

# 気候変動対策推進のための 有識者会議(第二回) 資料

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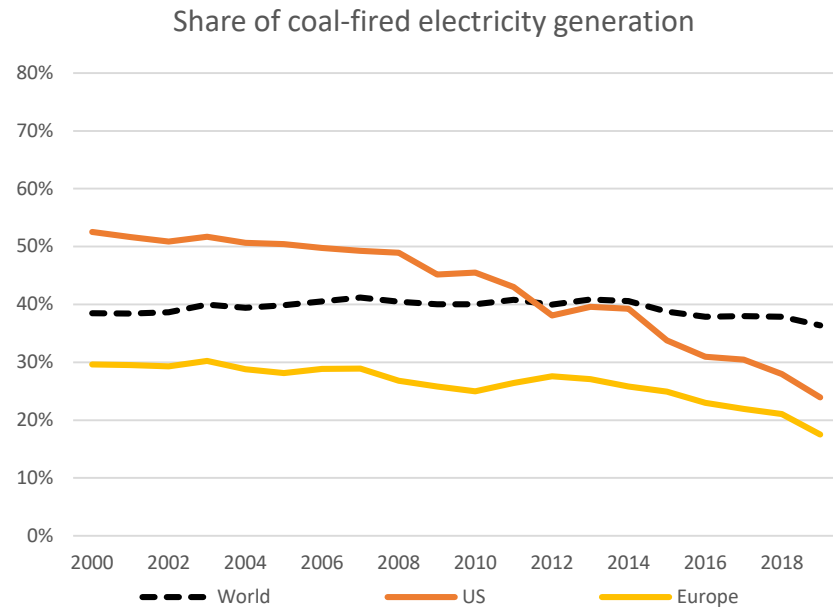
石井菜穂子

# エネルギー・トランジション・スキーム

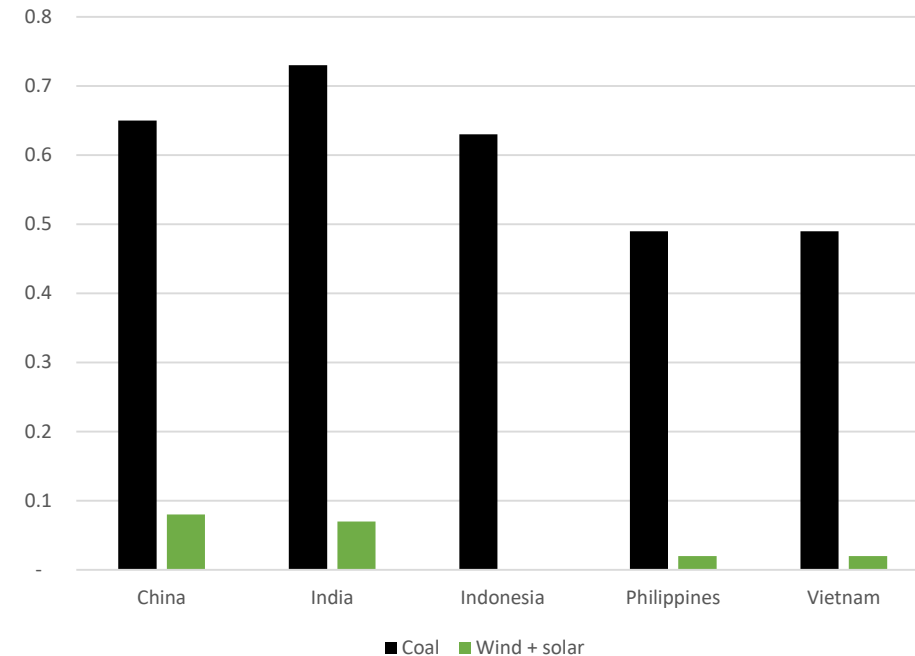
- 石炭火力発電は、温暖化ガス排出の最大の要因。ひとたび建設されれば、数十年にわたって稼働。世界的な脱炭素達成のためには、世界のエネルギー・ミックスから除去される必要。
- 石炭火力発電のシェアは、ヨーロッパ、アメリカで低下しているが、アジアでは依然として高く、その傾向が続くと予想される。
- 最近アジアの石炭火力の早期引退を支援するスキームに関する議論が活発化。その一つがADBにおいて検討が開始された「Energy Transition Mechanism」(別添)
- スキームの特徴は、石炭火力発電所の早期稼働停止と再生可能エネルギー発電の加速化をセットで支援する仕組みを、主要な石炭火力発電国ごとに作る。ファシリティには、MDBやバイの公的機関と長期的な投資資金を有する民間資金の両方が出資する。石炭火力発電所の所有者はファシリティに発電所を売却、ファシリティは稼働停止日を前倒しにする一方、REの導入を促進するための施策をとる。
- 国ごとのNDC(国家別脱炭素計画)とエネルギー計画と整合的であること、新たな石炭火力発電所を作らない約束をすることが重要。
- COP26における立ち上げを目指して議論が展開。

# Coal-fired electricity must drop radically, but has continued to be significant in Asian developing countries

Share of coal-fired power has dropped in US and Europe...



But remains very high in Asia (2019)



**Large-scale solution needed to simultaneously rapidly decarbonize and build-up clean energy in Asian developing countries**

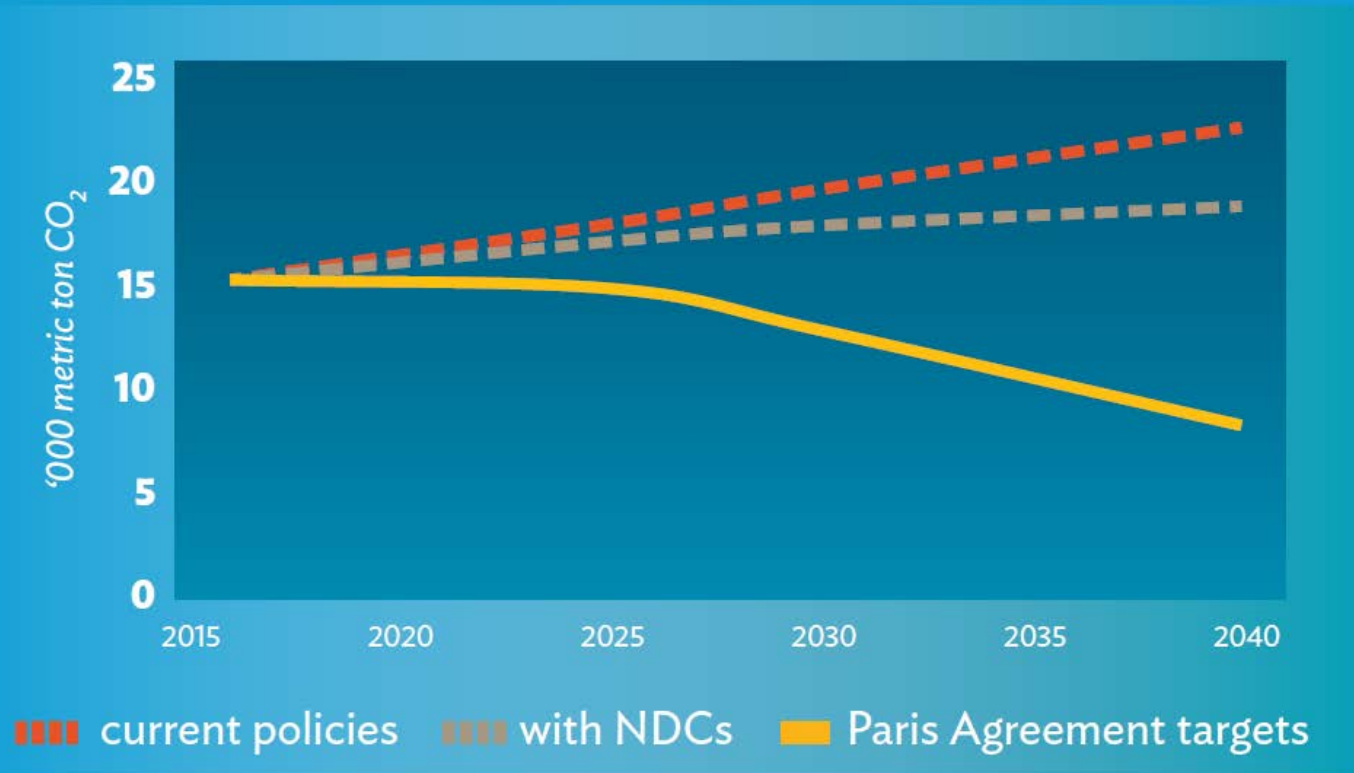
Source (left): Carbon Action Tracker 2020 and calculations based on IEA Data

Source (right): BP "Statistical Review 2020"; IPCC "Special Report on Global Warming of 1.5°C"

Author: Donald Kanak (WEF blog "How to accelerate the energy transition in developing economies" <https://www.weforum.org/agenda/2021/01/how-to-accelerate-the-energy-transition-in-developing-economies>)

# The Alarming Gap: Asia-Pacific

## Outlook vs Paris Agreement Target



\* CO<sub>2</sub> emissions from fossil fuel combustion for Asia Pacific<sup>3</sup> for scenarios (Current Policies, New Policies, and Sustainable Development) in World Energy Outlook 2018

# Energy Transition Mechanism (ETM): Possible solution for developing countries

**0** Set up an ETM that is consistent with national energy development plans and Nationally Determined Contributions to transition a large amount of carbon-intensive power (e.g. ~50% of current coal-fired capacity by 2035) and replace with Low-Carbon Power.

**2** Governance structure ensures the ETM's adherence to agreed energy transition plan

**1** Investors fund the ETM. Potential investors include:

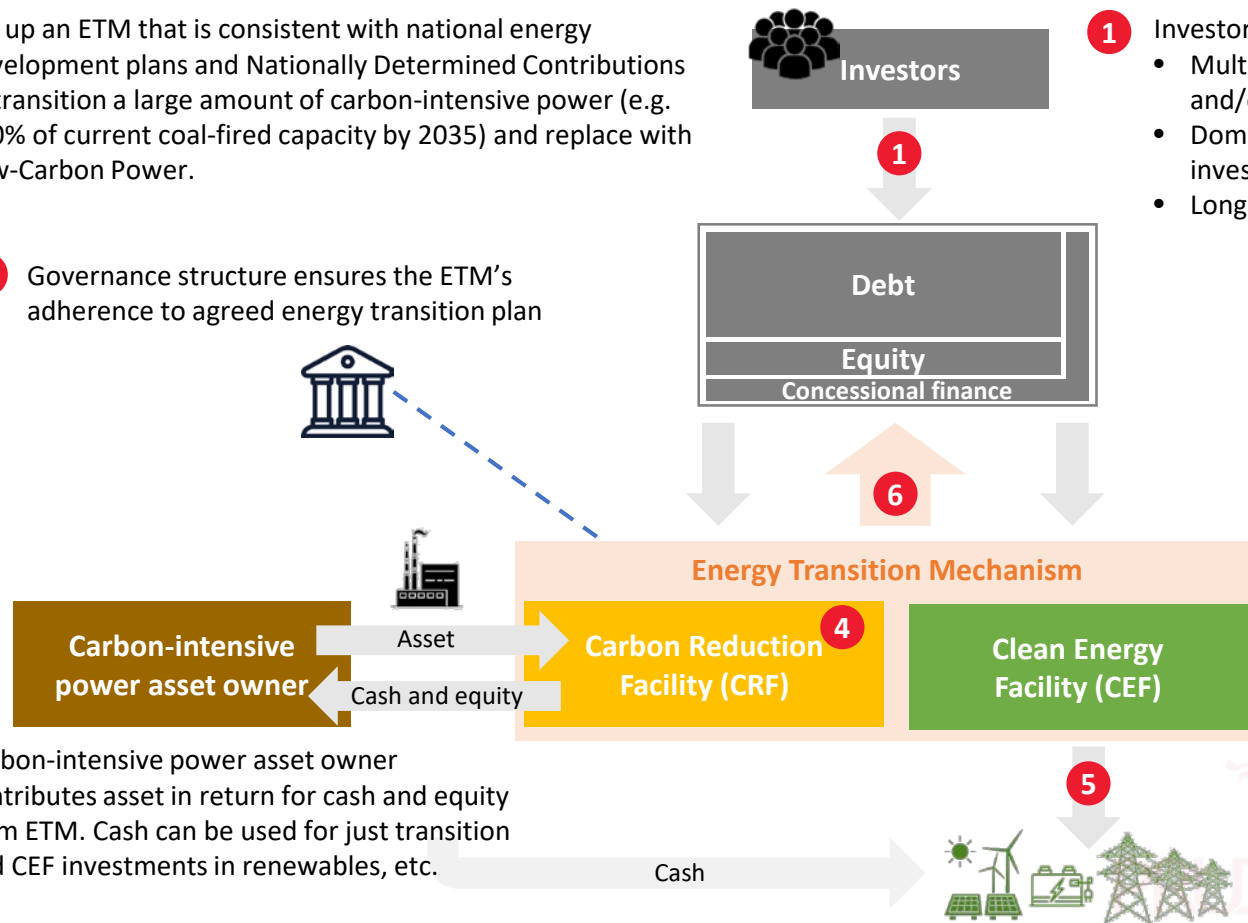
- Multilateral banks, including concessional lending and/or first-loss guarantee to create blended financing
- Domestic and international private sector institutional investors
- Long-term investors with low cost of funds

**3** Carbon-intensive power asset owner contributes asset in return for cash and equity from ETM. Cash can be used for just transition and CEF investments in renewables, etc.

**4** CRF owns carbon-intensive asset and continues operations until agreed but shortened decommissioning date. CRF uses proceeds from operations to repay investors

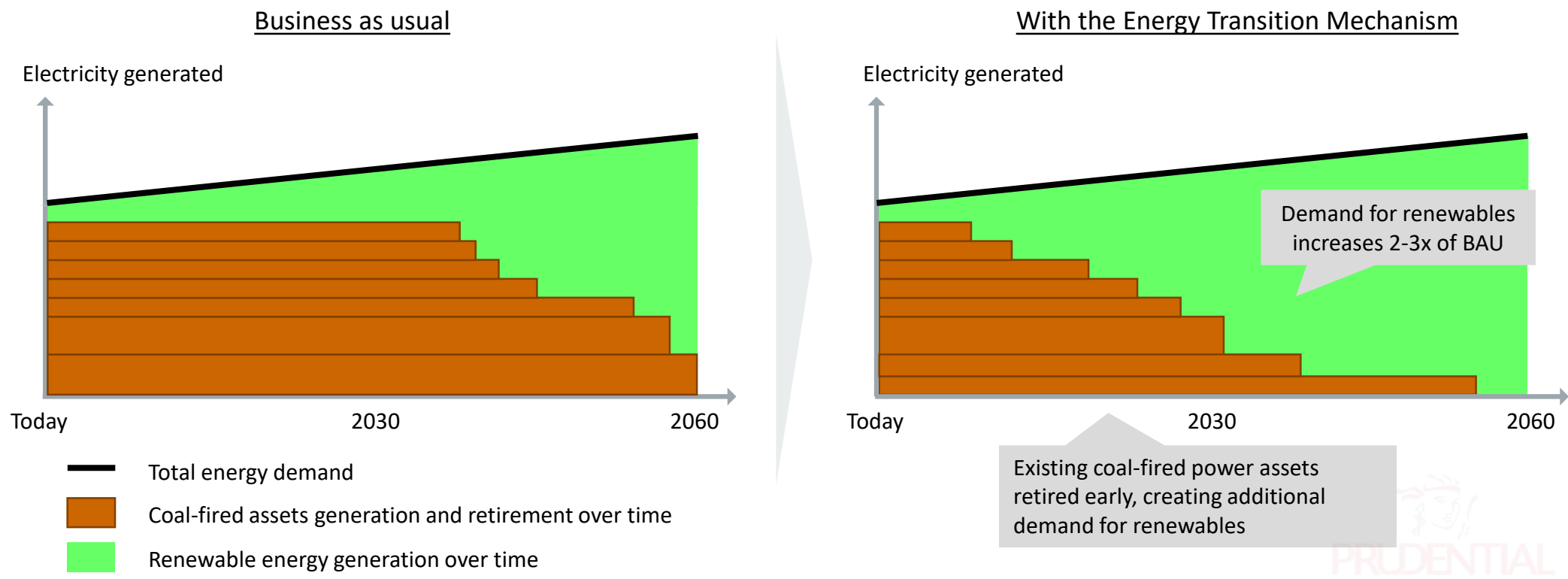
**5** CEF provides finance, technology assistance and know-how to host country to accelerate renewables, storage, grid upgrades, etc. Private investors invest in or alongside the CEF.

**6** ETM investors receive returns from both CRF and CEF. CEF and CRF cashflows may be enhanced to achieve faster and more just transition.



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# We can reduce the power costs AND emissions: accelerating demand for renewables by 2-3x by speeding up the retirement of coal-fired electricity



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