

Sustainable Energy as a Catalyst for Green Growth



Presented by

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To Reach Golden Indonesia 2045...



Kadin sees An Opportunity

- ✓ Unlocking New Industries
- ✓ Attracting Private Investment
- ✓ Driving Force: Climate Leadership



Spirit of Indonesia Incorporated

"Gotong Royong": Acting in partnership, as a unified entity



The main strategic function of Kadin Indonesia as a forum for the business sector



A strategic partner of the government as a driver for achieving 0% extreme poverty and 8% economic growth



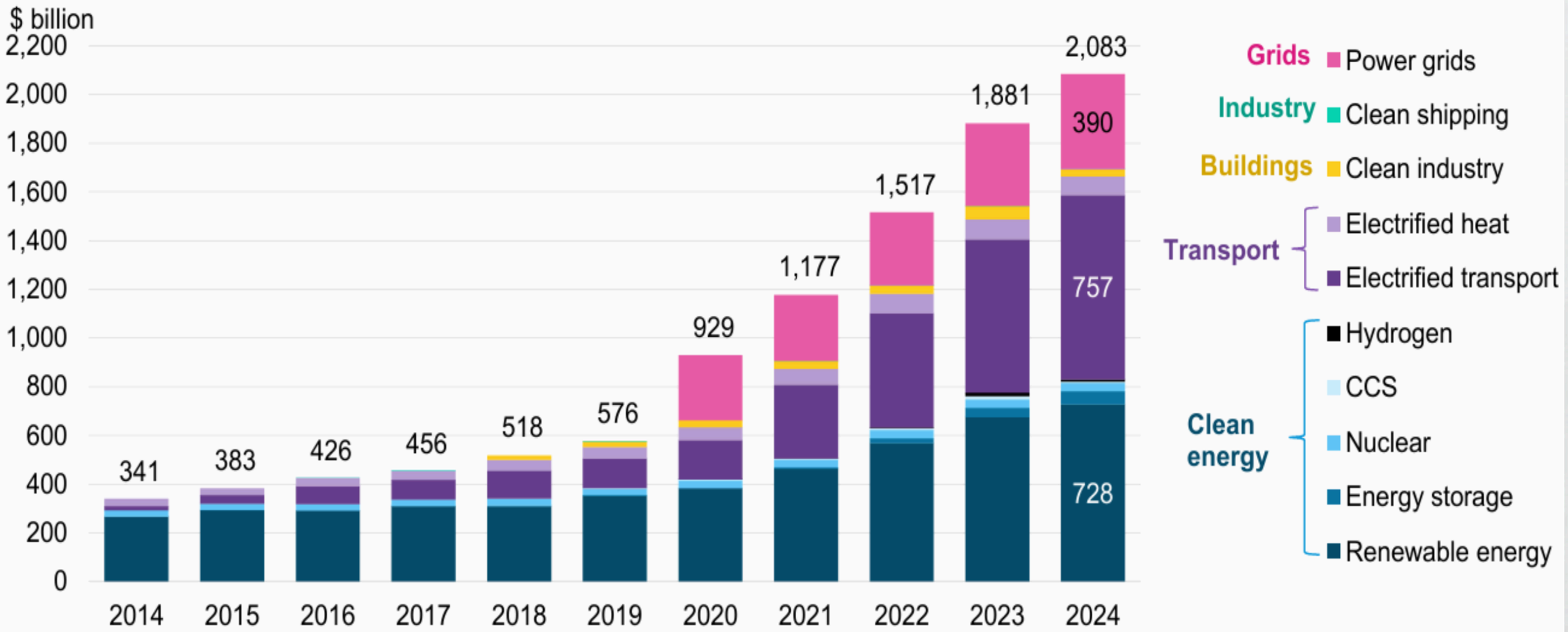
Collaboration with several Ministries to increase annual investment towards IDR 3,400 trillion per year



Helping to maintain legal certainty for investors to invest in Indonesia



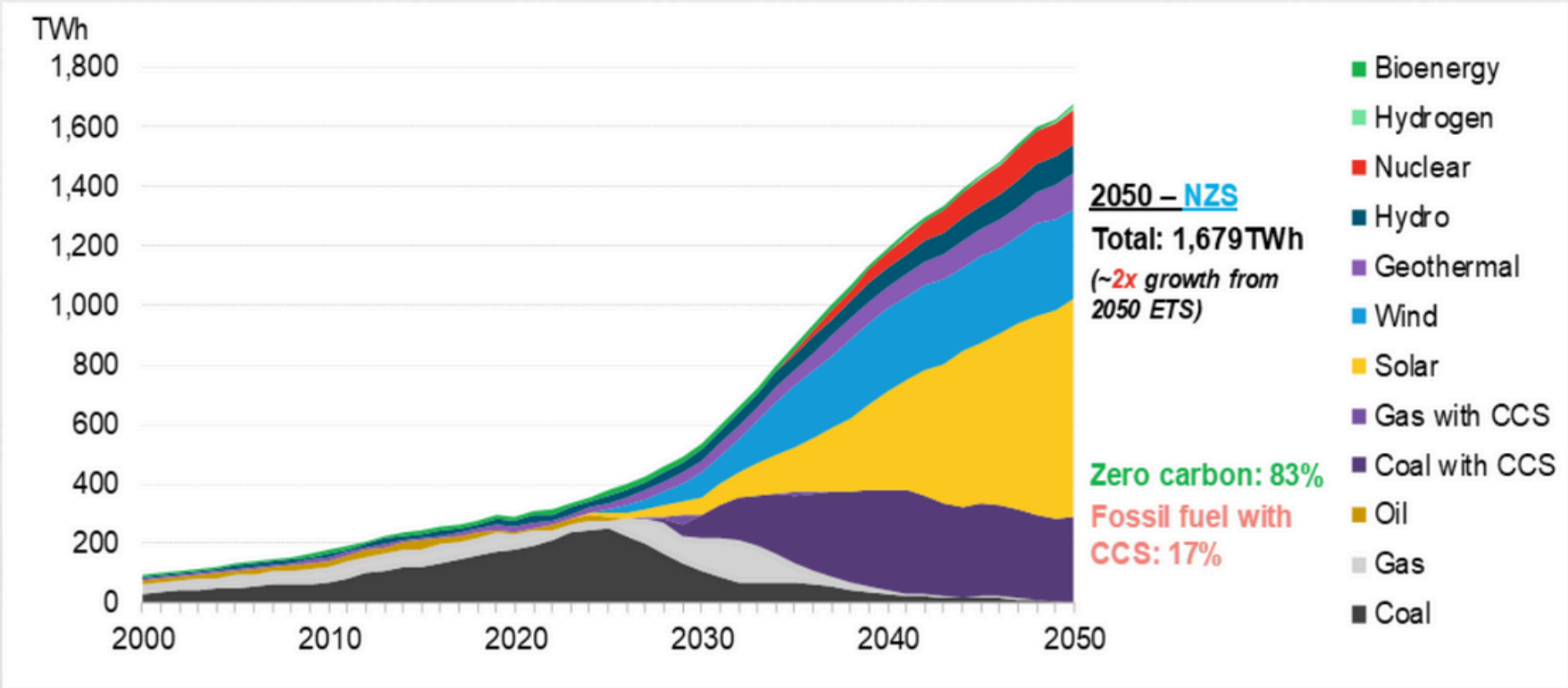
Green Investments Globally Have Reached An All-Time High Last Year At USD 2 Trillion, Despite US Withdraw From The Paris Climate Agreement. This Is An Irreversible Megatrend.



The global net zero transaction can represent a \$3.5 trillion investment opportunity for Indonesia according to BloombergNEF's analysis

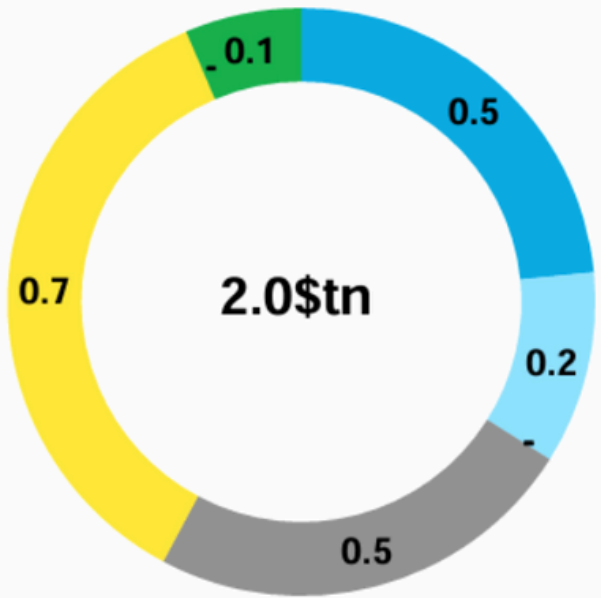


Indonesia's annual electricity generation, Net Zero Scenario

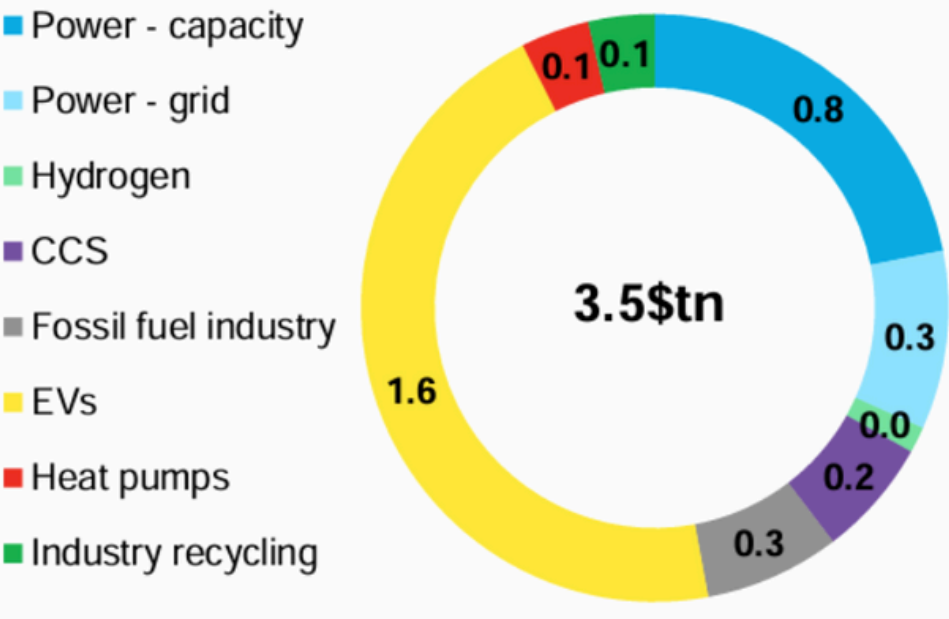


Indonesia net-zero transition represent \$3.5 trillion investment opportunity

Economic Transition Scenario



Net Zero Scenario



Source: BloombergNEF

83%

Share of zero carbon sources in Indonesia's 2050 NZS generation mix

\$2-3.5T

Energy investments opportunity in Indonesia

25GWh

Proposed lithium-ion battery cell manufacturing in Indonesia

- Over the next three decades, Indonesia requires an annual average of \$69 billion and \$122 billion under the ETS and NZS respectively, equivalent to 5-10% of Indonesia's GDP in 2021.
- Under NZS, zero carbon generation sources in the power sector will be the biggest driver of energy supply investments. The investments need to be front-loaded, with 44% of total investments from 2022 to 2050 happening between 2026 and 2035 alone.

Indonesia is a key player on the global stage due to its large size, strategic location, and rich natural resources endowment



A strategically located archipelago with the world's fourth largest population



Source: Ministry of Maritime Affairs and Investment (2024)



Population of **278 million people**



Renewable potential above ground: Solar (200-7,000GW), Wind (60GW), Hydro (95GW), Geothermal (28GW), Biomass (~33GW)



Blessed with **biodiversity, forest, and mangroves** that act as a carbon sink hub.

Indonesia rich in energy transition mineral reserves and high in renewable energy potential

1

Ni

World's biggest nickel reserves

2

Sn

World's 2nd biggest tin reserves

3

Al

6th biggest bauxite reserves

4

Cu

7th biggest copper reserves

5



437.4 GW of potential RE

KADIN is redoubling its efforts to support Indonesia in achieving the net zero targets by 2060 or sooner



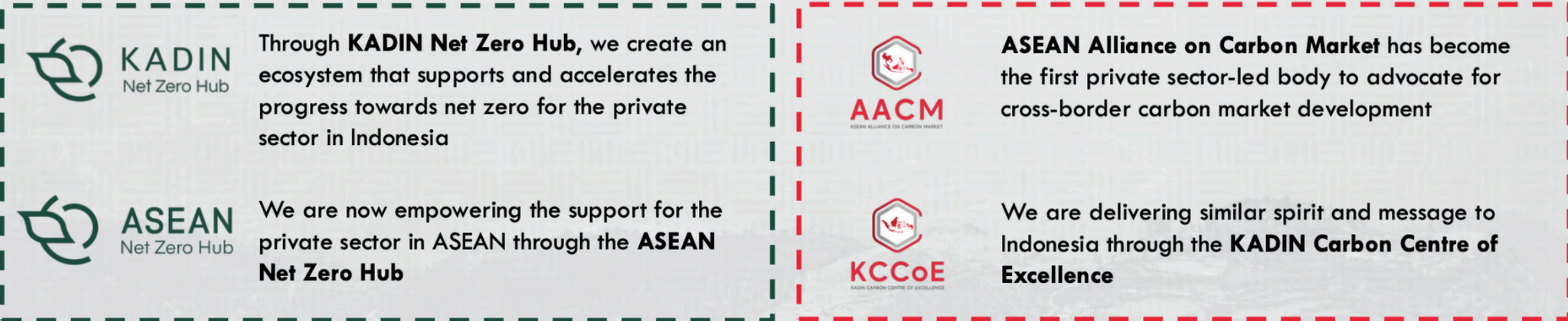
Several milestones have been achieved by KADIN to support the push towards net zero ...



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... and we will continue the work...

... by delivering more support towards the cause



Priority Sectors for Investment

Critical Minerals for EV

- **Potential:** ~55 million tonnes of **nickel reserves**, placing us as the world's top endowments. ~153 trillion of **downstreaming investment**
- **Best Practice:**
 - The **Morowali Industrial Park** in Central Sulawesi employs thousands of community members
 - **Renewable-powered centres** (including HPAL) are being built

Native Renewable Energy Sources

- **Potential:**
 - only ~2.6 GW of **geothermal plants** installed from ~24 GW **potential**.
 - only ~15 GW **solar plants** installed from 3,700 GW **potential**. Emerging wind corridors in **eastern part of Indonesia**.
- **Best Practice:** A lot of tenders involving state institutions like PLN, or Ministry of Finance's SMVs (called IPP) e.g. Darajat plant in West Java

Bioenergy & Clean Hydrogen

- **Potential:** 850+ palm oil mills and vast agricultural lands in Indonesia produce massive feedstocks and methane/ammonia waste that can be turned into bioenergy.
- **Best Practice:**
 - Asian Agri biogas power plants in North Sumatra, Riau, and Jambi
 - Musim Mas Methane Capture Facilities in Sumatra
 - Green Ammonia Initiative (PT Pupuk Indonesia and Japanese corporations)

Why are They Investable?

for PPP collaboration and Foreign Direct Investment attraction



1 Resource Advantage

Indonesia has scale: the world's largest nickel, geothermal, and palm oil by-products; huge solar and hydro corridors.

2 Demand Certainty

Industrial growth is surging: smelters, fertilizer plants, data centers — they all need firm, affordable, clean power.

3 Policy Direction

Downstreaming minerals, rooftop solar quotas, the hydrogen roadmap, and PLN's power plan all point to accelerating clean technologies.

Barriers to Financing



Regulatory Complexity

Overlapping regulations and institutions leading to long permitting process, increasing risks for investment.



Tariff and Pricing Issues

Indonesia's current electricity market is dominated by a single buyer model, limiting private power purchase agreements and reducing flexibility.



Infrastructure & Human Capital

Investment are needed for new-renewable energy plants and human capital development.

What Should We Do: Kadin Brings Partnership



Public-Private-Partnership

Government setting up de-risking investments, including by accepting private sector or international support for technical assistance.



Blended Finance & Green Funds

More investment needs to be mobilized to sustainable energy projects.



Local-International Partnership

Technology transfer, market access, and capacity building must be done to build local supply chains, including by collaborating with global partners.



Private Sector Role in Energy Transition: Arun Gas Field



Carbon Capture and Storage Project: PT Energi Mega Persada and partners are enabling large-scale CO₂ capture, utilization, and storage (up to 504 mtCO₂), directly supporting Indonesia's 2060 net-zero emission target.



A PPP Collaboration: Integrating CCS/CCUS with PT Pupuk Indonesia's operations, ensuring energy availability while lowering the carbon footprint of fertilizer and food production.



Aceh as a National Best Practice: Positioning Aceh as a carbon hub attracts investment, generates jobs, and showcases how PPP deliver both local economic and national climate goals.



THANK YOU



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