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Asean goes big on renewables

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THE Asean region is well-placed to leverage renewable energy sources to secure a sustainable future. Countries like Malaysia, Singapore, and Indonesia benefit from abundant sunlight, making solar power a pivotal resource.

Additionally, Laos relies heavily on hydropower, with 49 out of 57 power plants in the country dedicated to this energy source.

The Philippines and Indonesia, situated along the Pacific Ring of Fire, are ideal candidates for geothermal energy production. Wind energy is also gaining traction in coastal regions of Thailand and Vietnam. Indonesia has significant potential in advancing bioenergy by converting agricultural waste into power, especially in rural areas.

An aspirational target aims to increase the share of renewable energy in Asean to 23% by 2025, with an ultimate goal of reaching net zero emissions (NZE) by 2050 or 2060. Despite the region's immense potential, several challenges hinder the widespread adoption of renewable technologies.

A primary obstacle is the high initial costs associated with developing renewable energy infrastructure. Establishing solar farms, wind turbines, and hydroelectric dams demands substantial capital investment.

Transitioning from fossil fuel-based systems to renewables necessitates technological upgrades and can be a time-consuming process. Asean countries have historically depended on coal, oil, and natural gas for energy production; therefore, shifting from these established sources poses a significant challenge, requiring costly and complex overhauls of existing infrastructure.

Moreover, technological gaps in advanced renewable energy solutions complicate this transition. Many Asean countries depend on foreign technologies rather than developing locally optimized solutions, which could better cater to their geographical contexts.

This reliance creates barriers that prevent full realization of the region's renewable energy potential.

Another substantial challenge is the inconsistency in energy policies among Asean nations. While some countries have progressed in develop-

ing renewable energy markets, others continue to rely heavily on fossil fuels and struggle to adopt renewable technologies.

This inconsistency hinders collaboration and impedes progress towards the region's renewable energy goals. Furthermore, a lack of public awareness regarding the benefits of renewable energy remains a critical issue, as many residents in Asean remain unaware of the long-term environmental and economic advantages of transitioning to renewable sources.

To address these hurdles, Asean countries can collaborate to achieve shared renewable energy objectives. The theme for the 2025 Asean Energy Sector meetings, "Asean Powering: Bridging Boundaries, Building Prosperity," underscores the significance of regional collaboration in creating an integrated energy market that connects Asean countries through shared resources and infrastructure. By pooling resources and expertise, Asean nations can make renewable projects more affordable, accessible, and impactful. A prime example of such collaboration is the Asean Power Grid (APG), which connects the power grids of member nations, facilitating cross-border electricity sharing. The Trans-Asean Gas Pipeline also plays a critical role by ensuring the transportation of gas across borders and greater supply security.

Joint research and development efforts can further enhance collaboration, allowing for the exchange of best practices and advancements in renewable energy technologies.

Coordinated policies and a unified regulatory framework can help break down barriers and encourage the adoption of renewable energy.

Moreover, regional financing options, such as green bonds, can support renewable projects in less-developed nations. Renewable Energy Certificates (RECs) serve as financial incentives to promote renewable energy usage in both production and consumption.

Renewable energy holds the promise of becoming a vital commodity among Asean nations, benefiting both producing and consuming countries. By meeting the energy demands of high-energy-consuming nations, the region can simultaneously boost the income and GDP of renewable energy-

producing countries.

In Malaysia, for instance, a budget of RM300 million was recently established under the National Energy Transition Facilitation Fund in the 2025 Budget. The aim is to increase renewable energy capacity to at least 70% of its power generation mix by 2050, up from the current 27%. This goal will be accomplished by expanding renewable energy use and leveraging the nation's natural resources, strategic locations, and technological advancements.

Key focus areas in Malaysia include solar energy, supported by initiatives like the Large-Scale Solar Program and the Net Energy Metering scheme, as well as hydroelectric projects in East Malaysia and mini-hydro projects in West Malaysia.

Furthermore, Malaysia is interested in investing in biomass and biogas technologies to diversify its renewable energy portfolio and promote a circular economy. Efforts in Sarawak to champion hydrogen energy are also a part of the region's sustainable energy strategy.

The future of renewable energy in Asean appears promising, bolstered by abundant natural resources, growing climate change awareness, and international commitments to sustainable development. By investing in renewable energy infrastructure, fostering technological innovation, and enhancing regional cooperation, Asean holds the potential to emerge as a global leader in renewable energy, advancing towards a cleaner and more sustainable future for all its members.

In conclusion, the integration of renewable energy within Asean's energy mix promises numerous benefits, including reduced carbon emissions, job creation, and enhanced energy security.

The region's diverse renewable resources, alongside a commitment to sustainable development, pave the way for a bright and prosperous renewable energy future.

Through collaboration and dedication to harnessing these resources, ASEAN nations can be at the forefront of leading the transition to a greener and more sustainable world.

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