

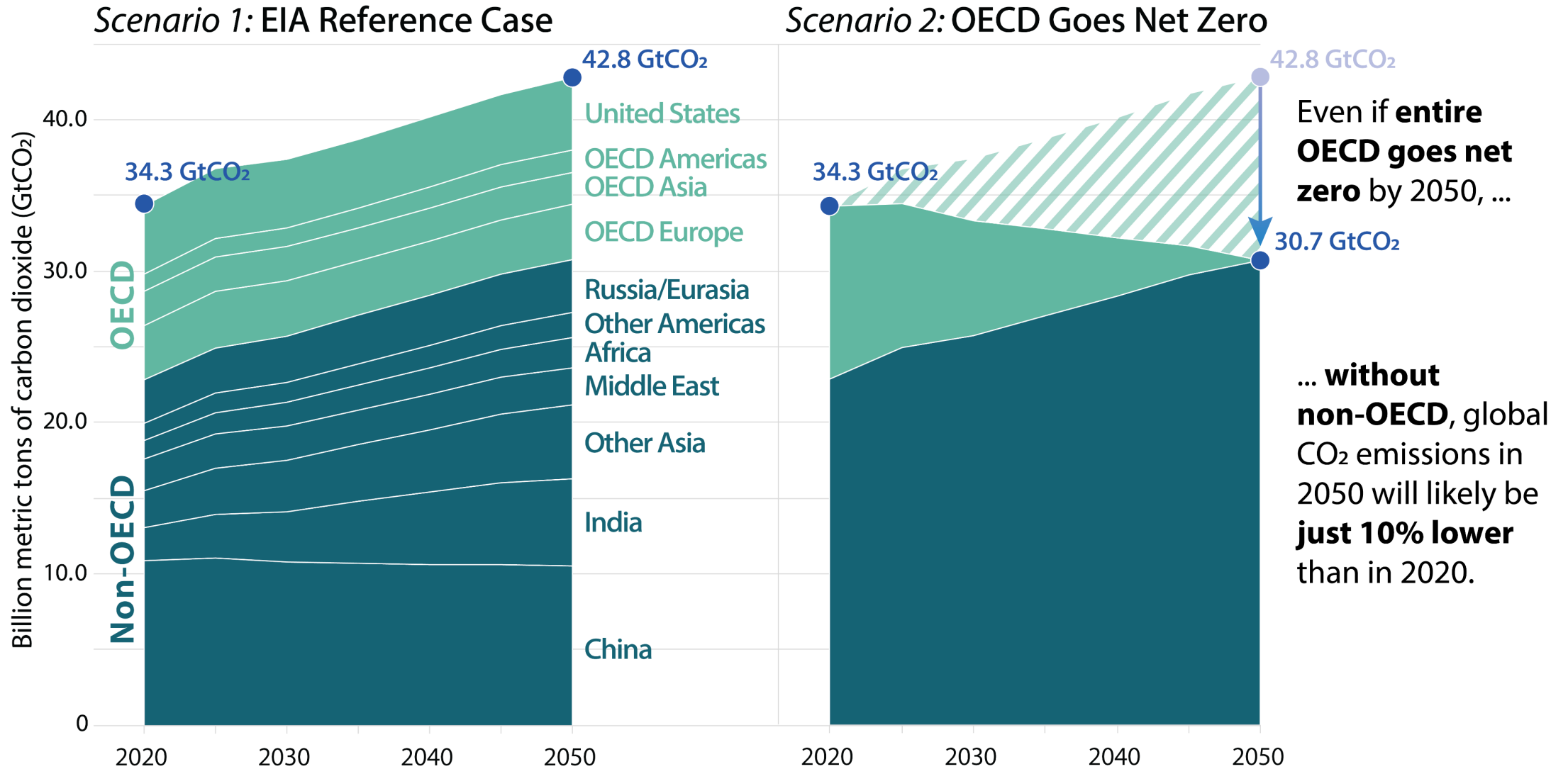
Chart of the Week #2023-21

Global CO₂ Emissions: What If Only OECD Goes Net Zero by 2050?

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Energy Policy Research analysis based on EIA's International Energy Outlook (Oct 2021)

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- According to the U.S. EIA's Reference case ([IEO-2021](#)), “[i]f current policy and technology trends continue, global energy consumption and energy-related carbon dioxide emissions will increase through 2050 as a result of population and economic growth,” particularly in Asia.
- In the Reference case, global CO₂ emissions are projected to rise by 24.7% from 34.3 billion metric tons (GtCO₂) in 2020 to 42.8 GtCO₂ in 2050. The majority of this increase, accounting for 71% of the growth, is attributed to India and other Non-OECD Asian countries (excluding China).
- Achieving net zero emissions by mid-century is considered highly improbable, even for developed countries, due to various costs and risks associated with fully replacing the existing energy systems with ones based on variable resources and technologies that are yet to be commercially viable.
- Our analysis of the EIA's Reference case suggests that even in a scenario where the entire OECD achieves net zero by 2050 while the energy profile of the non-OECD remains unchanged, the total emissions reduction will be 30.7 GtCO₂. This represents a mere 10.5% decrease compared to the 2020 levels.
- For more information on this chart, please contact Batt Odgerel (batto@eprinc.org)