



Indonesia Accelerated Renewable Energy Development: Collaborative Endeavors towards Sustainable Future

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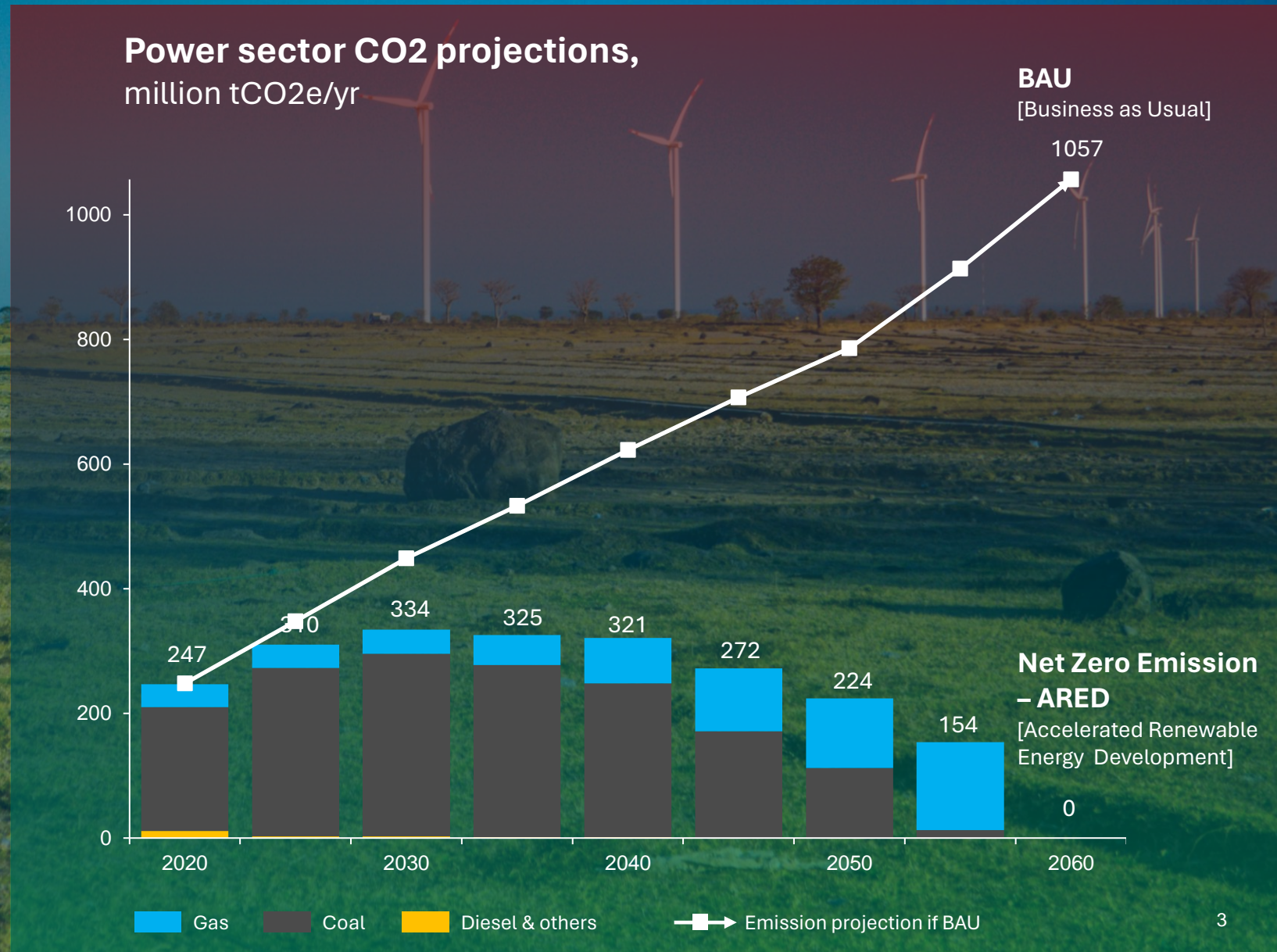




The earth is **warming...**

PLN is fully committed to reduce Green House Gas emissions...

During COP26, PLN announced a strategic roadmap aimed at achieving Net Zero Emissions by 2060.



At COP28, PLN reaffirmed our commitment to realizing the energy transition towards Net Zero Emission by 2060.



1 1.8 Bn tCO₂

Cancellation of 13.3 GW new coal power plant planned in RUPTL 2019-2028

5 0.1 Bn tCO₂

Biomass co-firing at 43 coal-fired power plants and up to 52 plants by 2025

2 0.2 Bn tCO₂

Cancellation of 1.4 GW PPA of coal power plant under the Greenest RUPTL pipeline

6 0.1 Bn tCO₂

1 GW De-dieselization program

3 0.2 Bn tCO₂

Replace 1.1 GW of coal with Renewable Energy

7 0.1 Bn tCO₂

Implementation of *carbon trading* at 55 Coal-Fired Power Plant, trade volume ~5.26 million CO₂

4 0.1 Bn tCO₂

Replace 800 MW of coal with gas power plant.

8 1.2 Bn tCO₂

Plan and develop 21 GW renewables plants under the Greenest RUPTL



Total cumulative emissions reduction/avoidance

3.7 Billions Ton CO₂

How are we going to walk the talk?



Greenest National Electricity System Planning 2021-2030

Additional RE Capacity

20,9
GW

RE Energy Mix

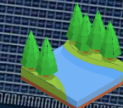
52%



Hidro
10,4 GW



Solar & Wind
5,0 GW



Biomass
0,6 GW



Geothermal
3,4 GW



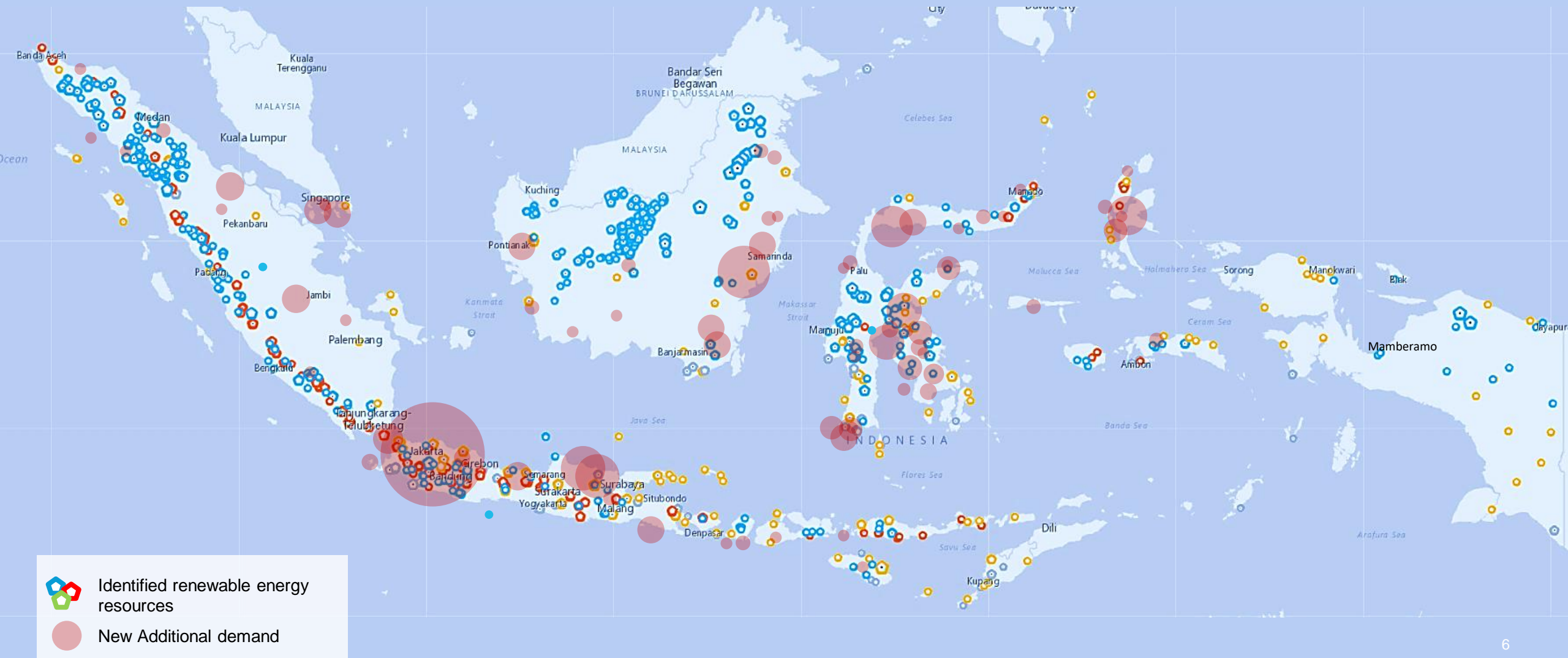
Lainnya
1,5 GW



Net Zero Emission 2060

There is a **mismatch** between

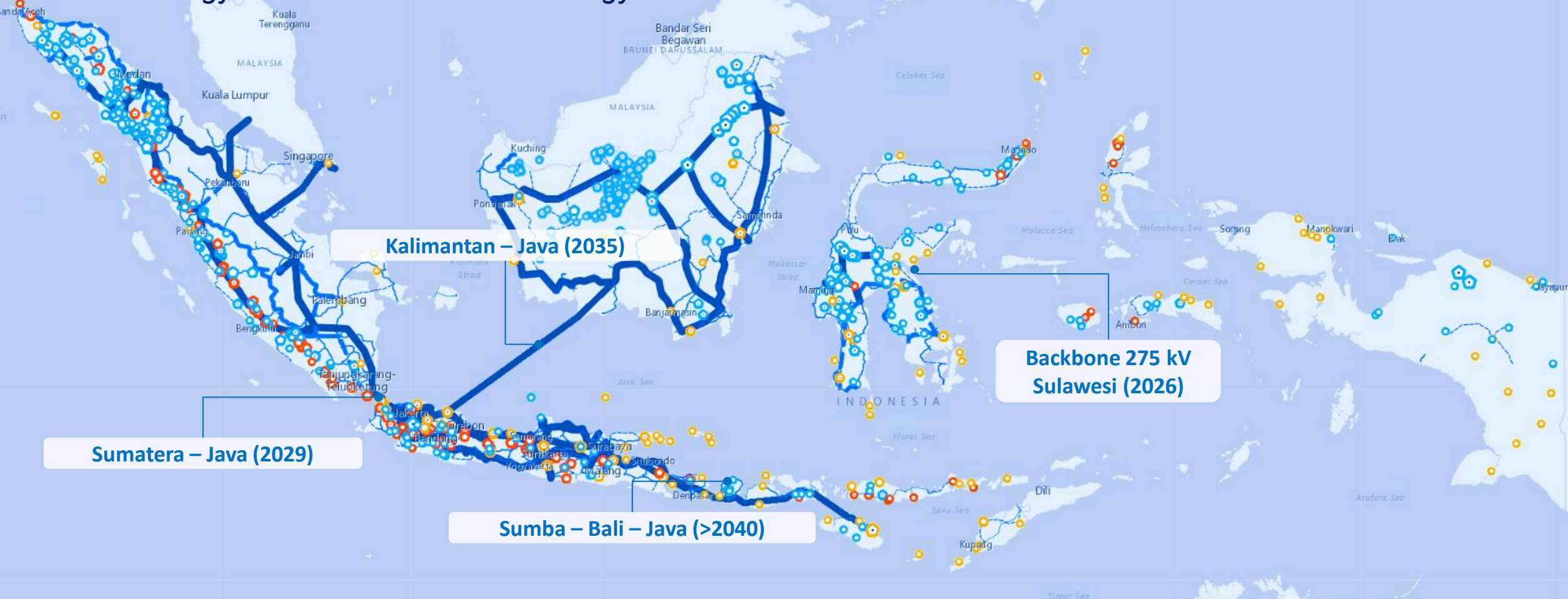
Large scale of renewable energy resources and epicentrum of demand



Accelerated Renewable Energy Development (ARED)



The Green Super Grid will solve the problem of mismatch between supply and demand, connecting renewable energy sources to areas where energy is needed..



Total additional renewable energy capacity within Accelerated Renewable Energy Development (ARED) Scenario
61 GW

- Hydro **19,6 GW**
- Geothermal **7,1 GW**
- Bioenergy **3,7 GW**
- Solar **16,5 GW**
- Wind **11,3 GW**
- New energy **2,4 GW**

No Transition, Without Transmission...

PLN will build a **end-to-end smart grid system** to accommodate the massive penetration of renewable energy sources (vRE)



SMART GRID

Smart Control System
Balancing & smoothing power operations end-to-end

Accurate weather prediction

Network Diagnostic

Smart dispatch system

Smart defense scheme

Supply



Smart
Power Plant

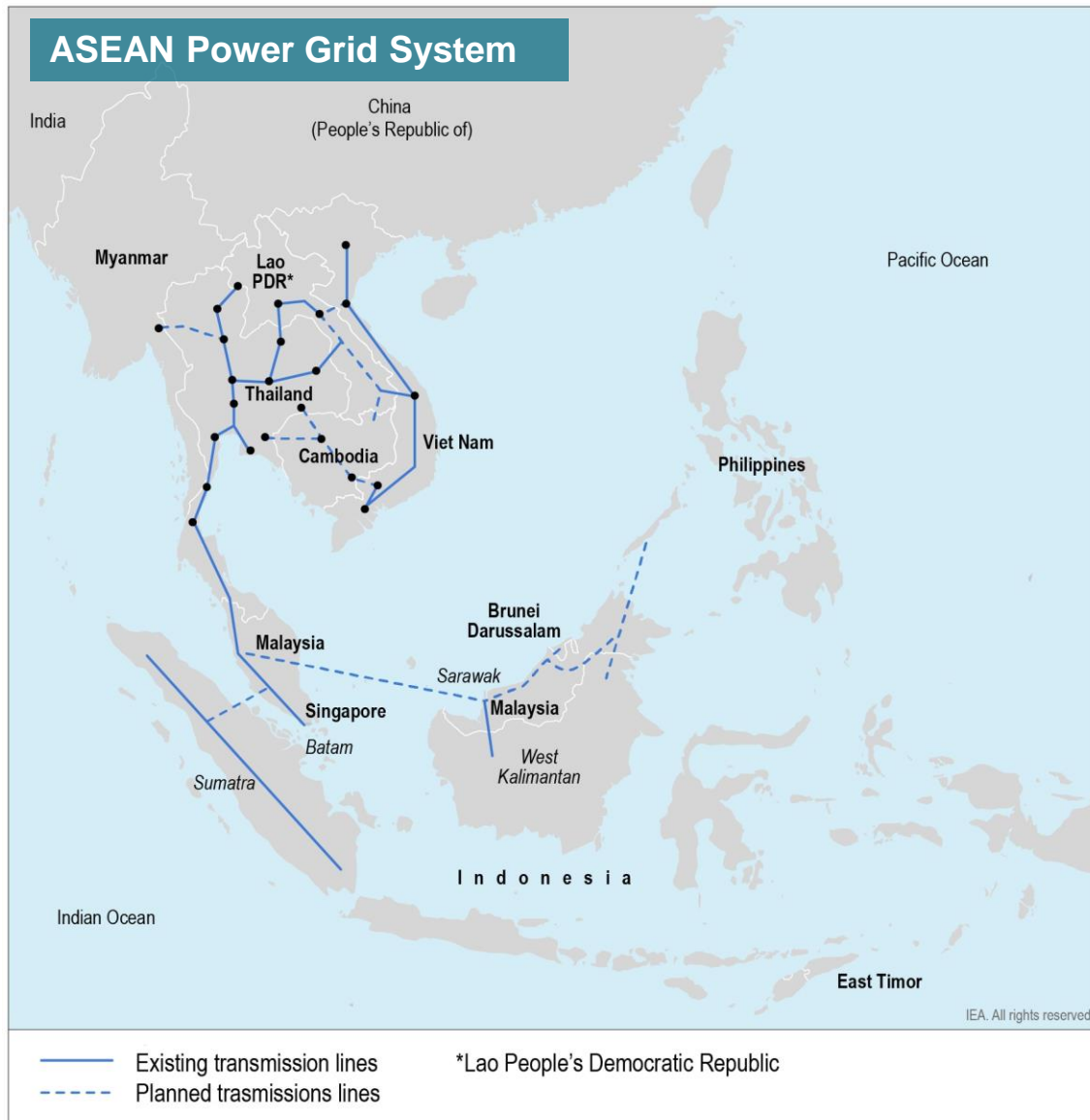
Smart Transmission

Smart
Distribution

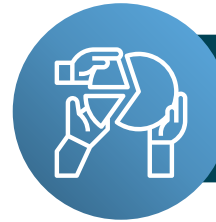


Demand

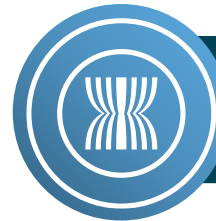
The dream of **ASEAN Power Grid** reflecting a great mission of prosperity for all ASEAN countries. This dream **can be achieved** through **collaborations**.



Reflecting the spirit of:



COLLABORATION



UNITY OF ASEAN



MUTUAL PROSPERITY

PLN cannot bear these burden alone. Combating climate change is a global effort. We **collaborates** to accelerate Energy Transition Agenda...



Primary Energy



Generation



Transmission



**Is it enough?
No, it's not enough...**

**We open to collaborates
more...**

Distribution



Technology



Financing





**PLN is ready to collaborate
with Singapore with the Spirit
of Fairness for the Mutual
Prosperity and Unity of ASEAN**



Transition of Energy

Accelerating Growth of Economy



It is not about international environmental agreements, but **because we do really care...**





PLN's Future is to take care the **environment** as our primary responsibility, with **electricity** as our **byproduct**.



PLN