



Norfund

The Norwegian Investment Fund for Developing Countries

Klimafrokosten - Hvor og hvordan kan norsk kapital bidra til fornybar energi og utslippskutt i utviklingsland?

1. Juni 2023 - Tellef Thorleifsson, CEO

Tittel

Hvor og hvordan kan norsk kapital bidra til fornybar energi og utslippskutt i utviklingsland? Hvordan får vi mest utslippskutt for pengene? Hvordan er tilgangen på risikokapital i land som trenger mer fornybar energi fort? Og; Er det risikokapital eller tilgang til prosjekter som forsinker utbygging av fornybar energi og energiinfrastruktur i utviklingsland?

Agenda

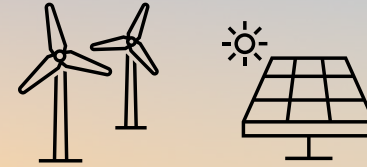
- 1. Bakgrunn: Norfunds mandat og strategi**
- 2. Hvordan kan vi få mest utslippskutt for pengene?**
- 3. Status tilgang til prosjekter og kapital til fornybar energi i utviklingsland**
- 4. Hvor og hvordan kan norsk kapital bidra?**

Norfund



Development mandate

Create jobs and improve lives by investing in businesses that drive sustainable development



Climate Investment Mandate

Investing in the transition to net zero in **emerging markets**

Norfund is the **Norwegian investment fund for developing countries** and we invest to build sustainable businesses

We are a responsible minority investor working closely with partners

Through local presence we seek solutions designed to work for the countries in which we invest

Our investments are concentrated in **four areas** that each contribute to the SDGs



Renewable Energy

Large-scale renewable power generation

Commercial and industrial power solutions

Off-grid energy solutions



Financial Inclusion

Commercial banks

Microfinance institutions

Other financial services, including non-deposit taking lenders, insurance and fintech



Scalable Enterprises

Agribusiness value chain

Manufacturing

Other scalable businesses through funds



Green Infrastructure

Waste management, including waste-to-energy

Water supply and sanitation, including wastewater treatment

We target selected developing countries with high impact potential, focusing our efforts on 30 core countries

Norfund's development mandate country strategy

CORE

LDCs

Bangladesh	Senegal
Cambodia	Tanzania
Ethiopia	Uganda
Laos	Zambia
Malawi	Zimbabwe
Mozambique	Rwanda
(Myanmar) ¹	

Other SSA

Côte d'Ivoire	Kenya
Ghana	South Africa
Nigeria	Cameroon
Namibia	

Other countries

Colombia	Indonesia
Dominican Rep.	Nicaragua
El Salvador	Sri Lanka
Guatemala	Vietnam
Honduras	Ecuador

● Core countries



KPI: 33% of portfolio in LDCs
KPI: 50% of portfolio in SSA



Norfund has a focused country strategy with **30 core countries** to maintain focus and build on existing capabilities

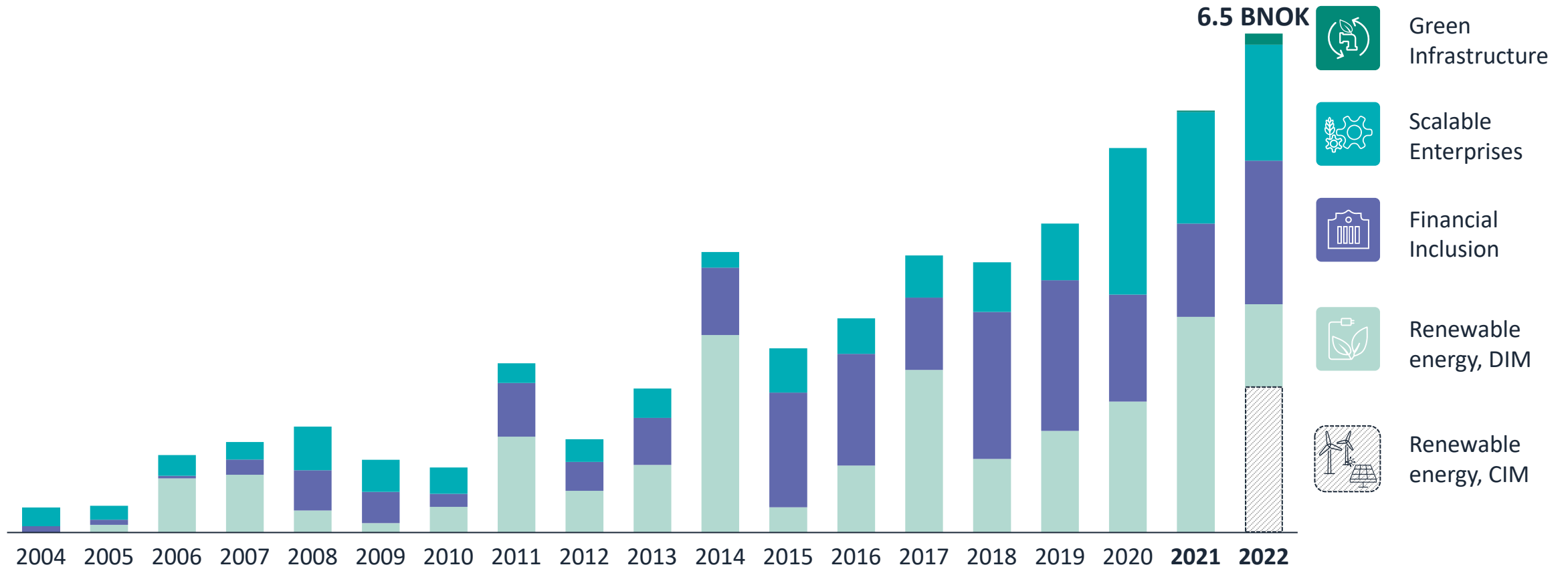
- In these countries, Norfund actively build pipeline and country expertise
- Countries are selected based on Norfund's ability to be additional, have an impact and make successful investments

Norfund may also invest directly in **other countries in SSA and/or LDC** in Norfund's regions² **together with partners³ on a selective basis**

1. On hold until situation improves 2. LDC in Norfund's regions: Includes Nepal, Bhutan and Haiti outside SSA 3. Partners being funds, platforms or industrial partners. 4. On an opportunistic basis with case-by-case assessment of impact and/or additionality.

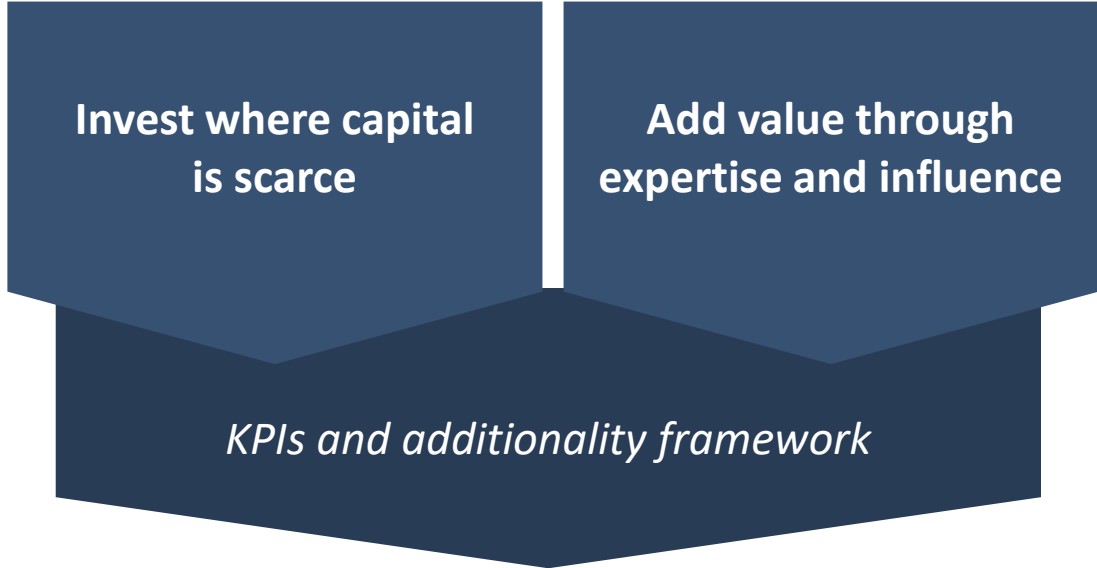
Our investments have grown to more than NOK 6.5 billion per year

Committed investments per year, NOK billion



Norfund creates impact by being additional and catalytic

ADDITIONAL



CATALYTIC



More capital and competence where it will have the most impact

Delivering on our mandate is a constant balancing act

Being additional – investing where others hesitate due to the high risks involved

vs

Being catalytic – mobilizing capital from other investors

Investing in the least developed countries with **difficult investment conditions**

vs

Being responsible and living up to **high ethical standards**

Understanding and reporting the development effects of our portfolio companies

vs

Tailoring our data demands to the **realities of companies in developing countries**

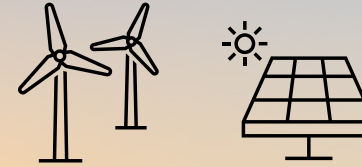


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Under the Climate mandate we will primarily invest in renewable energy, but also associated enabling technologies that can reduce the need for fossil fuels

Our primary focus is on renewable energy...



~90% of
portfolio

... as well as enabling technologies



~10% of
portfolio

Renewable energy production, e.g.,

- Solar (incl. floating)
- Wind (onshore, offshore)
- Hydropower



Enabling technologies, e.g.,

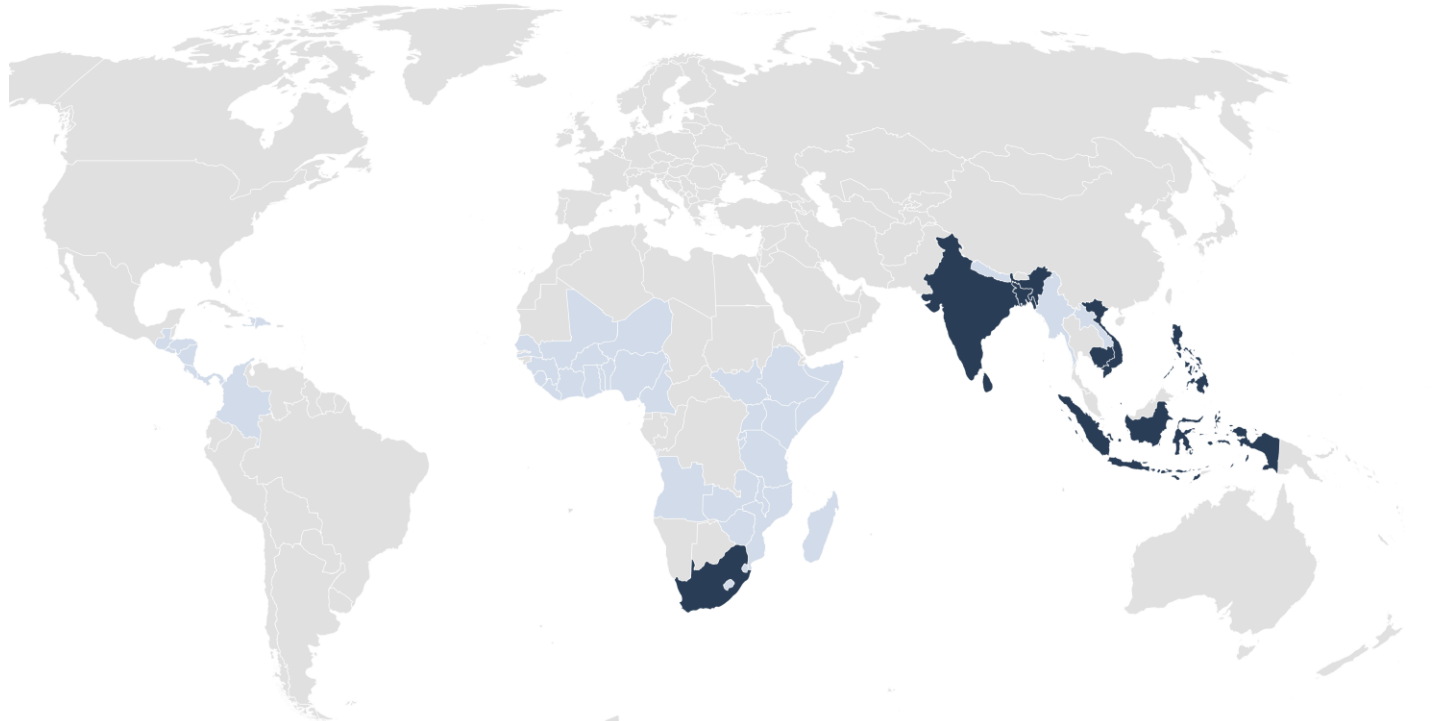
- Storage
- Green hydrogen and other power-to-X technologies
- Transmission



South Africa and South- and South-East Asia are the core geographies for the Climate Investment Mandate

Climate Investment Mandate country strategy

● CIM core countries ● NF strategy countries



The CIM will prioritize existing Norfund strategy countries¹ in order to maintain focus and build on existing capabilities.

Among existing strategy countries, we will prioritize 8 core countries based on the selection criteria²:

- India
- Vietnam
- Philippines
- Cambodia
- Indonesia
- Sri Lanka
- Bangladesh
- South Africa.

We may opportunistically extend our reach to new countries with high climate impact, together with strong, existing partners

1. Countries prioritized for Norfund in the 2019 strategy – 29 core and 20 extended reach countries
additionality (measured by Norfund’s country and sector-specific additionality scores and (3) feasibility (measured by Norfund’s capabilities and investability of the country

2. (1) Climate impact (measured by amount of coal in pipeline and grid emission factors), (2)

Agenda

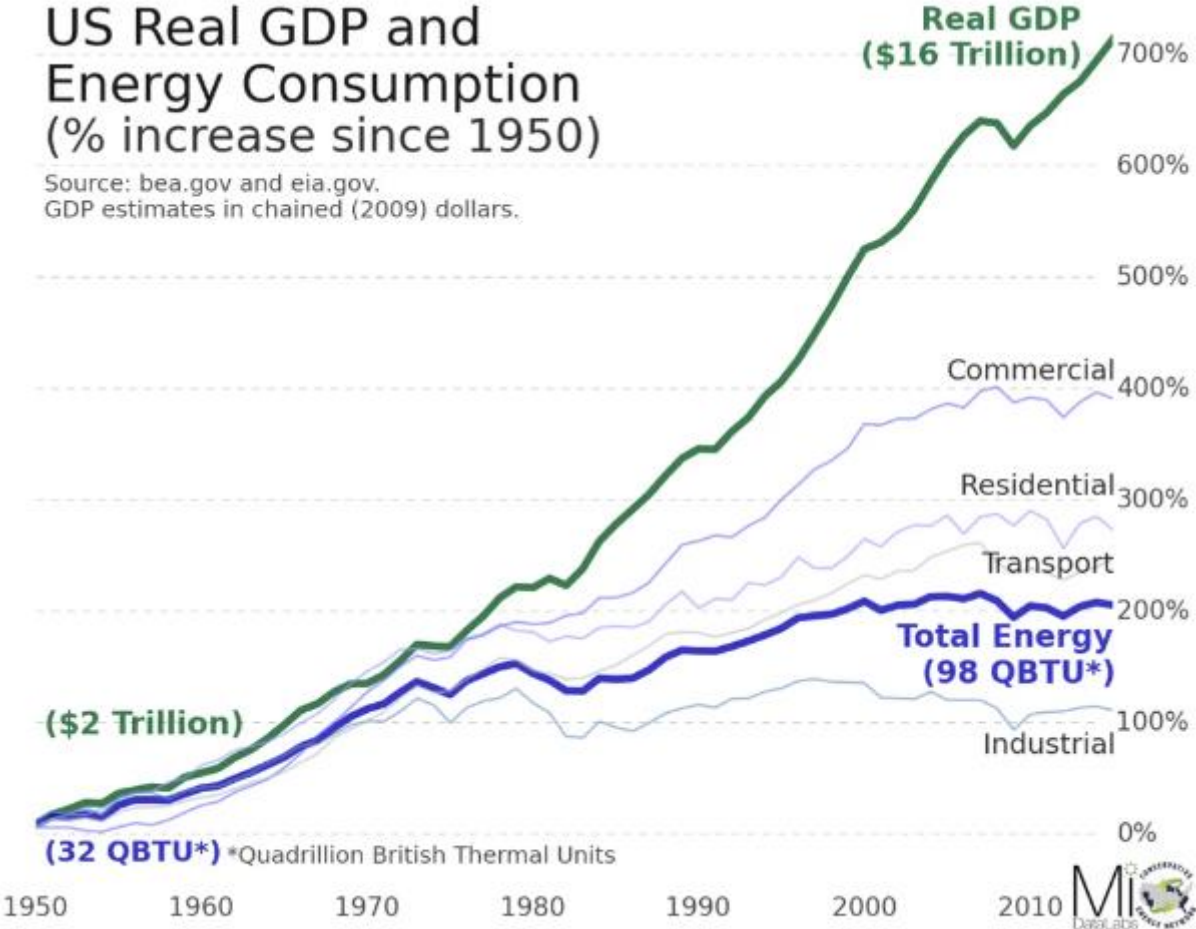
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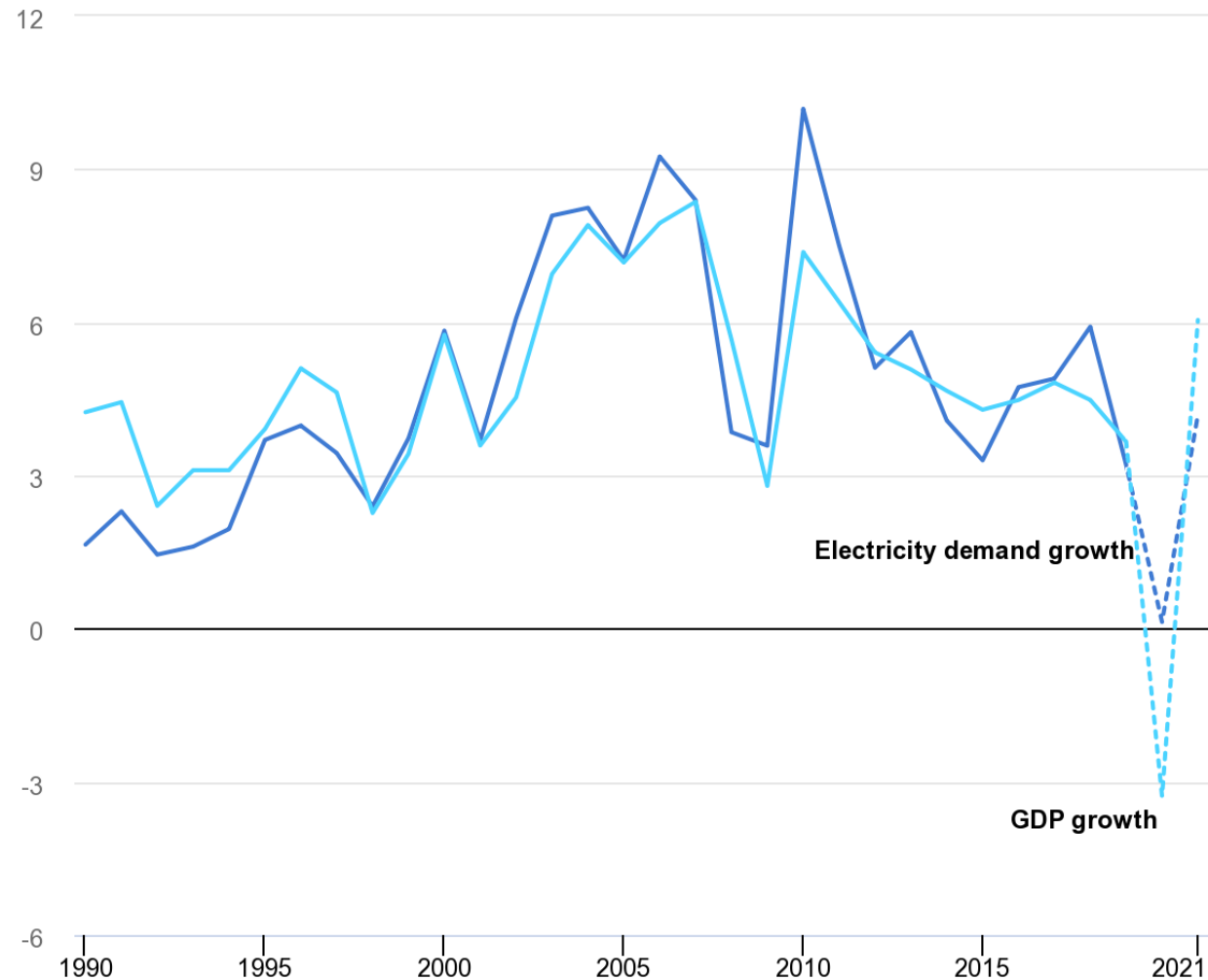
4. Hvor og hvordan kan norsk kapital bidra?

Energy consumption and GDP growth



Source:
Notes:

Electricity demand and real GDP growth in emerging and developing economies, 1990-2021



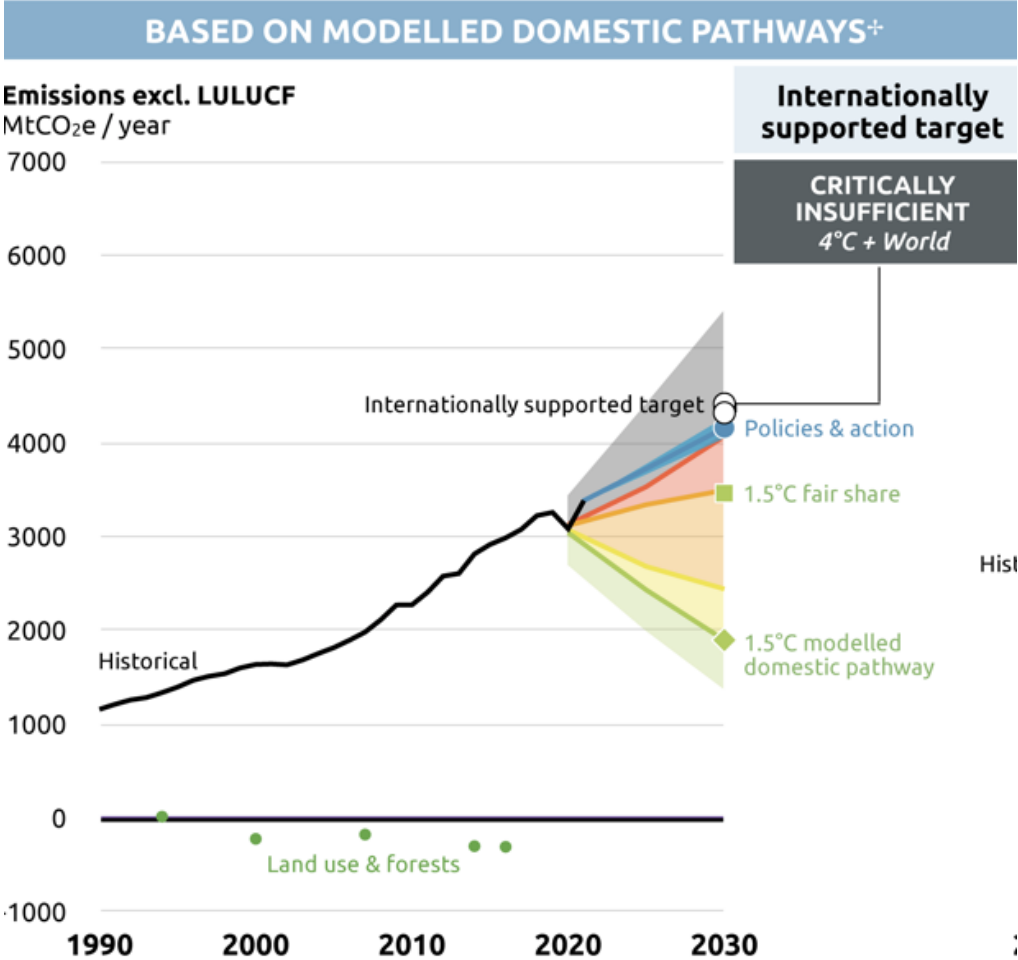
Source:
Notes:

By 2030 India will emit more CO2 than the EU – international support is needed to drive actual emission reductions

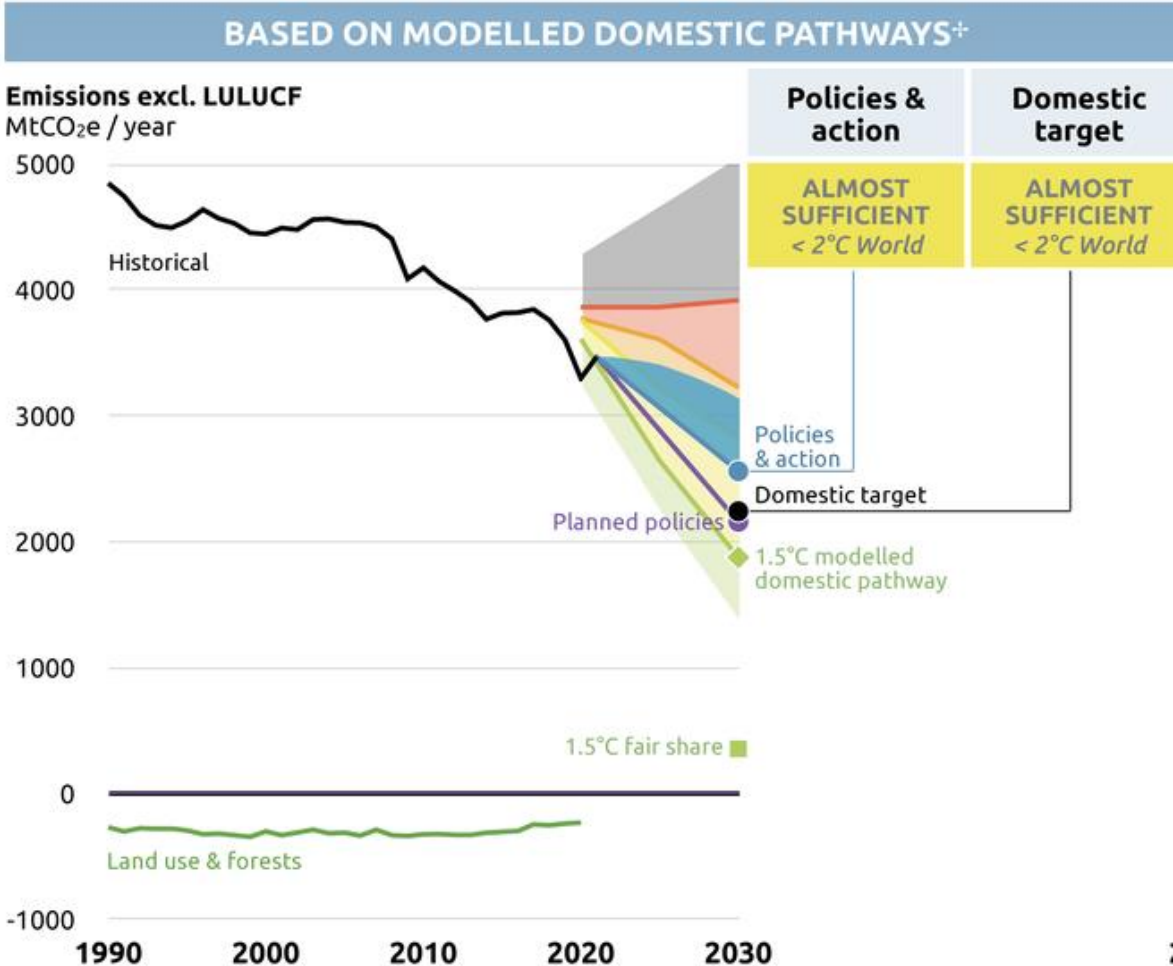
CO2 emission pathways based on alternative pledges & pathways (Excl. forestry)

Source: Climate Action Tracker

INDIA

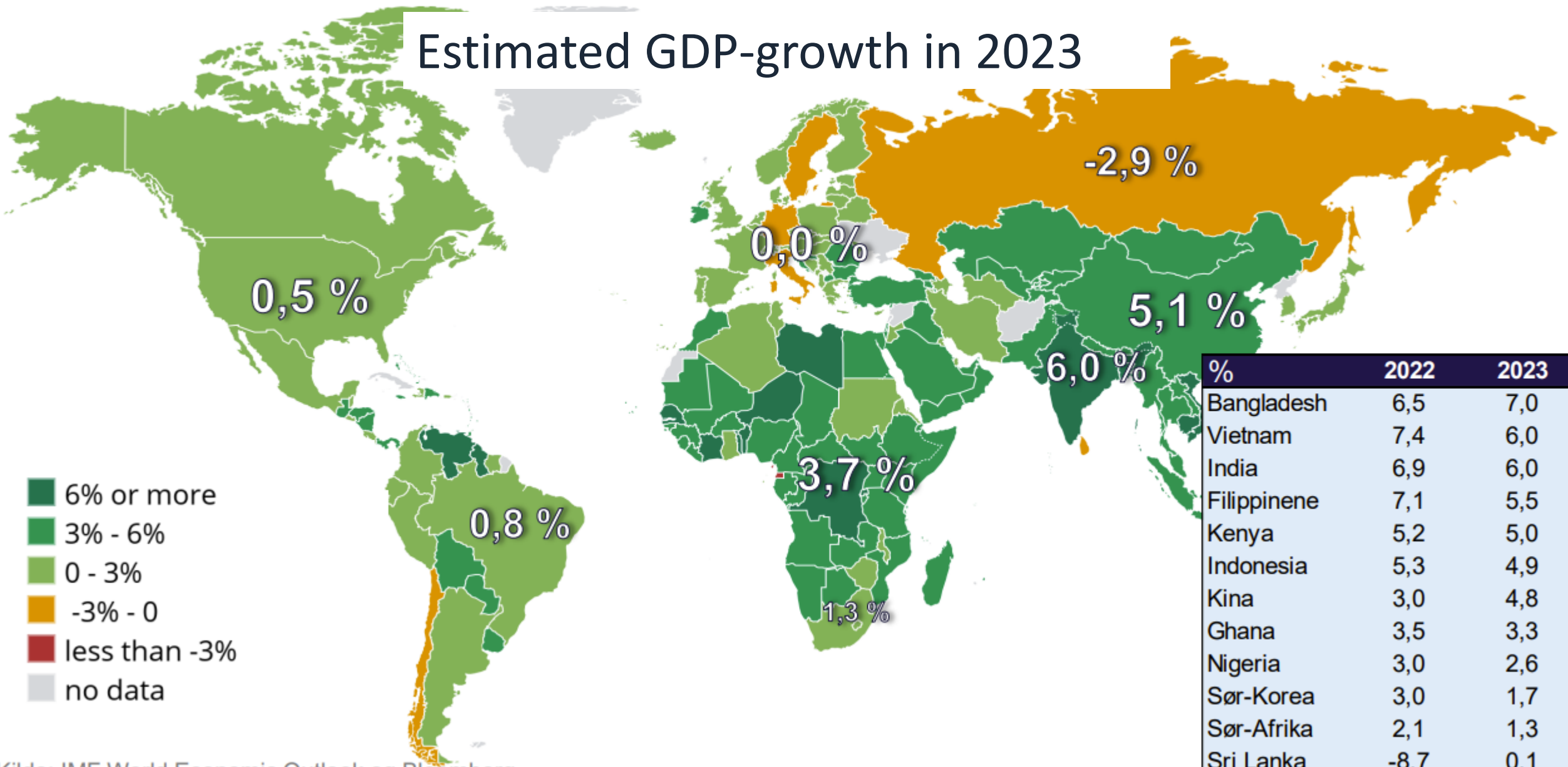


EUROPEAN UNION

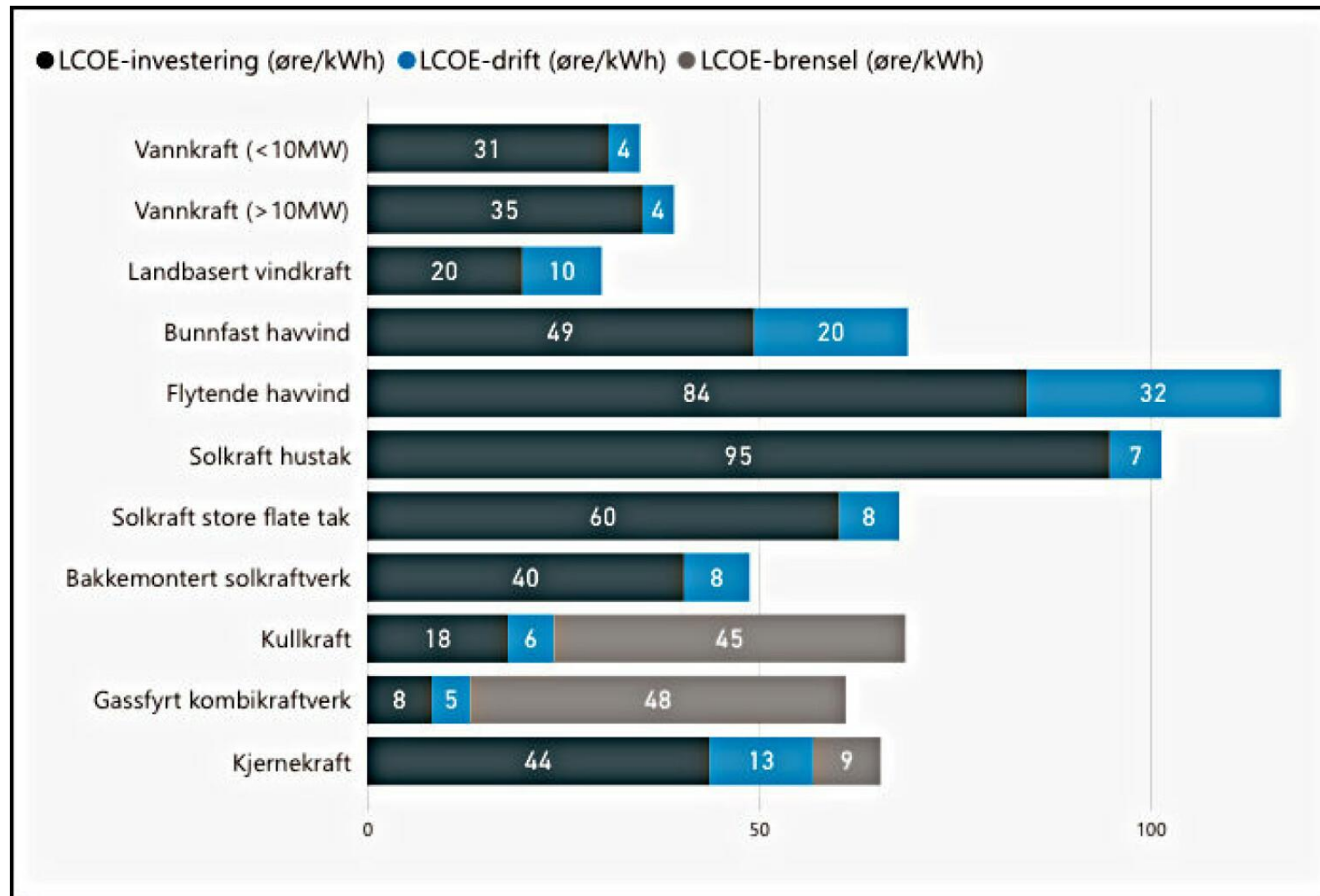


Global growth – ie. Increased energy needs – are in the EM&EDs

Estimated GDP-growth in 2023

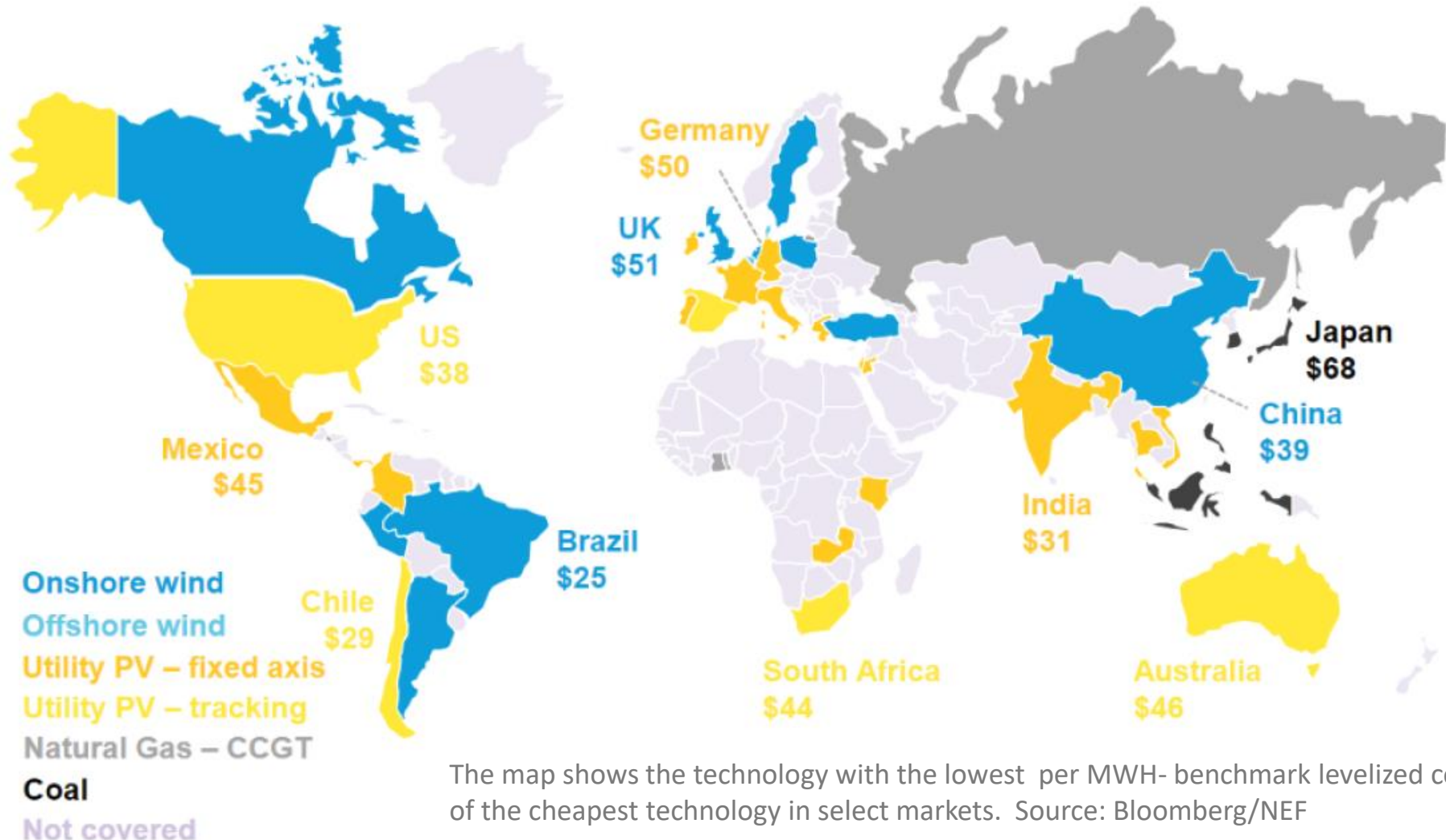


In Norway onshore wind is the most competitive alternative for greenfield renewable projects - but hydro is also interesting.



In emerging markets solar and onshore wind are the most attractive alternatives, but the LCOE varies greatly

Cheapest source of bulk generation, 1H 2022

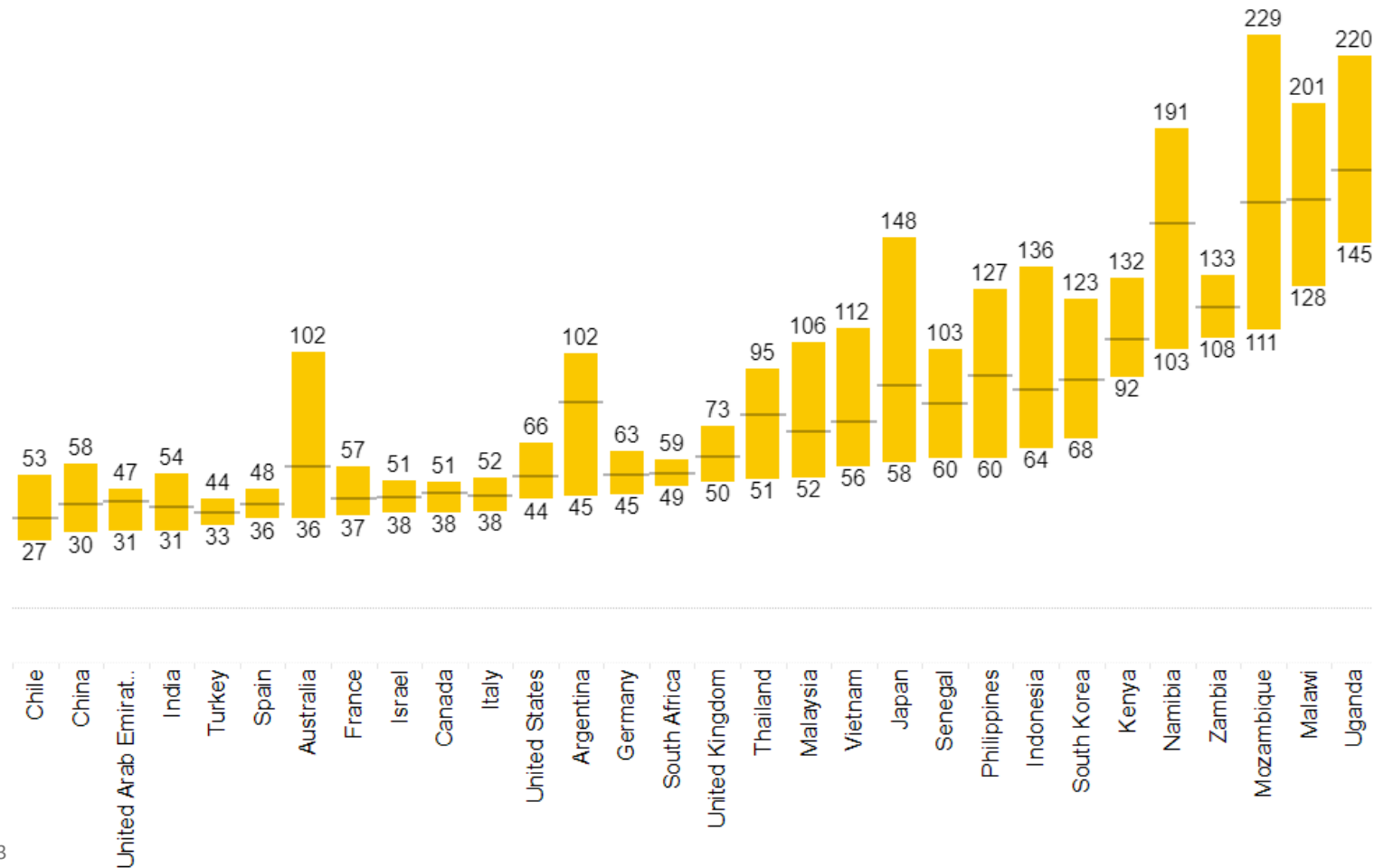


The map shows the technology with the lowest per MWh- benchmark levelized cost of the cheapest technology in select markets. Source: Bloomberg/NEF

Cost of capital makes the biggest difference on LCOE for wind and solar

Leverage 70% - market based cost of debt and equity

Current LCOE range (\$/MWh, nominal) - PV non-tracking, 2022 2H



Summary: where do we get most bang for the bucks

- maximizing CO2-avoidance per USD invested

By investing in renewables in countries that:

- have a high fossil share – particularly coal - in their energy mix, such as South Africa and India
- Where renewables either replace or avoid the construction of new of fossil power plants,
- that have a moderate cost of funding
- that offer a high yield for solar or wind assets
- With a capacity to connect renewable power to the grid or large C&I off-takers

YET

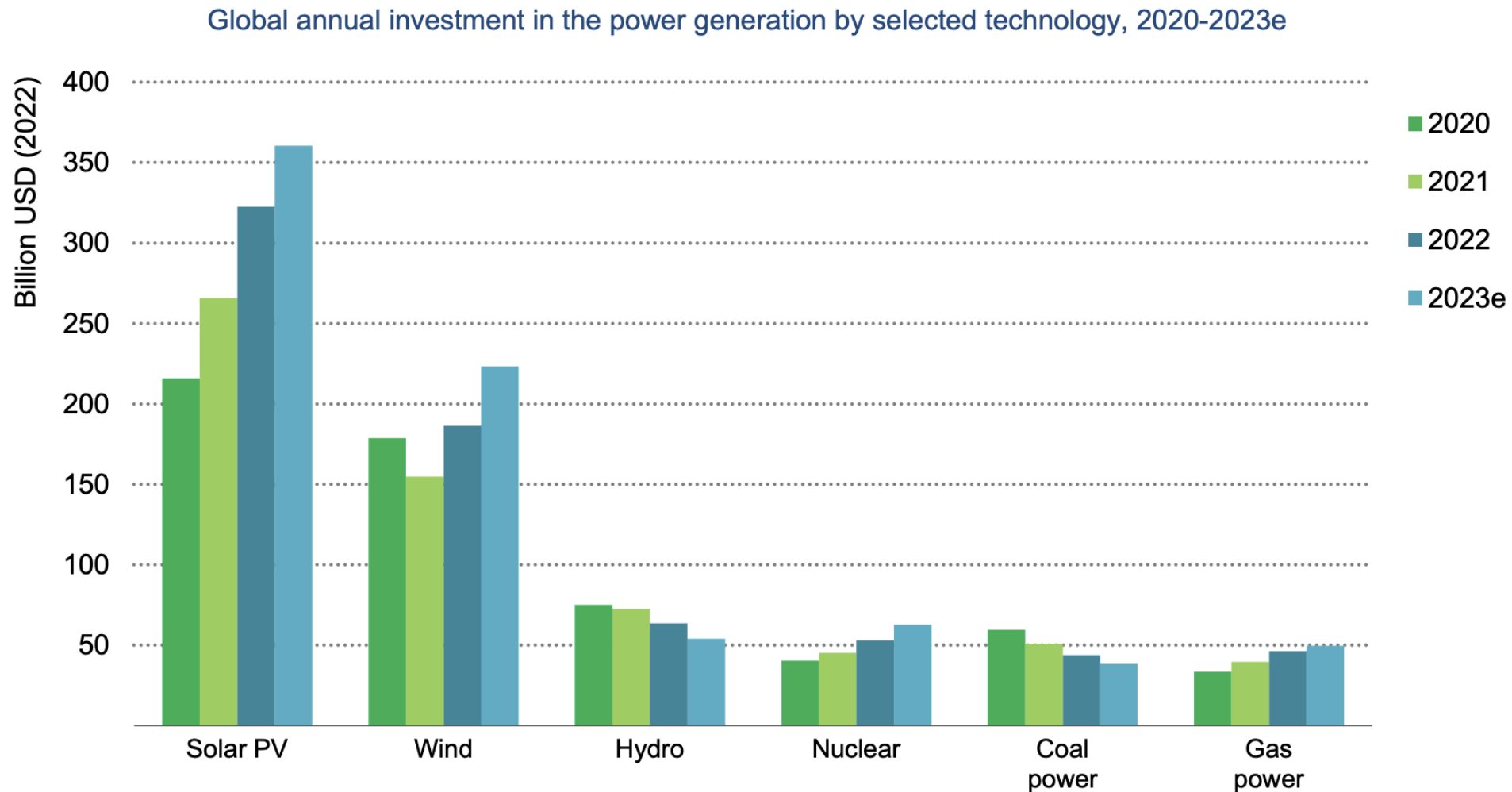
- By investing in projects where you as an investor is highly additional by:
 - mobilizing other investors that would not otherwise engage in projects that avoid CO2, or
 - by realizing projects that pave the way for others, the CO2 avoidance per USD invested might also be very high

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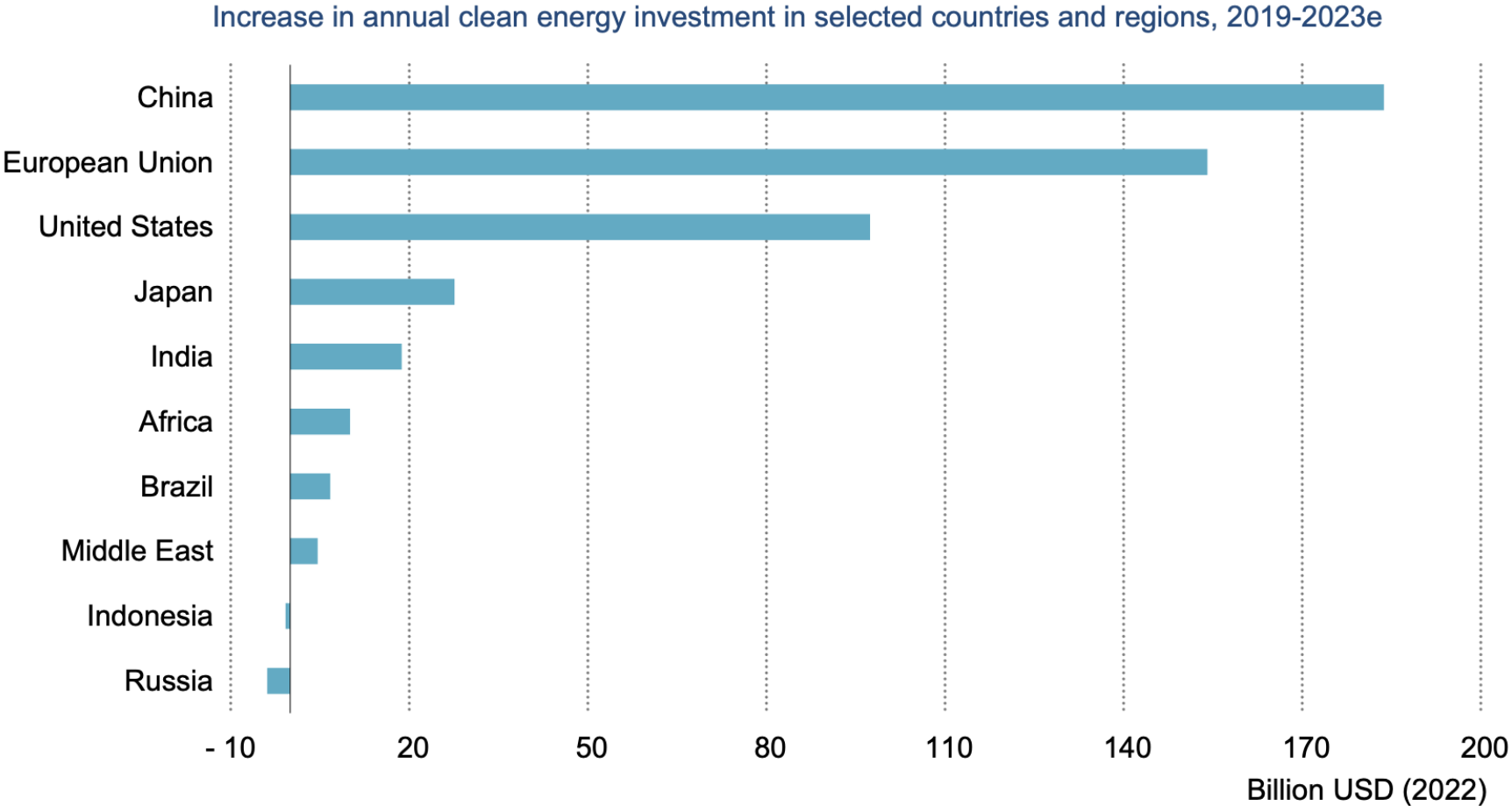
Global investments in renewables are growing fast

Variable renewables are by far the most dynamic sectors for investment in power generation...



Unfortunately, most of the growth takes place in China, EU and US

The increase in clean energy spending in recent years is impressive but heavily concentrated in a handful of countries



In 2021 only 0.6% of the global investments in renewables went to Africa

- Investments in renewables in SSA only 1/3 of fossil fuel investments

Figure 1: Global renewable energy asset investment by region

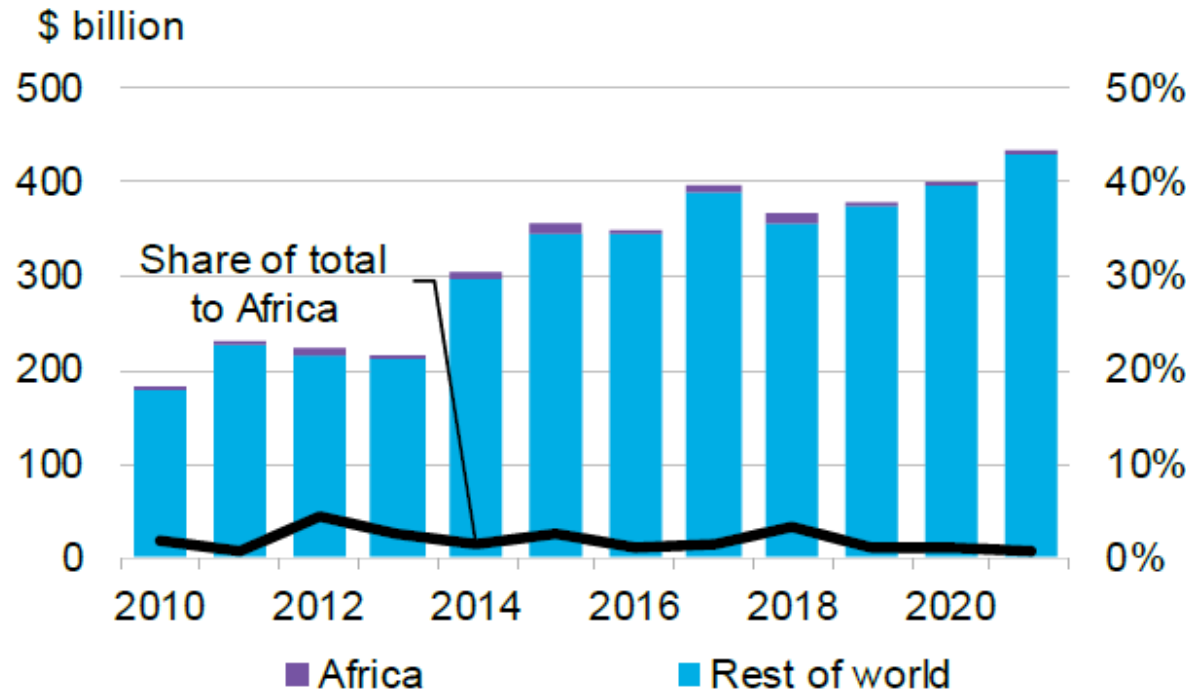
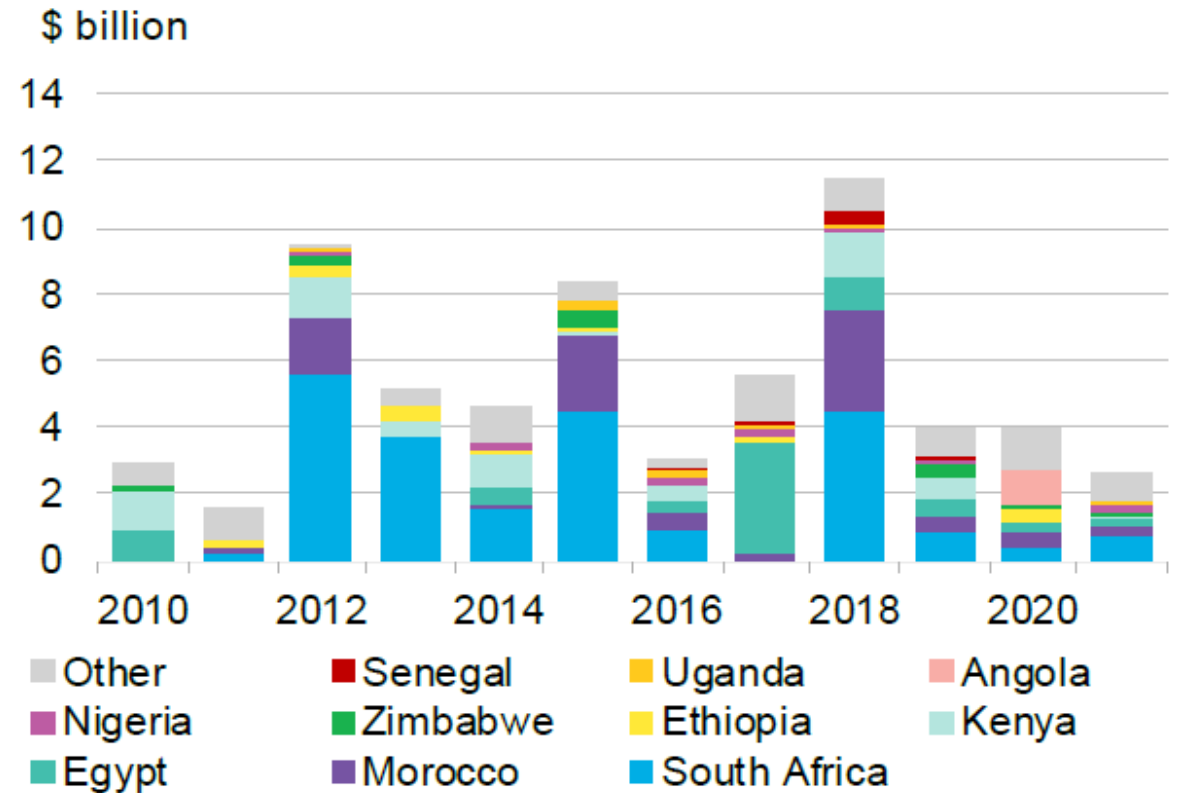


Figure 2: Africa renewable energy asset finance by country



Source: BloombergNEF.

Renewables in developing markets are increasingly attractive, but availability and cost of capital is constraining developing economies

- Building new wind and solar has become cheaper than running existing fossil fuel plants in a growing number of countries.
- Many emerging markets are very well positioned
- High financing costs inflate the cost of clean technologies in many markets
- But regulatory, policy and political constraints are also key obstacles
- Many LDC governments fail to provide satisfactory structures meeting requirements from international investors
- IRA and large-scale subsidy programmes for renewables in OECD-countries attract funding that could otherwise be invested in EMDBs
- Political risks & currency risks are also (perceived to be) high

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Recent new investments by the Climate Investment Fund



ReNew Power, 109 MNOK*

First transmission investment in an Indian project being developed by ReNew Power, together with KLP, Norway's largest pension company.

Through this investment we are contributing to the connection of **2.5 GW of planned renewable power** in the south being connected to the national grid.



H1 Capital, 220 MNOK

NOK 220 million invested in wind farms in South Africa

Three wind farm with a total capacity of **420MW**

Will deliver more than 1400 GWh per year

The project will avoid more than **1.3 million tonnes of CO2 emissions per year**

- equivalent to the yearly emissions from **700,000 petrol cars** in Norway



SAEL, 600 MNOK

Norfund is investing **NOK 600 million** in equity in SAEL, an Indian solar and agri waste-to-energy company

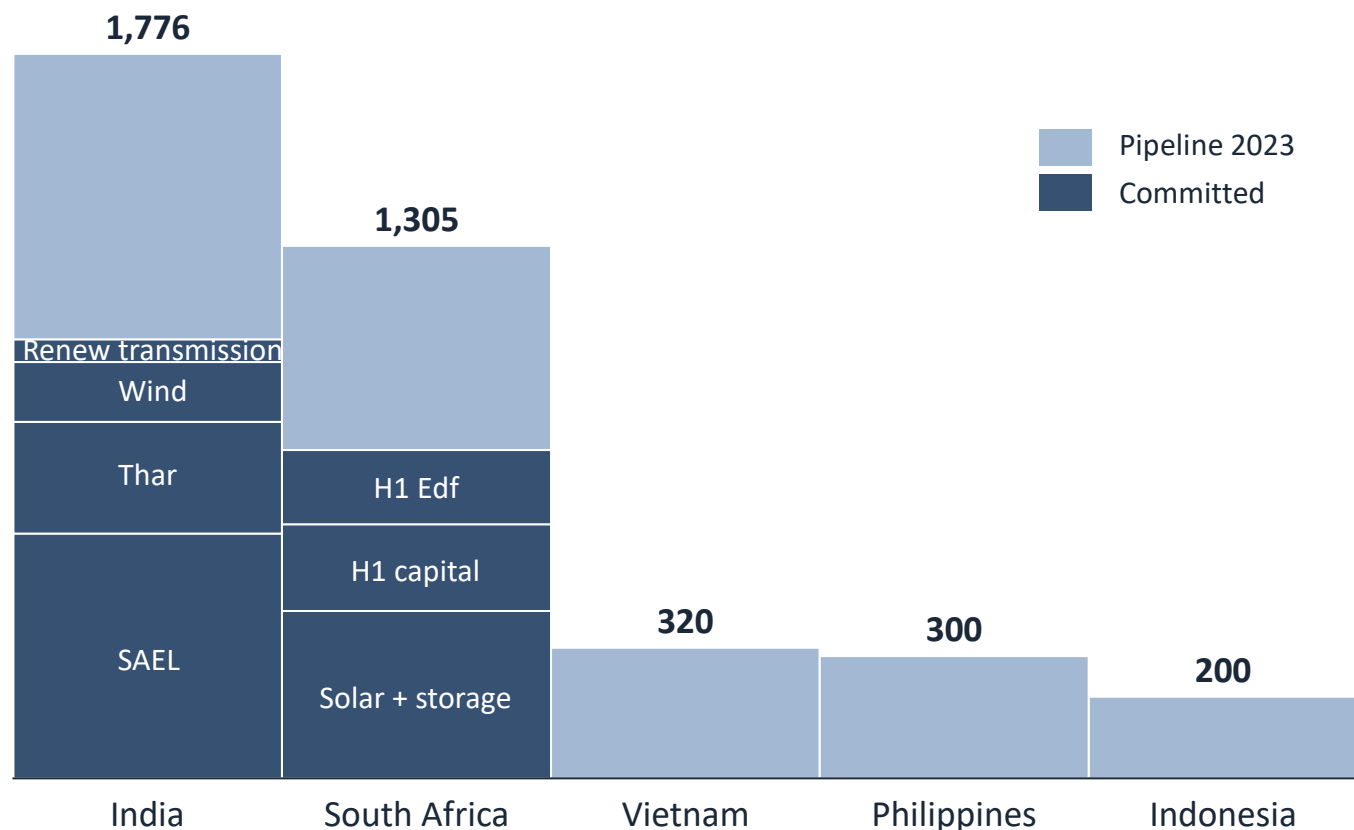
The investment will contribute to **avoiding more than 2.8 million tons of CO2 emissions** and improving air quality by reducing stubble burning.

SAEL has developed a business model where crop residues are used as fuel in waste-to-energy projects.

* Together with KLP, Norfund share is 51%

As of year-end 2022, we are on track in India and South Africa, but we need to strengthen pipeline in countries such as Vietnam, Indonesia & Bangladesh

Investments under the Climate Investment Fund today and pipeline for 2023, MNOK



The Climate Investment Fund (CIM) was established in 2022. The targeted funding of CIM totals NOK 10 billion, of which:

- NOK 5 billion has been transferred from Norfund's Development Mandate from gains realized through the exit of SN-Power, and
- NOK 5 billion shall be injected by the government over a period of 5 years.

As of year-end 2022:

- Total CIM commitments of **BNOK 2.14** of which:
 - **62%** of the fund is in India
 - **38%** in **South Africa**

Norfund has identified potential investments for more than **NOK 8 billion** in the eight prioritized countries under the climate mandate.

Where and how can Norwegian investors play an active role in developing countries?

- Most Norwegian investors focus on local opportunities and the OECD-markets
- The risk-weighted returns in other parts of the world may be more attractive
- Scatec, Aker Horizon, Norsk Solar and KLP have dared to venture out
- Equinor, NBIM and most other large institutions are still holding back

Type of projects

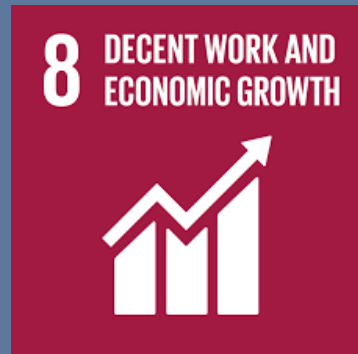
- Large scale IPPs or C&I in middle income countries
- Distributed energy through funds or with a strong partner taking lead

Why?

- We are a capital rich country
- Offers diversification beyond OECD
- Competitive risk-weighted returns
- Government bonds are not safe
- The world needs our funding!
- There is no planet B!

Our mission is challenging and cannot be achieved on our own

Working closely with the Embassies is a key prerequisite in some of our markets



Our ambition is to create jobs and improve lives



We will not succeed alone but in partnership with others