

Promises and Discontents of Energy Transition in Taiwan

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March 23rd @ Taiwan-Nordic Forum 2023

Taiwan Climate Action Network



Green Citizens' Action Alliance



Taiwan Environment & Planning Association



Citizen of the Earth, Taiwan

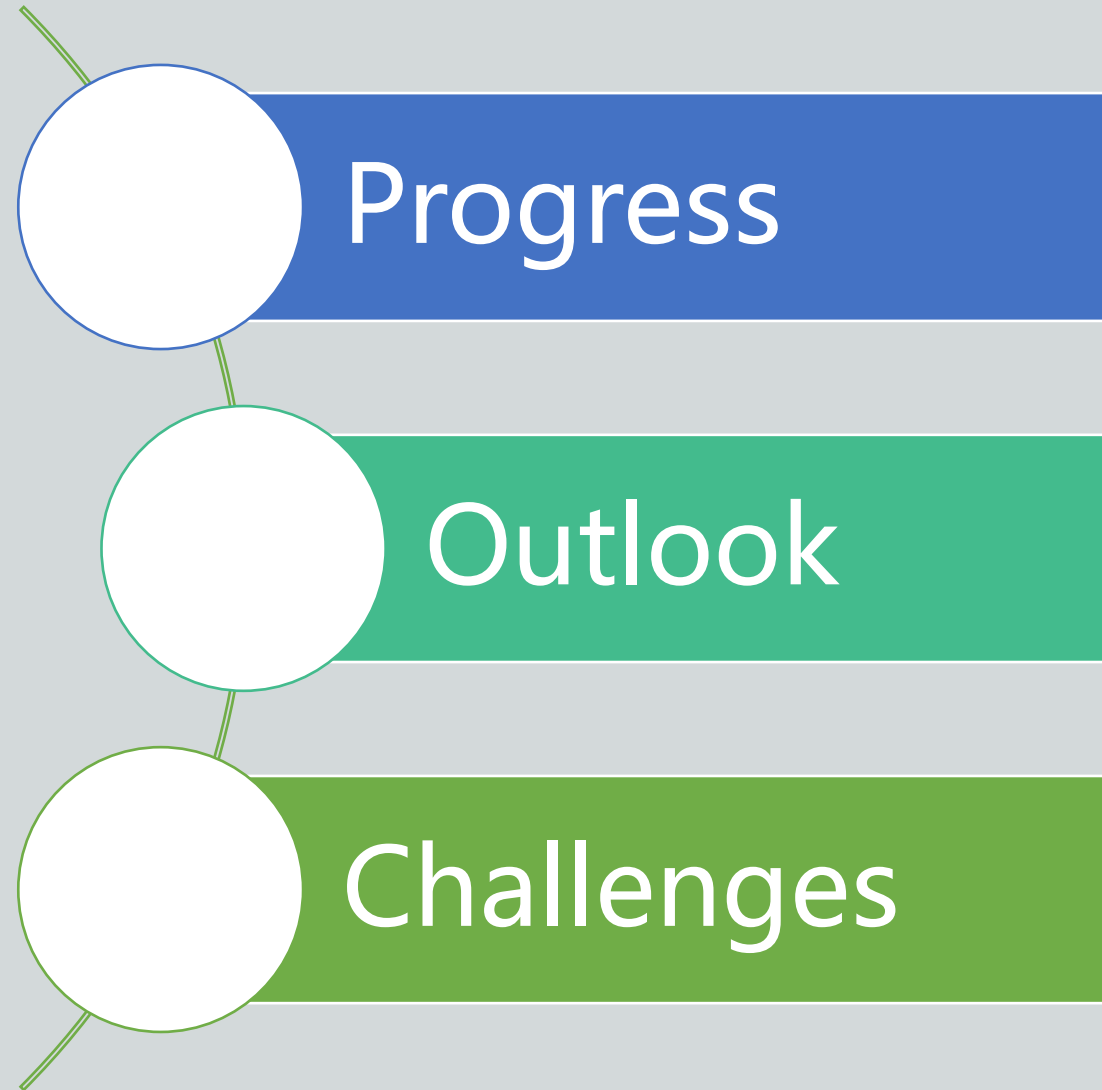
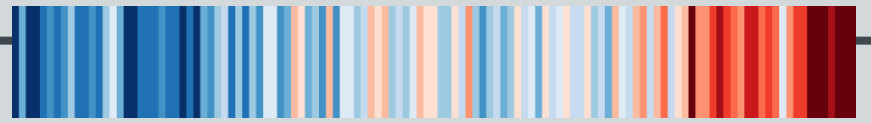


Environmental Rights Foundation



Homemakers United Foundation

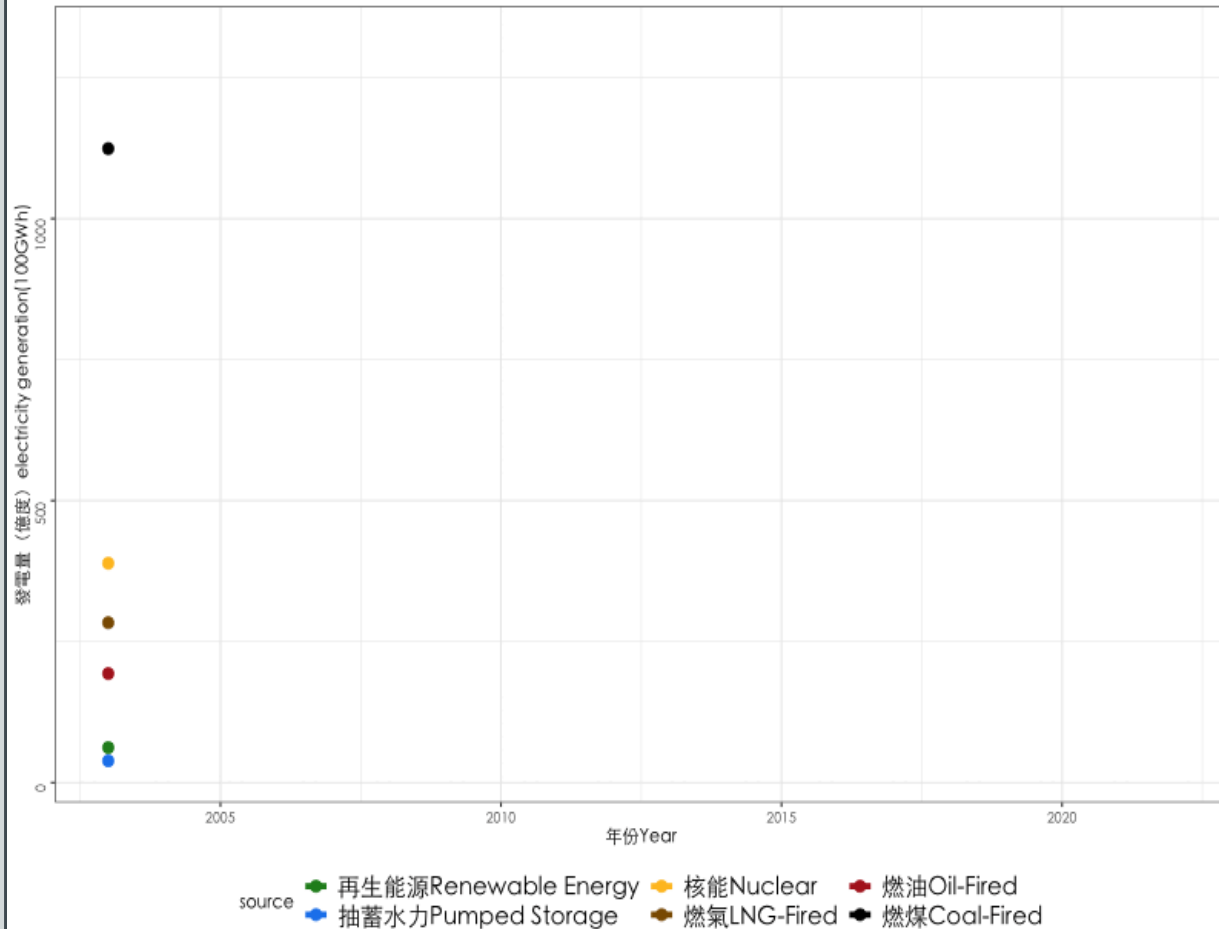




Progress of Energy Transition in Taiwan (1/2)

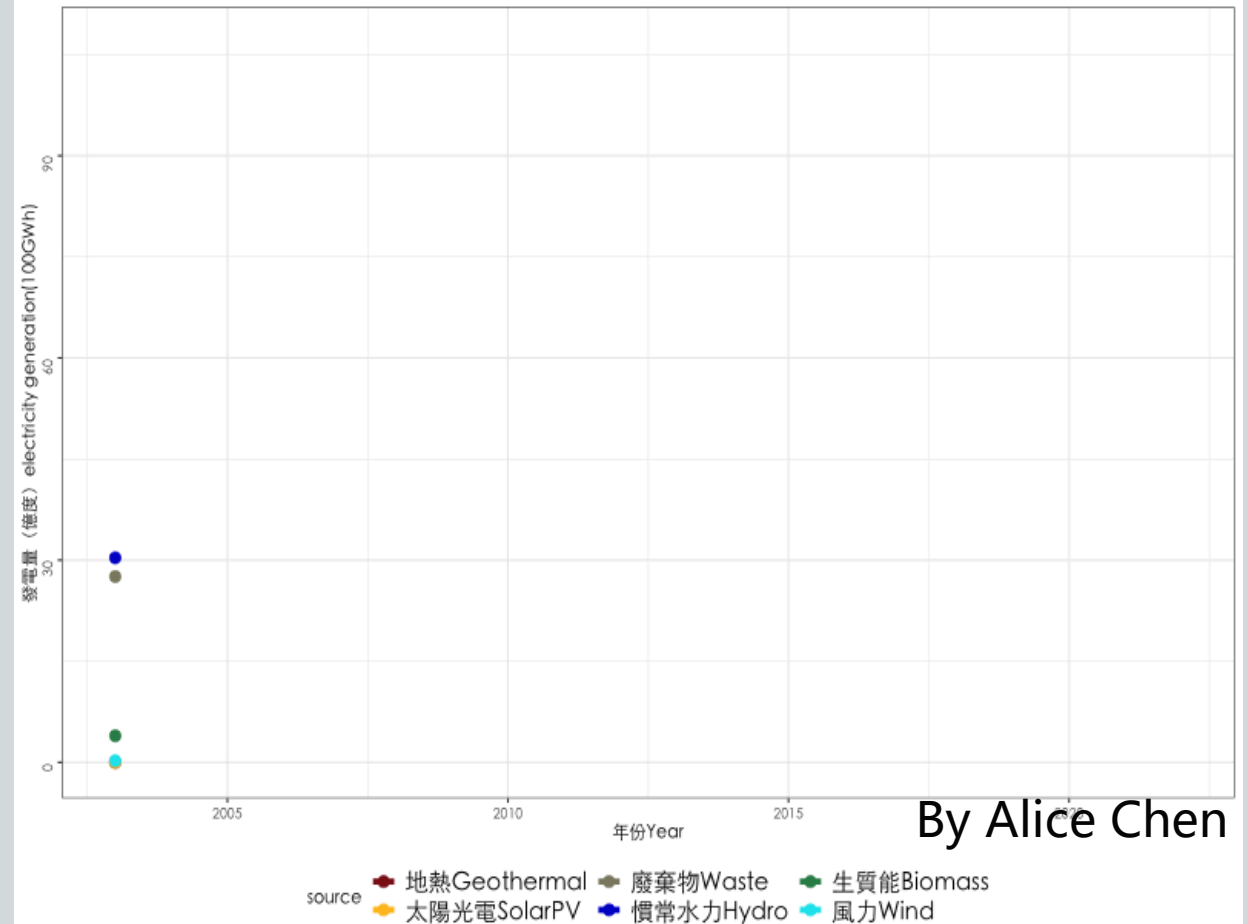
Electricity Generation

全國各式能源發電量變化



Renewable Energy

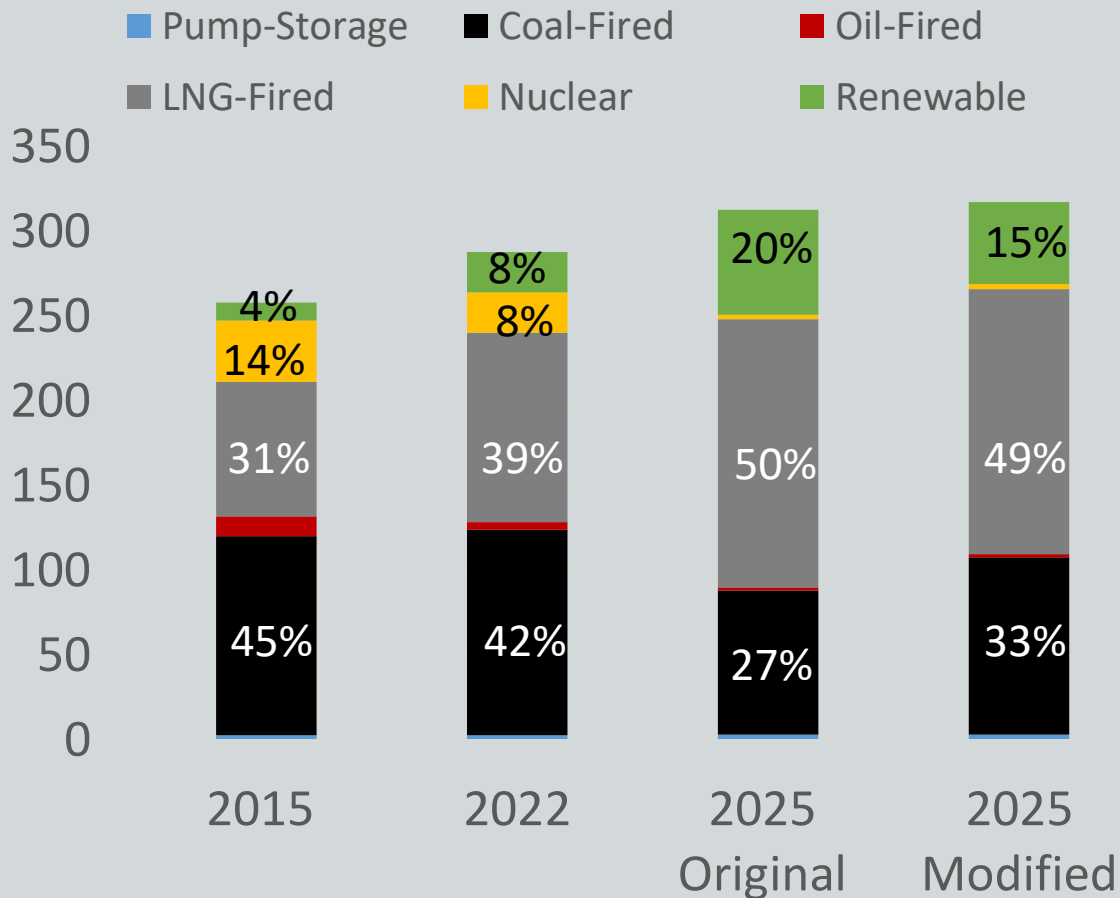
全國各式再生能源發電量變化



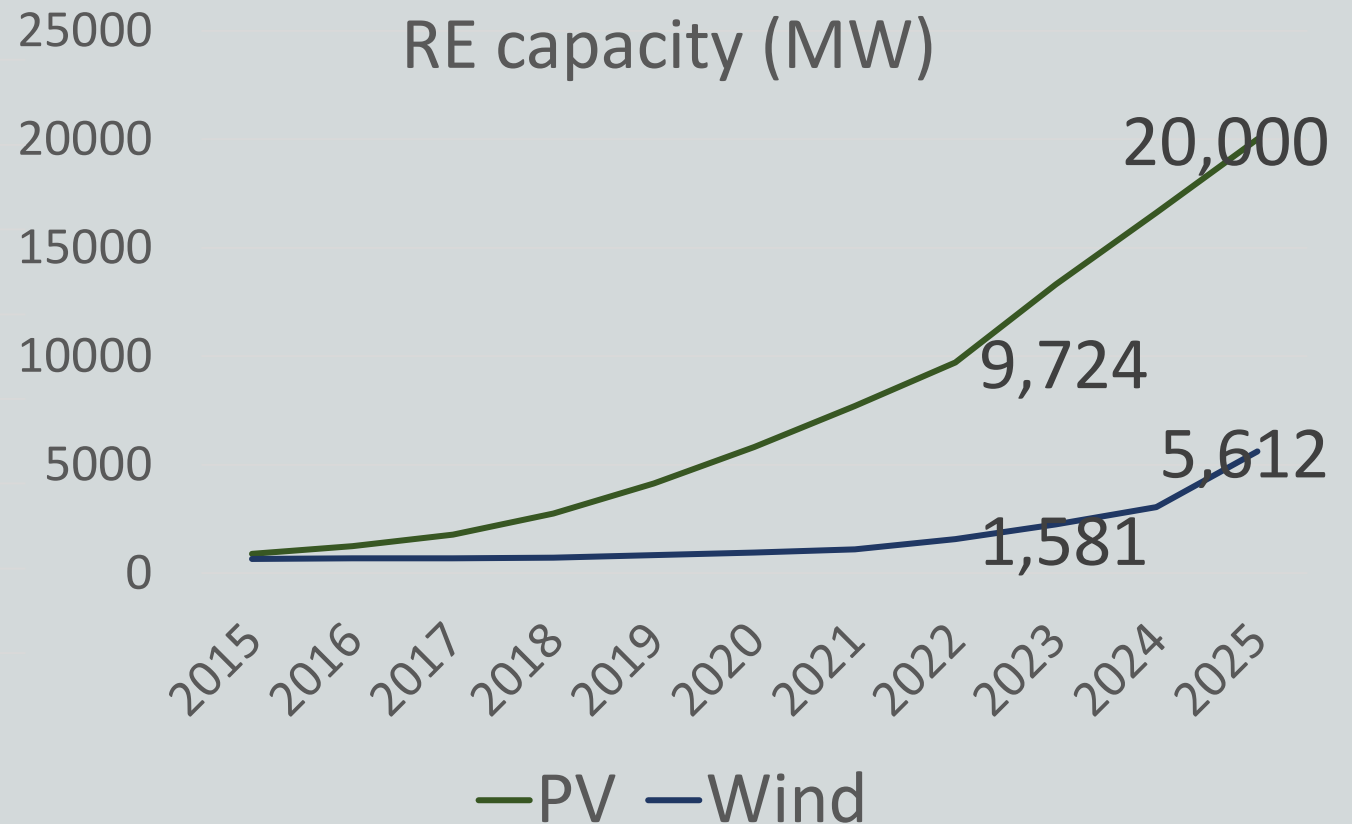
By Alice Chen

Progress of Energy Transition in Taiwan (2/2)

Electricity Generation (TWh)



Renewable Energy



Promises and Discontents of RE in TW

ESG investment

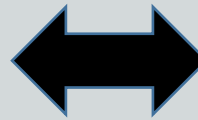
Lower Public Trust

Job Opportunity

New NIMBY

Offshore Wind
hub

Not Citizen-
Oriented





From “Energy
Transition” to
“Net-Zero Transition”

Net-Zero Transition in TW

Taiwan's 2050 Net-zero transition

4 strategies + 2 foundations

Energy transition Industrial transition Lifestyle transition Social transition

Strategies for transition

foundations in governance

Technology R&D

net-zero technology
negative-emission technology

Climate legislation

regulation and policy
carbon pricing and green finance



2050 Net-Zero Pathway (Key Milestones)

Buildings

Improving in exterior design, energy efficiency and appliance energy efficiency standards.

Transportation

Changing in travel behavior, reducing demand for transportation, and electro-mobility.

Industry

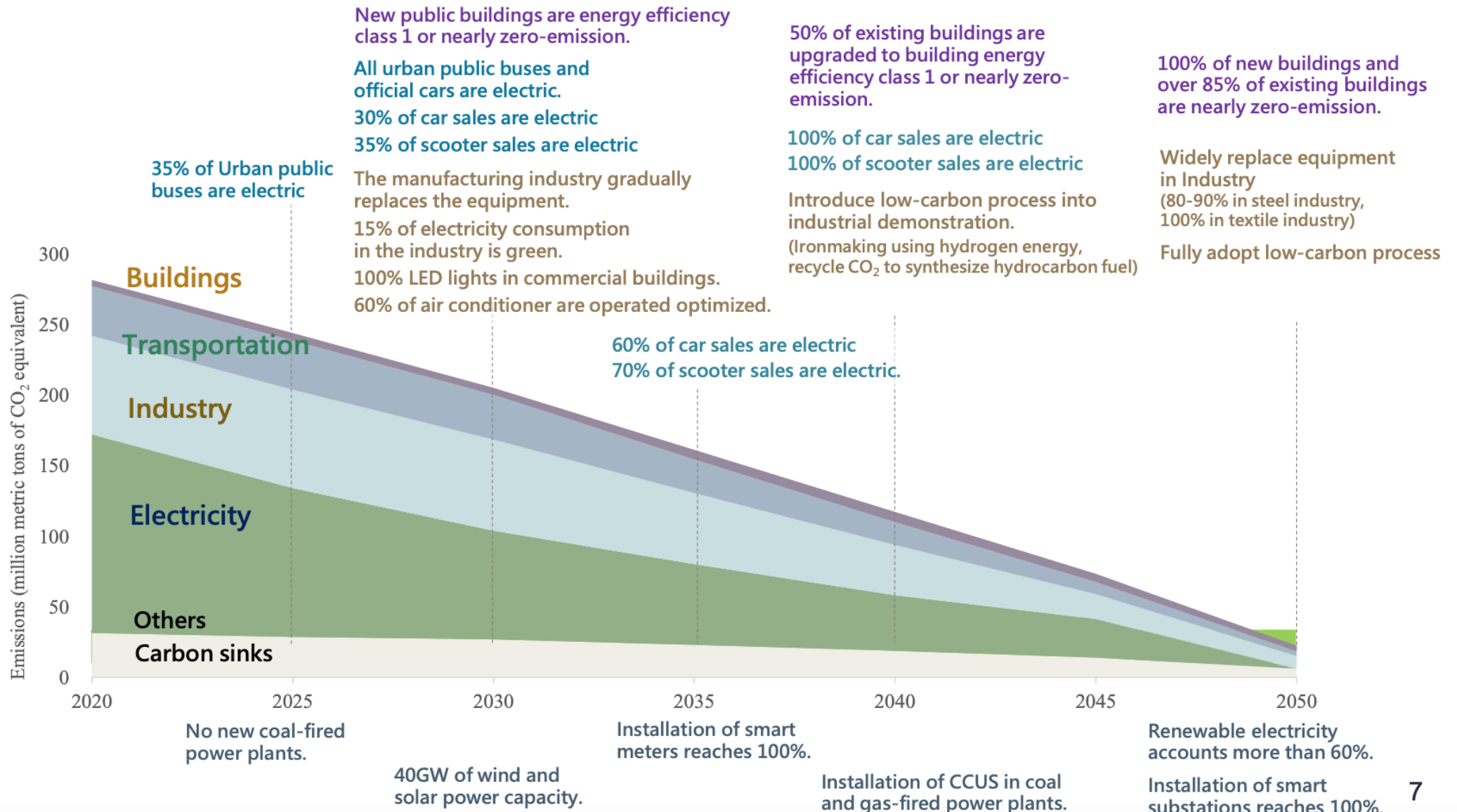
Improving in energy efficiency, fuel switching, circular economy, and innovative technologies.

Electricity

Scaling up renewable energy, developing new energy technologies, energy storage, and power grid upgrade.

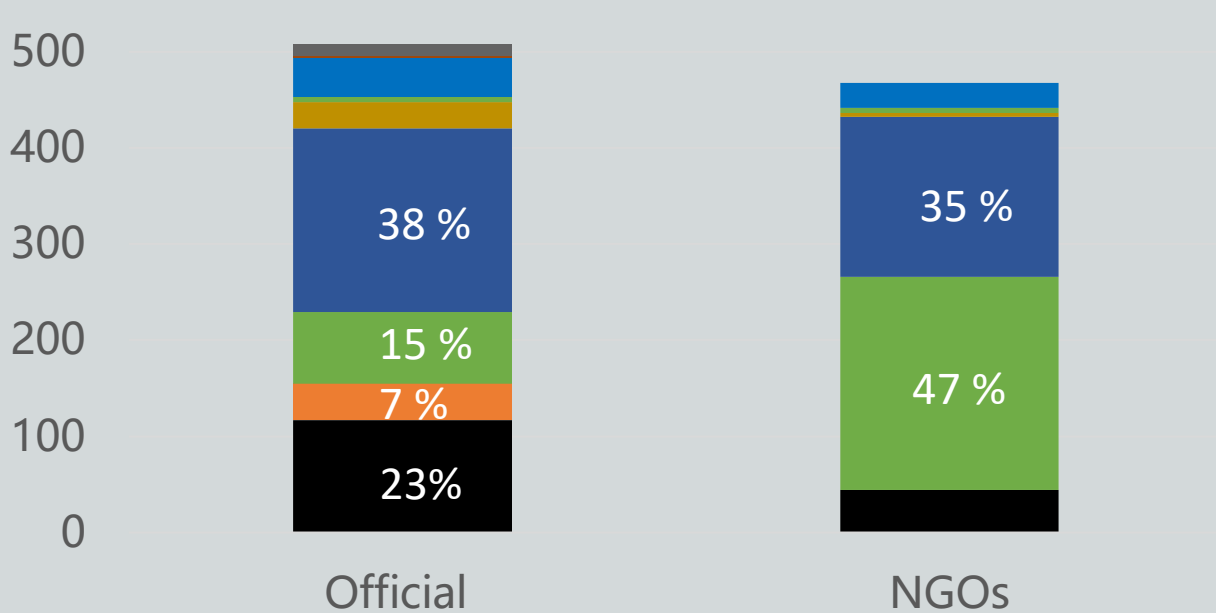
Negative emissions technologies

Demonstration by 2030. At scale by 2050.



Official Net-Zero Roadmap= Delayed Transition

Electricity Supply Structure by 2050 (TWh)

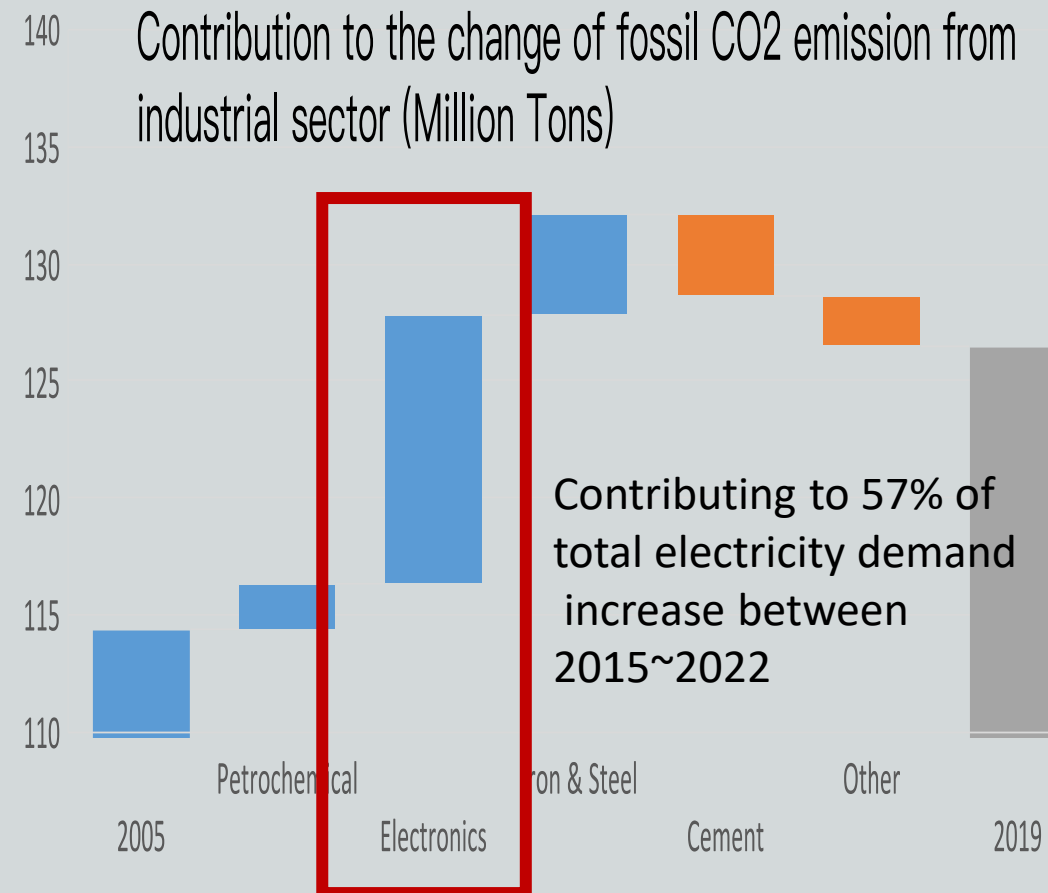
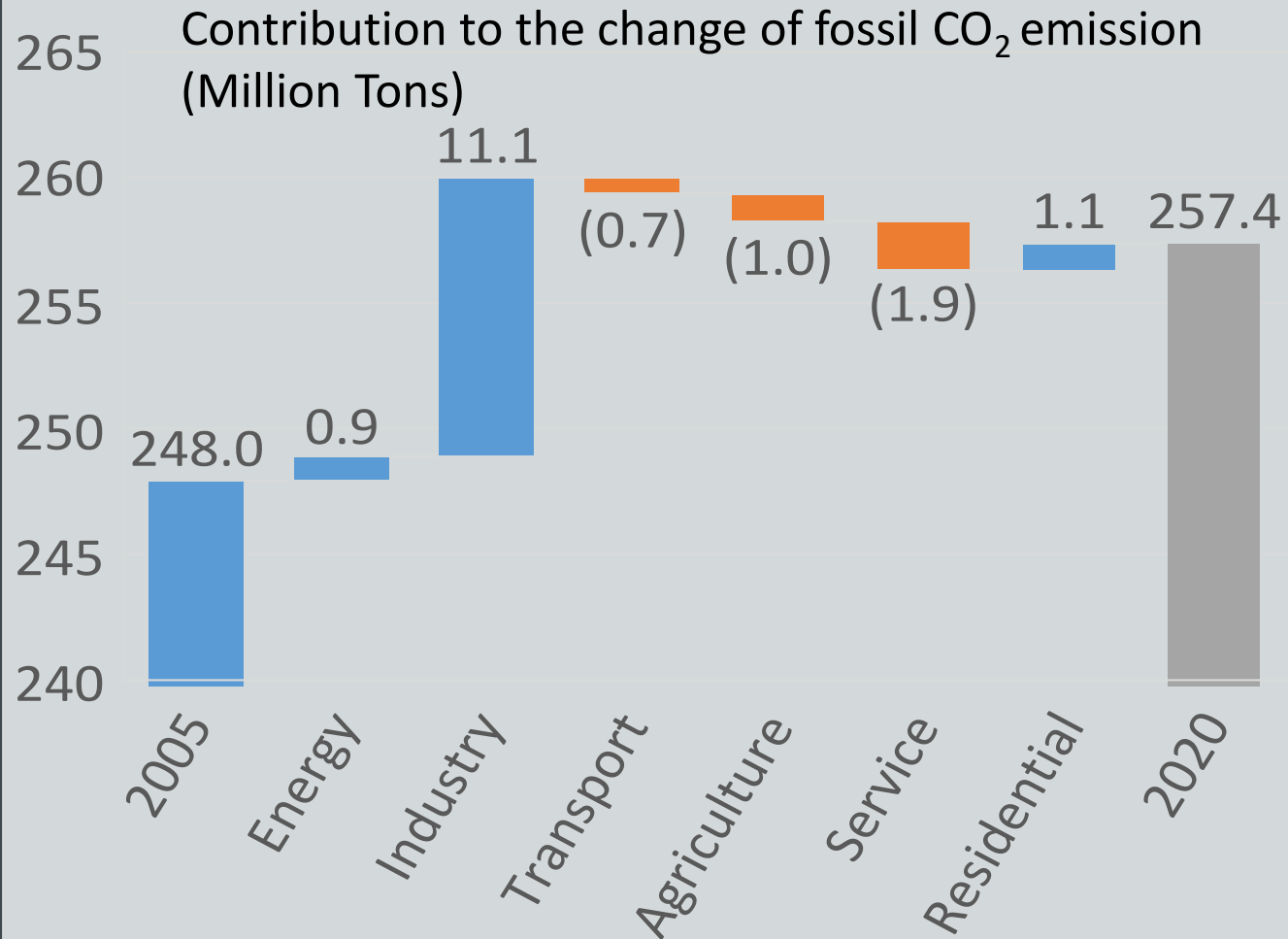


- CCS
- Solar
- Geothermal
- Other RE
- Energy Storage
- Hydrogen Co-firing
- Wind
- Hydro
- Pump&Storage

- Delayed decarbonization
- Too much CCS
- Too Much Hydrogen Co-firing
- Insufficient planning for long duration storage

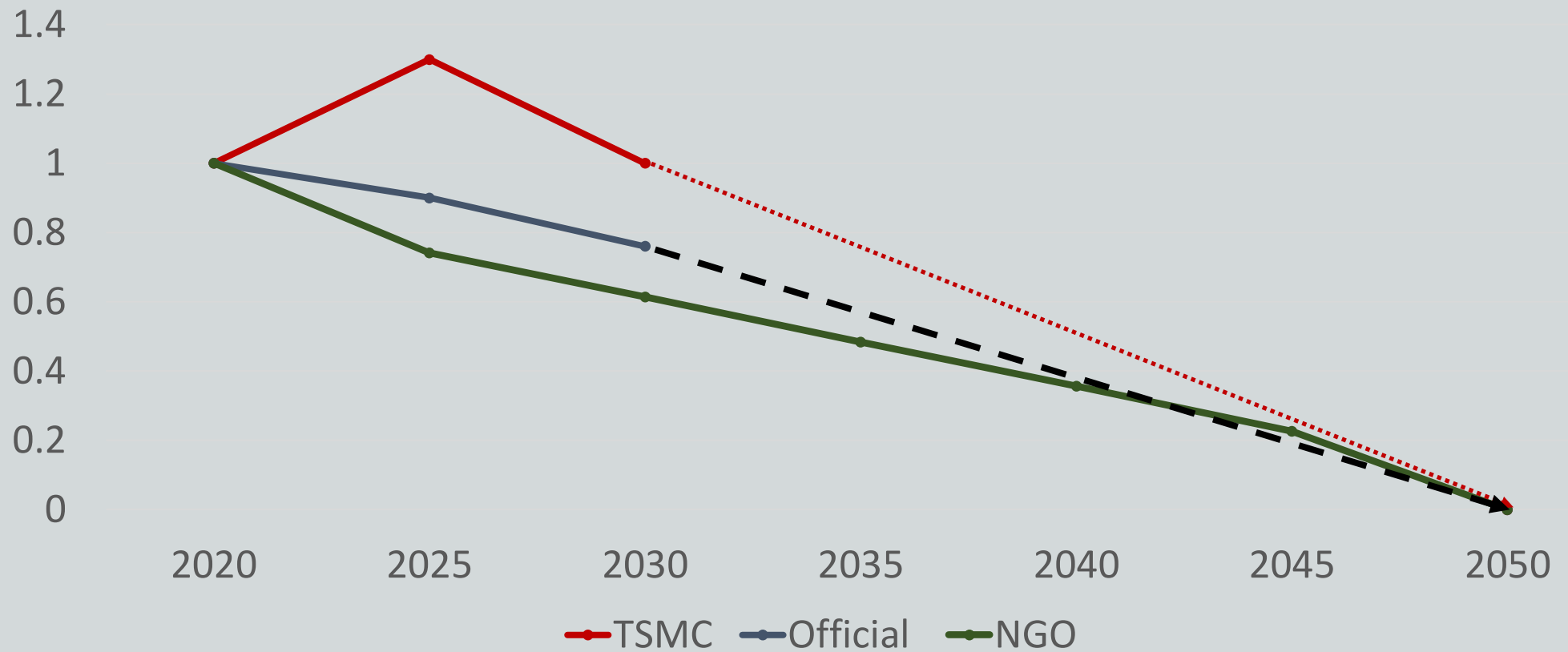
Source of NGO position : [10.1016/j.egycc.2020.100022](https://doi.org/10.1016/j.egycc.2020.100022)

Dual Effect of Silicon Shield (1/2)



Dual Effect of Silicon Shield (2/2)

Net-Zero Emission Pathways (2020 as Baseline)

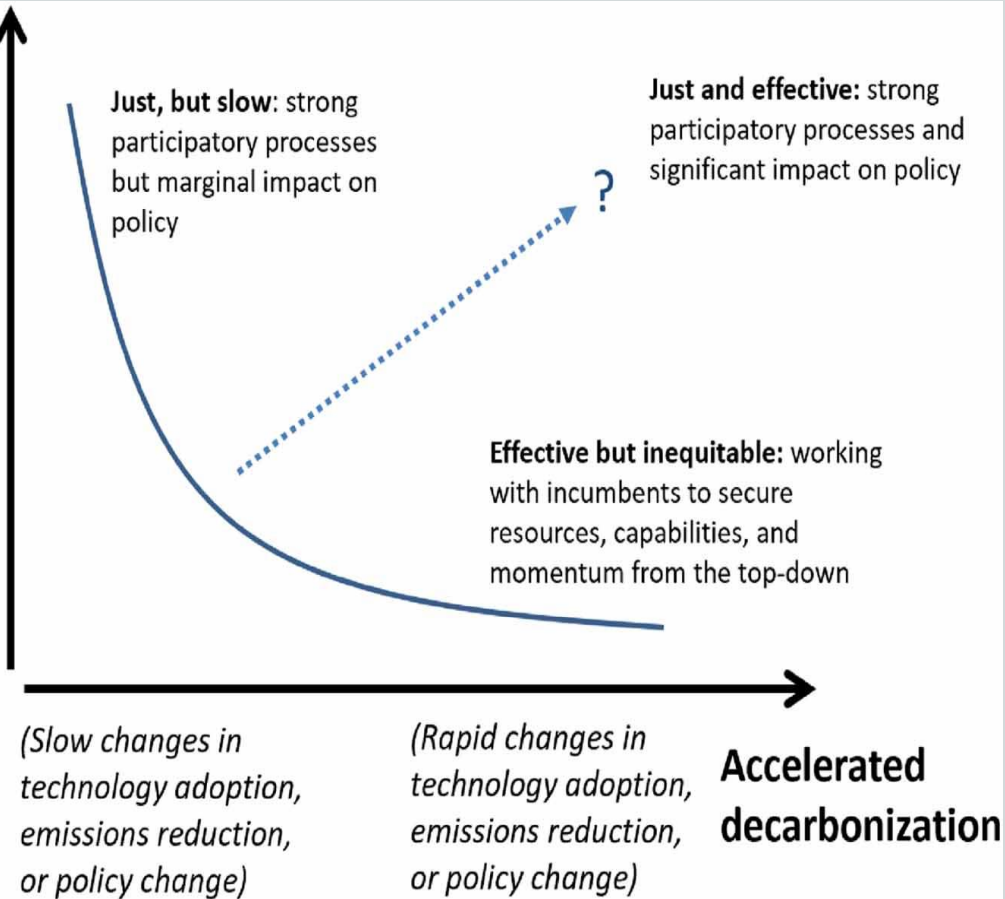


Conclusion & Reflection

Energy justice

(High degrees of equitable outcomes, fair procedures, and social legitimacy)

(Low degrees of equitable outcomes, fair procedures, and social legitimacy)



Defending Freedom
via Energy Transition

Industrial
Decarbonization

Nordic Governance