Geopolitics of Energy Transition

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Global energy transition: four alternative futures

**GET drivers:**
- Policy
- National politics
- Technology
- Markets

Source: Goldthau, Bazilian et al, Nature 2019
Big green deal

BIG GREEN DEAL
Policies, funding and cooperation drive rapid decarbonization.

- Global consensus on CC action & strong international policy push
- Financial markets reallocate capital to low carbon firms
- Generous Green Climate Fund compensates petro-states
- Wave of green globalization follows
- All countries to share in the benefits of decarbonisation

→ Low geopolitical friction; Just Transition/ SDGs achieved
Technology breakthrough

- US and China take the lead
- Google & State Grid of China emerge as dominant players
- World fractures into 2 rivaling camps led by tech leaders
- Blocs control rare earth metals & LCT access for outsiders
- Renewables race helps climate mitigation but not all regions profit
- Developing nations excluded from advanced energy know-how

→ Oil producers falter; clean tech cold war; tensions due to uneven transition
Dirty nationalism

- Elections bring populists to power
- Nation-first policies drive both domestic fossil fuels & renewables
- States ringfence their industries, zero sum logics return
- Protectionism limits RES economies of scale
- Fossil fuel producers panic & pump
- Power rivalries undermine multilateral institutions incl. UNFCCC & Paris Agreement

Unmitigated CC as stress amplifier; conflict over water and other resources
Muddling on

MUDDLING ON
Fossil fuels dominate and renewables fail to mitigate climate change.

- Unit costs keep declining but fossil fuels remain dominant
- GET too slow to mitigate CC but too fast for FF industry to adapt
- Few producers compete on exports
- NOCs go bust or consolidate
- MENA producer countries and Russia see political turmoil
- Europe goes for like-minded partnerships, US on the sidelines
- Some regions fail to benefit from partnerships, energy inequality rises

→ Global North-South imbalances reinforced; BAU results in ‘energy clubs’
## Geopolitics of the global energy transition

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<td>Concerted, multilateral policy drive</td>
<td>Fast and even</td>
<td>Multilateralism</td>
<td>Green globalization meets SDGs &amp; Climate targets</td>
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<td>Dirty Nationalism</td>
<td>Nation-first policies</td>
<td>Slow if not stalling</td>
<td>Zero-sum, anarchy</td>
<td>Unmitigated climate change acts as a stress amplifier (SDGs fail)</td>
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<td>Tech Breakthrough</td>
<td>Disruptive advancement in energy technology</td>
<td>Fast but uneven</td>
<td>Regional hegemony</td>
<td>Successful climate change mitigation (but not all SDGs)</td>
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<td>Muddling on</td>
<td>Falling costs, but slow progress</td>
<td>Slow</td>
<td>Clubs</td>
<td>Mitigation too slow to meet CC targets (SDGs compromised)</td>
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Key takeaways from scenarios

• A zero-carbon world does not do away with zero-sum games. It produces different ones.
• Global win-win is but one plausible outcome.
• The pace of change matters.
• Some pathways may not be politically palatable to all.

→ Acknowledge abating carbon creates losers & prepare for it
→ Shift attention from goals to pathways
→ Draw lessons from past and parallel experiences
Thank you

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