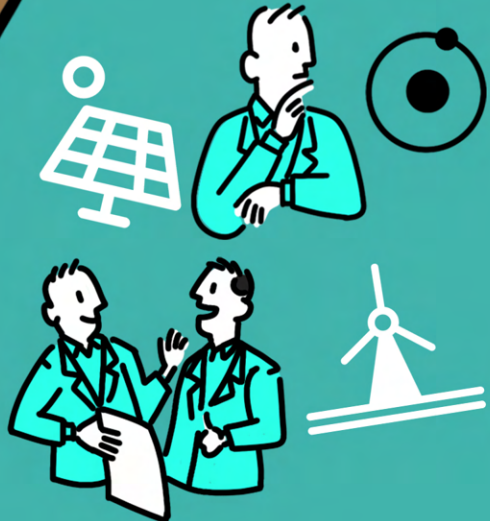


#RETHINKING RENEWABLES:

Interrogating Misconceptions on
Renewable Energy Technologies



MISCONCEPTION 1

Renewable energy is more expensive than fossil fuels.



REALITY

For a significant majority of countries, wind and solar are the cheapest options for new electricity production.

Cost of renewables continue to fall in 2021:

Solar Photovoltaic

-13%



Onshore Wind

-15%



Offshore Wind

-13%



Almost two-thirds or

163 GW

of newly installed renewable power in 2021 had lower costs than the world's cheapest coal-fired option.



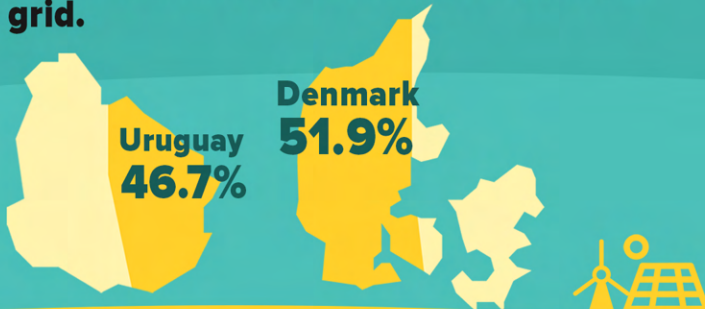
MISCONCEPTION 2

Wind and solar energies are intermittent and therefore unreliable.

REALITY

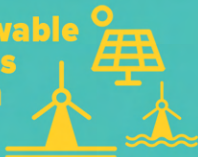
Renewable energy can be deployed across large distances and can be stored. Alongside making consumption more efficient and responsive to moments of scarcity, these can support a balanced and reliable grid.

Top countries with highest wind and solar power share:



How to address renewable energy variability:

Clever mix of renewable energy technologies reduces production variability



Channeling energy to where it is needed.



Diversified locations of RE facilities can smooth out supply.



Deploying innovative energy storage technologies to match demand.

MISCONCEPTION 3

Hydrogen is the future.



REALITY

Investments in fossil fuels in the name of hydrogen simply postpones the energy transition and wastes precious funds.

Main Types of Hydrogen:



“Grey”

How is it produced?

Produced from fossil fuels

What's the drawback?

All CO₂ emissions released to the environment



“Blue”

Produced from fossil fuels

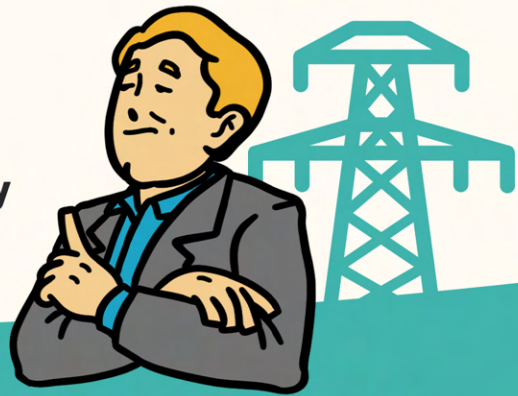
Depends on unproven carbon capture and storage



“Green”

Produced from renewable sources

Takes more energy to produce and transport than it delivers to the customer



MISCONCEPTION 4

Current technology is not ready to deliver 100% renewable energy deployment.

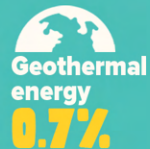
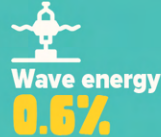
REALITY

The technology exists to help the world transition to a fully sustainable and renewable energy system by 2050.



It is possible to transition to 100% renewables in 139 COUNTRIES

One projected feasible renewable energy mix by 2050



RECOMMENDATIONS FOR MDBs:



1. **Work with country governments** to create the policy and finance environment **for renewable energy investments.**



2. **Prioritise core sectors of the economy to shift to renewable electricity, renewable heating and cooling, and low carbon transportation modes.**

3. **Support electrification investments that can overcome challenges in renewable energy sources such as grid enhancements, storage and enabling smart consumption.**



4. **Shift finance away from fossil fuels to renewable energy projects which put people and planet at the heart of development.**

5. **Approach hydrogen investments with cautious skepticism.**

