

INTERNATIONAL



Trading Off: Balancing Economic Efficiency and Political Demands in Pursuit of the First Global Stocktake Targets

Discussion Paper

October 2, 2026

Trade is essential to achieving the global stocktake (*GST*) goals under the Paris Agreement.¹ These goals include tripling global renewable energy capacity and doubling energy efficiency by 2030, transitioning away from fossil fuels, and accelerating low-emissions technologies. Most countries depend on imports to access clean energy technologies, and trade plays a crucial role in ensuring affordable access to these key goods.² However, production of key products is highly concentrated, creating concerns about supply-chain resilience, energy security, and the viability of domestic industries.

Policymakers designing climate-aligned trade policies must balance competing priorities. Domestic policies on manufacturing capacity and energy security, the cost of renewable energy products, relationships with trade partners, and the need to meet nationally determined contribution (*NDC*) and global GST targets factor into policymakers' decisions. Debate over how to balance these factors will likely continue to grow as discussions on trade's role in addressing climate change expands from traditional venues like the World Trade Organization (*WTO*) to fora like the UN Framework Convention on Climate Change (*UNFCCC*).

No trade policy perfectly reconciles political, energy-security, economic, and climate objectives. Reducing trade barriers may lower the cost of accessing and deploying renewable energy technologies but may also lead to greater reliance on foreign producers. This could undermine domestic manufacturing and expose a country to international supply shocks. On the other hand, trade-restrictive measures such as tariffs, local content requirements, subsidies, and non-tariff barriers (i.e., administrative or technical requirements designed or implemented that add costs and restrict imports) can support domestic production and energy security. However, these measures may increase costs, provoke trade disputes or retaliation, and ultimately slow renewable-energy deployment and progress toward GST targets.

Using trade policy to enhance international cooperation with climate benefits may offer a way forward. This discussion paper explores whether cooperative, climate-aligned trade policy offers a more promising path than either unilateral restrictions or unrestricted liberalization. It first examines why trade is necessary to achieve GST targets, then considers the tradeoffs policymakers face when balancing domestic political demands, affordable clean-energy deployment, trade relationships, and climate objectives. It concludes by offering the Agreement on Climate Change Trade and Sustainability (*ACCTS*) as an example of how trade policy can support competing priorities and accelerate collective progress toward GST targets. The ACCTS provides possible avenues to do so through its innovative climate-related provisions, including the removal of barriers to trade in renewable energy products and disciplines on the provision of fossil fuel subsidies, which ensure that fossil fuels do not receive additional government financial support that could make them more cost competitive.³

Contents

A.	Introduction	2
B.	Trade's Role in Achieving the Global Stocktake Goals	3
C.	Tradeoffs: Balancing Politics, Cost, and Climate	3
D.	Toward Enhanced International Cooperation in Climate and Trade	4
E.	Conclusion	5
F.	C2ES Resources	6
G.	References	7

Questions for consideration

- How can policymakers balance demands to promote domestic industry, maintain access to the benefits of free trade, and meet climate objectives?
- How may enhanced cooperative approaches to climate-aligned trade reduce barriers to trade in clean energy technologies while accommodating countries' individual political priorities?
- What cooperative trade policy measures are best suited to accelerate progress towards the GST targets?

A. Introduction

1. Aligning trade with climate objectives is essential to combating climate change, including by attaining the GST's targets and goals, such as tripling installed renewable energy capacity and doubling the global average annual rate of energy efficiency improvements by 2030, the transition away from fossil fuels, and accelerating low-emissions technologies. For example, trade and its ability to expand affordable access to clean energy technologies are essential to meet the GST target of tripling global renewable energy capacity by 2030.
2. The prevailing economic view is that reducing barriers to trade contributes to shared growth and economic development. Yet this perspective is increasingly challenged in practice by restrictive trade and industrial policies that aim to shore up domestic production of strategic goods, including clean energy technologies.
3. Removing barriers to trade in clean energy technologies could reduce the cost associated with achieving the GST goals. However, doing so may risk exacerbating existing tensions within the international trade regime by reinforcing the concentrated production of clean energy technologies. Four countries and the European Union (*EU*) account for 80–90 percent of manufacturing capacity for some of most relevant clean energy products (i.e., solar photovoltaics [*PVs*], wind, batteries, electrolyzers, and heat pumps).⁴ Further concentration in the production of key clean energy technologies may raise risks for a just transition by impeding efforts to foster domestic production capacity and energy security, reducing associated opportunities to create local jobs.
4. In this context, debate over how to align trade and climate policy has grown across several international fora, including the UNFCCC and the Paris Agreement negotiations. Recognizing the importance of this conversation, Parties agreed at the 7th Conference of the Parties Meeting as the Parties to the Paris Agreement to discuss “opportunities, challenges, and barriers to enhancing international cooperation related to the role of trade.”⁵ Parties also initiated discussions on trade under the purview of the newly formed Integrated Forum on Climate Change and Trade (*IFCCT*) as part of the Global Climate Action Agenda (*GCAA*).⁶
5. Yet, as policymakers engage in these discussions, they simultaneously face the challenge of deciding how to use trade policy to reach the GST targets and achieving their own NDCs as quickly and



affordably as possible, while balancing political demands to support local industry and energy security imperatives.

6. How policymakers balance these priorities will likely continue to feature in conversations in the UNFCCC, the GCAA, and more traditional venues for trade negotiations like the WTO. Parties to these discussions could consider the respective impacts of cooperative approaches and unilateral trade-restrictive measures on economic and climate objectives.
7. With these issues in mind, this paper examines:
 - how trade is necessary for achieving the GST targets
 - the various factors policymakers must balance when designing trade policy for clean energy technologies and climate alignment
 - tradeoffs associated with unilateral trade measures (i.e., trade policies that grant preferential treatment to domestic goods over imports), including their implications for progress towards GST targets
 - the ACCTS, which contains numerous provisions that are novel to trade agreements and could enable enhanced international cooperation by balancing political, economic and climate objectives, while avoiding trade disputes and economic retaliation.

B. Trade's Role in Achieving the Global Stocktake Goals

8. Despite recent increases in the use of trade restrictive policies that target clean energy technologies, trade remains essential to meeting the GST targets. Most countries rely on imports of clean energy technologies, which has contributed to increased demand for trade in renewables-related products.⁷ For example, the traded volume of clean energy technologies, including solar PVs, reached U.S. \$479 billion in 2025, accompanied by continued reductions in the cost of these technologies.⁸
9. Trade has played a key role in reducing the cost of renewable energy technologies even as the volume of shipments grows. For example, in 2024, the EU imported 11.1 billion EUR of solar panels, which represented a 43 percent value drop year over year.⁹ At the same time, the volume of solar panel imports increased by two percent, demonstrating the drastic cost reductions trade has enabled for those seeking to deploy renewable energy.
10. Trade can therefore be a crucial enabler by ensuring all countries have adequate and affordable access to supplies of clean energy technologies sufficient to meet GST targets—like tripling installed renewable energy capacity—and any related target that may be reflected in NDCs.
11. Raising barriers to trade—for example, by implementing tariffs on renewable energy products—may raise the cost of deploying renewable energy to the point that it undermines the deployment of clean energy technologies.¹⁰ Yet, countries may work to align trade and climate by proactively removing barriers to trade in relevant products. This can be done by, for example, reducing tariffs on finished clean energy technologies and associated upstream inputs.¹¹
12. Parties and non-Party stakeholders participating in the UNFCCC's trade-related dialogues and relevant GCAA initiatives (including the IFCCT) could therefore evaluate the ways in which trade will prove necessary to meet collective GST targets, with particular attention to cooperative approaches (see Section D for more detail).

C. Tradeoffs: Balancing Politics, Cost, and Climate

13. Trade in clean energy products is essential to meeting growing global energy demand while reducing greenhouse gas emissions. But the production of key renewable energy products like solar PV components is highly concentrated in a limited number of countries, raising questions for energy supply chain security and the implications for local producers.¹²

14. While highly liberalized trade in renewable energy technologies may reduce costs and accelerate the deployment of renewable energy worldwide in line with GST goals, policymakers must also consider the potential impacts to a country's domestic renewable energy technology industry and consequences for energy supply chain security, among others.
15. Operating in this context, policymakers should balance intertwined concerns for impacts when designing trade policy. These include:
- **domestic political demands to: (i) protect and promote industry and (ii) increase energy security**—domestic industries that are unable to compete with imports on price may pressure governments to implement trade-restrictive measures to protect domestic production capacity of strategic energy technologies
 - **the cost of renewable energy technologies**—trade restrictive measures like tariffs may raise the cost to purchase, produce, and deploy clean energy technologies
 - **relationships with trade partners**—restrictive measures may lead trading partners to initiate trade disputes or to respond in kind with economically damaging trade measures
 - **a country's ability to achieve NDC and GST targets**—the cost of importing or producing clean energy technologies will impact the scale and speed at which they are deployed.
16. For example, there are tradeoffs in addressing political demands and keeping costs low to make progress on the deployment of renewables. Also, a secure energy supply relies on diversified and resilient supply chains, which can be threatened by highly concentrated production of upstream goods.
17. Disruptions in trade have highlighted the importance of maintaining secure energy supplies to insulate from supply shocks and upstream bottlenecks. Multiple global supply shocks, including the COVID-19 pandemic and the closure of the Strait of Hormuz (through which around 25 percent of world seaborne oil and 19 percent of global liquified natural gas trade flows), have reinforced the need for diversified and resilient supply chains for critical goods, including renewable energy products like solar PVs.¹³
18. Some countries have responded to the highly concentrated character of clean energy goods production by implementing trade-restrictive measures like tariffs and local content requirements to address domestic political concerns in order to foster local production and reinforce energy security.¹⁴ However, these measures may also raise the cost of producing and procuring clean energy technologies. Additional costs can slow and reduce the scale of renewable energy deployment, impeding progress towards GST targets like the tripling of installed renewable energy capacity.
19. Policymakers involved in the UNFCCC's trade dialogues and the GCAA could therefore look toward these competing factors and consider ways in which they may be cooperatively balanced.

D. Toward Enhanced International Cooperation in Climate and Trade

20. Rather than unilaterally implementing restrictive trade measures that insulate domestic producers from competition from imports but add cost, create trade frictions, and impede progress towards the GST targets, countries may choose to pursue trade policies that cooperatively remove barriers to trade for key goods and establish shared standards. Some trade policy approaches seek to enhance international cooperation and can address the tradeoffs outlined in the section above.
21. Signed in 2024, the ACCTS is a free trade agreement that goes beyond preceding trade agreements in its treatment of climate issues. It therefore provides an example of a recent effort to align trade policy with climate objectives in a cooperative fashion.¹⁵ Explicitly framed as a "dynamic pathfinder agreement," the ACCTS reflects the choice to push trade policy towards alignment with climate objectives through a series of innovations in cooperative trade policy.¹⁶
22. For example, the ACCTS includes a chapter dedicated to trade in environmental goods, explicitly stating that its objective is "to promote the liberalization of trade in environmental goods as a means

of contributing to the transition to a low-emissions, climate-resilient, circular and sustainable economy, and increasing the uptake of, and investment in, relevant technologies and products.”¹⁷ This chapter includes a list of environmental goods and services for which parties to the agreement will reduce or eliminate tariffs.

23. Beyond its environmental goods and services list, the ACCTS includes additional provisions aligning trade and climate, including by being the first trade agreement to introduce enforceable disciplines regarding fossil fuel subsidies. In other words, while liberalizing trade in environmental goods like renewable energy technologies to make access more affordable, the ACCTS takes steps to ensure that fossil fuels do not receive additional government financial support that could make them more cost competitive.
24. The ACCTS includes provisions for phase-in periods for new members, giving them some flexibility when liberalizing trade in politically sensitive products and services. As such, it provides an example of an approach to balancing trade liberalization with domestic political considerations, driving expanded trade in environmental goods like clean energy technologies in a way that still permits signatory countries to address domestic political constraints.
25. While initially limited in membership, the ACCTS is an open, plurilateral trade agreement.¹⁸ It is open to accession by any WTO member that meets the standards established in the agreement. Although the ACCTS’s initial membership (Costa Rica, Iceland, New Zealand, and Switzerland) is currently limited, it may nevertheless serve as a useful case study for examining cooperative approaches to climate-related trade policy.
26. Thus, the ACCTS illustrates one possible model through which trade and climate objectives may be pursued simultaneously in service of shared climate goals.

E. Conclusion

27. Aligning trade policy with climate goals will prove essential, not only to facilitate the proliferation of clean energy technologies but to also achieve local political and economic objectives.
28. Policymakers must balance competing priorities—domestic political demands, cost, trade relationships, and climate objectives—when designing trade policy. Balancing tradeoffs impact the pace and cost of meeting the GST targets like tripling installed renewable energy capacity, transitioning away from fossil fuels, and doubling the global average annual rate of energy efficiency improvements by 2030.
29. Unilateral, trade-restrictive measures may allow countries to meet some of these objectives by temporarily insulating domestic industry, but they may also create unintended economic consequences and impact the pace at which relevant GST targets are achieved.
30. There is no solution that perfectly balances these competing concerns. Yet, Parties and non-Party stakeholders contributing to ongoing discussions on the intersection of trade and climate under the Paris Agreement and the ecosystem linked to the GCAA may wish to examine how different approaches to trade policy affect enhanced international cooperation and whether they can be designed and implemented in ways that strengthen it. The ACCTS may provide a useful example of a way to align trade and climate policy through cooperative approaches, in order to maximize mutual wins for people, businesses, and climate.

F. C2ES Resources

- Enhancing International Cooperation on Climate and Trade through the Lens of the Global Stocktake (May 2026), <https://www.c2es.org/2026/05/climate-trade-global-stocktake-unfccc/>
- Considerations for the First Climate and Trade Dialogue (May 2026), <https://www.c2es.org/2026/05/climate-trade-global-stocktake-unfccc/>
- Climate, Trade, and Equity: Considerations and Options (May 2026), <https://www.c2es.org/wp-content/uploads/2026/05/Climate-Trade-and-Equity.pdf>
- Considerations for a Transitioning Away from Fossil Fuels Roadmap (April 2026), <https://www.c2es.org/wp-content/uploads/2026/04/20260407-C2ES-TAFF-Roadmap-Submission.pdf>
- Delivering on the Targets and Signals from the First Global Stocktake (August 2025), <https://www.c2es.org/wp-content/uploads/2024/10/20250729-C2ES-GST-Factsheet.pdf>.

G. References

- ¹ United Nations Framework Convention on Climate Change [hereinafter UNFCCC], *Outcome of the first global stocktake*, Decision 1/CMA.5, ¶ 28 (December 13, 2023), <https://unfccc.int/documents/637073>.
- ² International Energy Agency [hereinafter, IEA], *Energy Technology Perspectives* (Paris, France: IEA, 2026), <https://iea.blob.core.windows.net/assets/8483779b-e472-435b-b173-2156f92b8a33/EnergyTechnologyPerspectives2026.pdf>.
- ³ Alice Tipping et al., “Agreement on Climate Change, Trade and Sustainability: A landmark pact for trade and sustainability,” (International Institute for Sustainable Development, 2024), <https://www.iisd.org/articles/deep-dive/agreement-climate-change-trade-sustainability-accts>.
- ⁴ IEA, *The State of Clean Technology Manufacturing* (Paris, France: IEA, May 19, 2023), 14, <https://www.iea.org/reports/the-state-of-clean-technology-manufacturing>.
- ⁵ UNFCCC, *Global Mutirão: Uniting humanity in a global mobilization against climate change*, Decision 1/CMA.7, ¶¶ 56-57 (March 30, 2026), https://unfccc.int/sites/default/files/resource/cma2025_19_a01.pdf.
- ⁶ Catalina Cecchi Hucke and Brock Burton, “Enhancing International Cooperation on Climate and Trade through the lens of the Global Stocktake,” *C2ES*, May 29, 2026, <https://www.c2es.org/2026/05/climate-trade-global-stocktake-unfccc/>.
- ⁷ IEA, *Energy Technology Perspectives*, 182.
- ⁸ Bloomberg NEF, “Global Clean-Energy Trade Rebounds to \$479 Billion in 2025 Despite Tariffs and Geopolitical Turmoil,” press release, May 27, 2026, <https://about.bnef.com/insights/clean-energy/global-clean-energy-trade-rebounds-to-479-billion-in-2025-despite-tariffs-and-geopolitical-turmoil-bloombergnef/>.
- ⁹ “EU imports €14.6 billion in green energy products,” Eurostat, October 9, 2025, <https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20251009-2>.
- ¹⁰ Maria-Grazia Attinasi et al., “Green supply chains at risk: measuring the true economic and environmental costs,” European Central Bank, Research Bulletin No. 141, March 24, 2026, <https://www.ecb.europa.eu/press/research-publications/resbull/2026/html/ecb.rb260324~0b81bd7e3c.en.html>.
- ¹¹ United Nations Trade and Development [hereinafter UNCTAD], *Global Trade Update (November 2025): Trade – a catalyst for achieving the Paris Agreement*, UNCTAD/DITC/INF/2025/9 (UNCTAD, 2025), 2, https://unctad.org/system/files/official-document/ditcinf2025d9_en.pdf.
- ¹² IEA, *Solar PV Global Supply Chains* (Paris: IEA, July 7, 2022), 58-62, <https://iea.blob.core.windows.net/assets/d2ee601d-6b1a-4cd2-a0e8-db02dc64332c/SpecialReportonSolarPVGlobalSupplyChains.pdf>; IEA, *Energy Technology Perspectives* (Paris: IEA, 2026), 177, 184, and 237, <https://iea.blob.core.windows.net/assets/8483779b-e472-435b-b173-2156f92b8a33/EnergyTechnologyPerspectives2026.pdf>.
- ¹³ IEA, *Snapshot of Global PV Markets: 2025* (Paris, France: IEA Photovoltaic Power Systems Programme, April 2025), https://iea-pvps.org/wp-content/uploads/2025/04/Snapshot-of-Global-PV-Markets_2025.pdf; IEA, *Strait of Hormuz* (2026), <https://www.iea.org/about/oil-security-and-emergency-response/strait-of-hormuz>.
- ¹⁴ IEA, *Snapshot of Global PV Markets: 2025*.
- ¹⁵ Inu Manak, Helena Kopans-Johnson, and Tony Wu, “Trade Tools for Climate Action: Agreement on Climate Change, Trade, and Sustainability,” *Council on Foreign Relations*, October 29, 2025, <https://www.cfr.org/articles/trade-tools-climate-action-agreement-climate-change-trade-and-sustainability>.
- ¹⁶ New Zealand Ministry of Foreign Affairs and Trade, “Joint Ministerial Declaration on the Agreement on Climate Change, Trade, and Sustainability,” *New Zealand Ministry of Foreign Affairs and Trade*, June 3, 2025, <https://www.mfat.govt.nz/en/media-and-resources/joint-ministerial-declaration-on-the-agreement-on-climate-change-trade-and-sustainability>.
- ¹⁷ Agreement on Climate Change, Trade, and Sustainability, Art. 2.1, November 15, 2024, <https://www.mfat.govt.nz/assets/Trade-agreements/ACCTS/ACCTS-Chapter-2-Trade-in-Environmental-Goods.pdf>.
- ¹⁸ Federal Department of Economic Affairs, Education, and Research, *Factsheet: Agreement on Climate Change, Trade and sustainability – an innovative, dynamic and open plurilateral agreement* (Federal Department of Economic Affairs, Education, and Research, November 25, 2024), https://www.seco.admin.ch/dam/en/sd-web/bkd8uT6U26BH/ACCTS%20Factsheet%20EN_V25.11.2024.pdf.