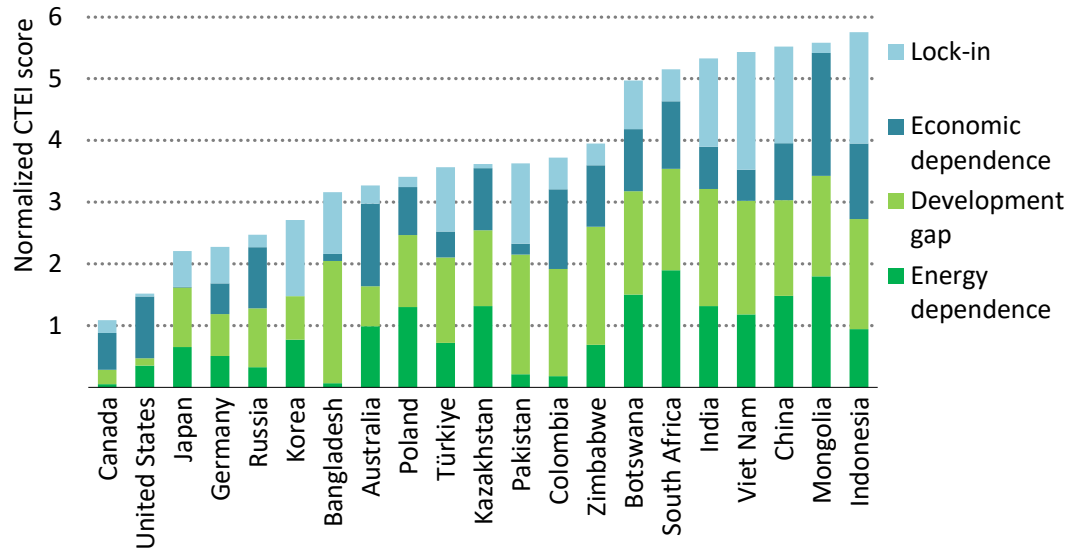
Electricity is turning the corner



As markets rebalance, the upside for coal is temporary as renewable generation rises by 90% to 2030; the peak in power sector emissions needs to be followed by a much steeper decline to be consistent with global climate goals

Indonesia scores highly on the IEA's coal transition exposure index

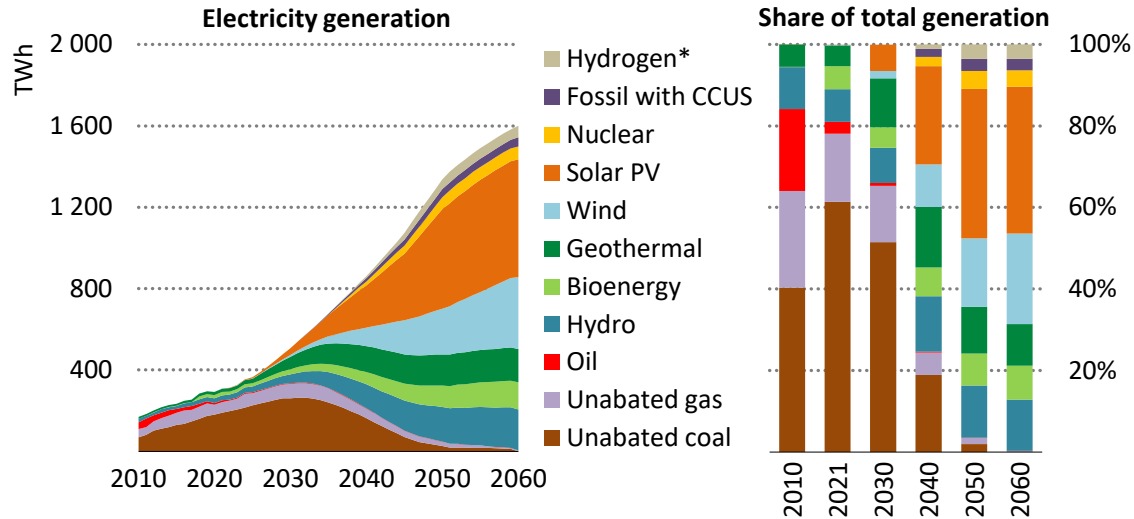
The IEA's *Coal Transition Exposure Index*



Indonesia scores highly on the multiple dimensions of coal dependence, notably because of the high share of coal in its electricity mix, exports, and the young age of its coal assets

Indonesia's net zero target implies a peak of coal just after 2030

Electricity generation by source, Announced Pledges Scenario, 2010 – 2060

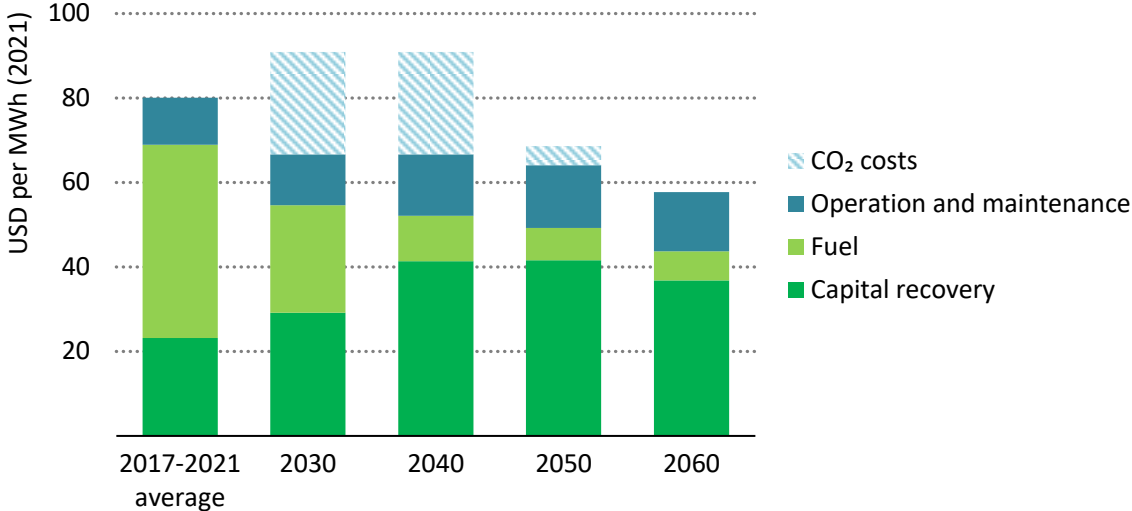


Indonesia's net zero target sees generation from unabated coal peaking around 2030, and being replaced by a portfolio of renewable technologies, in particular solar PV

Fundamental electricity supply costs can fall during the transition



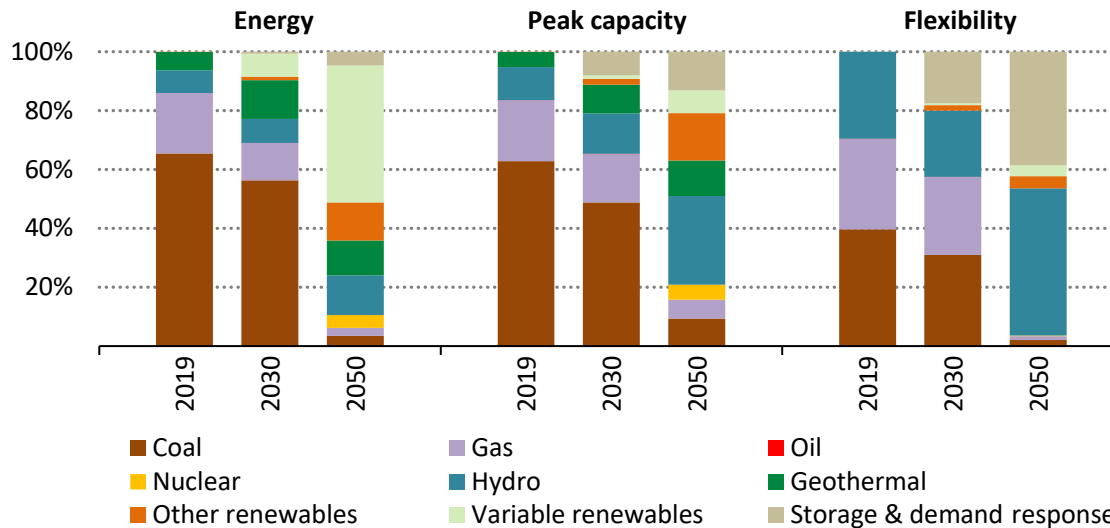
Electricity supply costs in Indonesia, Announced Pledges Scenario, 2017 – 2050



As the power sector transitions, it becomes more capital intensive as capital recovery comes to dominate fuel costs – but fundamental electricity supply costs do not rise, and indeed are slightly lower than recent averages

In the near-term, coal still has a crucial role in the system

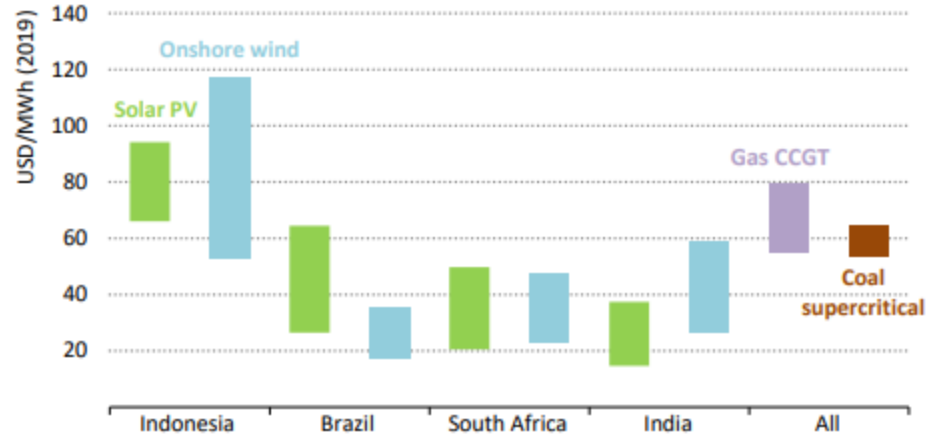
System services by source, Announced Pledges Scenario, 2019 – 2050



Even as the electricity sector transitions, coal still has to play a crucial role in the near-term, providing peak capacity and flexibility, while other options to maintain system security are scaled up.

Lowering the cost of renewables remains a critical priority

Levelized costs of electricity from different sources in 2020



Coal retirement is not a goal in itself – the objective must be to create the policy frameworks, local ecosystem and investments that would allow Indonesia to benefit from lower-cost renewables

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