



FROM AMBITION TO ACTION: POLICY PATHWAYS FOR INDONESIA'S ENHANCED NDC AND NET ZERO TARGET

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Summary

Indonesia stands at a critical juncture in its energy transition journey. This policy brief evaluates Indonesia's current climate policies and synthesizes insights from a survey of 30 Indonesian and international climate policy experts. Our analysis reveals that Indonesia's existing policies fall short of meeting key climate targets: peaking greenhouse gas emissions by 2030, increasing the share of new and renewable energy to 23% by 2025, and achieving net zero by 2060. Indonesia has various options to bridge these gaps and accelerate its energy transition. Our analysis focuses on the following measures as part of a potential decarbonization pathway:

- Focus on implementing policies that deliver economic benefits and job creation, thereby building a robust political coalition.
- Enhance financial incentives, such as feed-in tariffs, to lower renewable energy costs and expand innovation capacity in Indonesia.

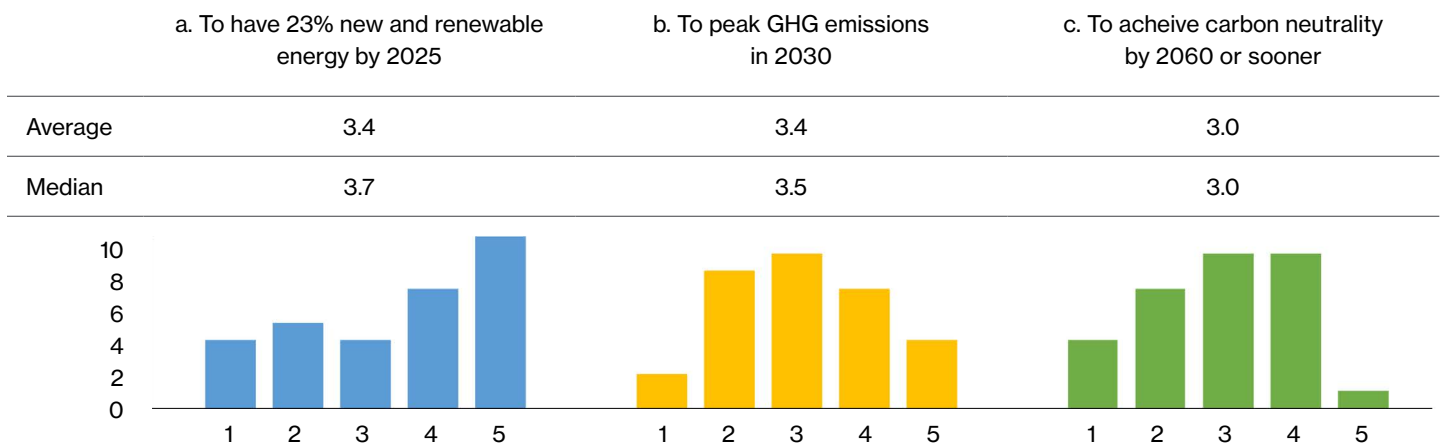
- Leverage targeted policies to build the groundwork and introduce a comprehensive policy roadmap for implementing more ambitious and stringent policies, which include increasing carbon prices and accelerating coal plant retirement.

Rising coal use amid climate risks in Indonesia

Indonesia's reliance on coal has surged in recent years, with its coal-fired power capacity doubling over the past decade, making it the leading fossil fuel user among emerging economies.^{1,2} Simultaneously, Indonesia faces severe climate risks, with high vulnerability to flooding, droughts, and extreme heat.³ Without decisive action, escalating emissions could intensify heatwaves, disrupt the agriculture sector, and reduce fishery yields.⁴

In response, Indonesia has set ambitious national targets. In its enhanced Nationally Determined

Figure 1. How difficult will it be for Indonesia to achieve key climate targets? Distribution of experts' responses



Answers were given on a scale of 1-5 where 1 is “extremely easy” and 5 is “extremely difficult”

Bridging the gap between business-as-usual emissions and climate goals will require stronger policies and increased investment.

Contribution (NDC) submitted to the UNFCCC in 2022, Indonesia revealed its ambition to increase the unconditional target from 29% to 32% below the business-as-usual (BAU) scenario. Indonesia also aims to reach net zero by 2060 or earlier and has set a goal for renewables to supply 23% of total electricity generation by 2025. With the Second NDC anticipated in 2025, Indonesia is expected to outline even more ambitious targets for 2035.

However, Indonesia’s domestic policies, including the much-awaited carbon pricing mechanism,

have not been enough to give strong signals for accelerating renewables and phasing out coal. The current Emissions Trading System (ETS) offers 100% free allocations to emitters, while the carbon tax law has not come into force.⁵

At the same time, a local content requirement for solar power plants limits their deployment, although it has been recently lowered to 20% from 40%.⁶ Further, fossil fuel subsidies persist

in Indonesia, while feed-in tariffs for solar, wind, biomass, and geothermal remain insufficient to drive significant growth in their deployment.⁷

The Indonesia Just Energy Transition Partnership (JETP) aims to offer \$20 billion to help Indonesia peak emissions by 2030 and achieve net zero in the power sector by 2050. However, Indonesia’s Comprehensive Investment and Policy Plan’s (CIPP) estimate for priority projects by 2030 is around \$97 billion, highlighting a significant funding shortfall.

Indonesia’s new government, under President Prabowo Subianto, has pledged to phase out coal and transition the country’s energy sector, which includes plans to retire fossil fuel power plants within 15 years and boost geothermal, hydropower, and bioethanol.^{8,9} However, commitments to invest in key areas like solar PV remain limited.

With current policies and the Indonesia JETP falling short, achieving the net zero target and enhanced NDC targets might present challenges. Bridging the gap between business-as-usual emissions and climate goals will require stronger policies and increased investment.

Expert elicitation on Indonesia's decarbonization pathways

To explore a policy roadmap for Indonesia to achieve carbon neutrality by 2060, we, the Climate Policy Lab at The Fletcher School, Tufts University, in partnership with Landscape Indonesia, conducted a survey of 30 Indonesian and international climate experts in 2023.

Most experts expressed skepticism about Indonesia's ability to meet the targets outlined in its enhanced NDC and Long-Term Strategy (LTS) (Figure 1).

Experts were particularly doubtful about the near-term 2025 and 2030 targets. The current renewable energy penetration (13%) highlights a significant gap. Achieving the carbon peaking

target by 2030 presents great hurdles as well due to the political economy of coal, with fossil fuel incumbents and vested interests maintaining significant influence. Experts pointed to limited funding for renewable energy deployment and slow progress in implementation as critical challenges.

While experts were more optimistic about the net-zero target by 2060, experts emphasized the need for stricter regulations and a more robust governance framework and identified concrete actions.

As part of the survey, the experts evaluated the impacts of various policy measures. Out of the 24 policies we asked about in the survey, frequently selected policies are listed in Figure 2 for illustration.

Figure 2. Experts' responses on how selected policies would positively or negatively affect different areas

Policies	Economic growth & employment	Social equity	Public expenditure	Innovation capacity
Hybrid emissions trading scheme (ETS) and carbon tax in the power sector				
Feed-in tariffs (solar PV, biomass, hydropower, solid waste)				
A coal-fired power plant retirement program				
Carbon Capture and Storage (CCS) initiative				
Reducing emissions from deforestation and forest degradation (REDD+)				
A multi-business forestry policy				
Agroforestry & Social Forestry				
A fiscal and non-fiscal scheme of incentives on electric vehicles				
Industrial energy efficiency standards				

Note: Green boxes represent net positive responses (darker: more positive; lighter: less positive); Red boxes represent net negative responses (darker: more negative; lighter: less negative).

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Economic Growth & Employment: Experts highlighted several policies with significant potential to stimulate Indonesia's economic growth and employment. Feed-in tariffs for renewable energy, agroforestry and social forestry programs, and a multi-business forestry policy were identified as particularly promising. Conversely, there were concerns about the

economic and employment impacts of a coal-fired power plant retirement program, which could harm sectors dependent on coal.

Social Equity: Forestry policies (e.g., agroforestry and social forestry initiatives, REDD+, and mangrove restoration) hold the potential for promoting regional and income equity. However, some policies, like the retirement of coal-fired power plants and incentives for EVs, may disproportionately affect communities.

Public Expenditure: There was broad consensus among experts that an early retirement program for coal-fired power plants would place significant pressure on Indonesia's public finances. Similarly, policies reliant on public funding, such as feed-in tariffs for renewables, subsidy schemes for public transportation, and incentives for electric

vehicles, were identified as potential drivers of increased public expenditure. This underscores the urgent need for innovative financing mechanisms to support these initiatives.

Innovation capacity and internal competitiveness: Experts highlighted that policies such as feed-in tariffs for renewables and initiatives related to carbon capture and storage (CCS) have significant potential for enhancing Indonesia's innovation capacity and internal competitiveness. Additionally, experts emphasized the role of carbon pricing in driving innovation by incentivizing industries to decarbonize and adopt cleaner technologies.

Conclusion

To meet its enhanced NDC goals, Indonesia will need a comprehensive policy roadmap. Policies with significant economic and social benefits, such as REDD+, agroforestry, and multi-business forestry programs, can be prioritized as they impose limited financial strain. Other policies that are financially constraining but carry substantial economic and innovation capacity benefits could also be considered, such as expanding feed-in tariffs for renewables. Finally, options to pave the way for more ambitious action could include retiring coal-fired power plants and increasing carbon prices under a hybrid ETS and carbon tax. ●

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