

Optimizing the potential of renewable energy in Indonesia

1,000 Islands – Renewable Energy for Electrification Programme (REEP) Phase II

Commissioned by	Federal German Ministry for Economic Cooperation and Development (BMZ)
Country	Indonesia
Lead executing agency	Directorate General of New Renewable Energy and Energy Conservation (DG NREEC), Ministry of Energy and Mineral Resources (MEMR), Indonesia
Overall term	January 2021 to December 2024

Context

With more than 17,500 islands, Indonesia is the largest archipelagic nation with fast-growing electricity demand. The state-owned electricity company (PLN) is obligated to fulfill the electricity demand, where most of the electricity is generated from conventional fuel, at times from costly diesel fuel. Indonesia's electricity consumption is set to increase significantly to improve economic development and quality of life. Covering this need in an environmentally sound and economical way remains a challenge for Indonesia.

The Indonesian Government recognises the potential of renewable energy as a widely available domestically and environmentally friendly energy source. In the national energy plan, Indonesia has set the target to reach 23 per cent of renewable energy in the national energy mix by 2025, which is essential for Indonesia's commitment to the 2015 Paris Agreement of reducing greenhouse gas emissions by 31.89 per cent conditionally by 2030.

So far, Indonesia has limited experience in integrating renewable energy into the electricity grid. Successful examples need to be demonstrated and scaled up to showcase the possibility of overcoming the numerous technical, administrative, and regulatory challenges.

The Directorate General of New Renewable Energy and Energy Conservation (DG NREEC), in cooperation with GIZ, acting on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), is jointly implementing the **1,000 Islands – Renewable Energy for Electrification Programme Phase II (REEP2)**.

For more information, please scan the QR code or visit
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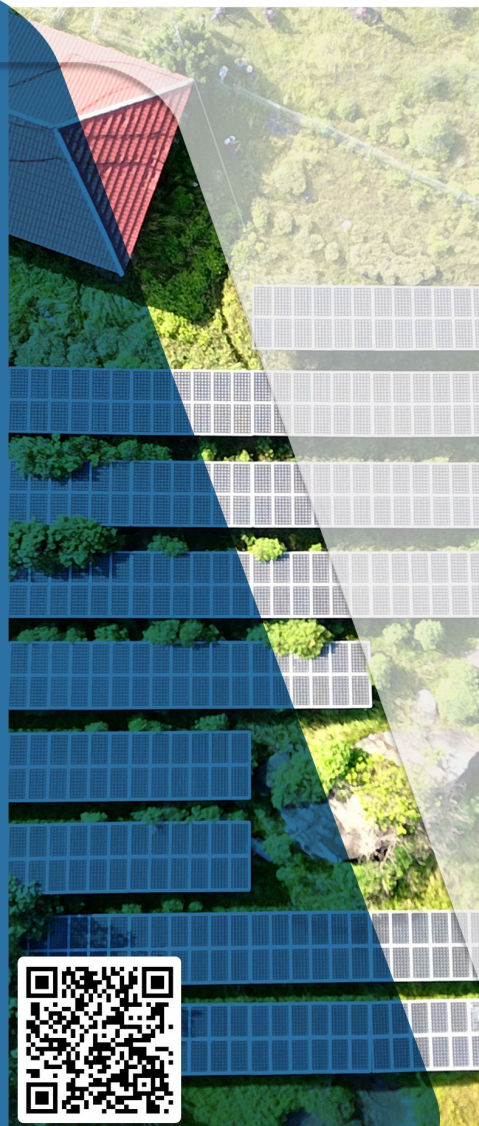


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Approach

REEP2 supports Indonesia in improving the institutional, regulatory, and technical conditions to reach 23 percent renewable energy in the national energy mix by 2025. REEP2 has three areas of intervention:

Output 1

Improve the regulatory framework to promote decentralized renewable energy (RE).

Output 2

Support PLN in power system planning and operation with high shares of variable renewables.

Output 3

Promote RE pilot projects through cooperation with the private sector.

REEP2 combines a bottom-up and top-down approach by combining policy advisory work for renewable energy regulation with the demonstration of innovative RE solutions in selected locations. Following the regional approach of REEP, in its second phase, the project focuses on three target regions, Sulawesi, East Nusa Tenggara (NTT), and Bangka Belitung, with good replication potential.

REEP2 also supports PLN in power system planning and operation with high shares of variable renewables while providing technical training in PLN's in-house institutes. In this regard, REEP2 supports the state-owned electricity provider PLN in assessing the local grid's capacities to incorporate higher shares of variable renewables in order to replace fossil fuel options. Related training programmes are incorporated in PLN's in-house training institute to distribute skills and knowledge across the PLN corporation.

GIZ is responsible for the content of this publication

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