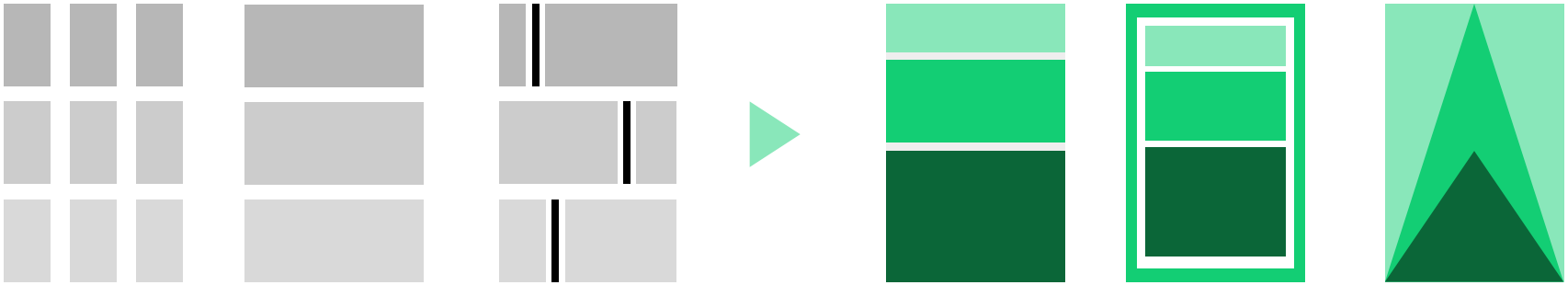
Mempercepat transisi energi bersih dengan data dan kebijakan

Dr Dinita Setyawati

13 Juni 2024

EMBER

Kami mengubah data menjadi aksi



Gather Curate Analyse

Change policy

Shift narratives

Empower campaigns

Open electricity data

- 2023 data for 80 countries making up 92% of global electricity demand
- Historical data (2000-2022) for 215 countries
- Tracking 90% of global power sector emissions and a third of total global CO2 emissions



Explore all of our electricity data for yourself in our data explorer.

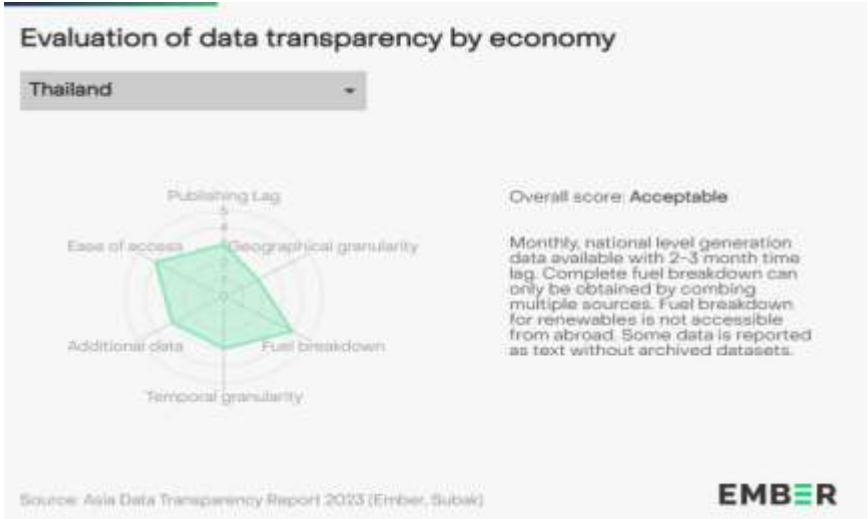


ember-climate.org/data/data-tools/data-explorer

Asia Data Transparency Report 2023



Indonesia (ESDM)



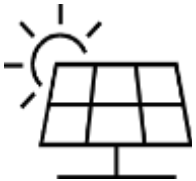
Thailand (EPPO, DEDE, EGAT)

Ember’s API

- Sign up https://ember-climate.org/data/api
- Documentation https://api.ember-climate.org/docs
- License https://creativecommons.org/licenses/by/4.0/deed.en



Temuan dari Global Electricity Review 2024



EBT capai rekor 30% listrik global - dipimpin oleh tenaga surya



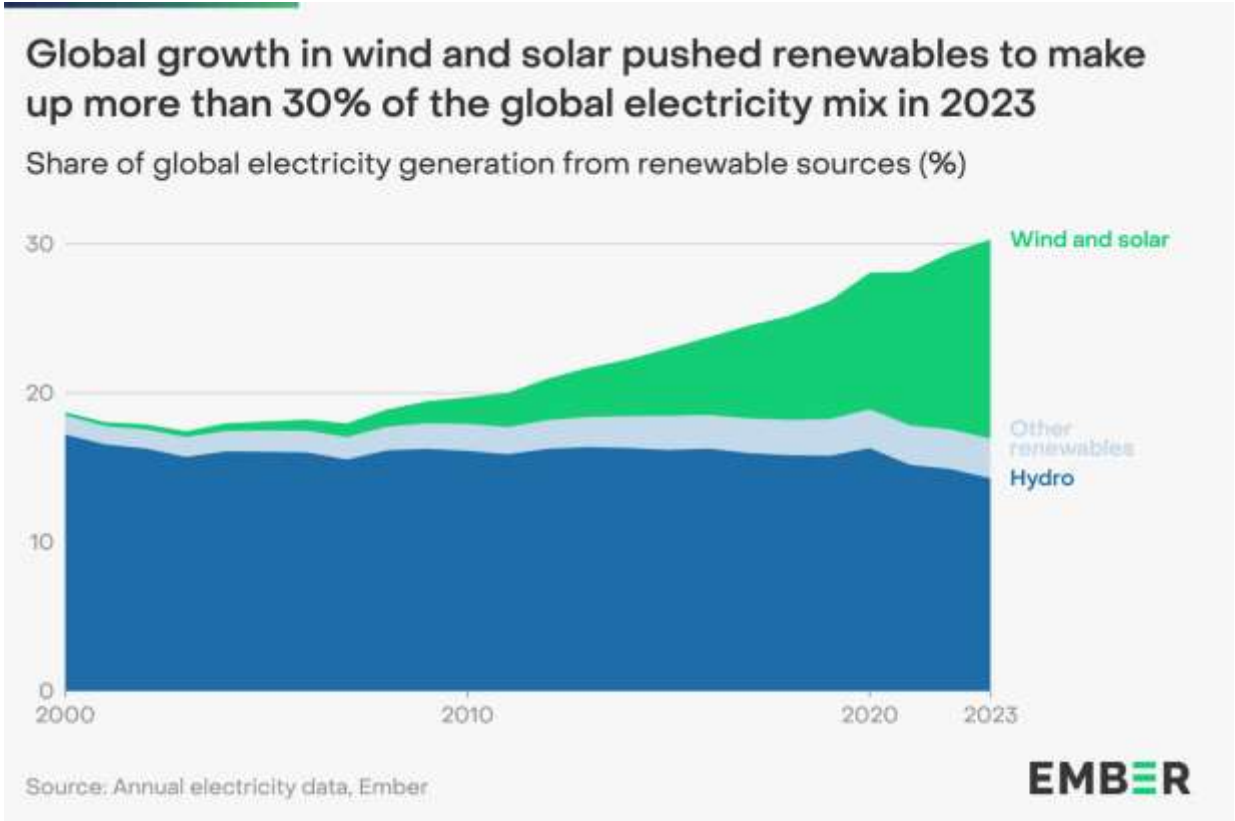
Emisi sektor ketenagalistrikan tahun 2023 meningkat akibat menurunnya tenaga air



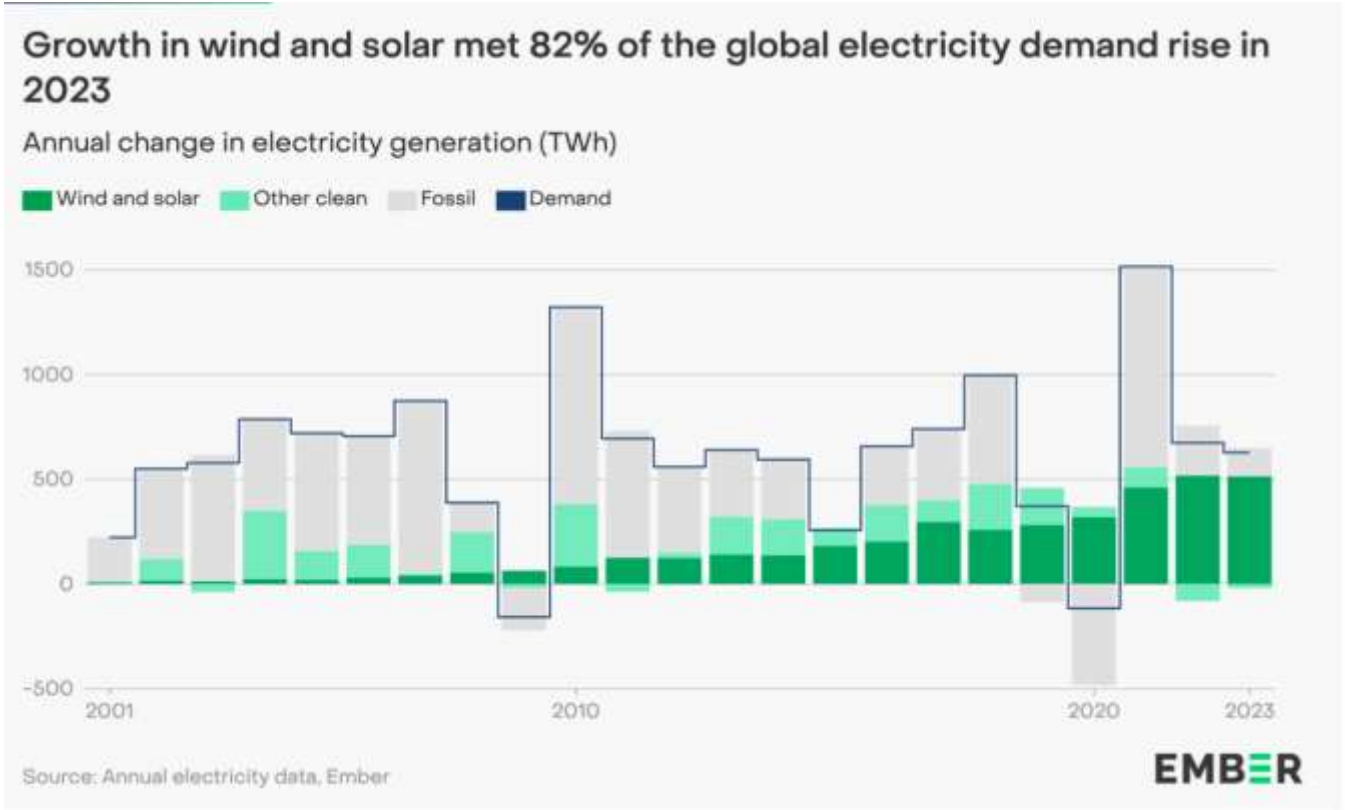
EBT terus meningkat - begitu juga permintaan listrik



2024 berpotensi menjadi tahun dimulainya era baru penurunan emisi sektor ketenagalistrikan

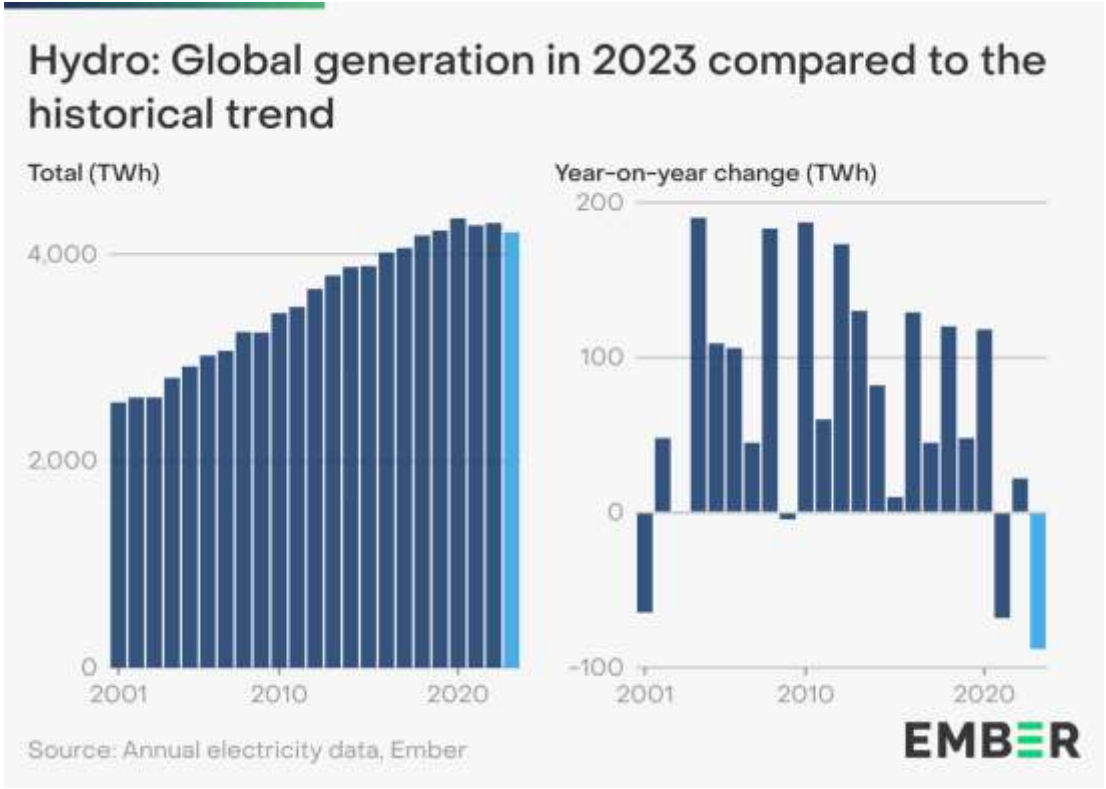


Porsi bauran tenaga surya dan bayu naik dari 1% di 2000 menjadi 13.4% di 2023



Pertumbuhan tenaga surya dan bayu mendorong dunia melampaui **30% listrik terbarukan** untuk pertama kalinya pada tahun 2023

Penurunan bauran tenaga air di 2023 walaupun penambahan kapasitas sebesar 7 GW 2023



Five fast-growing technologies are already noticeably contributing to electricity demand growth

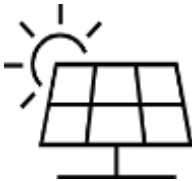
Share of global electricity demand growth attributed (percentage points)



Source: Ember calculations (see Methodology)

EMBER

Temuan dari ASEAN



Pertumbuhan produksi listrik tenaga surya dan angin di ASEAN mencapai 43% secara rata-rata selama 2015-2022



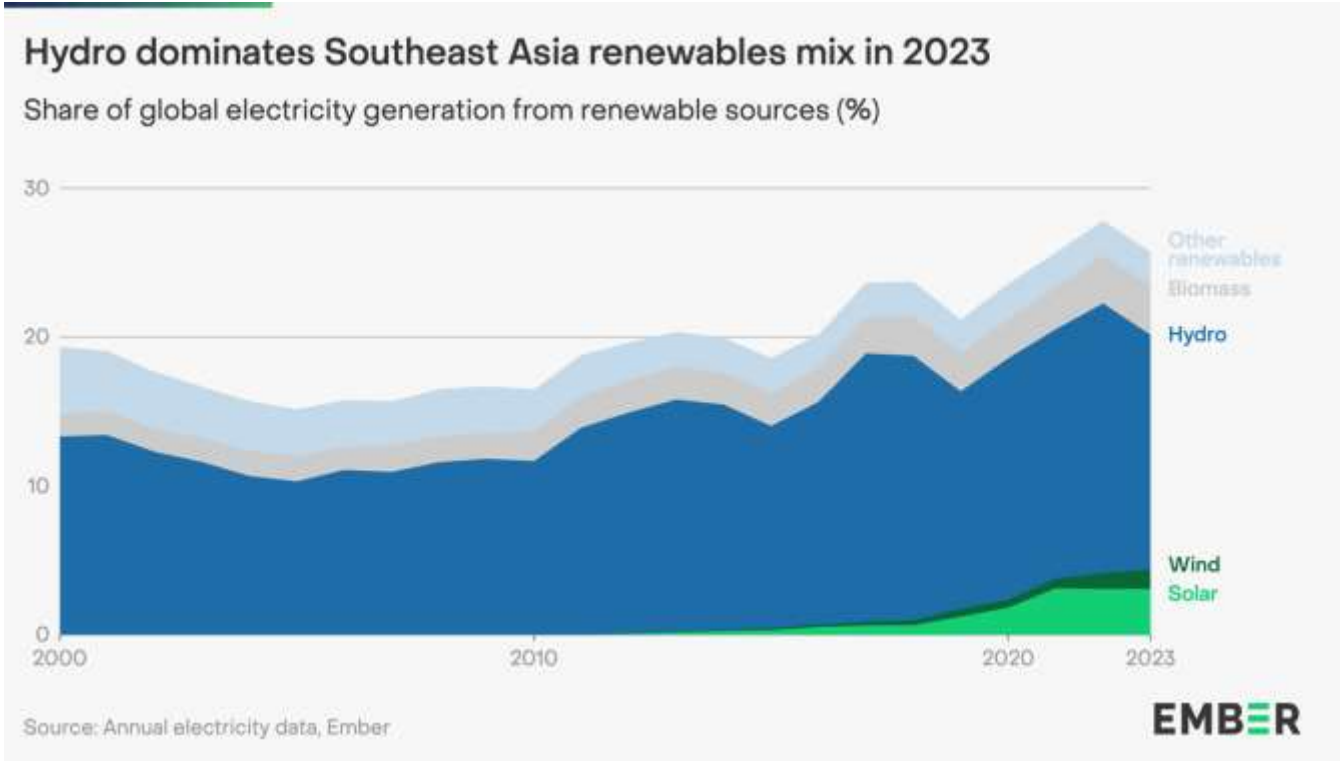
Agar sejalan dengan skenario IEA NZE 2050, EBT di ASEAN perlu meningkat 3-kali lipat



Pertumbuhan produksi listrik tenaga angin dan surya di ASEAN melambat tahun 2022 dibandingkan 2021

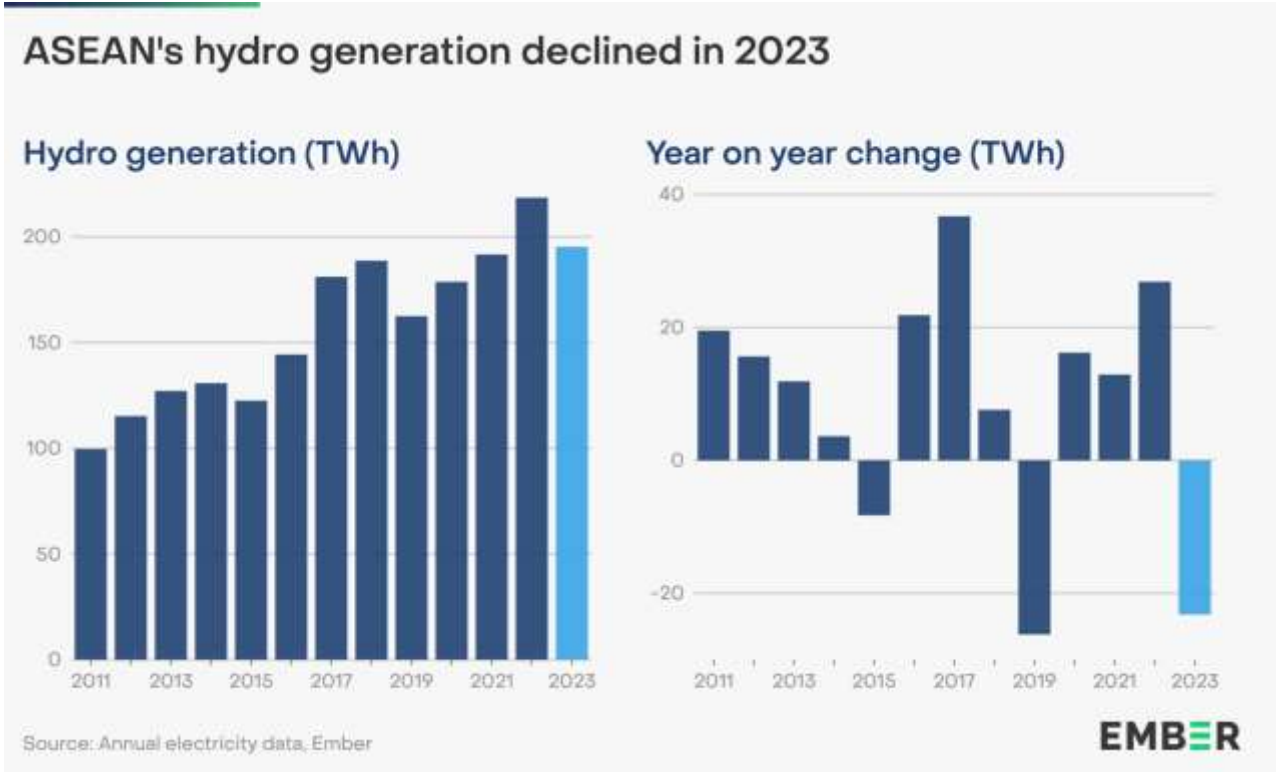


Lebih dari 99% potensi tenaga angin dan surya di ASEAN belum dimanfaatkan



Porsi bauran energi terbarukan sebesar 26%, surya dan bayu mencapai 3.7% di 2023

Tenaga air mengalami penurunan di 2023, walaupun adanya penambahan kapasitas 0.5 GW



Viet Nam drove up ASEAN wind power growth in 2022, while solar's progress slows

Electricity generation by source (TWh)

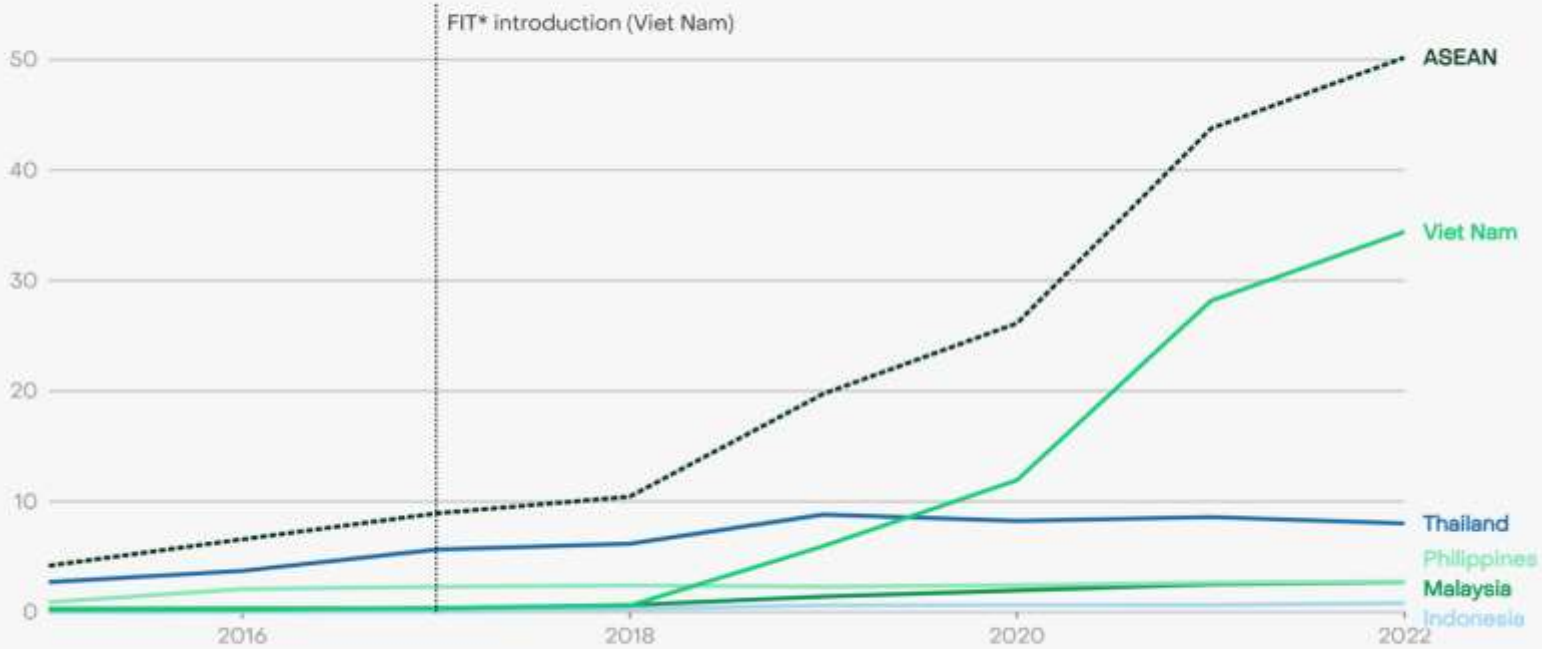


Source: Annual electricity data, Ember
The 2022 data for Cambodia, Lao People's Democratic Republic and Myanmar is unavailable. According to Ember's electricity data, Brunei Darussalam has reported zero generation for both wind and solar sources.

EMBER

Viet Nam clean power generation was boosted by Feed-in Tariff

Wind and solar generation (Twh)



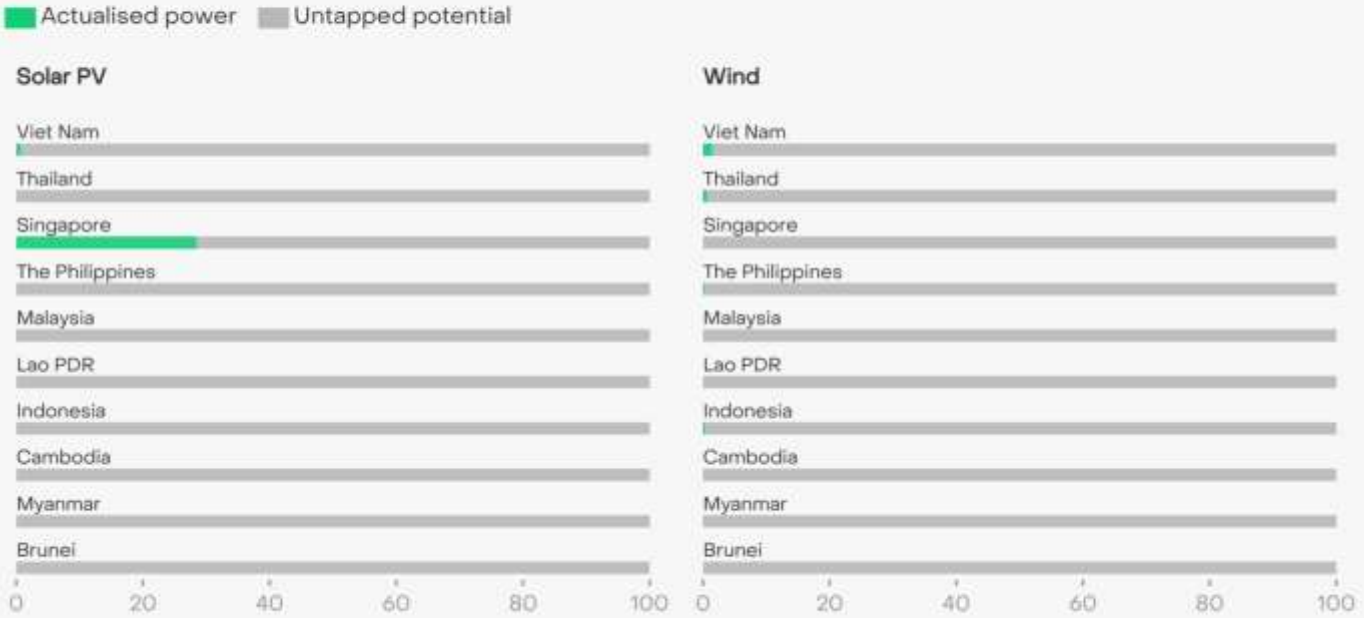
Source: Annual electricity data, Ember

* In Feed-in Tariff, the government offers a guaranteed purchasing price for electricity produced from renewable energy sources for fixed periods of time, typically for 20 years.

EMBER

Over 99% of the wind and solar potential in ASEAN remains untapped, demonstrating significant growth opportunities

Unutilised GW potential (% in 2022 or latest year*)



Source: Renewable Capacity Statistics, IRENA (2023), NREL (2020)

EMBER

More solar, less wind. Key ASEAN countries are banking on solar projects to accelerate transition

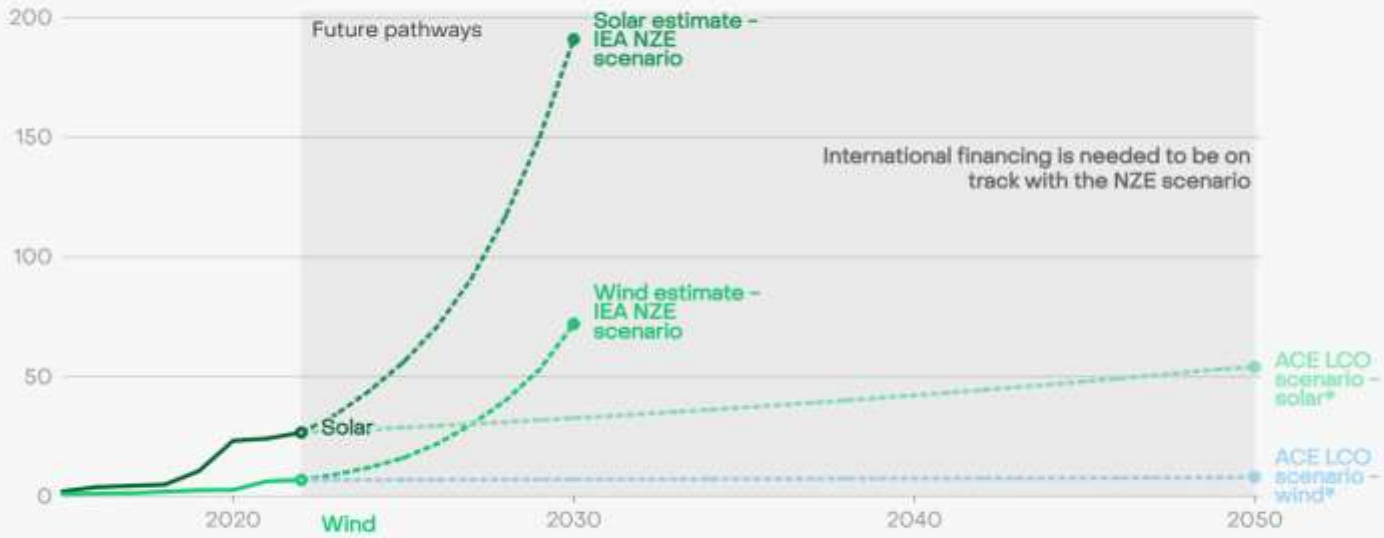
Solar and wind targets (in gigawatt)

Country	Target year	Solar	Wind	Source
Indonesia	2030	4.8	0.7	PLN's Electricity Business Plan (RUPTL) 2021-2030
Malaysia	2030	6.9	0	National Energy Transition Roadmap
The Philippines	2030	21.6	1.5	Power Development Plan (PDP) 2020 - 2040
Thailand	2037	14.1	3.05	Power development plan (PDP2018 Rev.1)
Viet Nam	2030	22.6	27.9	National Power Development Plan (PDP) VIII for the period of 2021-2030

EMBER

ASEAN will need to more than triple solar and wind by 2030 to align with the IEA's NZE scenario

Solar and wind capacity: historical, IEA and ACE LCO* estimates (GW)



Source: Ember electricity data explorer, ASEAN Centre for Energy (ACE) 7th ASEAN Energy Outlook, IEA Net Zero by 2050 (2023). The solar and wind estimates for IEA's Net Zero Emission (NZE) scenario are calculated based on Ember's calculation of solar and wind percentage share by 2030 in IEA net-zero pathway and assuming capacity factors of 16% and 28% for solar and wind respectively.
*Least Cost Optimisation (LCO) scenario (see methodology for detail)

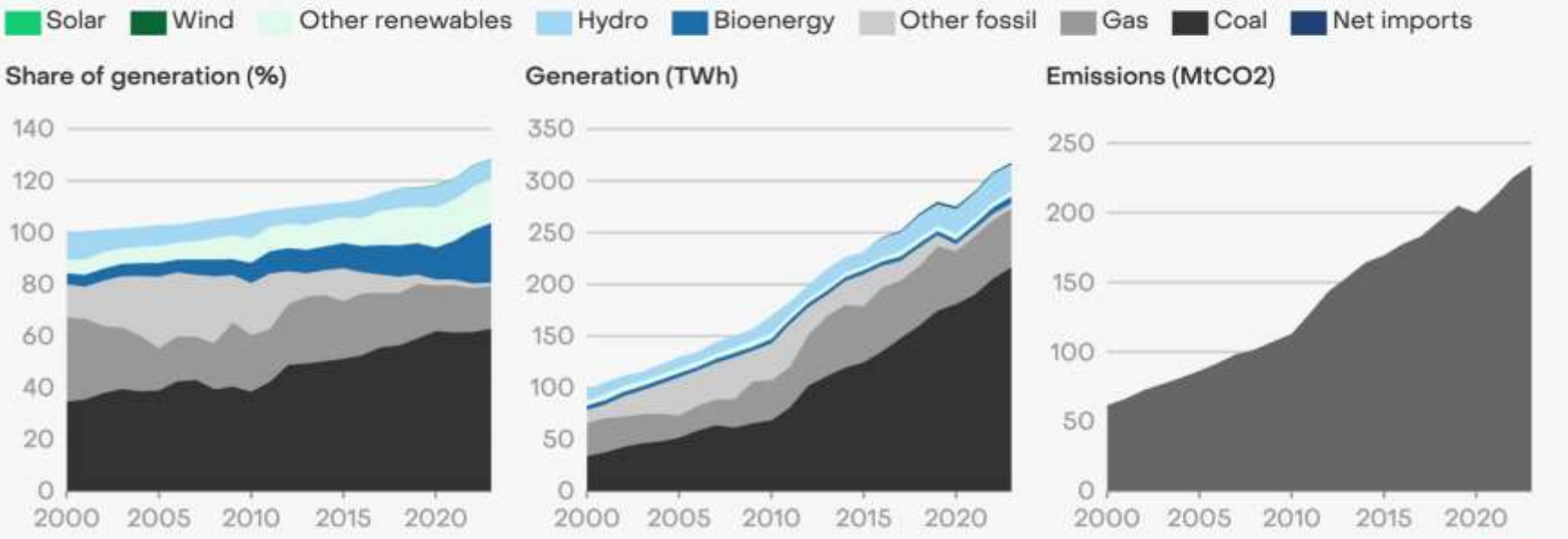
EMBER

Diskusi

Bagaimana dengan Indonesia?



Indonesia's power sector emissions tripled over two decades with rising fossil fuel use



Source: Annual electricity data, Ember

EMBER

Refleksi ambisi transisi sektor ketenagalistrikan

- Target bauran energi bersih di Kebijakan Energi Nasional yang baru perlu mempertimbangkan potensi energi terbarukan.
- Fleksibilitas di Tingkat komponen dalam negeri (TKDN) di infrastruktur pembangkit listrik terbarukan.
- Pemanfaatan energi surya untuk pembangunan infrastruktur listrik di daerah terpencil, ie percepatan program dediselisasi
- Insentif untuk pengguna tenaga surya.
- Penyesuaian antara demand listrik dan kapasitas pembangkit listrik terbarukan, dan prioritas dalam dispatch

Thank you!

Website: ember-climate.org
Email: info@ember-climate.org
Socials: @emberclimate





DATA INTO ACTION

Thank you!

Website: ember-climate.org
Email: info@ember-climate.org
Socials: @emberclimate





DATA INTO ACTION