

1,000 ISLANDS - RENEWABLE ENERGY FOR ELECTRIFICATION PROGRAMME (REEP 2)

REEP2



REEP2 is a programme to improve the institutional, regulatory and technical conditions for achieving the policy target of 23% renewable energy (RE) in the energy mix by 2025 at national and regional level.

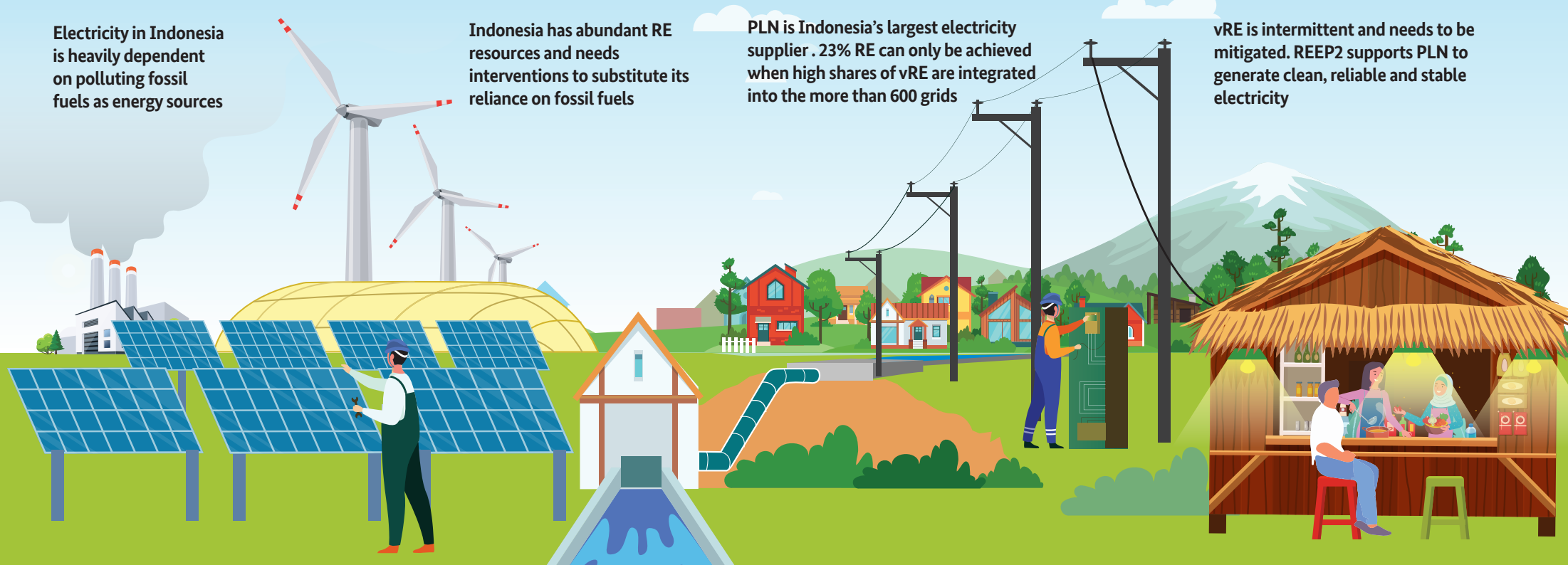
WHY IS THE INTEGRATION OF HIGH SHARES OF VRE* INTO THE GRID IMPORTANT?

Electricity in Indonesia is heavily dependent on polluting fossil fuels as energy sources

Indonesia has abundant RE resources and needs interventions to substitute its reliance on fossil fuels

PLN is Indonesia's largest electricity supplier. 23% RE can only be achieved when high shares of vRE are integrated into the more than 600 grids

vRE is intermittent and needs to be mitigated. REEP2 supports PLN to generate clean, reliable and stable electricity



WHY THE VRE* INTEGRATION IS STILL A CHALLENGE?



vRE is considered as unstable and unreliable sources.



Technical regulation is insufficient to increase vRE penetration into the grid.



Insufficient enabling environment to promote the use of vRE and increase private sector participation



Enabling environment to promote the use of vRE and increase private sector participation is insufficient

*Variable Renewable Energy

HOW DOES REEP2 HELP ACHIEVING THE TARGET OF 23% RE IN THE ENERGY MIX BY 2025?



REGULATION

The capacities of the electricity sector regulator for decentralised RE are improved



POWER SYSTEM

PLN's capacity in power system planning, engineering design and grid operation are strengthened



PRIVATE SECTOR

The private sector's capacity to develop innovative technologies and business models / load shifting are strengthened

WHAT ARE SOME OF REEP2S ACTIVITIES?



Legal and policy advice for RE upscaling, utilizing study results of pilot grids as well as evaluating the transferability of renewable energy in Indonesia



Technical advice to regional PLN offices in Sulawesi, NTT and Bangka-Belitung on power system and grid extension planning



Pilot Project Support to demonstrate the viability of VRE in island grids and demonstrate load-shifting solutions



Annual Indonesia- German RE Day in Jakarta to facilitate Indonesian-German / European technology cooperation and trainings for project developers

8 BENEFITS OF RENEWABLE ENERGY



Increase utilization of RE - Having tropical climate, Indonesia is blessed with plenty of renewable sources such as solar and biomass that can substitute fossil fuels, reduce energy import dependence and allow local power supply



Cover fast-growing demand - Electricity generation from RE will help cover the rising electricity demand of 8.6% annually in Indonesia (pre - Covid)



More cost-efficient in many areas - Building renewable power plants is often cheaper as it cuts fuel transportation costs, especially for an archipelagic Indonesia



Reduce distribution losses - RE can be built close to demand hence reducing transmission and distribution losses



Green House Gas (GHG) emission reduction - Carbon-intensive fossil fuels such as coal, oil, and gas make up almost 90 per-cent of national energy mix



Faster to build than fossil fuels - Coal power plants can take more than 10 years to build while solar power plants can only take 12-18 months



Provide 24-hour electricity access - In many areas, introducing RE can bring 24-hour electricity to people, particular on small island grids



Create jobs - The development of the RE sector will drive the local economy by generating more jobs in both urban and rural areas

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