KEMENTERIAN INVESTASI
DAN HILIRISASI/BKPM

80 Bersatu Berdaulat
Rakyat Sejahtera
Indonesia Maju

PYC International Energy Conference 2025

Towards Indonesia Emas 2045: Aligning Energy Security, Economic Growth, and Environmental Sustainability

Jakarta, 23 August 2025

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Ministry of Investment and Downstream Industry/
Indonesia Investment Coordinating Board

Outline

1 **Overview of Macroeconomic and Investment Landscape**

Recent Developments, Key Indicators, and Future Targets

2 **National Development Direction: Greening the industry through downstreaming acceleration in renewable energies**

Downstreaming supports in the battery storage, solar panels, and other related industries

Indonesia's Economy Grows by 5.12% (Year-on-Year) in the Second Quarter of 2025

Driven by household consumption (54.25%) and investment (27.83%).

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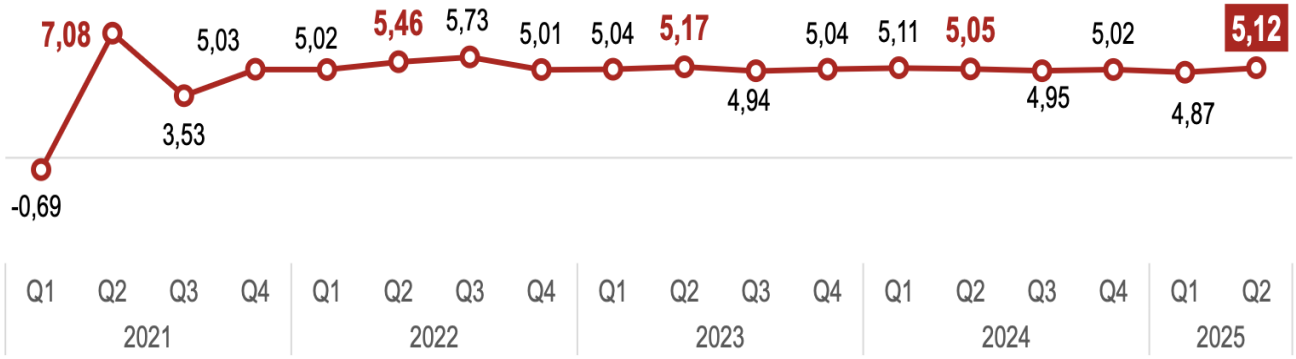
Indonesia's Economic Growth (5,12%, yoy)

Q2 2025 Economic Performance

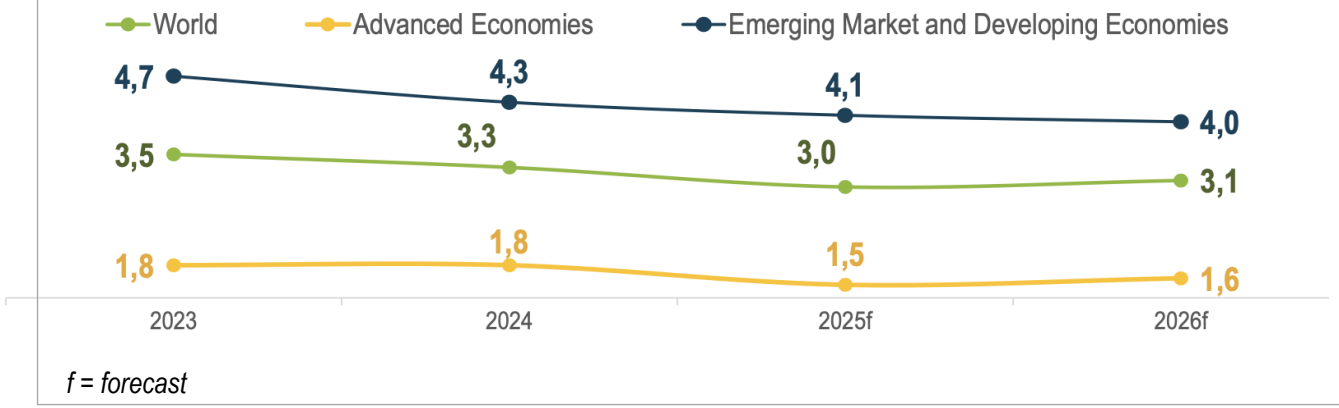
q-to-q growth: 4,04%

y-on-y growth: 5,12%



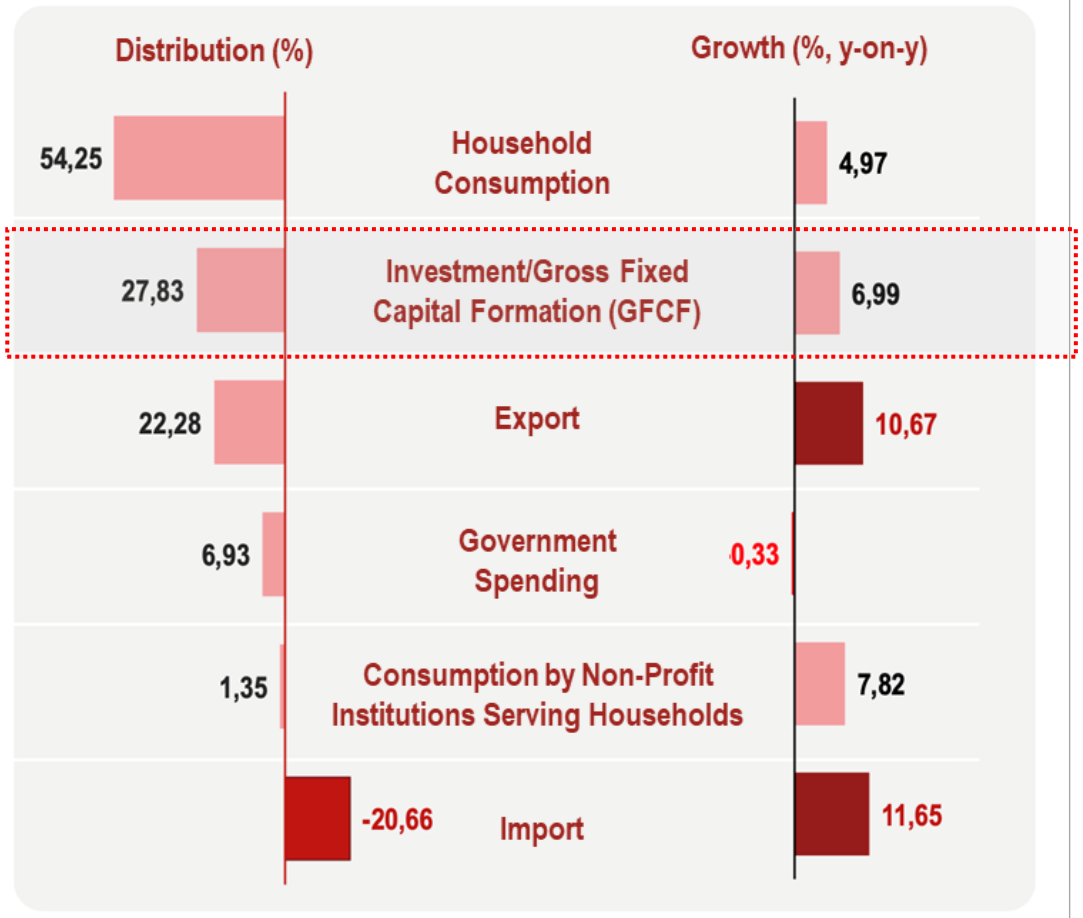
Global Economic Growth

2023-2026f (%, y-on-y)



f = forecast

GDP Distribution and Growth by Expenditure Component



All expenditure components registered positive growth, with the exception of Government Spending

Source: BPS, 2025

IDR13,032.8 T (~USD814.6 B) of FDI & DDI are needed in 2025-2029 to achieve 8% growth

This value is equivalent to 143% of the investment realization in the last 10 years

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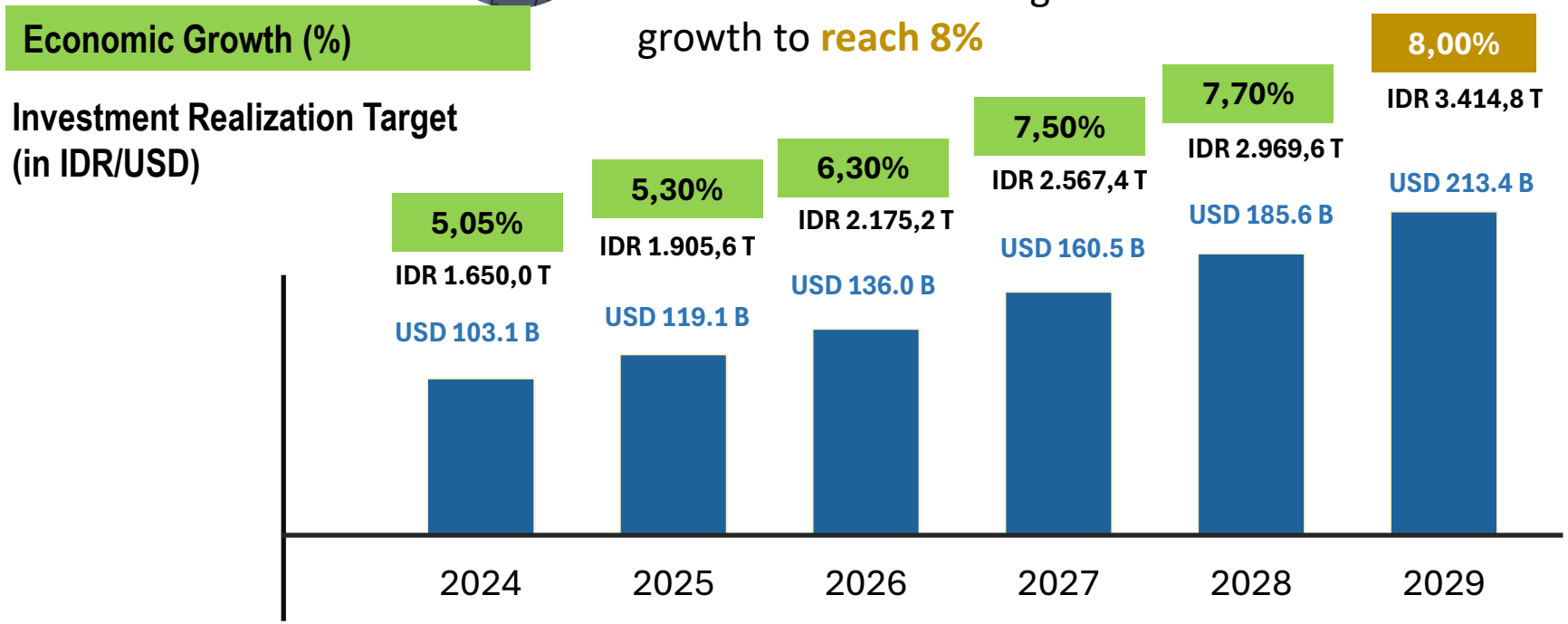
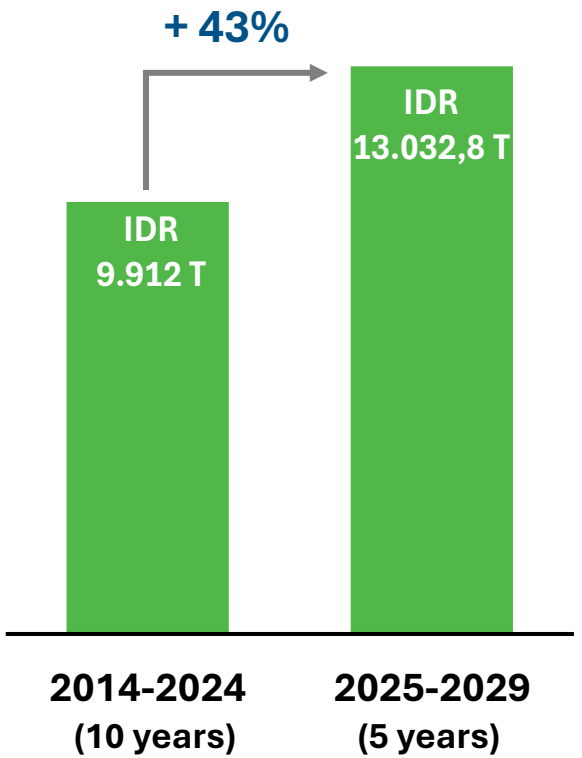
Economic growth and FDI-DDI Target for 2025-2029

President Prabowo targets economic growth to **reach 8%**



Average investment growth (2025-2029) 15.67% per year

Comparison between DI performance in 2014-2024 with the target for 2025-2029



Assumption: if 1USD = IDR16,000
T: Trillion ; B: Billion

Source: Ministry of National Development Planning/Bappenas, 2024

Investment Realization: First Semester 2025

(excl. upstream oil and gas and financial services sectors)

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Investment Realization: First Semester 2025

(49,5%)
From 2025 target
Rp 1.905,6 T

▲ 13,6% (YoY)

Indonesian Labour Absorption

1.259.868

FDI and DDI Contribution

FDI (45,9%)	DDI (54,1%)
Rp 432,6 T	Rp 510,3 T

Java vs Outside Java Contribution

Java (49,5%)	Outside Java (50,5%)
Rp 466,9 T	Rp 476,0 T

Exchange Rate is based on APBN USD 1 = Rp 16.000,00; T= Trillion

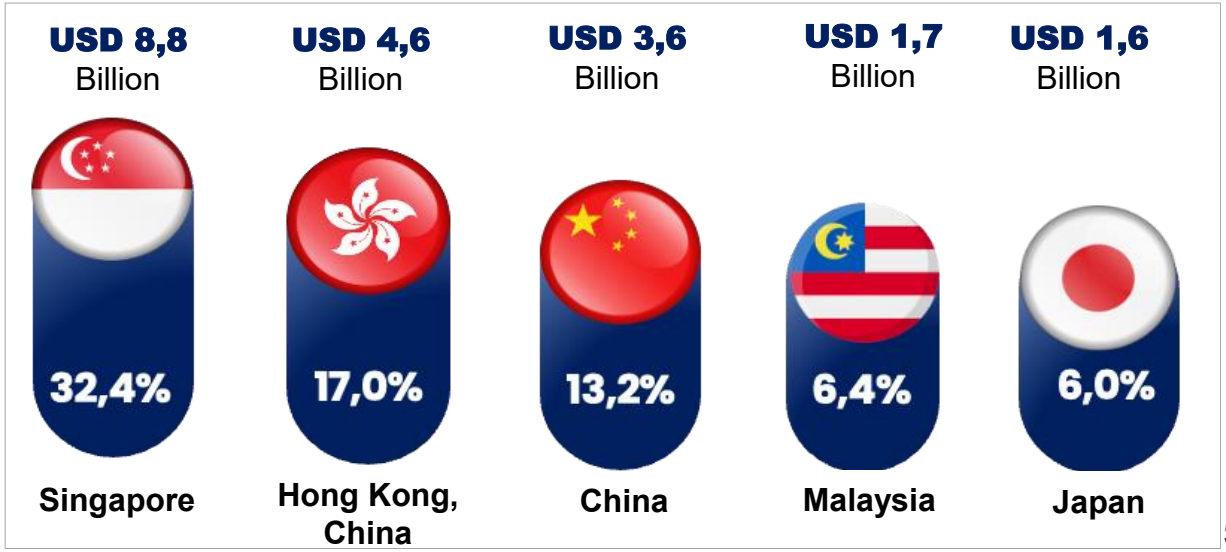
Top 5 Investment Location First Semester 2025 (FDI + DDI)

1. **West Java** Rp141,0 T (15,0%)
2. **Jakarta** Rp 140,8 T (14,9%)
3. **East Java** Rp 74,7 T (7,9%)
4. **Central Sulawesi** Rp 64,2 T (6,8%)
5. **Banten** Rp 60,7 T (6,4%)

Top 5 Sectors First Semester 2025 (FDI + DDI)

1. **Basic Metals, Metal Goods, Non-Machinery & Equipment Industry** Rp 134,4 T (14,3%)
2. **Transportation, Warehousing & Telecommunications** Rp110,7 T (11,7%)
3. **Mining** Rp 102,2 T (10,8%)
4. **Other Services** Rp 85,7 T (9,1%)
5. **Housing, Industrial & Office Estates** Rp 75 T (8%)

Top 5 FDI Source Countries, First Semester 2025



Investment Realization in Downstream Industry Sector: First Semester 2025

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Investment In Downstream Industry, 1st Semester 2025

Rp 280,8 Trillion YoY 54,8%

29,8% from total investment realization in First Semester 2025

Mineral (Total Rp 193,8T)

Nickel	Rp94,1 T	Iron Steel	Rp21,5 T
Copper	Rp40,0 T	Tin	Rp3,5 T
Bauxite	Rp27,7 T	Others*	Rp 7,0 T

*) Others: Sillica Sand, Gold, Silver, Cobalt, Manganese, Coal, Buton Asphalt

Plantation and Forestry (Total Rp67,4 T)

Palm Oil	Rp31,6 T	Rubber	Rp8,2 T
Log Wood	Rp24,9 T	Others*	Rp2,7 T*

*) Others: Nutmeg, Coconut, Cocoa, and Biofuel

Oil and Gas (Total Rp17,3 T)

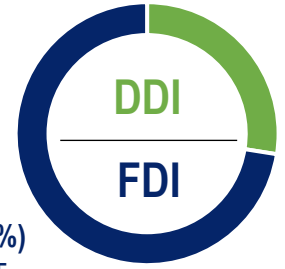
Crude Oil	**Rp7,9 T**	**Natural Gas**	**Rp9,4 T**

Fisheries and Marine (Total Rp2,3 T)

Commodities include Salt, TCT Fish (Tuna, Skipjack, Mackerel), Shrimp, Seaweed, Blue Crab, and Tilapia.

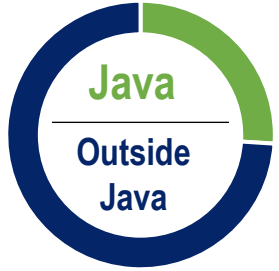
Top 5 Downstream Location

1. Central Sulawesi (Rp55,4 T)
2. North Maluku (Rp33,9 T)
3. West Java (Rp28,7 T)
4. East Java (Rp18,3 T)
5. West Nusa Tenggara (Rp17,9 T)



DDI (27,5%) Rp77,2 T

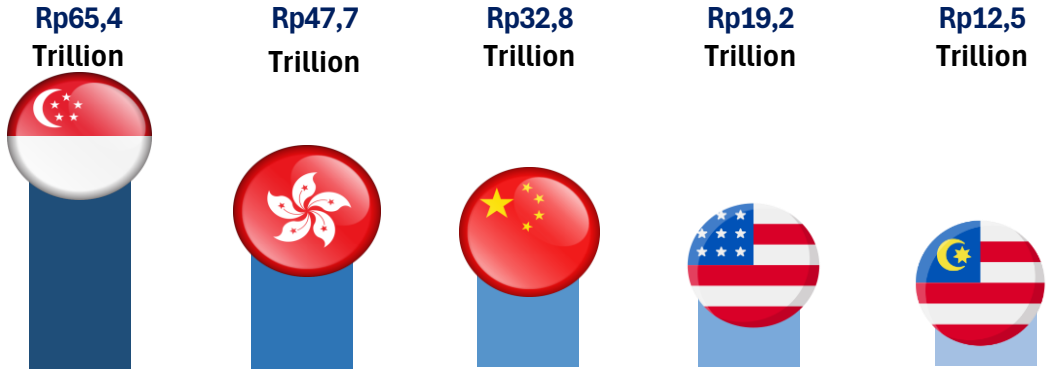
FDI (72,5%) Rp203,5 T



Java (26%) Rp73,1 T

Outside Java (74%) Rp207,7 T

Top 5 Countries Source of FDI



Vision of Golden Indonesia 2045: Sovereign, Developed & Sustainable Archipelagic Country

Self sufficiency and economic transformation as strategies to achieve

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Asta Cita 8 missions

1. **Strengthening the ideology** of Pancasila, democracy. and human rights.
2. Strengthening the national defense and security system as well as promoting **self-sufficiency in food, energy, and water through the creative economy, the green economy, and the blue economy**
3. **Continuing infrastructure development and increasing quality employment opportunities,** promoting entrepreneurship. developing the creative industry, and advancing the agro-maritime industry in production centers through the active role of Koperasi
4. **Strengthening human resource development,** science, technology. Education, health, sports achievements, gender equality, and enhancing the role of women, youth, and persons with disabilities
5. **Continuing downstream industrialization to increase value-added in the national level**
6. **Grassroots development starting from villages** to drive economic growth, economic equity, and poverty eradication
7. **Strengthening political, legal, and bureaucratic reforms** as well as enhancing the prevention and eradication of corruption, dangerous drugs (narcotics), gambling, and smuggling
8. Strengthening the alignment of harmonious living with the environment, nature, and culture, as well as enhancing interfaith tolerance to achieve a just and prosperous society

New and Renewable Energy

Total potential of **~3,700 GW** (Solar: 3,294 GW; Wind: 155 GW; Hydro: 95 GW; Tidal: 63 GW; Bioenergy: 57 GW; and Geothermal: 23 GW).

Current installed capacity of ~14 GW or only **less than 1%** of the potential.

Downstream Industry

- Global **major producer** of strategic natural resources: Nickel (#1), tin (#2), bauxite (#6), palm oil (#1), rubber (#1), fish (#1), seaweed (#2).
- **Roadmap of downstream industries** for 28 strategic commodities, with a potential investment value of USD618 billion until 2040.

POTENTIAL COMMODITIES IN INDONESIA'S DOWNSTREAM INDUSTRY

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Indonesia is a major global producer of 28 strategic commodities

With abundant natural resources, Indonesia is the best spot to invest. Its improving investment climate and higher global profile added comparative values

NICKEL
#1 world
42%

TIN
#2 world
16,3%

COPPER
#11
world

BAUXITE
#6 world
4%

STEEL
#16 world
0,94%

GOLD & SILVER
Gold 5%
Silver 2%

COAL
#7 world

BUTON ASPHALT
#3 world
3,91%

PETROLEUM
#5 Asia-Pacific

NATURAL GAS
#4 Asia-Pacific
0.7%

PALM OIL
#1 world
58.7%

COCONUT
#1 world
27%

RUBBER
#1 world
27%

BIOFUEL
#1 world
59%

LOG WOOD
#6 world
4%

PINE RESIN
#3 world
13%

SHRIMP
#3 world
16%

FISH*
#1 world
21%

CRAB
#2 world
3%

TILAPIA
#1 world
22.1%

SILICA SALT
#18 world
0.9%

MANGANESE
#7 world
3.2%

COBALT
#3 world
7.19%

RARE EARTH METALS
227,976 ton

COCOA
#7 world
4%

NUTMEG
#1 world
31.2%

SEAWEED
#2 world
28%

SALT
Land potential:
41,734 ha

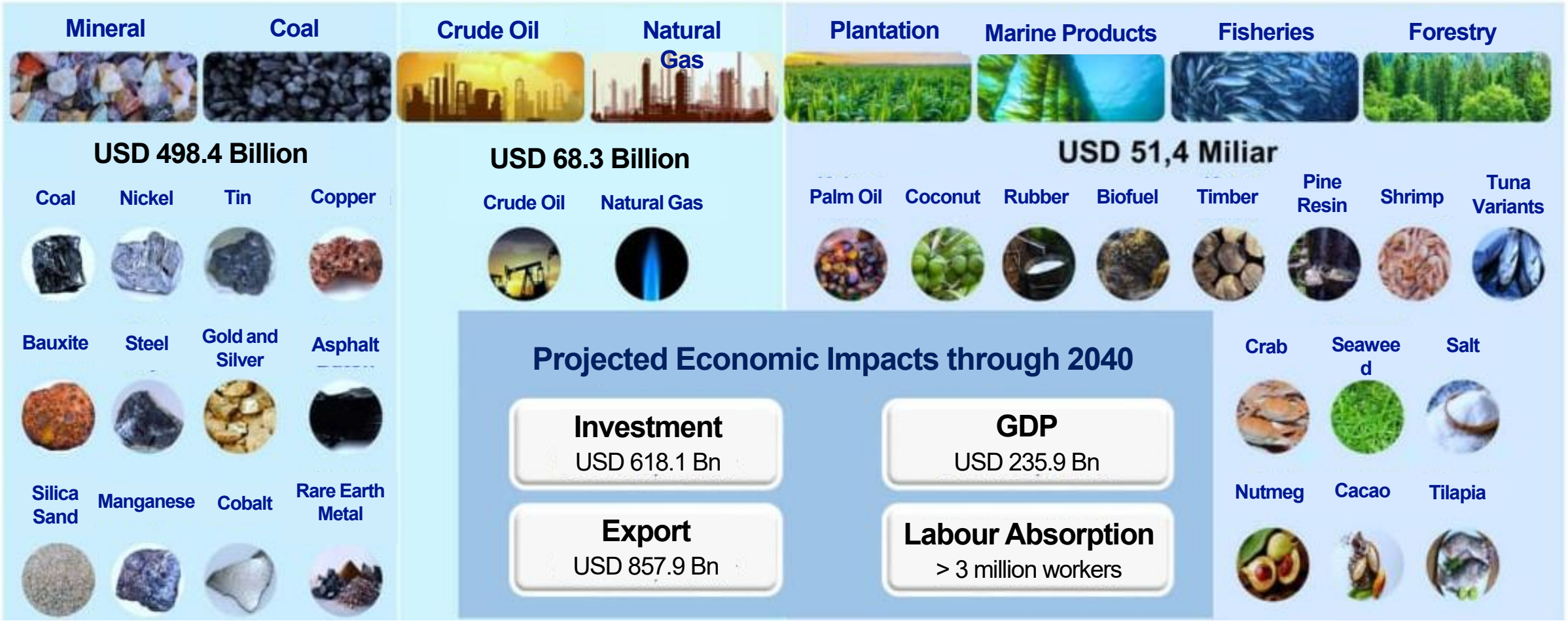
PRIORITY SECTORS

Mineral	Forestry
Coal	Plantation
Oil & Gas	Maritime
	Fisheries

* Fish commodities are specified to tuna, skipjack, and mackerel

ROADMAP FOR DOWNSTREAM STRATEGIC INVESTMENTS (SID) 2023-2045

Indonesian government is firmly committed to developing the downstream industry. The Ministry of Investment & Downstream Industry/BKPM has contributed to this effort by creating a roadmap for Indonesia's downstream industry, which provides investors with a clear overview of natural resources and natural reserves, technology and market projections, in 7 sectors and 28 commodities for the next two decades. It will enable investors to make informed decisions about investing in our downstream industry → **Investment potential is projected to reach US$618.1 billion by 2040, with the creation of 3 million jobs**



Source: Downstream Industry Roadmap 2023, BKPM

Indonesia aims to adopt sustainable principles, following the global trend and commitment

Starting with pushing the downstreaming agenda in renewables and its supporting industries

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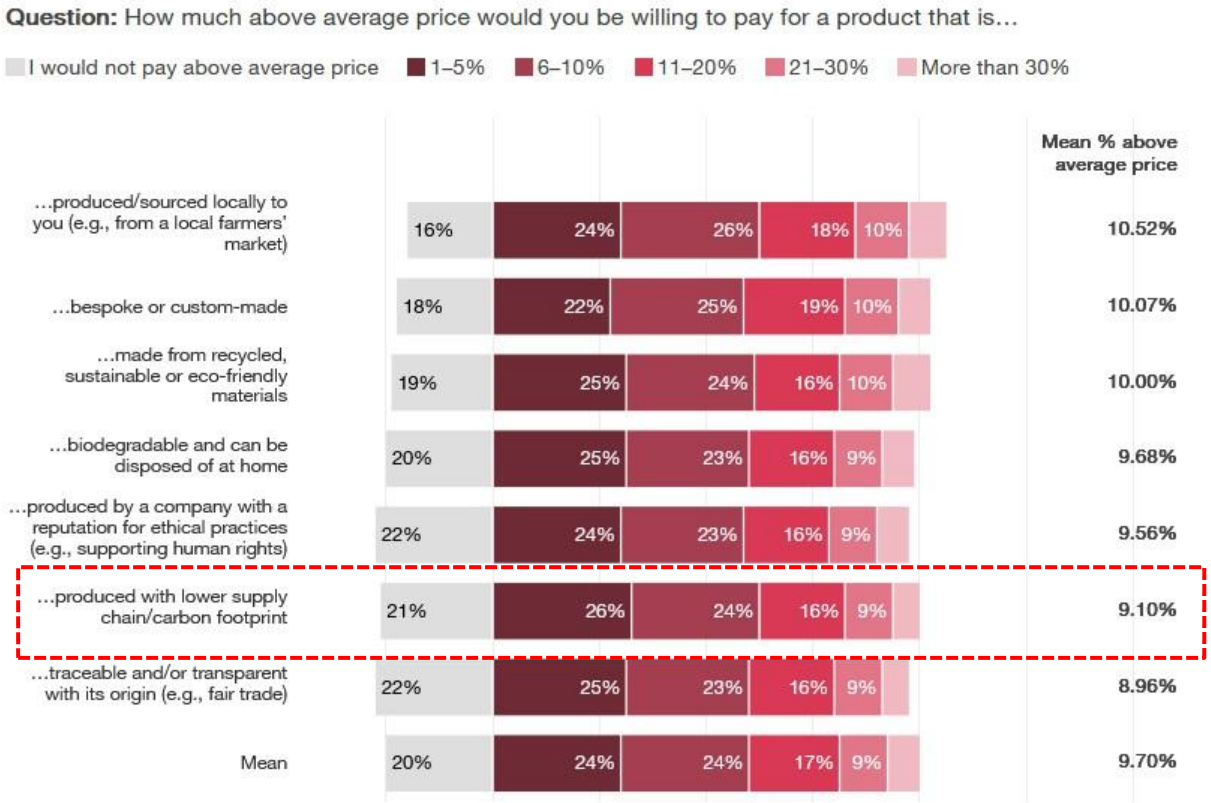
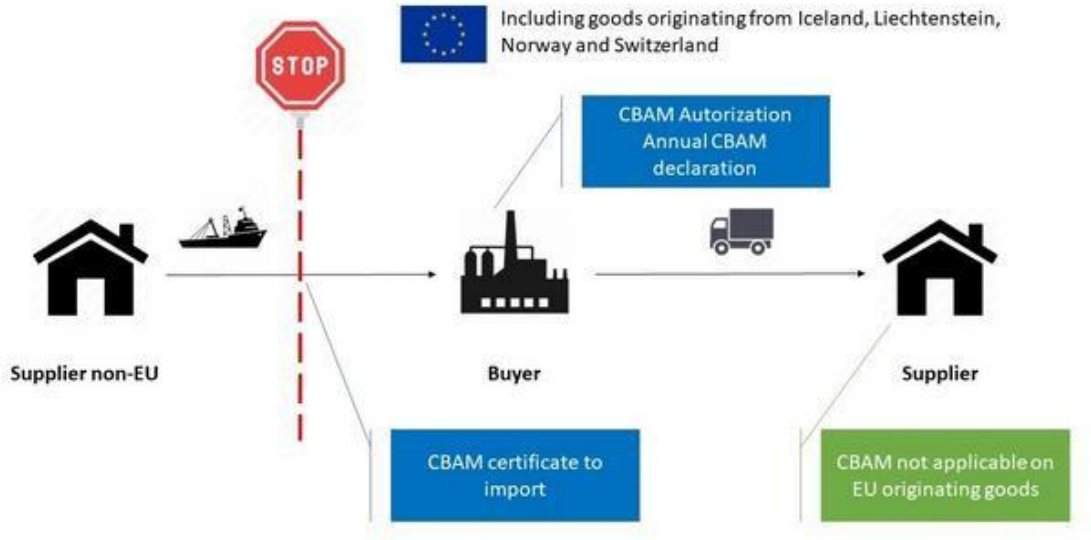
1 **Sustainable products** hold **higher value** compared to conventional products.



Source: PwC 2024 Voice of Consumer Survey

According to a survey by **PwC (2024)**, consumers are willing to pay **9.1% more** for products with a **lower carbon footprint**.

2 Many export destination countries now **mandate sustainable policies and practices**, including measures such as **carbon taxes** or the **CBAM (Carbon Border Adjustment Mechanism)** in the European Union.

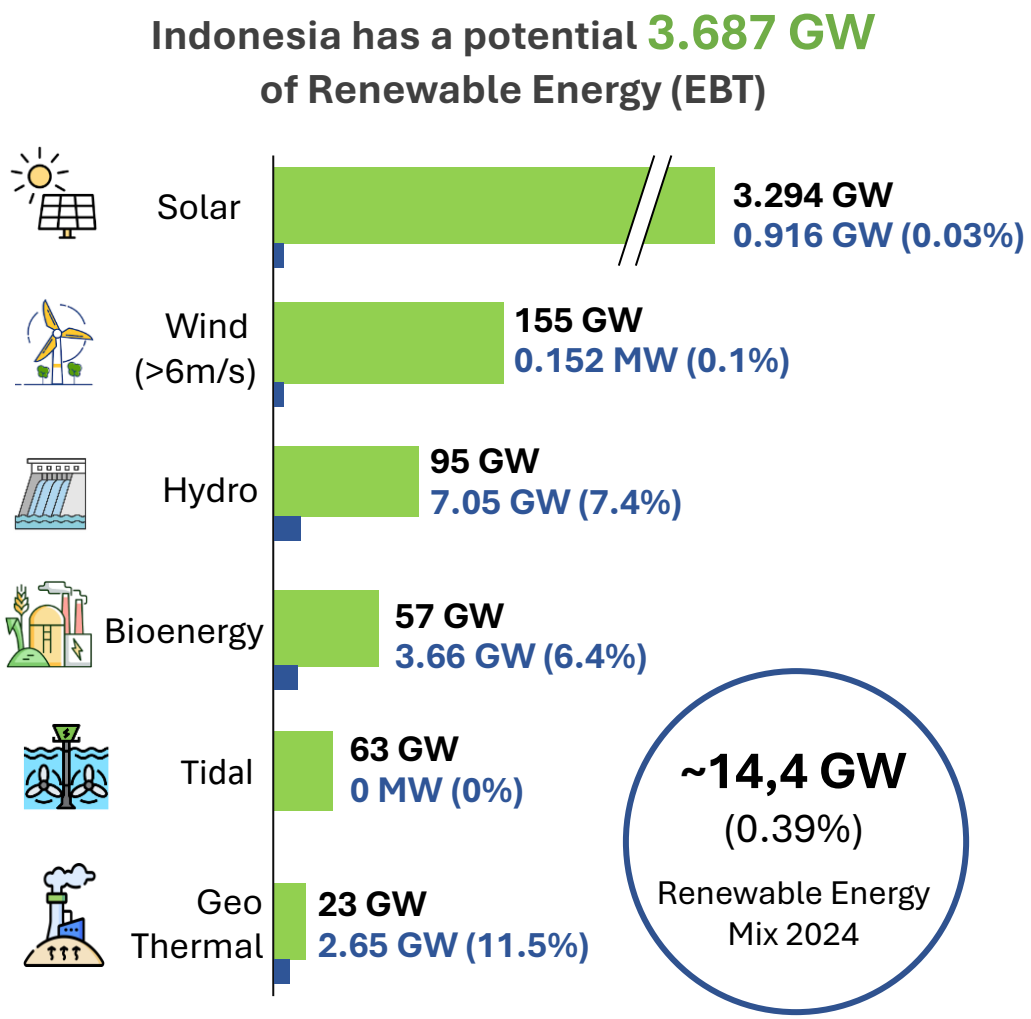


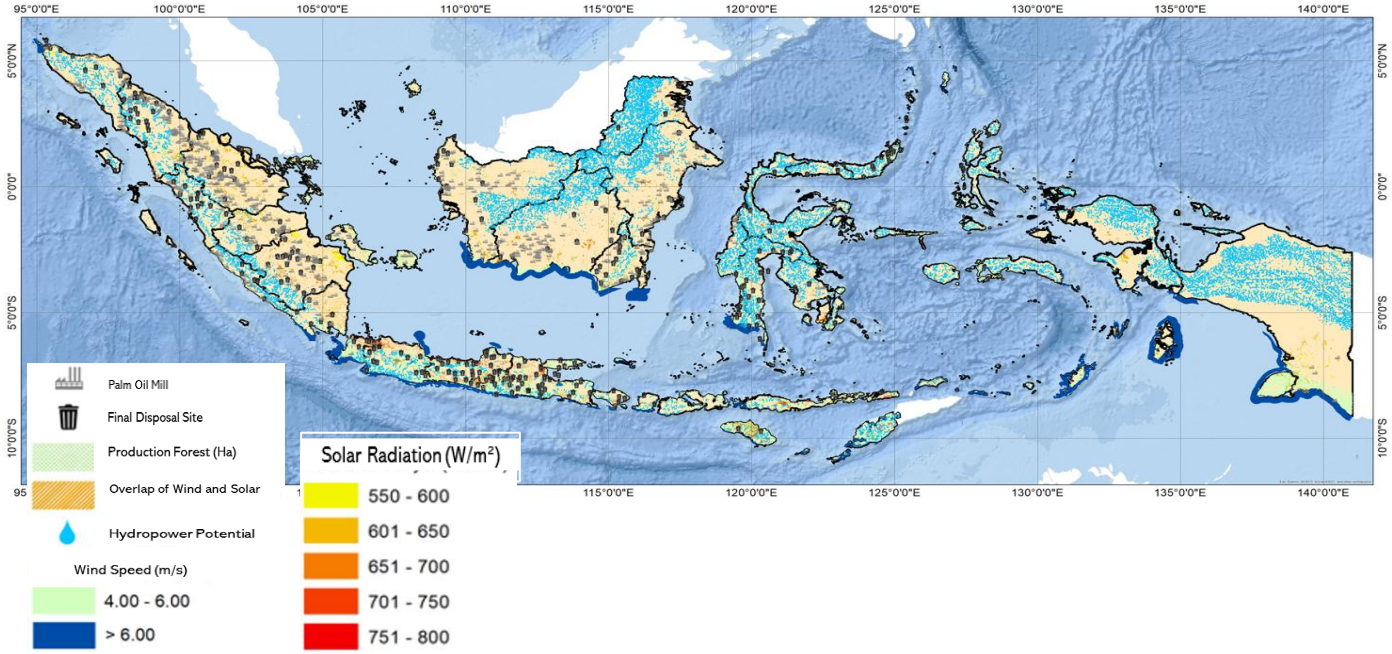
CBAM process illustration (Source: EY 2021)

The implementation of the **CBAM (Carbon Border Adjustment Mechanism)** requires EU importers to purchase **carbon certificates** priced equivalent to the **CO_2 emissions** generated during the production of imported goods, ensuring foreign products meet the **same climate standards** as EU-manufactured goods.

Indonesia Has Great Renewable Energy Potential To Be Utilized

A total of 3.687 gigawatts of renewable energy across the country





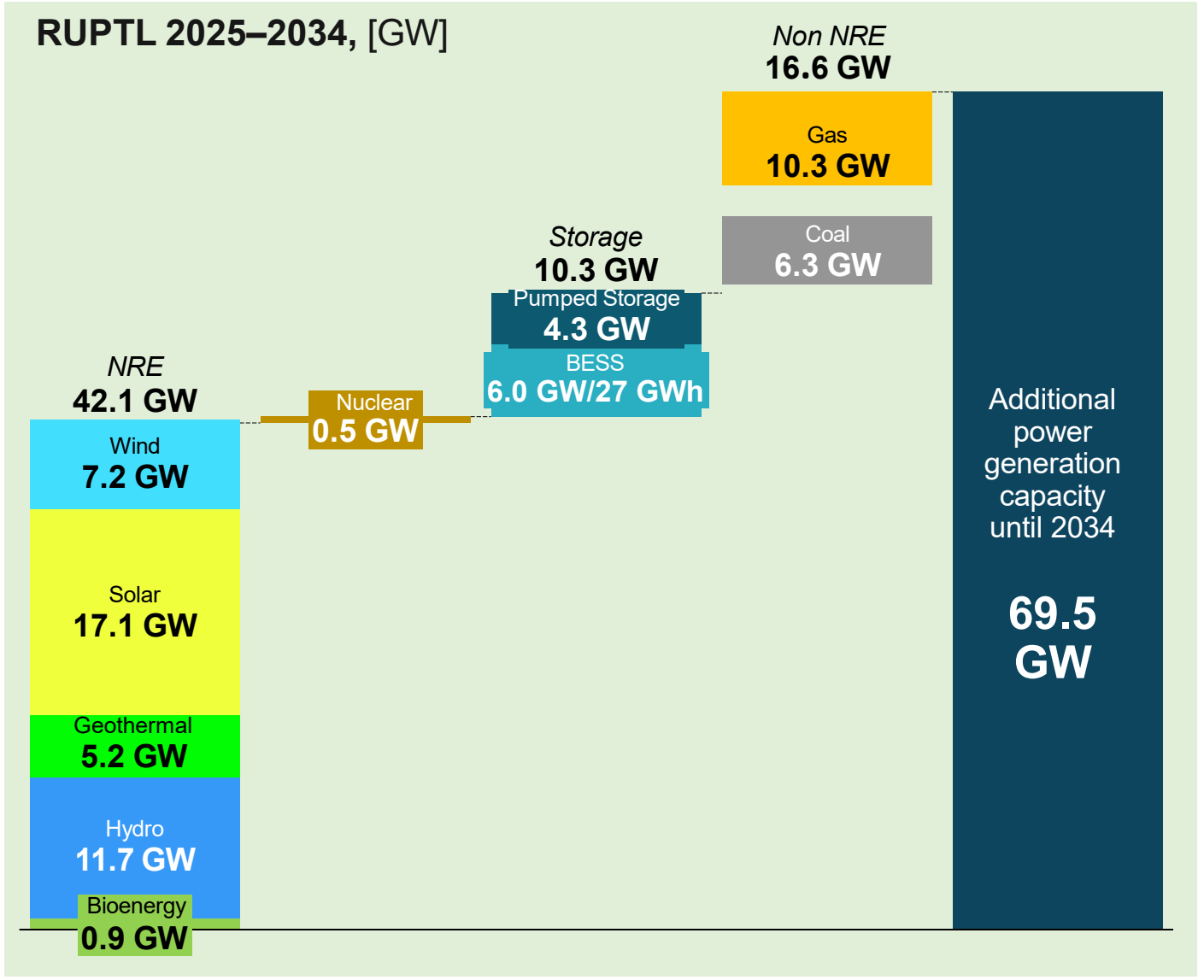
- Hydropower potential is spread across Indonesia, particularly in North Kalimantan, Aceh, West Sumatra, North Sumatra, and Papua.
- Solar potential is distributed throughout Indonesia, especially in East Nusa Tenggara, West Kalimantan, and Riau, which have higher radiation levels.
- Wind potential (>6 m/s) is mainly found in East Nusa Tenggara, South Kalimantan, West Java, South Sulawesi, Aceh, and Papua.
- Ocean energy potential is spread across Indonesia, particularly in Maluku, East Nusa Tenggara, West Nusa Tenggara, and Bali.
- Geothermal potential is concentrated along the Ring of Fire, covering Sumatra, Java, Bali, Nusa Tenggara, Sulawesi, and Maluku

Source: Ministry of Energy 2025, BPH-Migas, LKPP, Ministry of Finance 2023: SEKI BI: 2023

In the 2025–2034 RUPTL, 76% of the additional power generation capacity comes from NRE,[1] including Energy Storage.[2]

[1] *Renewable Energy (RE), equipped with Battery Energy Storage System (BESS) for Variable RE* sources *(Wind and Solar)*

[2] Including Pumped Storage & BESS. BESS capacity assuming a levelized cost of 4 cUSD/kWh



*Not including 3 GW Rooftop PV Quota
*Including the development plan for Hybrid PLTU (Coal 1.2 GW, PLTS 0.3 GW and BESS 0.15 GW)

Source: PLN, 2025

Downstream Industry to Support the National Energy Transition

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Today's Commodities
(limited source/non-renewable)

Downstream Industry to optimize value added of raw commodities

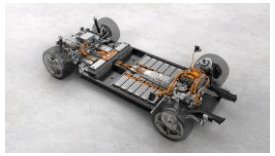
Optimizing the added value of Indonesian raw commodities through Downstream Industry

- **Nickel** #1 World (43%)
- **Cobalt** #3 World (7,19%)
- **Bauxite** #6 World (4%)
- **Silica** #18 World (0,9%)
- **Natural Gas** #4 Asia Pacific (0,7%)
- **Salt** # 47.734 Ha of potential land
- **Palm Oil** #1 world (58,7%)

Future Commodities
(Sustainable-renewable commodities)

Development of renewable industrial supply chains

Downstreaming of raw commodities into green products to increase Domestic Renewable Energy Supply



Battery Electric Vehicle

Battery Energy Storage System (BESS)

Solar Panel

Improving national energy resilience and self-sufficiency, saving national foreign exchange

Supporting Carbon Emission Reduction, Increasing Foreign Exchange Potential, and National Energy Resilience

Hydrogen

Biofuel
(Bioavtur, Biodiesel, Bioethanol)

Solar Energy

Battery industry development for a cleaner transportation and industry

Indonesia is aiming to establish itself as the global hub for end-to-end EV and BESS production

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Mining	Processing Refining	Precursor, Cathode, Anode	Battery Cells	Battery Pack
				
MIND ID antam CATL VALE MERDEKA eramet HARITA GROUP NINGBO LYGEND MINING …etc.	MIND ID antam TSINGSHAN CATL HUAYOU MERDEKA BATTERY MATERIALS GEM CNGR HPAL …etc.	HUAYOU CATL IBC BTR LiBM CHENGTOK LITHIUM INDONESIA …etc.	CATL IBC HLI GREEN POWER Gotion …etc.	HYUNDAI MOBIS Gotion …etc.
Central Sulawesi, Southeast Sulawesi, North Maluku	North Maluku, Central Java	Karawang, West Java	Karawang, West Java	

Electric Vehicle (EV)

HYUNDAI, WULING, electrum, ALETRA, NETA, CHERY, BYD, GEELY, VINFAST, GESITS, ALVA, smoot elektrik, YADEA, VOLTA, VIAR, AION

…etc.

Karawang & Subang, West Java

Battery Energy Storage System (BESS)

IBC

Solar Panel Ecosystem Development to Support Energy Transition

Indonesia has already produced 60% of solar panel components domestically

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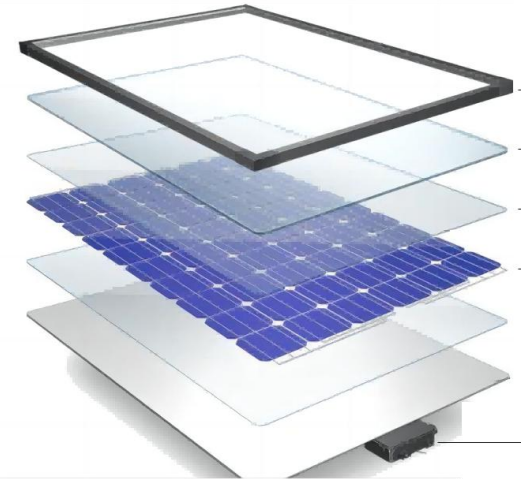
Mining	Processing/Refining	Solar Panel Glass & *Mono-Polycrystallin* Wafer	Solar Cell	Solar Panel	Solar Panel Recycle
Raw material: **Silica, Copper, Bauxite**	SGS, *Mg-Silicon*, *Mono-Polysilicon* ingot/*Block* , Cu-Cathode, Al Ingot				
Bangka, Rempang, Lingga, Anambas (Kepri) Bengkayang (Kalbar), Katingan (Kalteng), JIIPE Gresik, Batam		Batam , WPPI Jabar	Batam , WPPI Jabar	Batam , WPPI Jabar	Plan: Batam , WPPI Jabar

Percentage of Raw Materials in Solar Panels

- Silica **72.42%**
- Bauxite **24.02%**
- Copper **3.48%**
- Tin **0.08%**

Source: Roadmap HIS 2022 & 2023 MIDI/BKPM, processed

Solar panel components



Component	Product Origin
Aluminum Frame	Indonesia
Front & Back Glass	Indonesia
EVA / POE	Indonesia
Solar Cell	Indonesia
Junction Box	Indonesia
Ribbon	Import
Silicon	Import

Terima Kasih

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