Is Net Zero Emissions Possible on a Global Scale?

Prepared by: Georgy Hadwen, Senior Researcher for Householders' Options to Protect the Environment (HOPE) Inc. (Australia)
Date: October 2025

🔍 Introduction

Net zero emissions is widely accepted as the balancing ratio between the amount of greenhouse gases emitted and the amount removed from the atmosphere. It is a critical goal to limit global warming to 1.5°C and avoid the worst impacts of climate change: But is it achievable globally?

This report explores best-case scenarios, major roadblocks, and the role of national and international policy—including the US, EU, and China. It also presents counterarguments from conservative and industry-aligned perspectives, offering a balanced view for a non-expert audience.

🌟 Best-Case Scenarios: What Success Could Look Like

1. Global Cooperation and Policy Alignment

- The Paris Agreement remains a cornerstone, with over 190 countries committed to climate targets. The recent withdrawal of the US in remaining within this framework is of increasing concern both politically and environmentally.
- International frameworks like the UN's Net-Zero Framework for shipping aim to standardize emissions pricing and technology adoption. This has recently been frozen forcing shipping concerns to self manage emissions when over 5% of global emissions are in shipping freight.

2. National Leadership and Innovation

- **United States**: The Biden administration targeted a 61–66% reduction in net emissions by 2035, backed by the Inflation Reduction Act and Bipartisan Infrastructure Law. President Trump has made it clear his interest lies in corporate profit and his relationship with the fossil fuel industry.
- **European Union**: The EU aims for a 55% emissions cut by 2030 and full climate neutrality by 2050, using tools like the Emissions Trading System and sectoral decarbonisation mandates.
- **China**: President Xi Jinping has pledged to reduce emissions 7–10% below peak levels by 2035, with net zero by 2060. China leads in renewable capacity and is piloting zero-carbon industrial parks.

3. Clean Energy and Electrification

- Solar, wind, and hydro are scaling rapidly, with battery storage and smart grids enabling reliability. The core needs to improve battery capacity and longevity is ever-more pressing.
- Electric vehicles and hydrogen-powered industry are gaining traction globally. EVs are gaining traction but still impose engineering challenges on aspects of capacity, charging points, battery life and weight which correlates to performance and customer buy-in.

4. Nature-Based and Technological Solutions

- Forest restoration, regenerative agriculture, and carbon capture technologies offer scalable carbon removal alongside concerted research on ocean warming with its impact on viability of a vast range of human activity.
- Innovations in AI, circular economy models, and low-carbon fuels are accelerating.

⚠ Roadblocks: What's Holding Us Back?

1. Fragmented Global Action

- Some major economies—including the US under current leadership—have withdrawn from international agreements like the IMO's Net-Zero Framework, citing cost concerns and scepticism of the climate change findings irrespective of empirical research.

2. Fossil Fuel Dependence

- Despite renewable growth, coal and gas remain dominant in many regions. China's coal expansion in 2024 was the highest in a decade.

3. Carbon Market Challenges

- Voluntary carbon markets lack transparency and consistent standards, risking greenwashing.

4. Infrastructure and Investment Gaps

- Developing nations need trillions in climate finance. The EU and US have made strides, but global equity remains elusive.

5. Political and Social Resistance

- Conservative parties in the US, UK, and Australia argue that net zero policies impose unfair costs, reduce competitiveness, and threaten jobs.

🚢 Counterarguments from the Political Right

1. Economic Burden

- Critics argue that net zero policies act as de facto carbon taxes, raising consumer prices and harming small businesses.
- In Australia, some claim the safeguard mechanism allows polluters to buy credits without cutting emissions, undermining integrity.

2. Impact on Productivity and Growth

- Conservative economists warn that rapid decarbonization could slow productivity growth, especially in energy-intensive sectors.
- The EU's shipping sector fears that emissions levies will fuel inflation and reduce fleet viability.

3. Technological Readiness

- Sceptics highlight the lack of scalable alternatives for aviation, shipping, and heavy industry, arguing that premature regulation could stifle innovation.

4. Geopolitical Risk

- Some governments fear that aggressive climate policies could hand a competitive edge to nations with looser standards, such as China.

🛠 What Can Be Done?

- **Governments** must balance ambition with fairness, ensuring inclusive transitions and robust carbon accounting.
- **Businesses** should adopt transparent sustainability targets and invest in clean technologies.
- **Communities** can support local initiatives and demand accountability.

- **Individuals** can reduce emissions through energy choices, transport, diet, and waste reduction.

Conclusion

Net zero emissions on a global scale is technically possible—but politically and economically complex. Success depends on coordinated policy, inclusive planning, and transparent implementation. HOPE continues to advocate for household and community-level action, recognizing that informed citizens are essential to driving change.

Appendix: References

1. Carbon Brief. *China's Paris Agreement Pledge*. https://carbonbrief.org
2. China Briefing. *Tracking China's Carbon Goals*. https://www.china-briefing.com
3. ABC News. *Xi Jinping's 2035 Climate Goal*. https://abc.net.au
4. Climate Action Tracker. *China Country Summary*. https://climateactiontracker.org
5. CNESA. *Zero-Carbon Industrial Parks Directive*. http://en.cnesa.org
6. The Chemical Engineer. *US Withdraws from IMO Net-Zero Shipping Deal*. https://thechemicalengineer.com
7. The Telegraph. *UK Net Zero Tax Debate*. https://telegraph.co.uk
8. US Sustainability.gov. *Net-Zero Government Roadmap*. https://sustainability.gov
9. US Economic Report. *Net Zero CO_2 Emissions in the US*. https://govinfo.gov
10. US Department of Energy. *Clean Energy in 2025*. https://energy.gov
11. US State Department. *Climate Crisis Policy*. https://state.gov
12. White House. *2035 Climate Target Fact Sheet*. https://bidenwhitehouse.archives.gov
13. Supply Chain Brain. *Biofuels and IMO Net-Zero Goals*. https://supplychainbrain.com
14. Protothema. *Cyprus Shipowners Reject Net-Zero Framework*. https://en.protothema.gr
15. MSN. *EU Shipping Sector Pushback*. https://msn.com
16. European Parliament. *EU Climate Action Strategy*. https://europarl.europa.eu
17. PolicyDesk. *EU Net Zero Direction*. https://policydesk.net
18. Clean Energy Wire. *EU Net-Zero Legislation Guide*. https://cleanenergywire.org
19. ECNO. *EU Climate Neutrality Progress Report*. https://climateobservatory.eu
20. Dentons. *EU Decarbonization Policy Outlook*. https://dentons.com
21. Sustainable Home Mag. *Counterarguments to Net Zero in Australia*. https://sustainablehomemag.com
22. The Conversation. *Net Zero Transition Costs*. https://theconversation.com
23. TechXplore. *Net Zero and Productivity*. https://techxplore.com
24. PV Magazine. *Reforms to Ease Net Zero Costs*. https://pv-magazine-australia.com
25. IEEFA. *Least-Cost Path to Net Zero*. https://ieefa.org

Supplementary sources

Icons Used:

- 📘 Books icon (Appendix): https://fonts.google.com/icons → Search “book” under Material Icons.
- 🌍 Globe icon (Global Overview): https://fontawesome.com/icons → Search “globe”.
- 🏛️ Government icon (Policy): https://thenounproject.com → Search “government” or “policy”.
- ✅ Check icon (Best Case): https://icons8.com/icons → Search “check” or “success”.