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Indonesia's Endeavour Towards Green Energy Transition



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Indonesia has set a visionary energy transition roadmap with the goal of achieving zero carbon emissions by 2060, or possibly even earlier. At the core of this ambitious plan lies a commitment from the Indonesian government to construct a staggering 600 gigawatts (GW) of power plants, all fueled by new and renewable energy sources, encompassing a diverse energy mix that includes water, geothermal, and hydrogen.

In the near term, Indonesia is dedicated to rapidly advancing its shift towards renewable energy by initiating decarbonization through the conversion of diesel



fuel into a cleaner power source, specifically designed to operate diesel power plants in remote regions.

The roadmap champions bioenergy sources, aiming to bolster national energy security and independence in the foreseeable future. This unwavering commitment to a clean energy transition aligns seamlessly with emission reduction targets and the ultimate aspiration of realizing net-zero emissions and carbon neutrality by the year 2060.

The Indonesian government is determined to expedite the energy transition process by promoting the widespread use of electric vehicles across all sectors. Beyond mere



encouragement, the government plans to offer incentives and implement measures that will make electric vehicles more cost-competitive and accessible to the entire population. These efforts signify the nation's steadfast resolve to electrify the end-use sector, heralding a transformative shift within the power sector. By targeting a massive 1,000 GW of renewable capacity by 2050, the roadmap envisions a remarkable 85% or higher share of renewables in the nation's power generation mix.

State-owned energy company Pertamina has emerged as a key player in this transition. It has empowered 63 villages to harness the potential of clean energy sources as part of its Desa Energi Berdikari (Energy Self-Sufficient Village) initiative. By incorporating environmentally friendly sources like solar power, hydropower, wind, and biogas, Pertamina not only advances the nation towards its net-zero emissions goal by 2060 but also boosts the economic prospects of these villages. Through the installation of solar panels and biogas-powered plants, the initiative has yielded an impressive 31,070 watts of peak energy while also aligning harmoniously with the United Nations' Sustainable Development Goals.

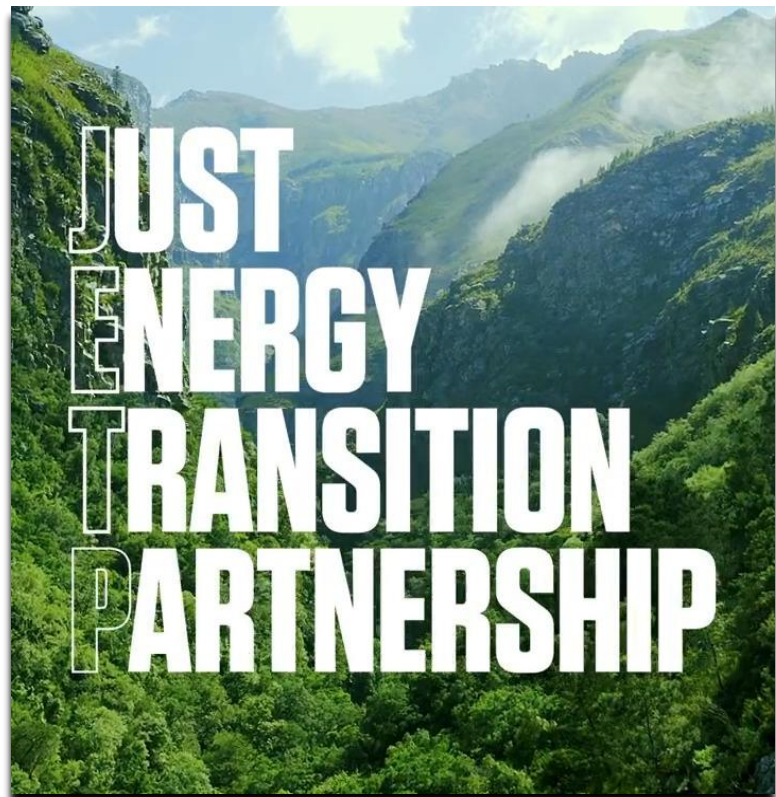
The Just Energy Transition Partnership (JETP)

The Just Energy Transition Partnership (JETP) is a pivotal approach with an initial \$20 billion in public and private financing for the purpose of decarbonizing Indonesia's energy sector. The JETP employs a multifaceted approach, encompassing grants, concessional loans, market-rate loans, guarantees, and private investments.



To operationalize this, Indonesia has committed to developing a comprehensive JETP Investment and Policy Plan in August 2023, with robust support from international partners. The plan outlines pathways for Indonesia to realize new and accelerated targets, such as reaching the peak of total power sector emissions by 2030, setting a cap on power sector emissions at 290 MT of CO₂ in 2030, a decade ahead of the baseline value, and establishing a goal of achieving net zero emissions in the power sector by 2050.

Furthermore, the plan involves a rapid increase in renewable energy deployment, targeting at least a 34% share of all power generation from renewables by 2030, effectively doubling the current deployment over the next decade. The success of these targets hinges on mobilizing the initial \$20 billion in public and private



financing over a three-to-five-year period and leveraging the expertise, resources, and operations of multilateral development banks. Indonesia acknowledges the necessity of enhanced financing to pursue its climate objectives and the importance of including international partners in this endeavor.



However, it's important to acknowledge that this transition to clean energy may result in the displacement of around 30,000 mining workers in Indonesia between 2020 and 2040, highlighting the need for strategies that address the employment impact of the transition.

Collaborations with ASEAN

Indonesia's commitment to renewable energy extends beyond its borders through its active participation in the Association of Southeast Asian Nations (ASEAN). ASEAN has established ambitious targets of achieving a 23% share of renewable energy in the Total Primary Energy Supply (TPES) and a 35% share of renewable energy in the installed power capacity across the region. The Indonesian government is playing a pivotal role in pushing for collaborative efforts to accelerate the transition to green energy in Southeast Asia.

Recognizing the imperative of a global shift from fossil-based economies to low-carbon economies, this transition must be undertaken in an inclusive and equitable manner, respecting national circumstances, capacities, and priorities. ASEAN is actively exploring various strategies to secure a sustainable energy



future, including optimizing biofuel and clean coal technologies, among others.



In conclusion, Indonesia's energy transition roadmap represents a comprehensive and visionary approach to embracing renewable energy sources. Indonesia is poised to lead the massive global shift towards clean and renewable energy. By encouraging youth-driven initiatives and engaging the private sector, Indonesia can realize its vision of a cleaner, more sustainable energy future, as outlined in the government-issued roadmap for achieving carbon neutrality by 2060 or earlier.