

The Geopolitics of the Energy Transition

UT Energy Week

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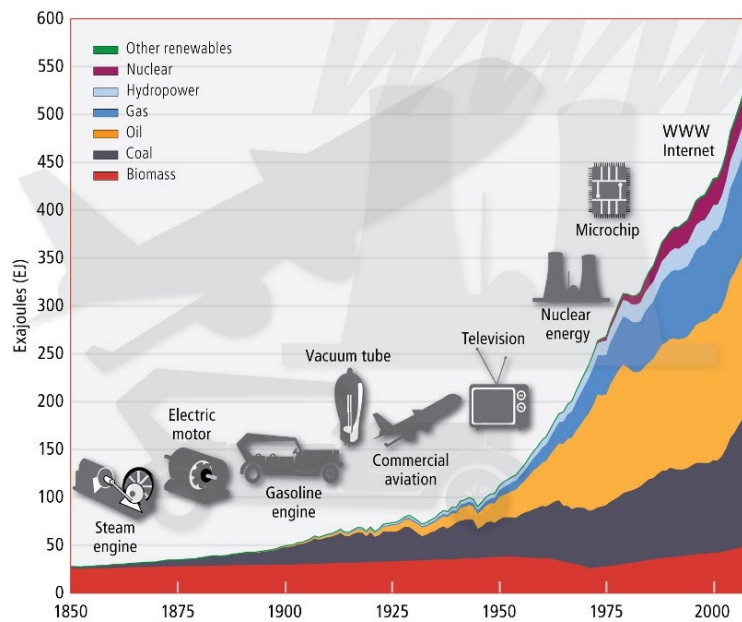
Director, The Payne Institute, and Professor of Public Policy

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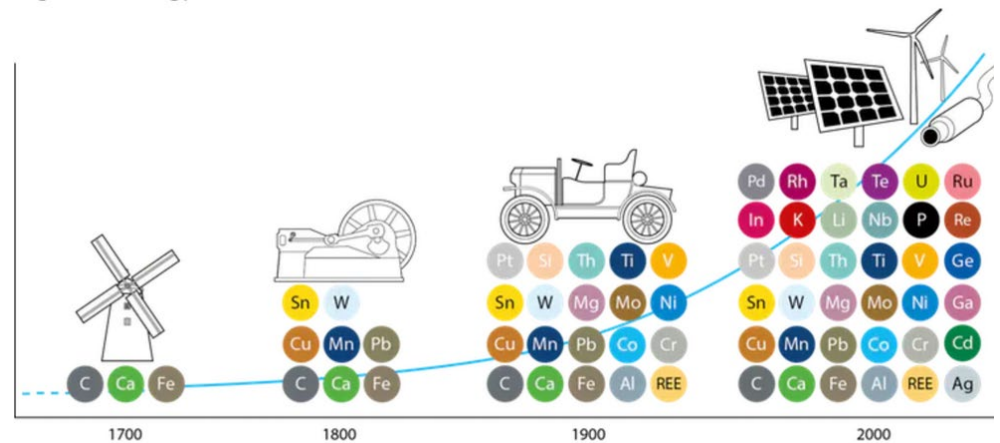


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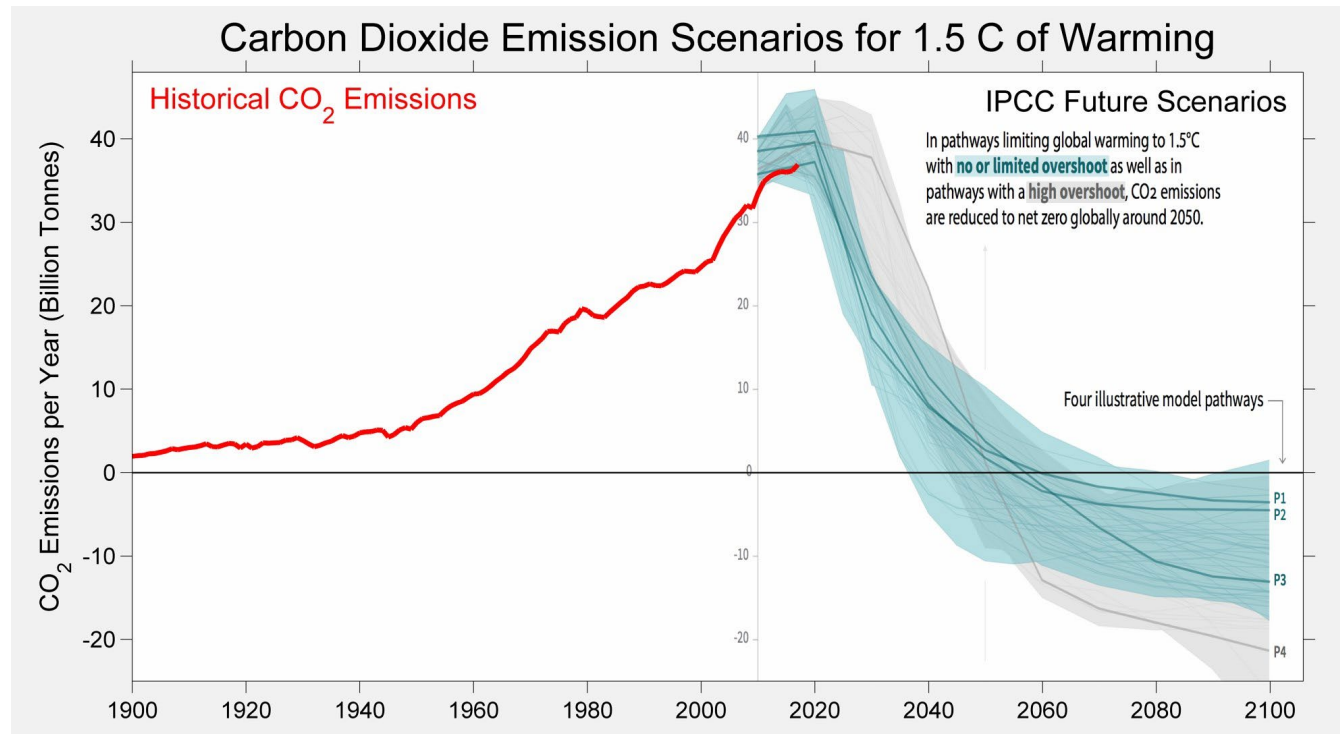
Of non-linear (upward) curves...



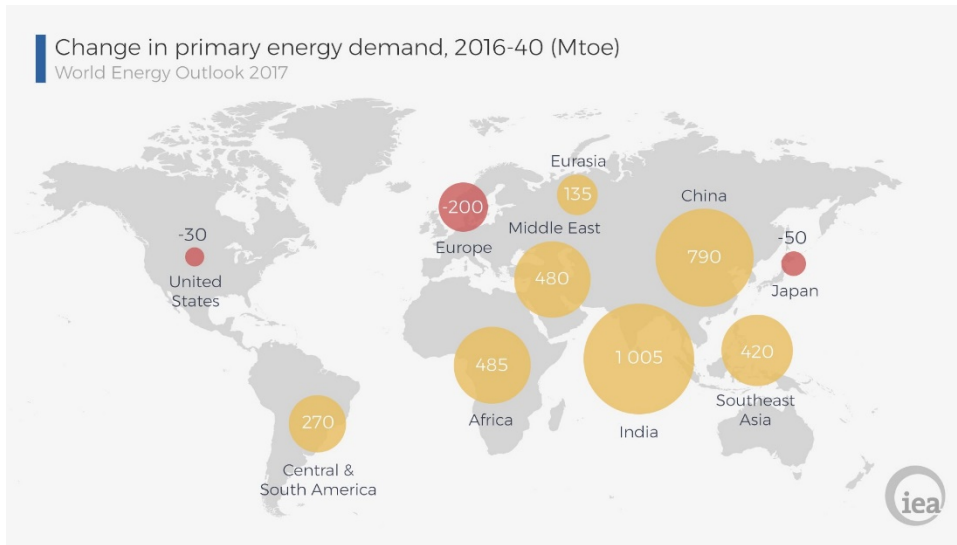
IIASA, Nakicenovi, Zepf, 2014c



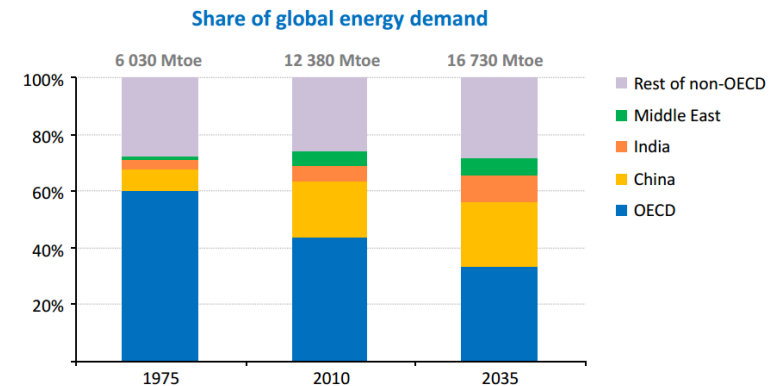
....and downward



The energy transition is largely a developing country story



IEA WEO 2017



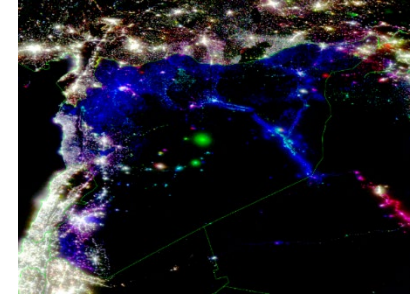
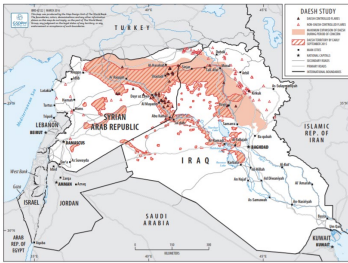
Five geopolitical contours

While climate change impacts are being well-monitored, less so are other energy-related considerations:

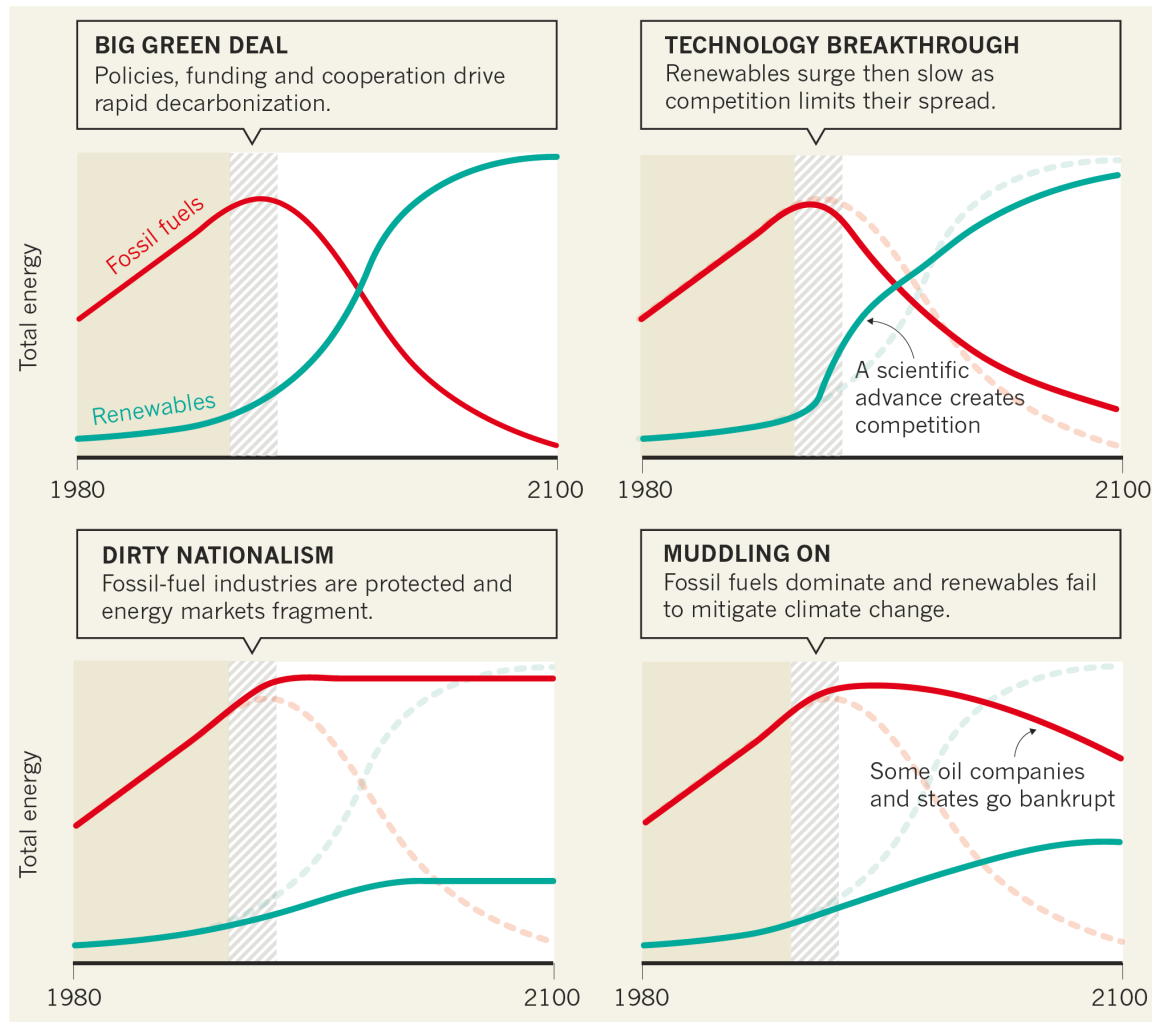
1. **Natural Gas** Accelerating trade through new international pipelines or liquefied natural gas (LNG)
2. **Cybersecurity** Growing importance with rise of interconnected systems and new forms of metering & system operation
3. **Minerals** Conflict over minerals due to changes in technology and deployment in large numbers
4. **Grids** More regional interconnections in electricity grids from the Belt and Road to East Africa
5. **Inequality** Energy poverty and demand for reliable & affordable energy services to billions of people and businesses

New ways to monitor the transition

Figure 1: Iraq and Syria Oil Production, Fields, and Daesh Control, March 2016



Global energy transition: four alternative futures



Drivers:

- Policy
- National politics
- Technology
- Markets

Source: Goldthau, Bazilian et al,
Nature 2019

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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