Financing Climate Futures

RETHINKING INFRASTRUCTURE

THE AGENDA FOR TRANSFORMATION TO LOW-EMISSION, CLIMATE-RESILIENT ECONOMIES

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BETTER POLICIES FOR BETTER LIVES

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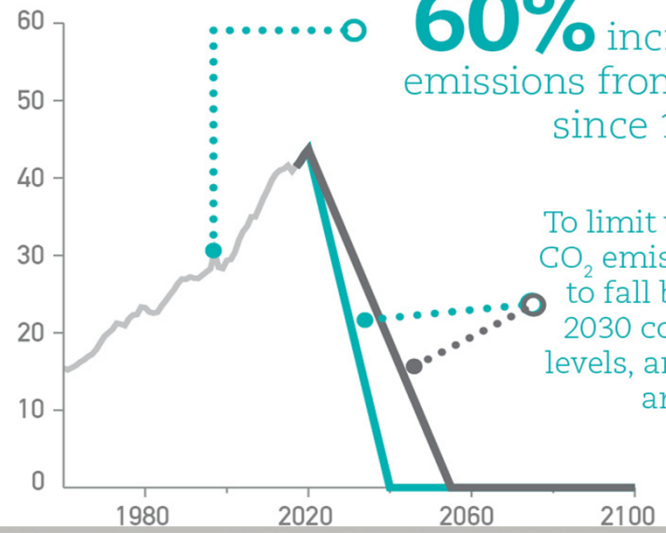
Climate Change

We have just over a decade to drastically reduce emissions

STYLISED NET GLOBAL CO_2 EMISSION PATHWAYS

Billion tonnes CO_2 per year ($GtCO_2/yr$)



60% increase in CO_2 emissions from fossil fuels since 1990

To limit warming to 1.5°C, CO_2 emissions would need to fall by about 45% by 2030 compared to 2010 levels, and reach net-zero around 2050

6.9T

USD/year *is needed to suppor*

climate and development objective

until 203

Resulting in GDP

+Δ 4.6%

in 2050

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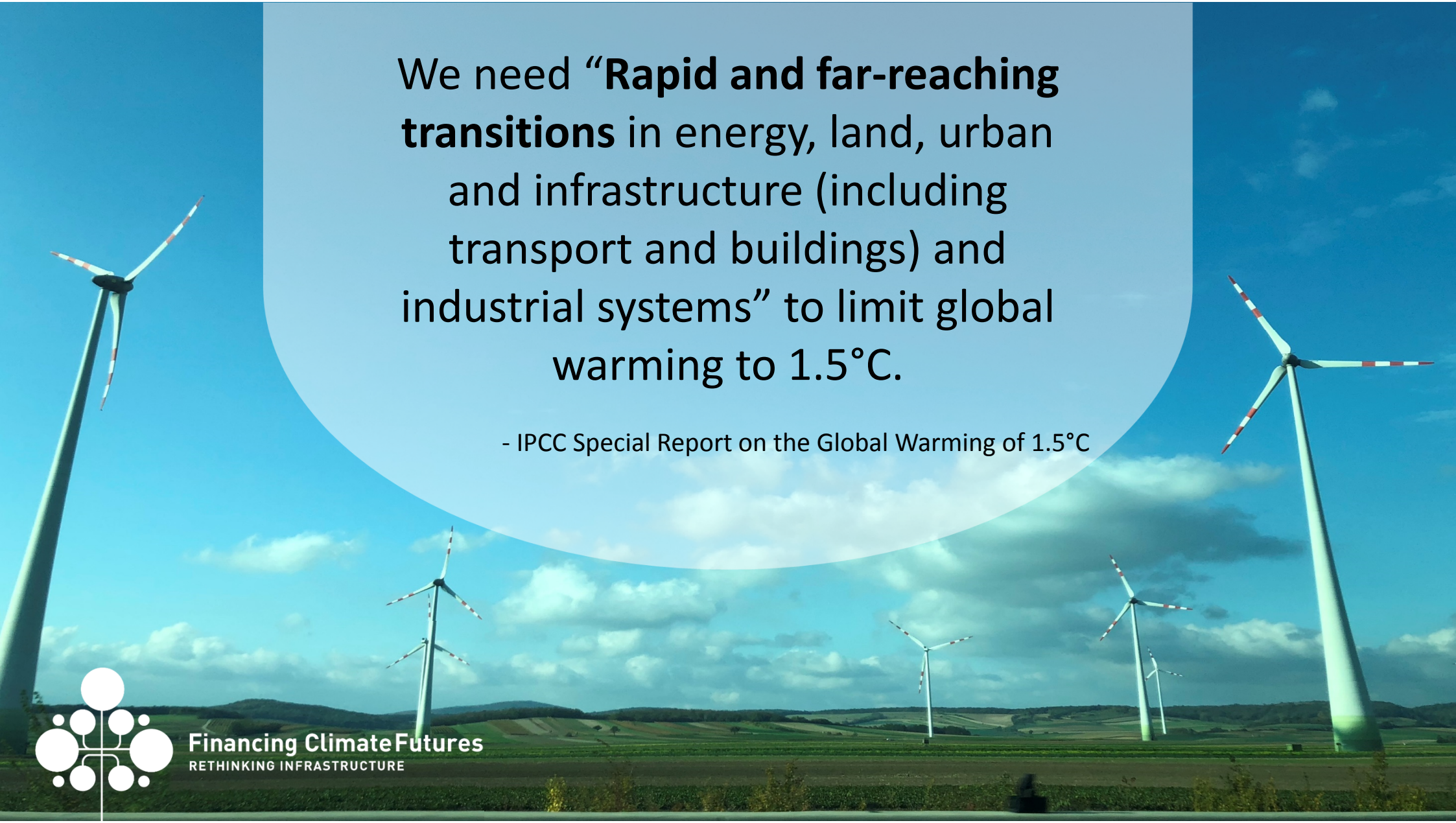
We need “**Rapid and far-reaching transitions** in energy, land, urban and infrastructure (including transport and buildings) and industrial systems” to limit global warming to 1.5°C.
- IPCC Special Report on the Global Warming of 1.5°C
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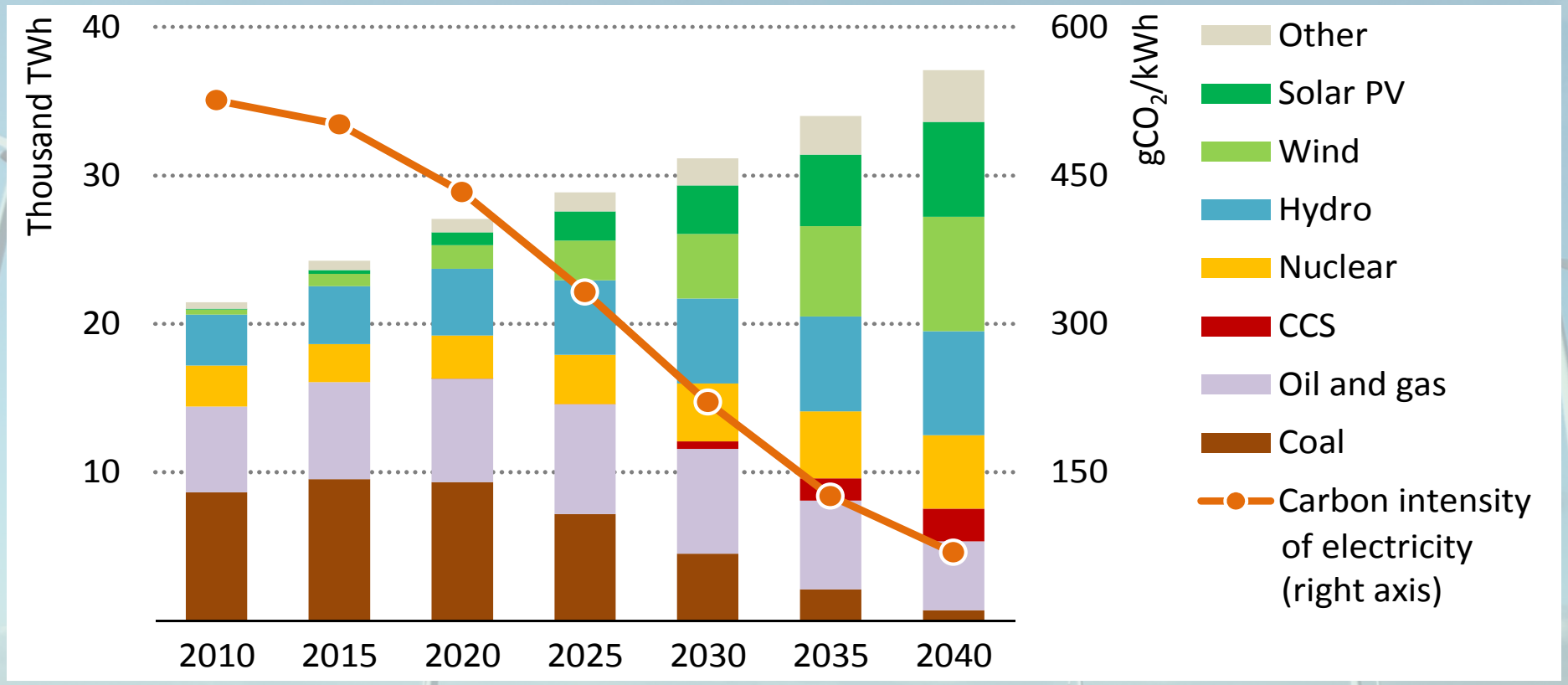
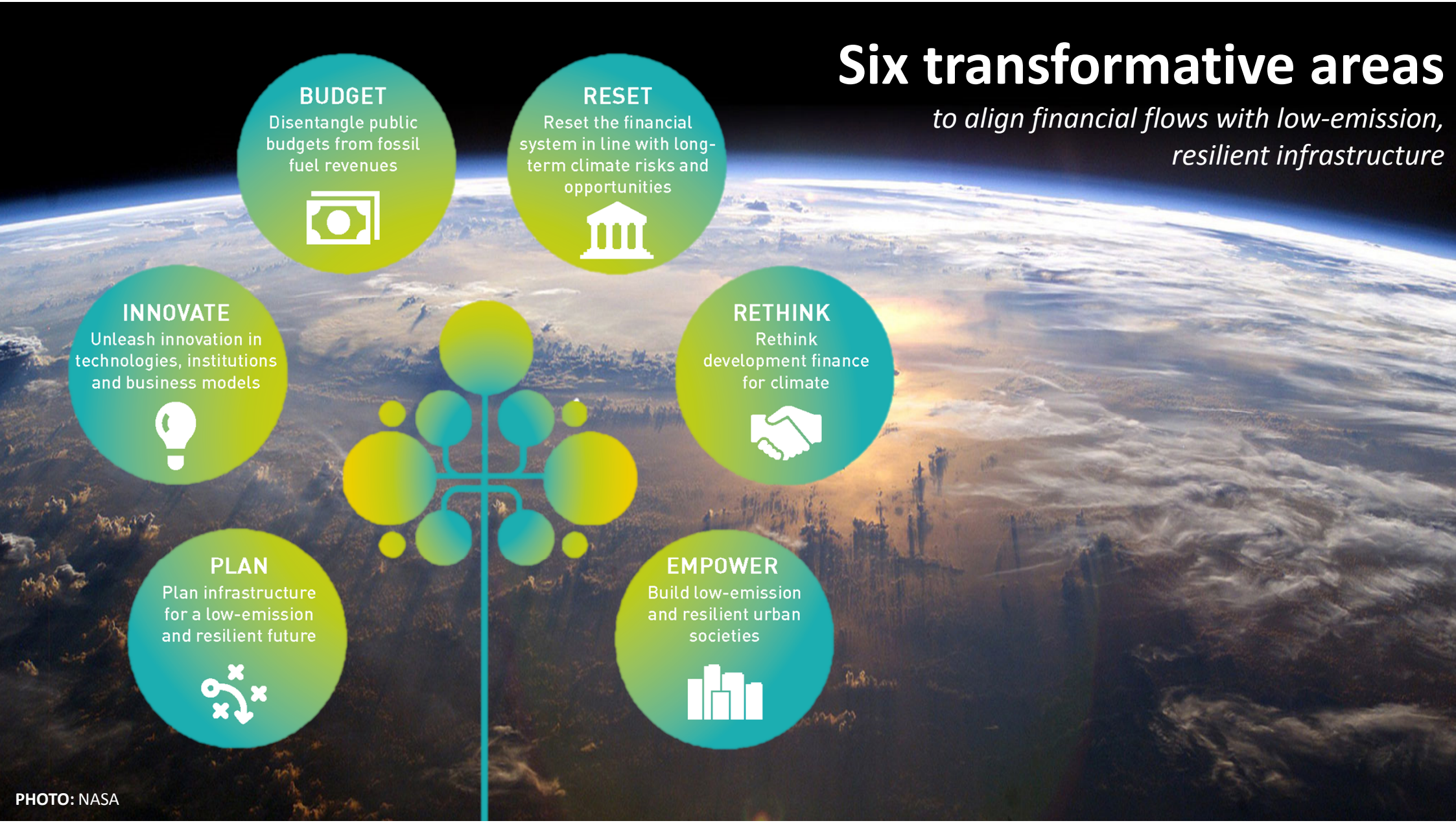
Increasing the share of renewable energy will be key to reducing emissions

Power generation and carbon intensity of electricity in the Sustainable Development Scenario



IEA(2018), World Energy Outlook 2018

PHOTO: BBC News, Lohit river bridge in India


Six transformative areas
to align financial flows with low-emission, resilient infrastructure
BUDGET
Disentangle public budgets from fossil fuel revenues
RESET
Reset the financial system in line with long-term climate risks and opportunities
INNOVATE
Unleash innovation in technologies, institutions and business models
RETHINK
Rethink development finance for climate
PLAN
Plan infrastructure for a low-emission and resilient future
EMPOWER
Build low-emission and resilient urban societies
PHOTO: NASA

Why is it transformative?

- Avoid emissions lock-in and implant resilience
- Prevent stranded assets

Priority action areas

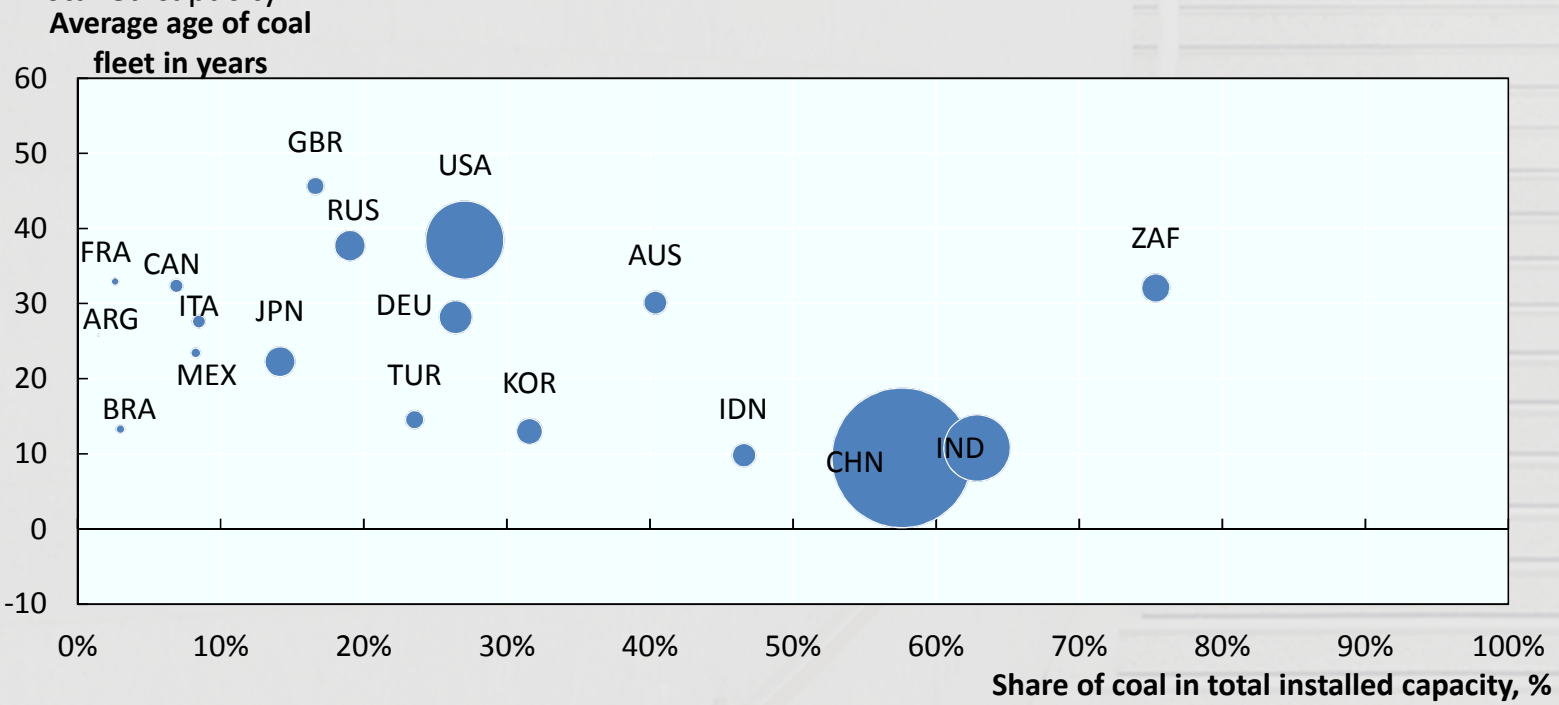
- Develop long-term low-emission strategies, through cross-ministry collaboration and stakeholder consultation with development at its core
- Strengthen climate capacity
- Develop pipelines of infrastructure projects compatible with climate goals
- Mainstream climate-resilience considerations across planning practices
- Prepare for different ‘futures’ through specialised foresight personnel or units within ministries

Some countries are particularly at **risk of stranding coal power plants**

PLAN

Plan infrastructure for a low-emission and resilient future

Exposure to stranded assets in G20 countries: average age of coal fleet and share of coal in total installed capacity



The size of the bubbles represents the size of the coal generation capacity stock

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Why is it transformative?

- Current technologies are not on track
- New business models, technologies and financing practices create opportunities for more sustainable development

Priority action areas

- Deploy targeted innovation policies to create a market for climate innovations
- Deliver and scale-up support for research and development of climate solutions
- Overcome financial barriers to demonstration, deployment and early-stage commercialization
- Promote international technology diffusion and adoption at scale

INNOVATE

Unleash innovation in technologies, institutions and business models

CLEAN-ENERGY TECHNOLOGIES

4/38 clean-energy technologies included in the IEA's Sustainable Development Scenario are on track to penetrate markets sufficiently.

Action Area:

Promote international technology diffusion and adoption at scale

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BUDGET

Disentangle public budgets from fossil fuel revenues

Why is it transformative?

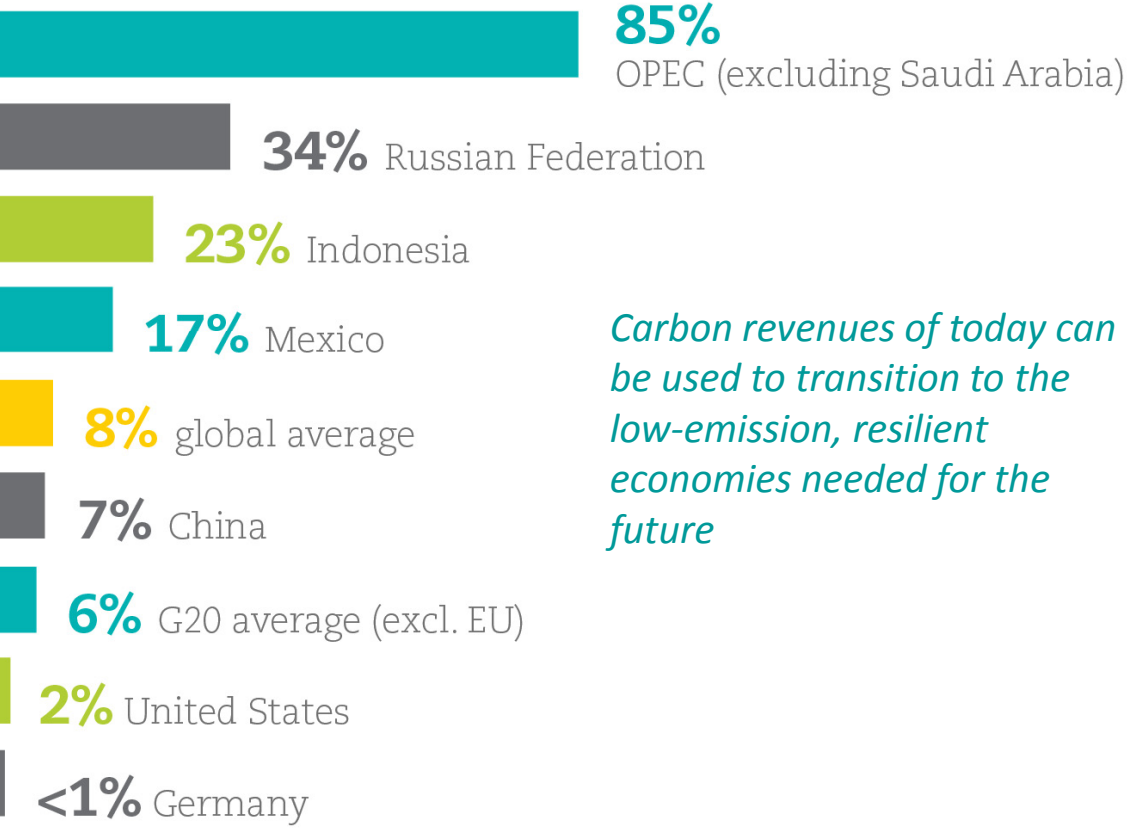
- Budgetary practices influence public and private investment behaviour
- Current dependence of many governments on fossil fuel revenues puts long-term fiscal sustainability at risk

Priority action areas

- Diversify government revenue streams
- Align fiscal incentives with climate objectives
- Leverage public procurement practices and indirect spending through SOEs or development finance institutions
- Ensure an inclusive transition along the way to facilitate social acceptance

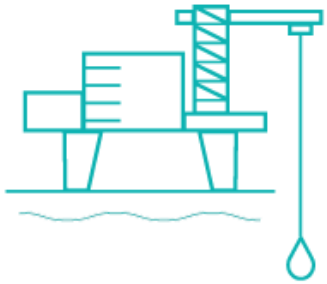
CARBON ENTANGLEMENT OF GOVERNMENT BUDGETS

Total % of government revenues



Carbon revenues of today can be used to transition to the low-emission, resilient economies needed for the future

Action area:
Diversify government revenue streams



FOSSIL FUEL SUPPORT

$373-617bn

annually over the period 2010-15 of 76 economies that collectively emit 94% of global CO_2 emissions

BUDGET

Disentangle public budgets from fossil fuel revenues

Action area:

Align fiscal policies with climate objectives

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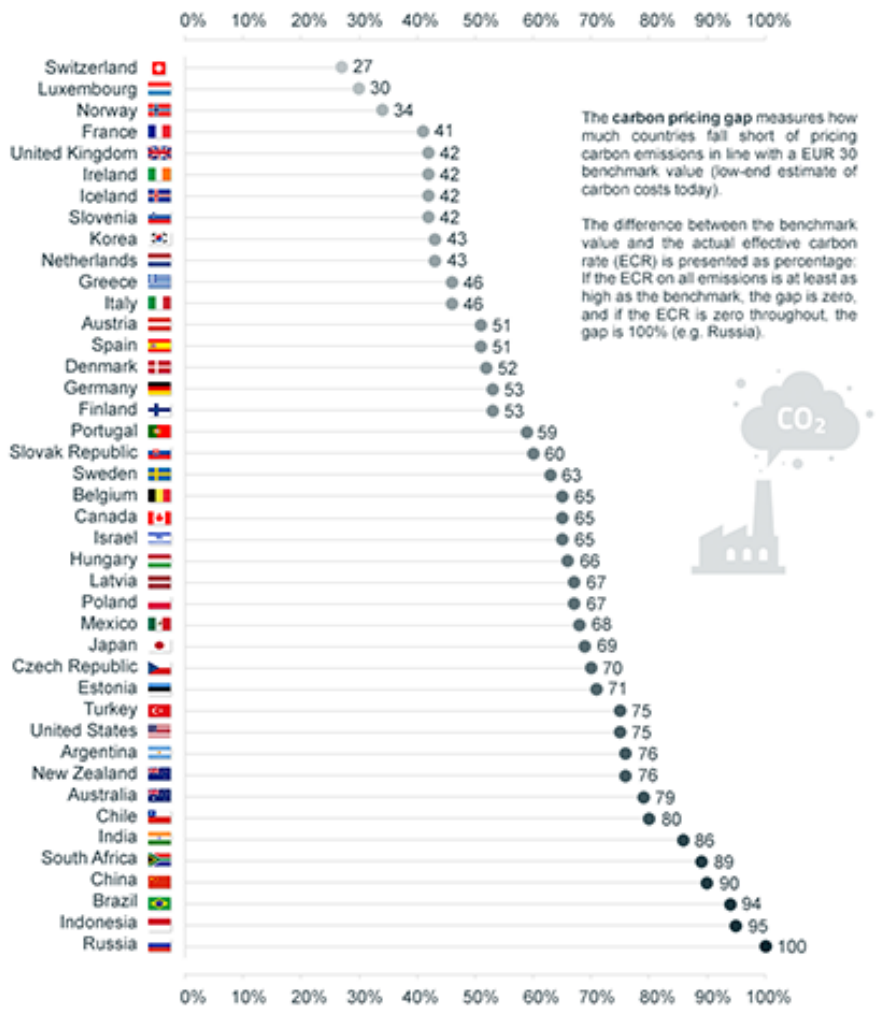
Align fiscal policies with climate objectives

More than 60% of CO_2 emissions from energy use in G20 countries **are not priced at all**

In the Slovak Republic, **60% of emissions fall short** of the EUR 30 benchmark value

Carbon emissions remain underpriced

Carbon pricing gap for OECD and G20 countries, 2015



Source: Effective Carbon Rates 2018

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EMPOWER

Build low-emission and resilient urban societies

Why is it transformative?

- Today's urban infrastructure choices will:
  - determine the extent and impact of climate change
  - contribute to the vulnerability or resilience of urban societies
  - create the backbone for a strong, inclusive urban development

Priority action areas

- Integrate land-use and transport policies
- Align national and local fiscal regulations with investment needs in cities
- Build climate-related and project finance capacity in cities
- Seize the development benefits of low-emission, resilient planning

Thank you

To learn more:

http://oe.cd/climate-futures

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