



PLN

PLN Strategy for Net Zero Emissions by 2060

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For 77 years, PLN has been powering millions of lives in Indonesia



66+ GW
Generation capacity¹



84+ Million
Customers



~270 Million
Lives powered



USD 25 Billion
Revenues²

1. Including Independent Power Producers

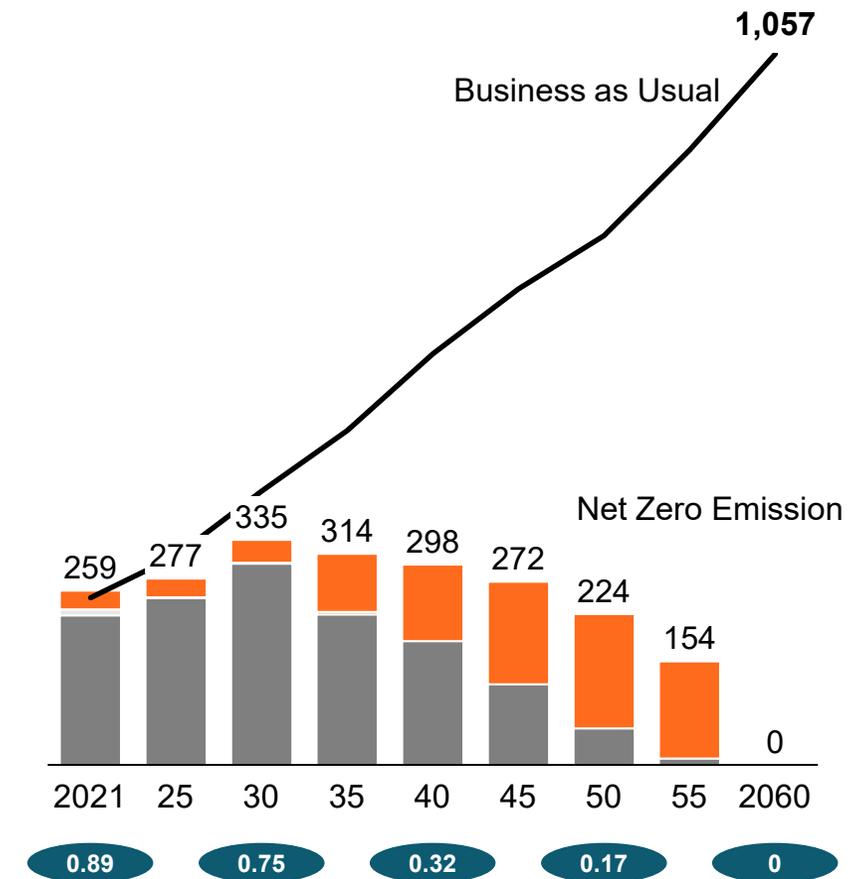
2. 2021 Consolidated Financial Statements of PLN, equivalent to 368 Tn IDR

At COP26, PLN has declared a roadmap to achieve net zero emission by 2060

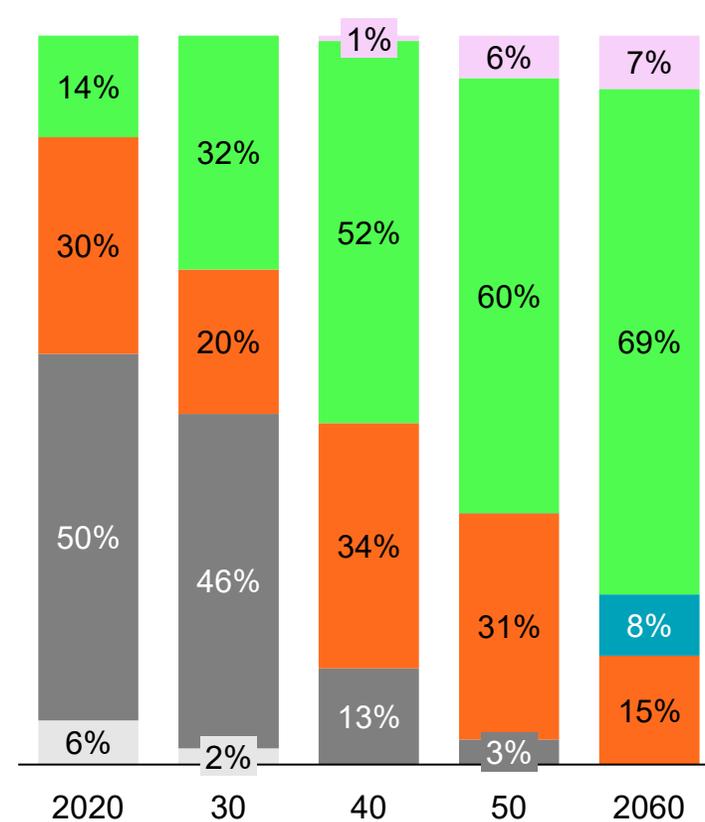


xx Emission intensity, tCO2/MWh New Energy RES Coal CCS³ + Gas CCS Gas² Coal Oil & other

Power sector CO2 projections, million tCO2e/yr



Capacity share by technology for net zero scenario¹, %



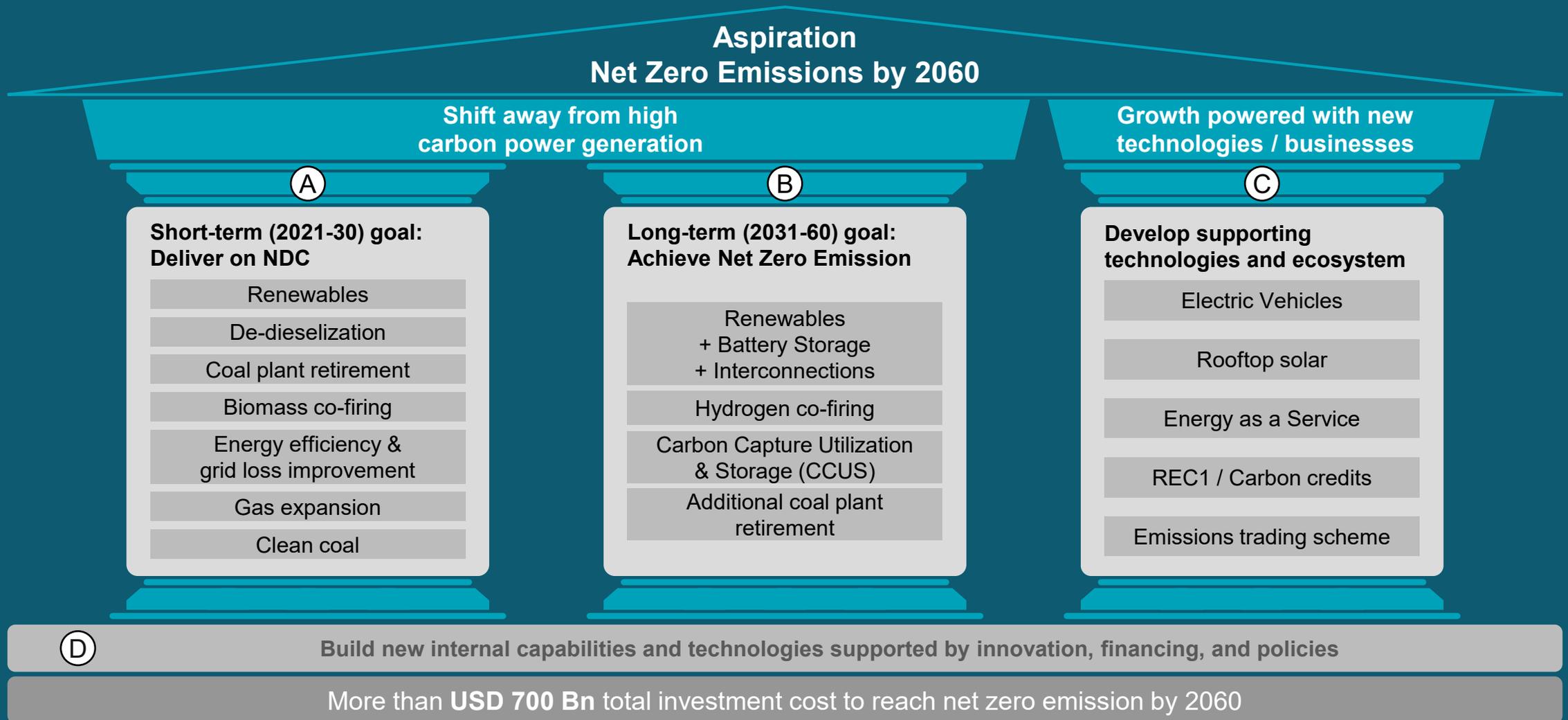
PLN is on a journey to become a clean power company

PLN will expand power capacity to support the growth of Indonesia's economy & power demand

PLN to focus power capacity expansion **with clean technology**

1. Disruptive scenario: allowing for CCUS and New Energy (e.g., nuclear) with projected demand of 1499 TWh in 2060
 2. Gas with hydrogen cofiring up to 65% in 2060 3. Coal CCS with biomass cofiring up to 19% in 2060

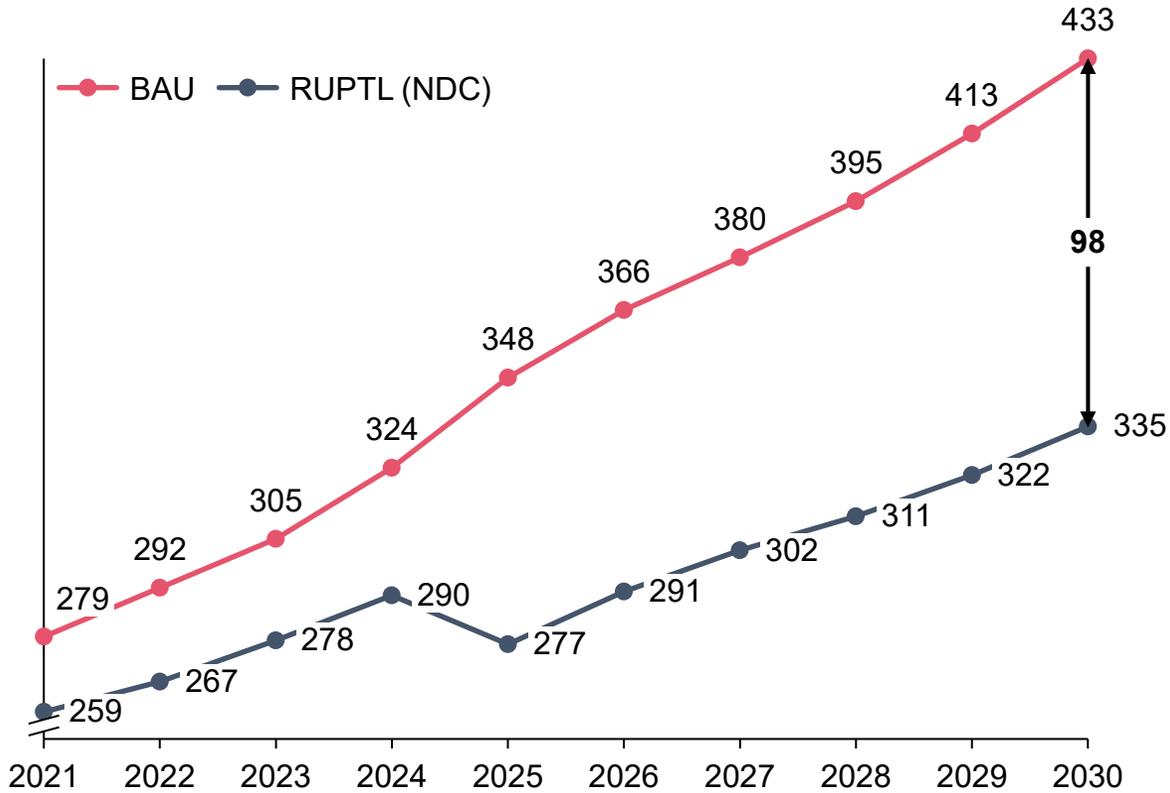
PLN will continue to implement all energy transition initiatives, to walk the net zero 2060 commitment



Aligned with Indonesia's NDC, PLN is undertaking extraordinary initiatives to reduce CO₂ emissions by more than 98 million tons in 2030



Emission levels in different scenarios (Mn ton CO₂)



CO₂ mitigation actions under NDC



Cancellation of 14.2 GW new coal power plant planned in RUPTL 2019-2028



Addition of renewable power plant with total capacity **20,9 GW**



Biomass cofiring at 52 coal-fired power plants by 2025



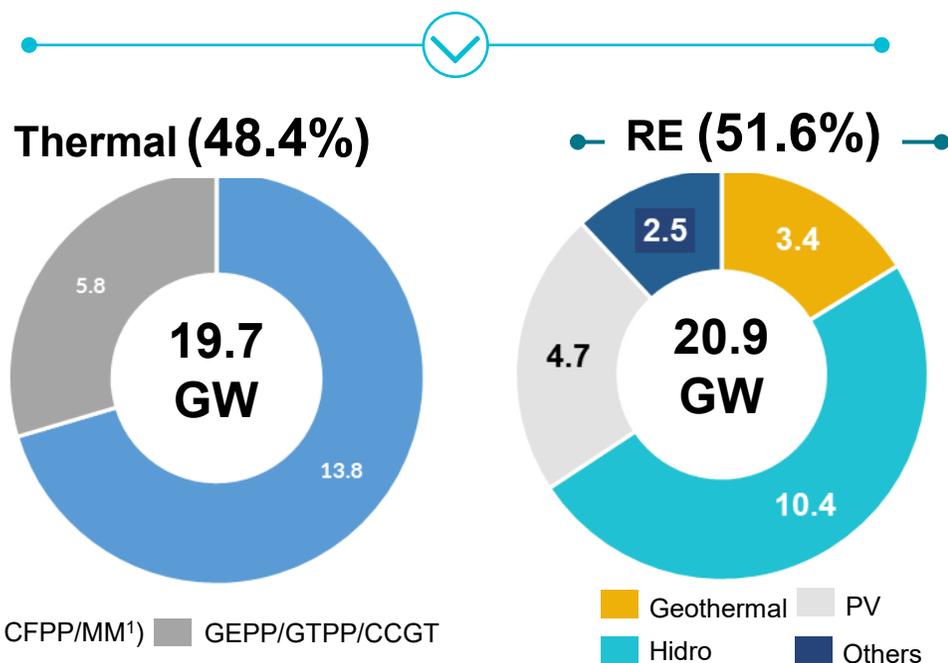
Addition of natural gas-based power plant with total capacity **5,8 GW** and gasification in natural gas-based power plant

NDC : Nationally Determine Contribution

Renewable energy comprises nearly 52% of planned additional capacity between 2021-2030



With the addition of 20.9 GW of renewable capacity, renewable energy share will increase to 24.8% by 2030.

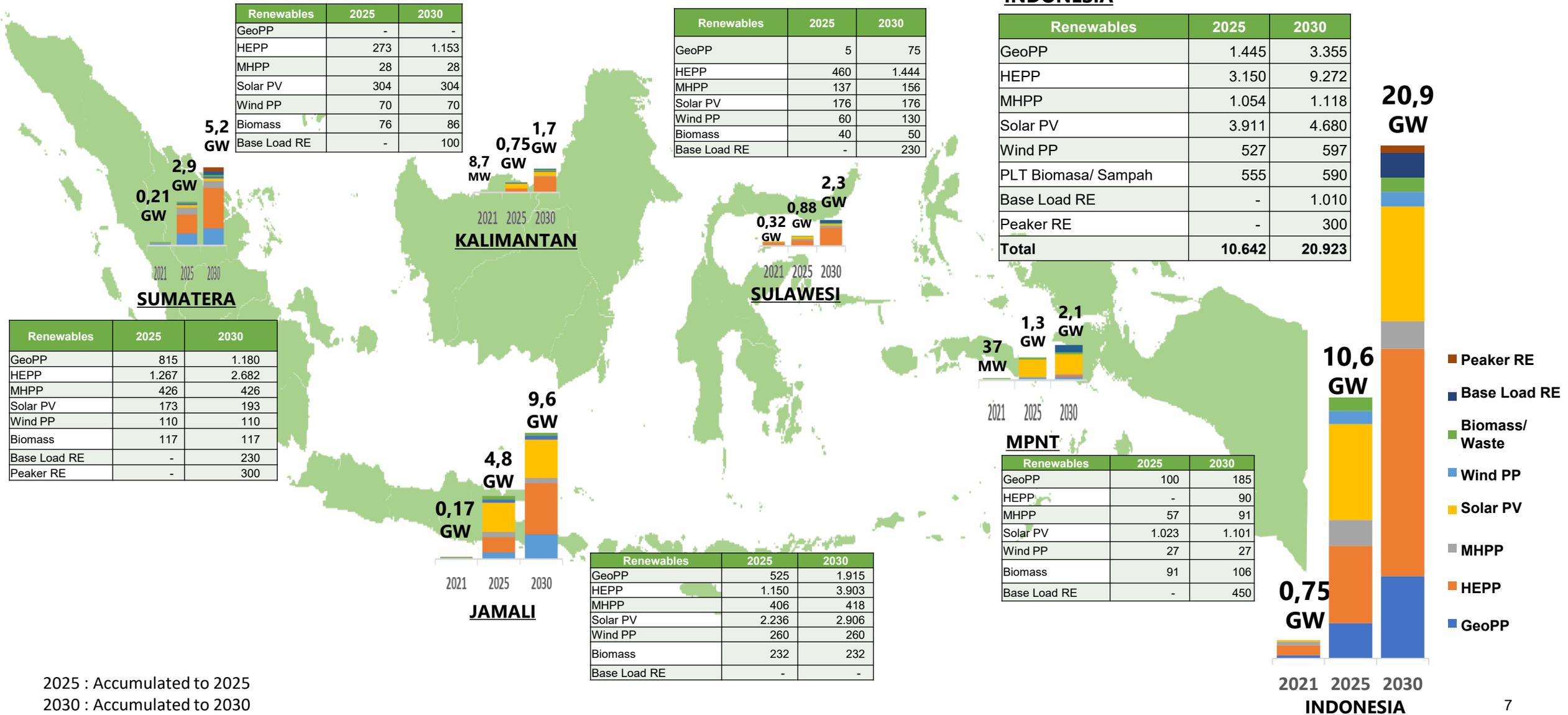


Total Capacity and Energy Mix

	2021 ²	2025	2030
 Total Capacity (GW)	63	90	99
 RE Capacity (GW)	8.2	18.6	28.9
 Energy Mix (%)	12.6	23	24.8

¹ Existing Contract, Construction Stage II ² installed capacity

Renewable Energy Development Plan 2021-2030 across Indonesia

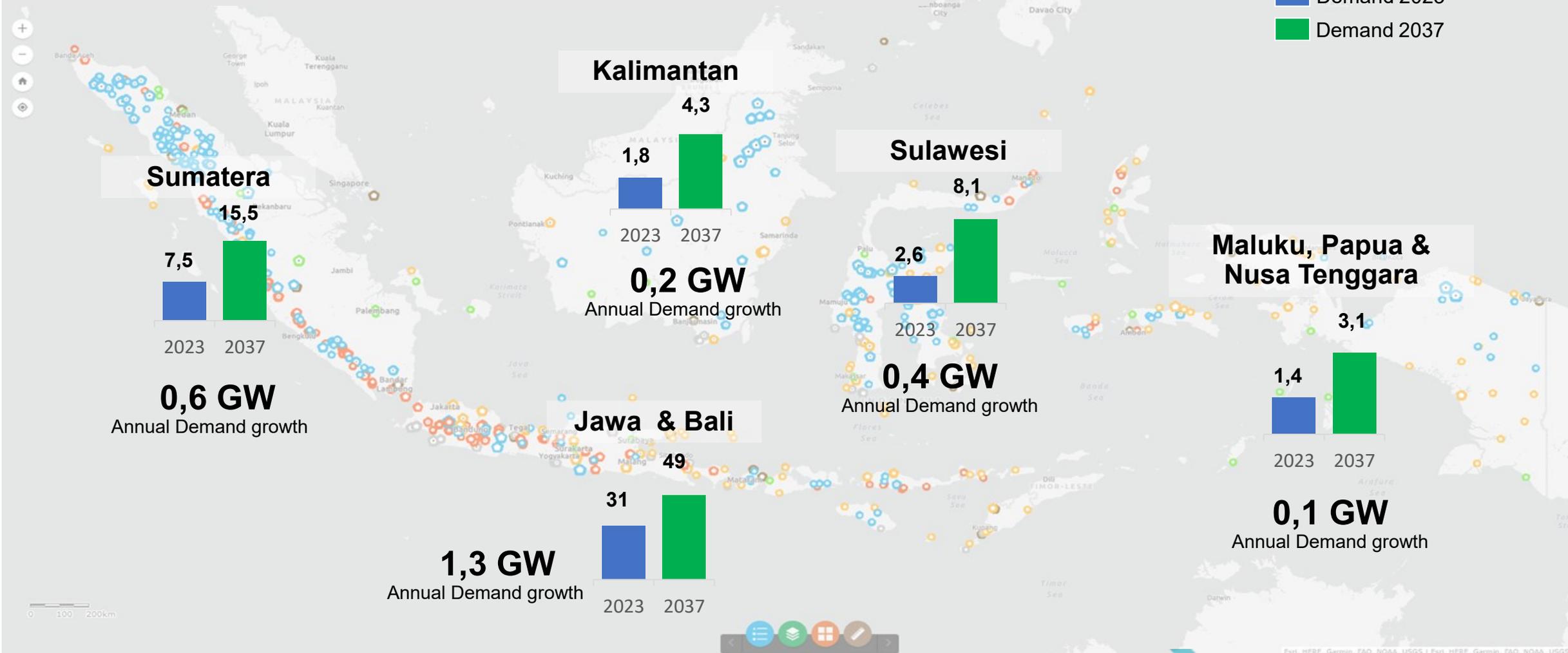


2025 : Accumulated to 2025
 2030 : Accumulated to 2030

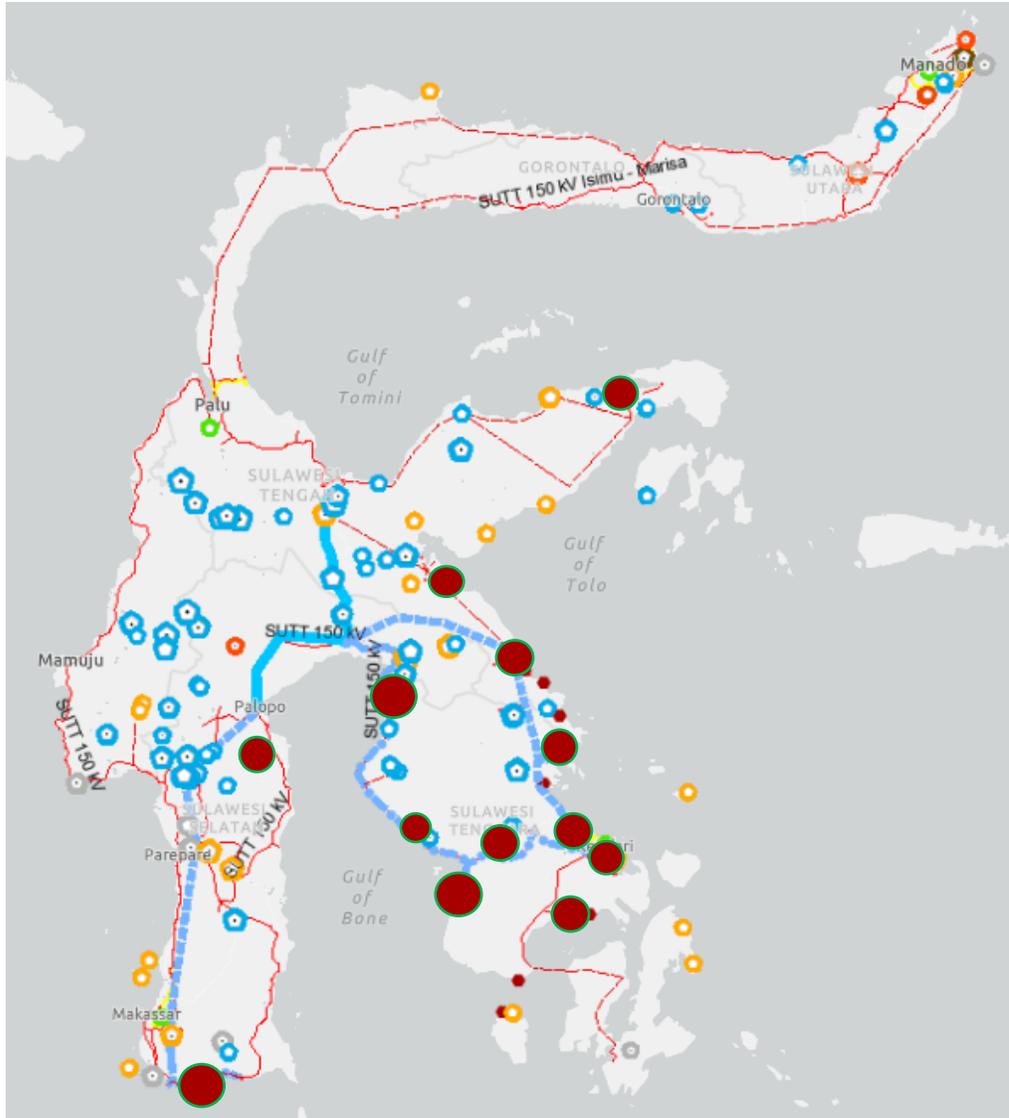
PLN has identified additional demand beyond RUPTL up until 2037, which will keep growing across Indonesian archipelago



Growing electricity: demand 2023 vs. 2037 across the archipelago, in GW



PLN faces immediate and high additional renewable energy demand beyond RUPTL for energy intensive industries -- an example of Sulawesi island



- ▶ Sulawesi has an immediate and high additional demand for energy intensive industries (captive power), which require additional renewable power plant and transmission lines to evacuate green energy to the demand source.
- ▶ The expansion of 275 kV backbone transmission line (**Green Transmission Corridor**) will connect **3+ GW additional hydro** across three provinces in southern Sulawesi.
- ▶ Inter temporal capacity of natural gas power plant will serve the immediate demand before hydropower become online.

- ⬡ : Hydro potential
- : Existing 150 kV Transmission Line
- - - : Planned 150 kV Transmission Line
- : Captive demand
- : Existing 275 kV Transmission Line
- - - : Planned 275 kV Transmission Line
- : Existing 70 kV Transmission Line

PLN also enables renewable consumption through Renewable Energy Certificate



PLN is enabling stakeholders' participation in green energy consumption and development with green energy as-a-service

1.9 TWh of PLN RECs sold to multiple stakeholders (293 customers)

PLN's RECs can be tailored based on the institutions needs and budget

Three of PLN's renewables power plants are registered to issue RECs:

- Lahendong geothermal power plant (80 MW)
- Kamojang geothermal power plant (140 MW)
- Bakaru hydropower plant (130 MW)



PLN's REC Customers



+ many more companies and institutions



PLN