Perspectives on Financing the Energy Transition in Southeast Asia, and in Indonesia

Presented by
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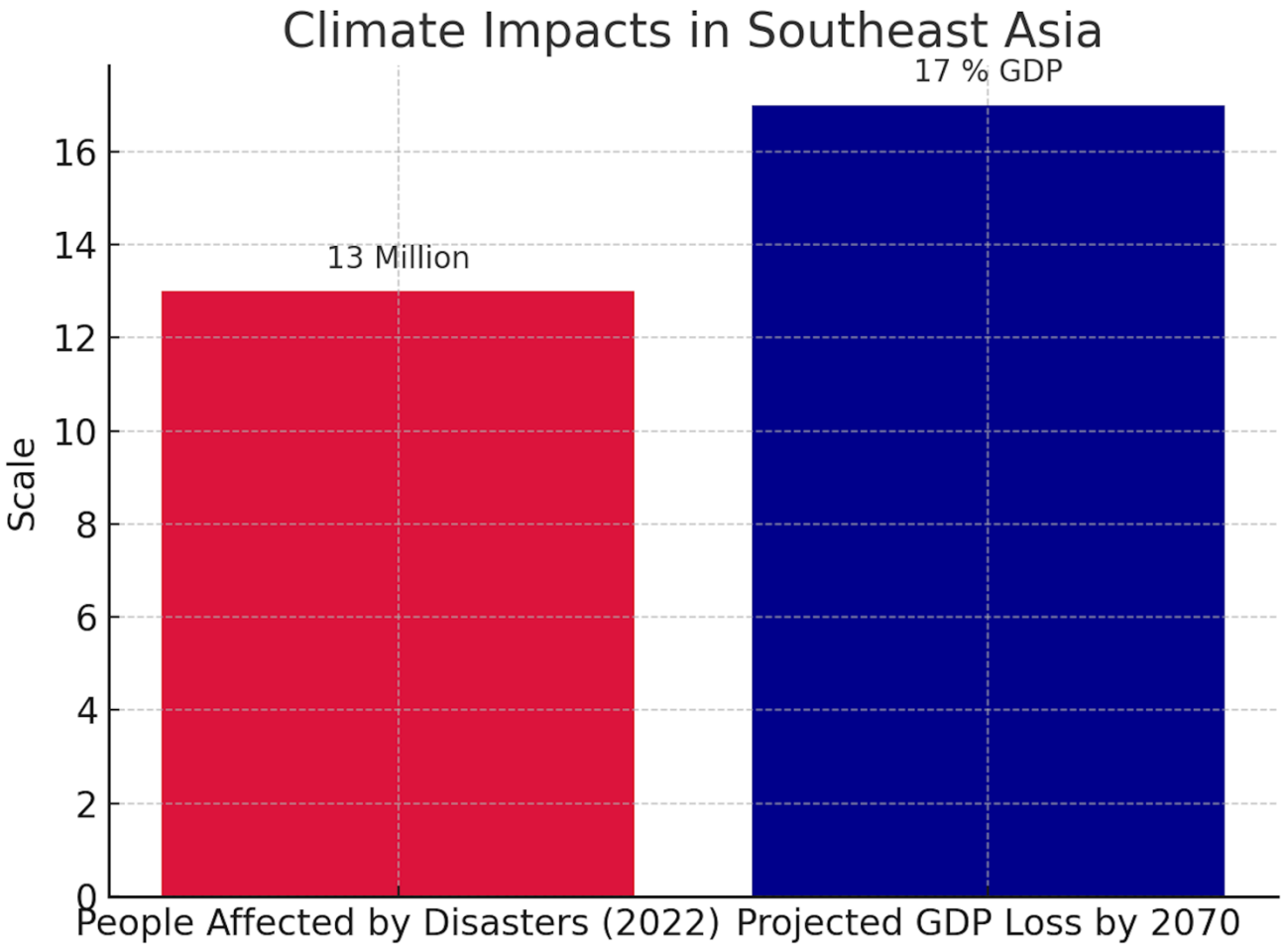
Topics Covered

1. Public and Business Concern about Climate Change
2. Geopolitics and the Drop in Development Funding
3. How Are We Doing? Plans, Targets, and Progress
4. Investment Trends and Needs
5. Insights on Mobilizing Private Sector Capital

Public and Business Concern about Climate Change

Increasing Climate Impacts in SE Asia

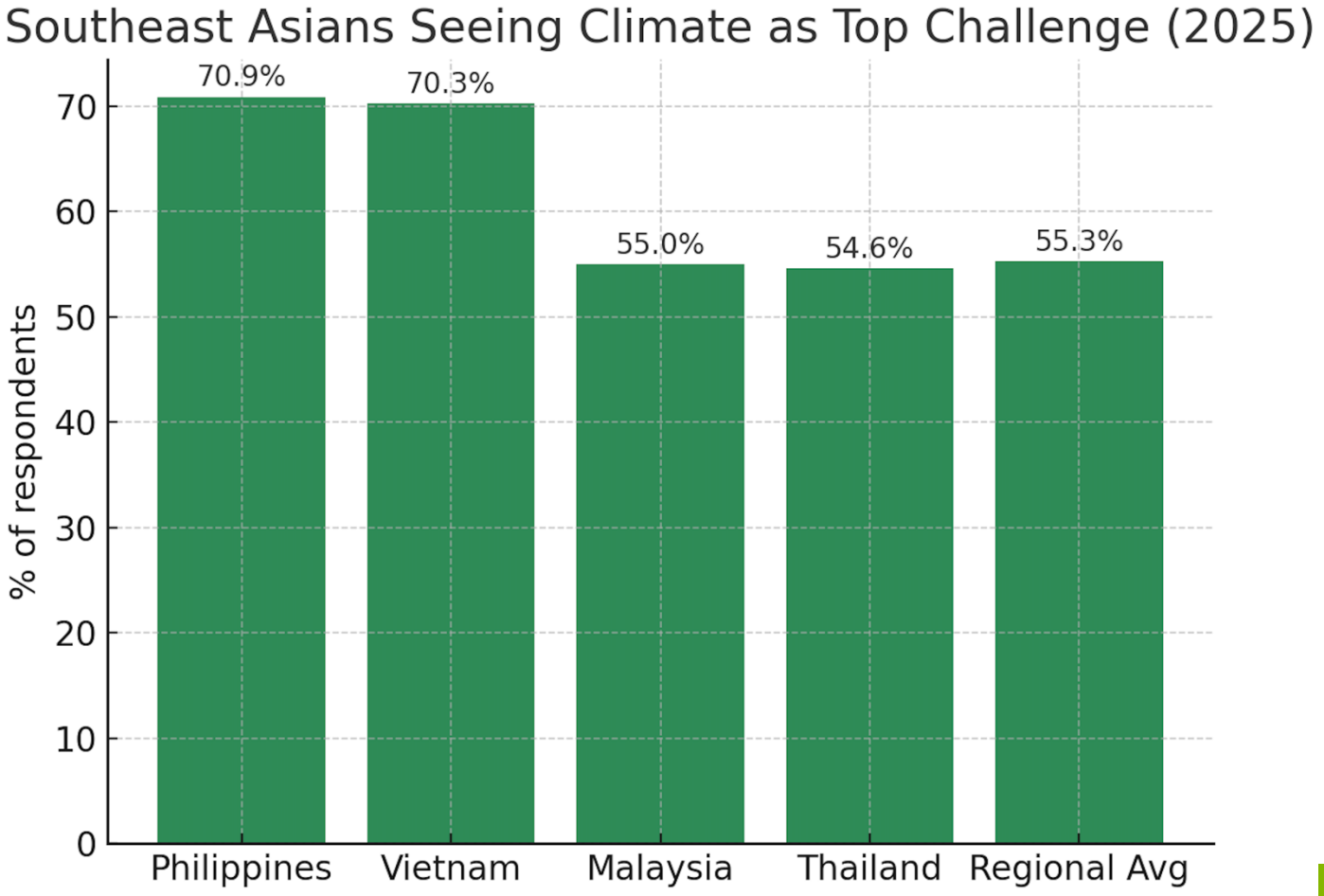
- Southeast Asia is one of the most climate-vulnerable regions globally:
- Nearly 13 million people impacted by natural disasters in 2022 alone—floods, typhoons, extreme heat.
- Impacts are mounting: ADB projects developing Asia could face a 17% GDP loss by 2070 under continued inaction, driven by disasters, heat stress, and sea-level rise.



Source: Eco-Business and Reuters

Climate Has Overtaken Economic Worries in Southeast Asia

- **55.3% of Southeast Asians** now say climate change and extreme weather are the region's greatest concern—marking the first time since 2019 this issue has ranked higher than unemployment or recession worries.
- National front-runners:
  - **Philippines:** 70.9%
  - **Vietnam:** 70.3%
  - **Malaysia:** 55.0%
  - **Thailand:** 54.6%

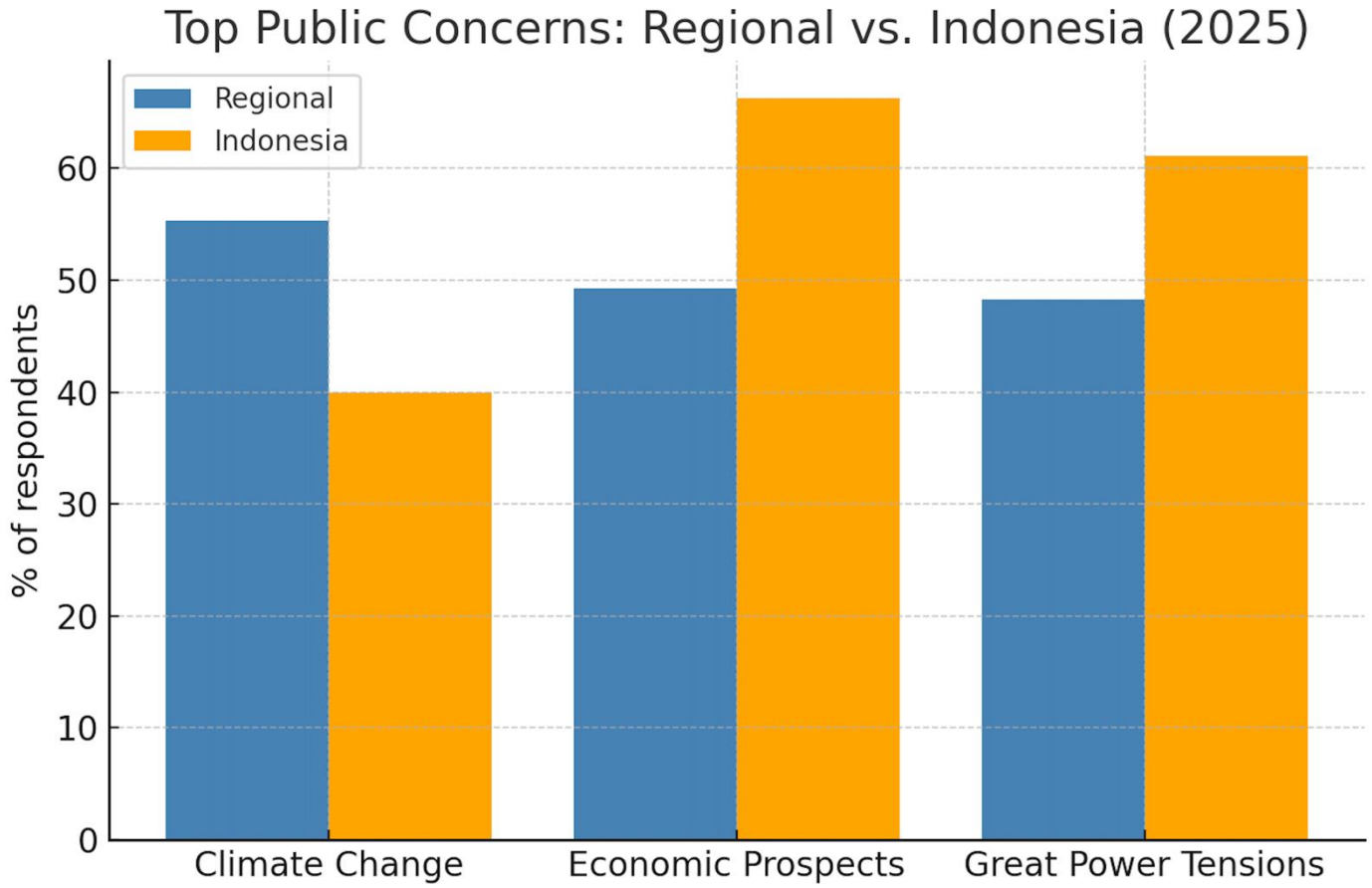


Source: Eco-Business (4 April 2025)

For Indonesia, climate change is not as high a priority or concern

Other concerns dominate:

- unemployment/economic recession remains highest concern at 66.3%
- followed by income inequality (61.1%)
- climate appears lower on its radar for now



Source: Eco-Business (4 April 2025)

Implications for Financing

What This Shift in Public Opinion May Mean for Clean Energy Funding

- Elevated public concern increases political will for financing clean energy and resilience infrastructure.
- Citizen and corporate awareness is aligning—angling for greater demand in renewables, adaptation projects, ESG investing, and public-private climate finance.
- Example: ASEAN green financing discussions—led by region-wide smog, drought, and climate-linked crisis—are now gaining traction.

Geopolitics and the Drop in Development Funding

Geopolitical Shift in Climate Leadership

- **US Withdrawal an Leadership Vaccuum**
  - » In March 2025, the US pulled out of the USD 45bn JETP (Indonesia, Vietnam, South Africa)
  - » Along with demolition of USAID, this created financing uncertainty in Southeast Asia
  - » The US has effectively ceded its role at the center of global climate action, prioritizing fossil fuels over transition
- **Others Step Forward:**
  - » **EU:** new 2040 emissions target with higher ambition.
  - » **BRICS:** July 2025 summit in Rio placed climate at the top of the agenda
  - » **China:** Energy Transition Partnership with Indonesia

Source: China Global TV Network

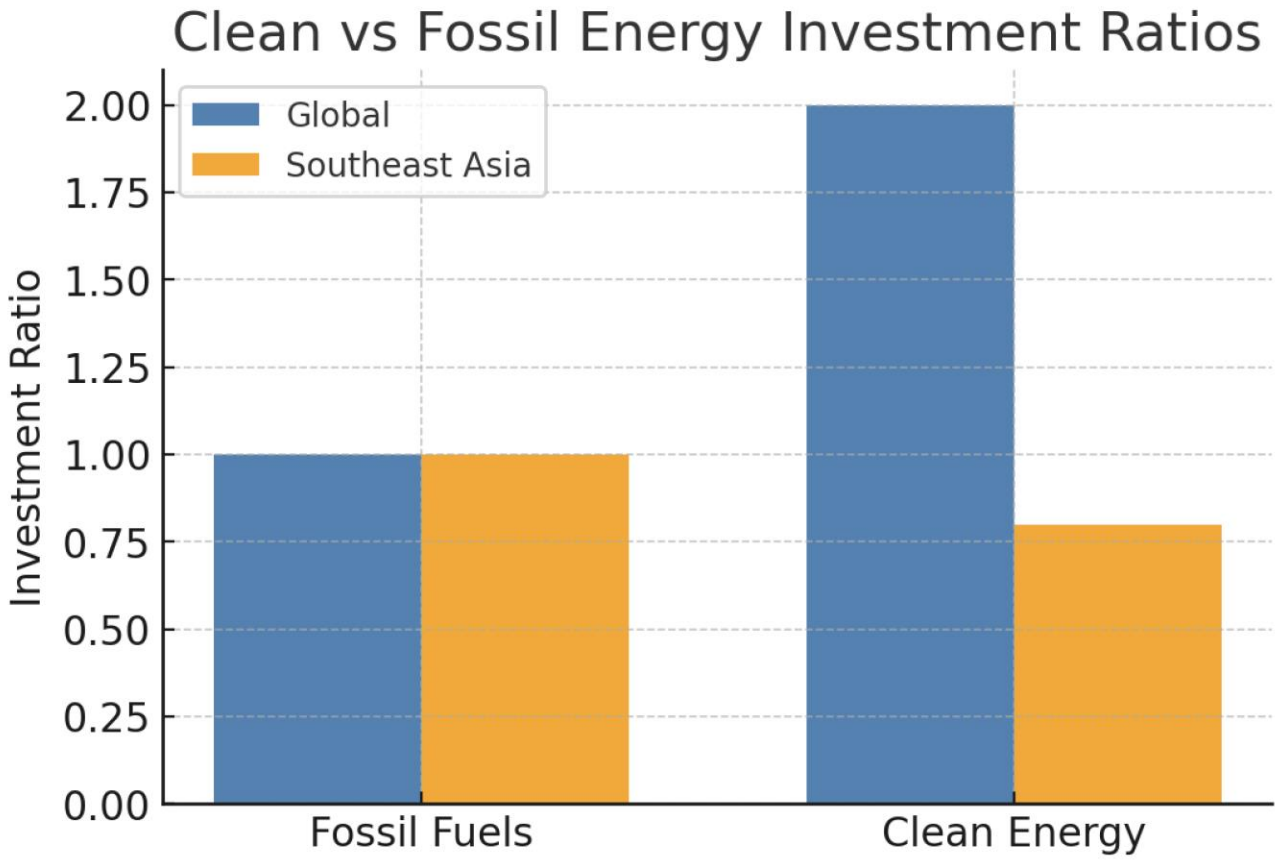
Indonesia–China Energy Transition Partnership: Strategic Highlights

- **Strengthened ties under BRI Green Shift:**
  - China's pivot from coal to green projects aligns with Indonesia's 2060 net-zero target .
- **Major MoUs:**
  - More than **USD 22.6bn in green energy deals (2023–2024)** covering solar, wind, EVs, and batteries .
- **Flagship projects**
  - Lumut Balai Geothermal (55 MW), Batang Torch Hydropower (510 MW), Karawang Solar (100 MW) .
- **Critical minerals:**
  - Joint ventures in nickel refining and EV batteries reinforce Indonesia's global supply chain role.
- **Capacity building:**
  - Thousands of Indonesians trained in geothermal & hydropower by Chinese firms.
- **Strategic import:**
  - Positions Indonesia as a hub for renewable manufacturing and technology transfer, but coal legacy & regulatory gaps remain.

Structural Underinvestment

Southeast Asia is Lagging in Clean Energy Spending

- Southeast Asia = 5% of global energy demand, bu only 2% of global clean energy investment
- For every $1 in fossil fuels, only $0.80 goes to clean energy — vs global ratio of 2:1 in favor of clean energy
- This imbalance leaves the region overexposed to fossil fuel lock-in at a time when global markets ar decarbonizing.

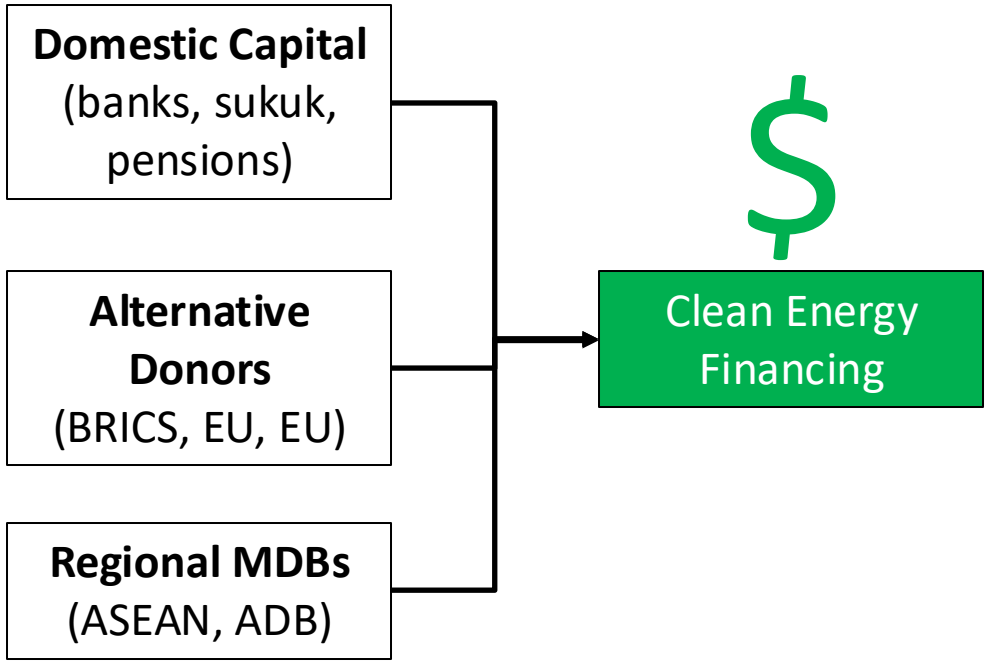


Source: IEA

Implications for Southeast Asia

Financing Must Go Local and Regional

- US withdrawal exposes vulnerability of relying on a few donors.
- Implication for Indonesia & Vietnam:
  - » Accelerate domestic capital mobilization (banks, pension funds, sukuk).
  - » Expand intra-ASEAN and Global South partnerships (BRICS, regional MDBs).
- Bottom line:
  - » Future climate finance in SE Asia will be shaped more by EU, BRICS, China, and private capital than by the US.

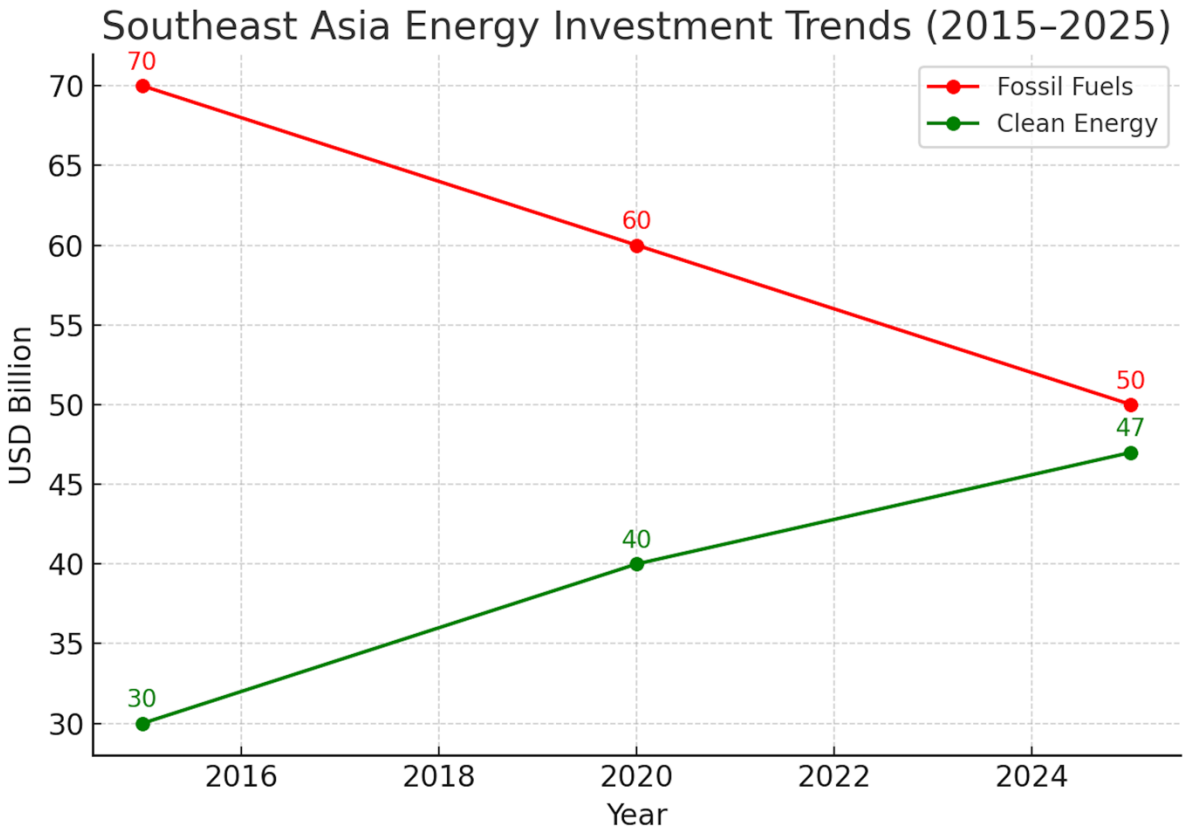


Investment Trends and Needs

Regional Energy Investment Landscape

Clean Energy Rising, But Fossil Fuels Still Strong

- Southeast Asia's clean energy investment nearly equals fossil fuel funding in 2025:
  - » Fossil fuels: USD 50bn (down from USD 70bn in 2015)
  - » Clean energy: USD 47bn (up from USD 30bn in 2015)
  - » Historically, fossil fuels made up 60% of energy investment (2015–2025); coal alone attracted USD 110B since 2015, concentrated in Indonesia & Vietnam
- Financing profile:
  - » >85% of clean power & storage from commercial finance
  - » Grids & T&D: ~40% public finance



Source: Data from IEA (2025), *World Energy Investment*

Clean Energy Investment Hotspots

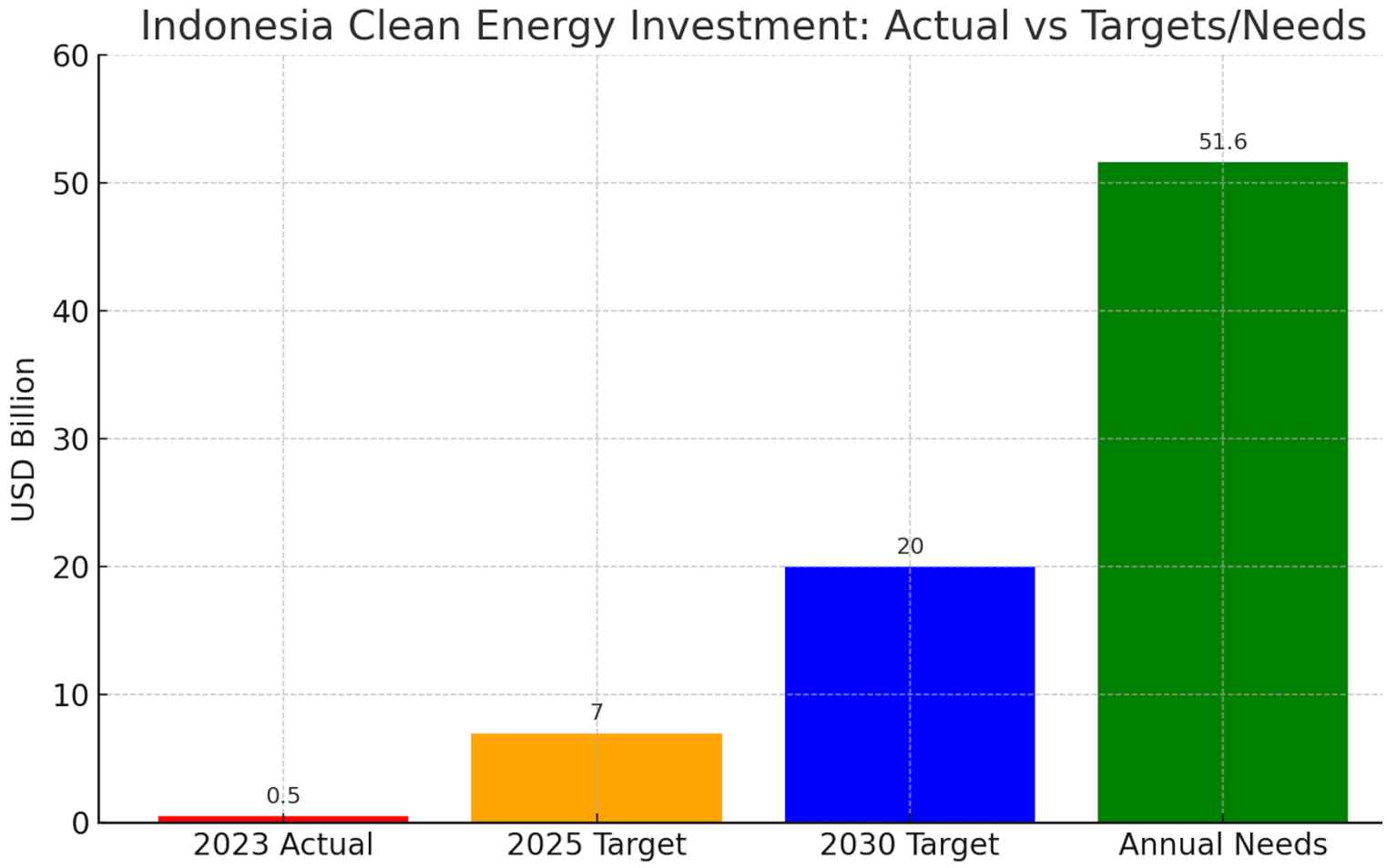
- **Solar PV manufacturing hubs**: Vietnam, Thailand, Malaysia — among the world's largest producers after China
- **Nickel mining & refining**: Indonesia produces >60% of global nickel; >USD 50B invested since 2014, with USD 30B in refineries in 2024, 75% Chinese-backed
- **Battery manufacturing**: Southeast Asia is emerging as a key battery and EV supply chain base:
  - **Indonesia:** Indonesia is pushing aggressively with EV battery plants tied to its nickel resources.
  - **Vietnam.** Vietnam is attracting global firms (e.g., VinES, VinFast) into cell production and battery assembly.
  - **Thailand:** Thailand is incentivizing battery factories and EV clusters as part of its Eastern Economic Corridor industrial hub.
- **Offshore wind:** 17 GW offshore wind target by 2050; requires USD 50bn+ investment

Sources: IEA (2025), Reuters (2025), OECD (2023), EnergyNews (2024)

Indonesia Investment Targets and Needs

Some Recent Flagship Projects & Investments

- **Cirata Floating Solar Plant (PowerChina, PLN):**
  - » Largest in Southeast Asia; completed 2024.
  - » 145 MW, USD 100m
  - » Now supplies ~25% of Indonesia's renewable energy generation.
- **Saguling Floating Solar:**
  - » JETP-backed, 92 MW, USD 60m
  - » financed by Standard Chartered, DEG, Proparco, ACWA Power, PLN
- **Nickel supply chain:**
  - » >USD 30bn refinery investments, led by Chinese companies.



Sources: IEA, Indonesian MEMR, SEforALL, Energy Compact Action Network

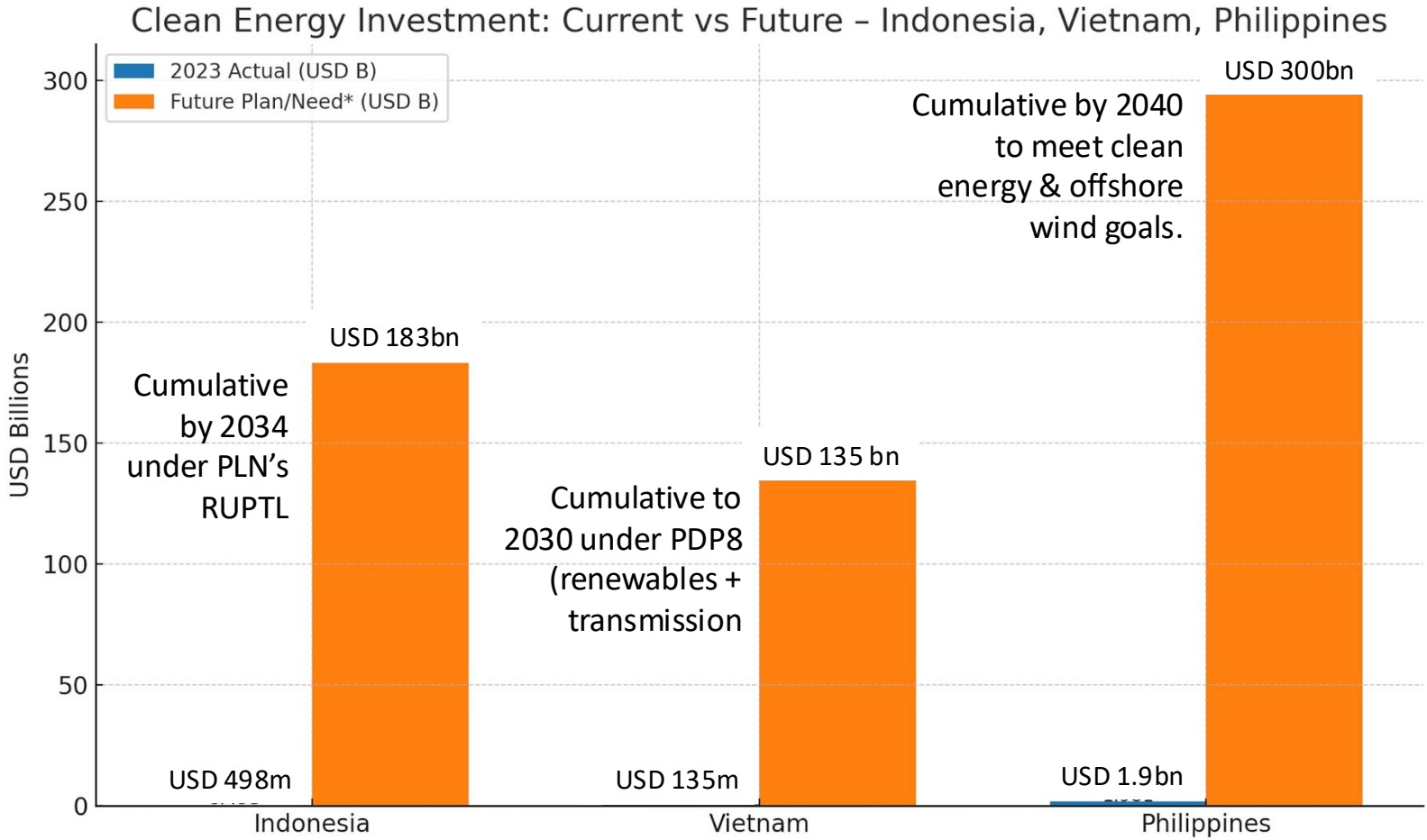
Investment in Vietnam and the Philippines

- **Vietnam:**
  - Heavy coal financing historically; coal share up to 30% of energy mix.
  - But now quadrupled solar & wind targets (2024) → investor confidence was rising, but now significant concerns on risks
  - Solar manufacturing hub — among top global producers.
  - ***But at risk from US tariffs under Trump Administration***
- **Philippines:**
  - Strong geothermal & solar pipeline.
  - Foreign corporates (e.g., data centers) demanding RE access to meet EU carbon border rules.
  - ***Investment risks: reliance on natural gas in power planning***

Clean Energy Investment Outlook – Indonesia, Vietnam, Philippines

Current spending is tiny compared to the scale of investment needed.

- All three countries face a massive investment gap between current flows and planned needs.
- Private and domestic finance will need to scale rapidly, as external concessional flows remain limited.

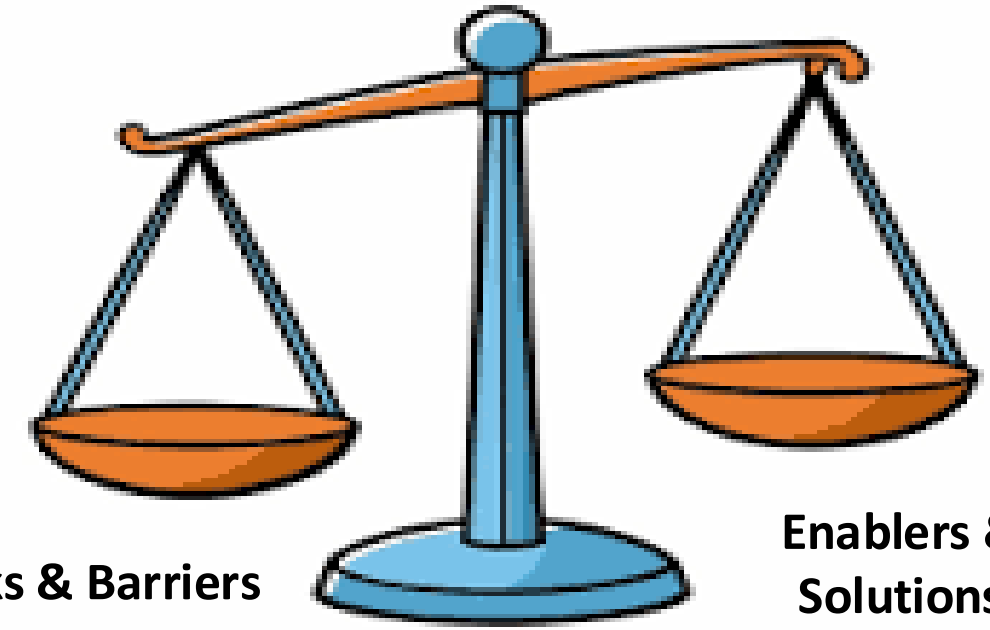


Sources: BloombergNEF *Climatescope 2024* (country pages); PLN RUPTL 2025–2034 (Indonesia); Vietnam PDP8 (2023); OECD CEFIM Roadmap – Philippines (2023).

Insights on Mobilizing Private Sector Capital

Mobilizing Private Capital: Balancing Risks and Enablers

- Southeast Asia needs tens of billions annually in clean energy to meet net-zero goals (IEA, Ember).
- Private capital already provides >85% of clean power & storage finance in the region (IEA 2025).
- But risks and uncertainties—policy, market, FX, and project bankability—limit flows.



Risks & Barriers

- Policy uncertainty and slow permitting
- FX and currency risk
- Offtake/PPA bankability
- Transmission bottlenecks

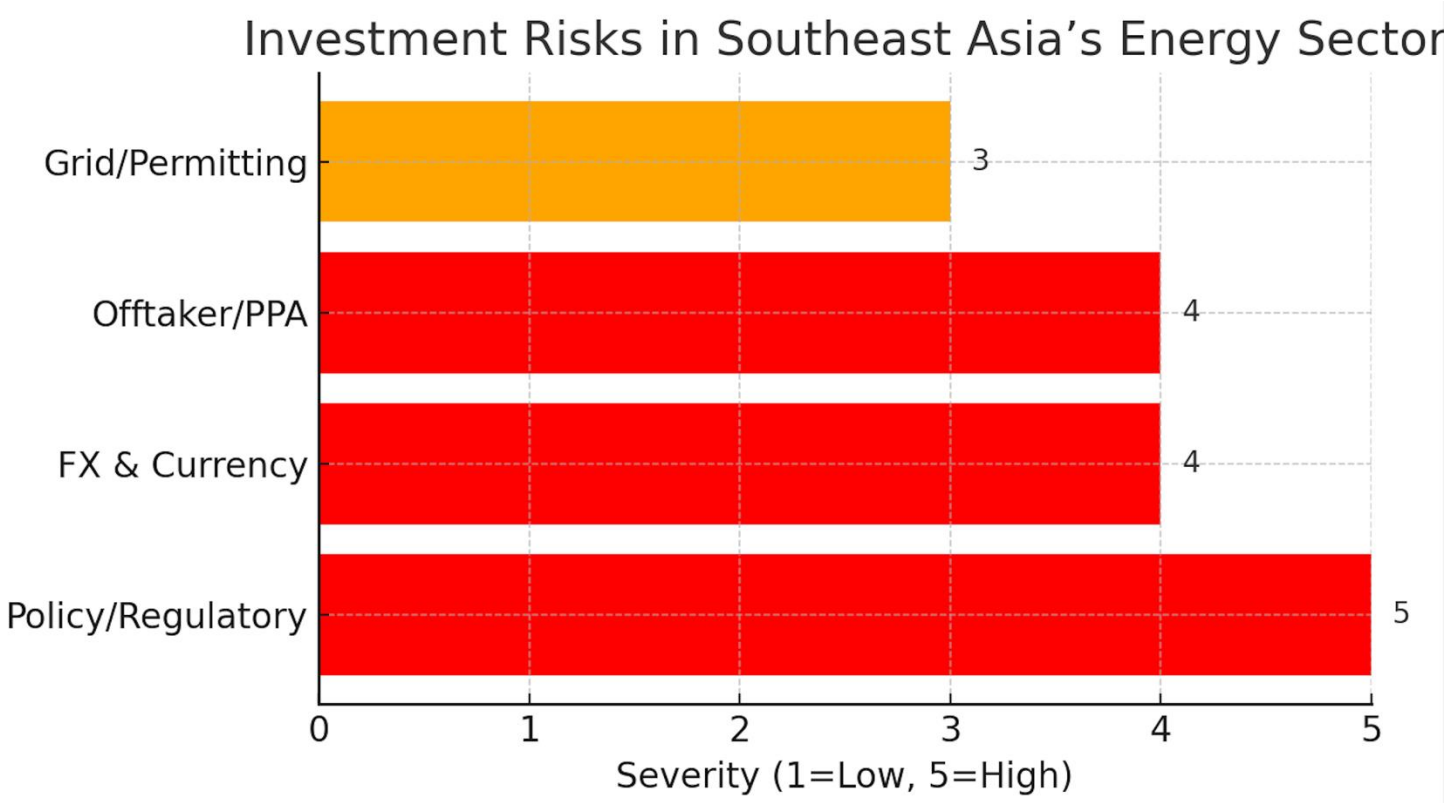
Enablers & Solutions

- Blended finance and PPPs
- Guarantees, FX hedging
- Bankable PPAs and tariff reform
- Carbon pricing, green sukuk

Main Risks and Uncertainties

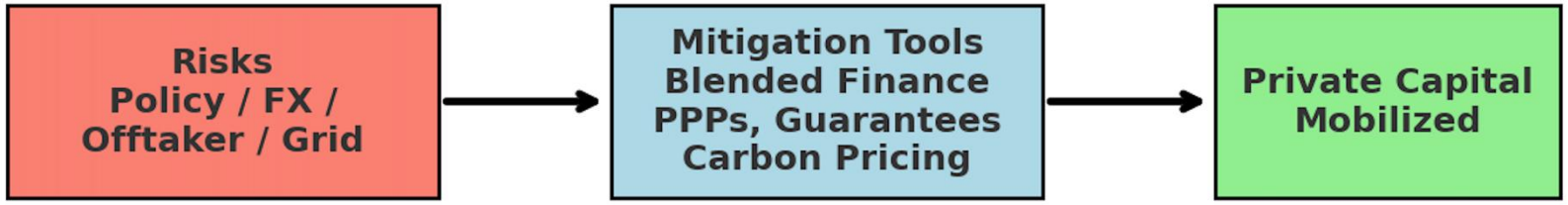
What Keeps Investors Awake at Night

- **Policy & Regulatory Risk:**
  - » Vietnam's proposal to retroactively cut feed-in tariffs could impact $13bn in wind & solar investment
  - » Thailand's slow DPPA rollout risks ~USD 31bn in lost foreign investment
- **FX & Currency Volatility:** Investors demand costly hedges; few local facilities.
- **Offtaker Risk:** PLN (Indonesia) balance sheet + restrictive PPAs undermine bankability.
- **Permitting & Grid Bottlenecks:** Transmission lags hold back projects.



Sources: Reuters (2025), Reccessary (2024), IEA (2025).

Strategies to Address Risks



Turning Barriers Into Bankable Projects

- **Blended Finance:** Use concessional capital for first-loss and FX risk coverage.
- **Public-Private Partnerships (PPPs):** Bundle renewables + transmission + storage
  - » Example: Saguling 92 MW floating solar, $60M, JETP-backed consortium
- **Guarantees & Hedging:** Partial risk guarantees, local currency hedging instruments.
- **Policy Credibility:** Transparent PPAs, enforceable contracts, carbon pricing mechanisms.

Key Takeaways

Mobilizing Private Capital in Southeast Asia's Transition

- **Risks are real:** policy instability, FX, off-taker risk, slow reforms.
- **But solutions exist:** blended finance, PPPs, guarantees, sukuk, carbon pricing.
- **Momentum:** Indonesia, Vietnam, Philippines show pathways, but must accelerate reforms. ***Policy transparency and consistency are critical.***
- **Message:** Private finance will lead the transition—but only if risks are actively managed.

Thank you - *Terima kasih*

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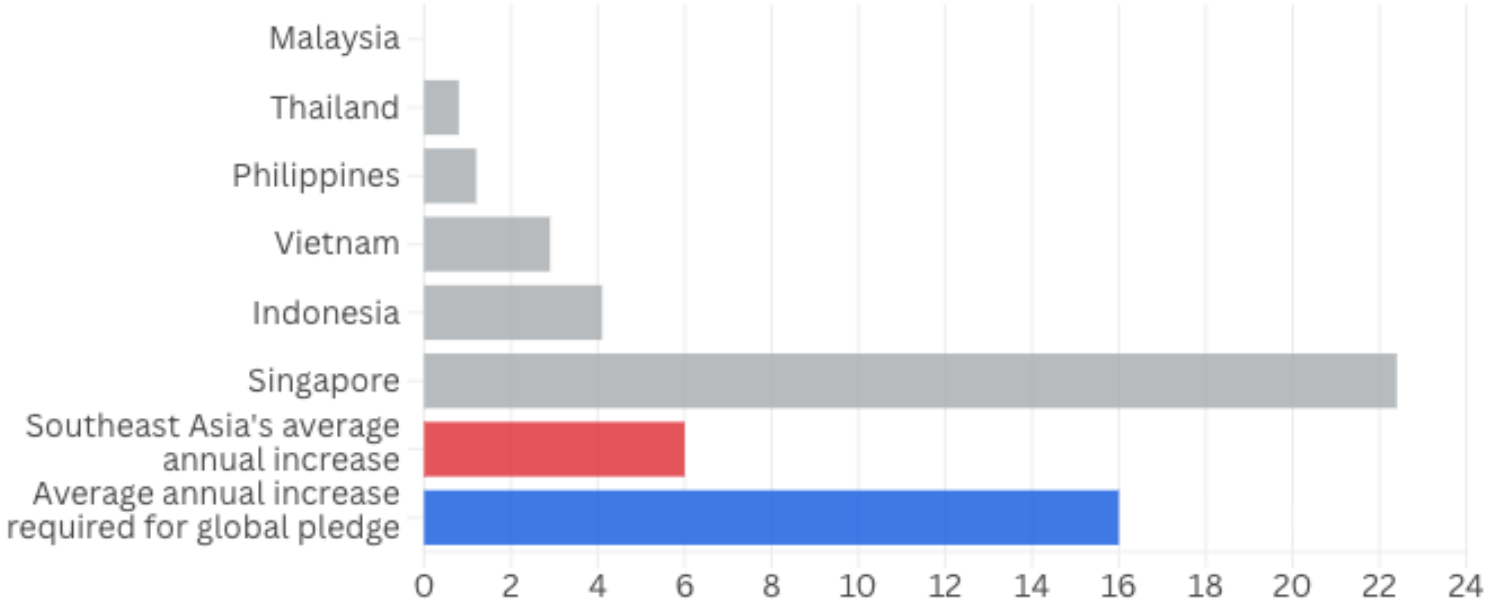
Additional Slides

How Are We Doing?
Plans, Targets, and Progress

Is Southeast Asia Keeping Pace with Global Pledge to Triple Renewables?

Current Status and is ASEAN Moving Fast Enough?

- At COP28, leaders pledged to triple renewable capacity by 2030, requiring ~16% annual growth from 2023 onward.
- ASEAN average: 26% of electricity from renewables in 2024
  - » Leaders: Vietnam (~50%), Philippines (~30–35%).
  - » Laggard: Indonesia (~13–15%).
- Gap: Between 2022–23, renewable power generation in the region grew by <6%, far below the ~16% annual pace needed to stay on track.

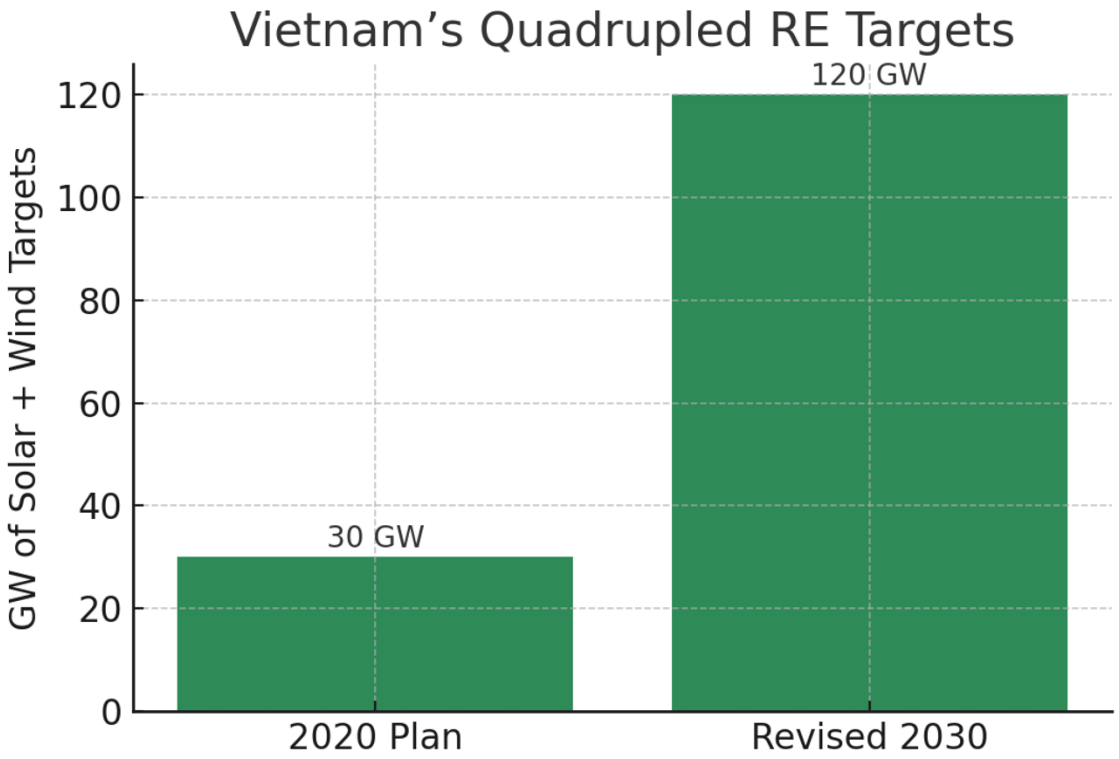


Source: Climate Analytics and Eco-Business

Vietnam: Raising the Bar

From Ambition to Pipeline Expansion

- Revised power plan (2024) quadrupled solar and wind targets.
- Rapid growth: Vietnam already among top RE players in ASEAN.
- Political will: Investors attracted by policy certainty, clear FiTs in earlier years.
- ***But … there are major integration challenges (curtailment, grid bottlenecks).***

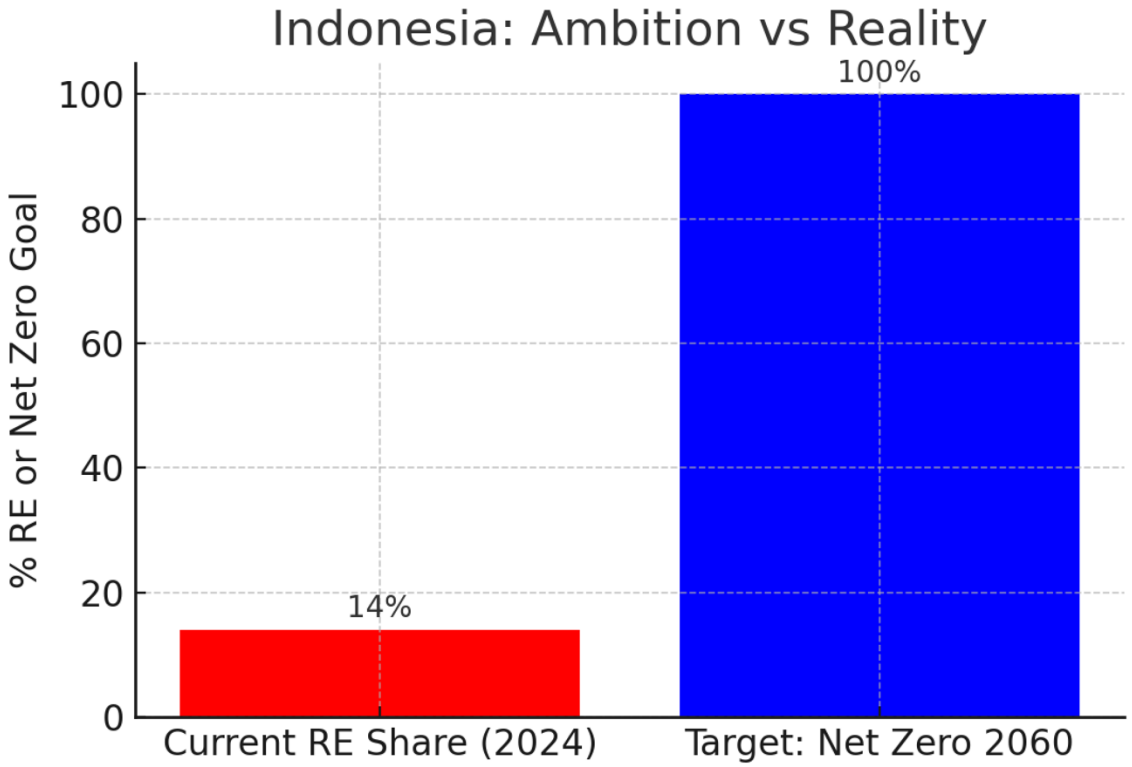


Source: EnergyNews.pro

Indonesia: Ambition Meets Reality

At the Crossroads

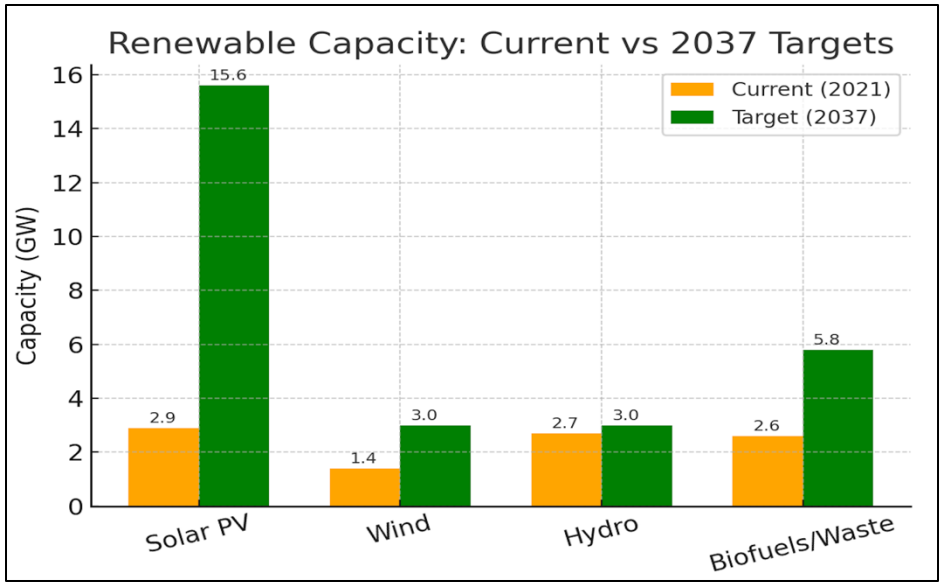
- Target: Net-zero by 2060
  - » JETP USD 20bn pledged for coal retirement + clean energy
  - » Current RE share lags peers; execution slow, coal still >60% of mix.
- Challenges:
  - » PPA credibility, transmission bottlenecks, FX risks
  - » Translation gap: Ambition vs. actual projects moving to financial close.

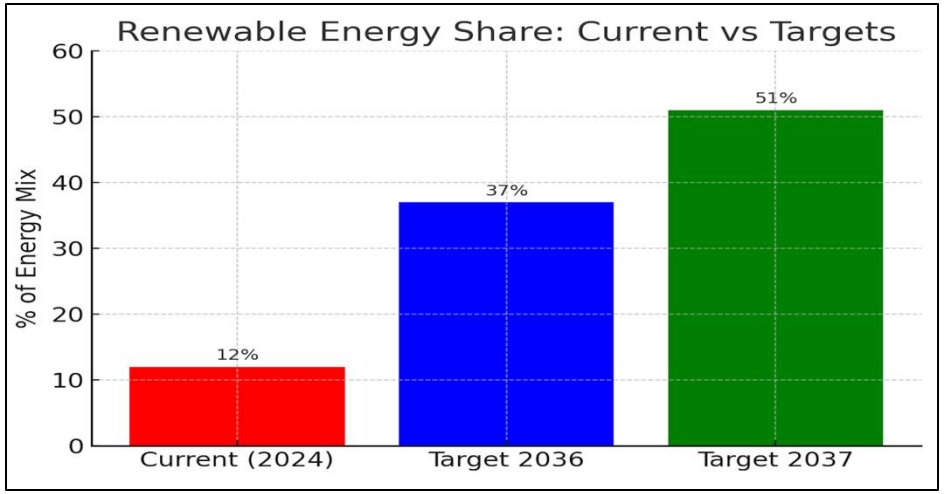


Source: Asian-Power.com

Thailand is Stepping Up — But a Gap Remains

- Ambitious Renewable Targets (AEDP 2018–2037)
  - Solar PV: 2.9 GW → 15.6 GW
  - Wind: 1.4 GW → 3 GW
  - Hydro: 2.7 GW → 3 GW
  - Biofuels & Waste: 2.6 GW → 5.8 GW
  - Renewables share: 12% today → 37% by 2036 → up to 51% by 2037
- Investment Commitments
  - THB 2.9 trillion (~USD 93bn) across five national energy plans — >50% to renewables & low-carbon solutions.
  - Corporate momentum: PTTEP allocating USD 1.75B over five years to wind, hydrogen, CCS, and clean tech.





Sources: UNESCAP, IEA, Reccessary, Wall Street Journal

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