THE NET-ZERO GOVERNANCE CONVEYOR BELT

December 2022

Thomas Hale

Kleinman Center
for Energy Policy

CONTENTS

3 Executive Summary

4 Introduction

6 Voluntary Governance Faces Limits

8 Emergence of Net-Zero Standards

9 Growth of Regulation

11 Is Regulation the (Only) Answer?

13 Moving Toward High Integrity Governance

16 What Next? A Task Force

18 Bibliography

18 About the Author

EXECUTIVE SUMMARY

Net-zero targets now cover over 90 percent of global GDP and 40 percent of the world's largest firms. While the proliferation of net-zero targets represents progress toward mobilizing action toward global climate goals, net-zero targets vary enormously in quality.

In response, we see a proliferation of four governance tools that seek to steer net-zero targets toward higher integrity. Voluntary standards can set a high level of rigor and push forward the frontier of best practice but lack the ability to compel action.

Orchestration campaigns from the UN or other legitimate entities can promote convergence around higher standards, and international standard-setting bodies can reach greater scale and mobilize the broader accreditation industry to ensure compliance.

However, both of these tools remain voluntary. Regulations, in turn, can mandate action and level the playing field, but may differ across jurisdictions and will only be as strong as the political economy of the jurisdiction allows.

As efforts to operationalize net zero deepen and evolve in the decades to come, building a "conveyor belt" that links the different kinds of governance tools together can help create a high-integrity governance ecosystem around net zero.

Best practices and innovations forged by leadership coalitions, often through voluntary action, can be supported and promoted by orchestration campaigns, mainstreamed through standards, and made mandatory through regulation. In this way the "groundswell" of voluntary targets can, with appropriate rules and standards, help shape the "ground rules" for the economy overall to better align to the goals countries have set in the Paris Agreement.

While this conveyor belt model of governance is already emerging, it is critical for government, business, civil society, and other actors to strengthen further the governance of net zero. In this context regulation is of particular importance.

While the surge of regulations around net zero carries the great promise of levelling the playing field and giving businesses the certainty they need to invest in net zero, it also carries two challenges: rigor and coherence.

Because regulation depends on the political economy of the jurisdiction that creates it, it may not reach the level of ambition needed to deliver the goals of the Paris Agreement. Indeed, in some jurisdictions interest groups opposed to climate action are working to undermine or reverse net-zero governance. Bad regulation may be worse than no regulation at all.

But even in jurisdictions where there is broad support for rigorous alignment to net zero, different regulatory domains do not necessarily share a unified vision of what is required of business. If different regulators require different things, the resulting friction may slow the transition.

One proposal to address both rigor and cohesion is a Taskforce on Net-Zero Regulation, proposed by a high-level panel convened by the UN Secretary General. This body could create a forum and process to drive upward convergence across both regulatory domains and jurisdictions.

INTRODUCTION

"Net zero" refers to the atmospheric state in which greenhouse gas emissions have fallen to a level at which no more greenhouse gases are going into the atmosphere than are coming out. To have a reasonable chance to achieve the goals of the Paris Agreement to limit global warming to well below 2C or, better, to 1.5C, this state must be achieved by 2050.

Remarkably, this simple idea has gone from a scientific concept, to a demand of fringe activists, to a mainstream organizing principle for mitigation in record time (Allen et al. 2022, Black et al. 2021). At present at least 90% of the global economy is covered by some kind of national net-zero pledge (Net-Zero Tracker 2022).

But having reached the "end of the beginning" of net zero—a near-universal commitment to the destination climate science says we need to arrive at by the middle of the century—a more difficult phase has emerged (Black and Hale 2021). A concept describing a global outcome must be operationalized for individual countries, regions, cities, sectors, and companies. Pledges must become binding pathways with sufficient short-term action to be credible.

As Paris Agreement architect Laurence Tubiana put it at COP26, greenwashing is the new, and perhaps more insidious form of climate denialism.

A string of studies have shown that current net-zero targets from countries, companies, cities, and regions vary substantially in robustness (Tubiana 2021, Hans et al 2022). For example, some net-zero targets only cover territorial or operational emissions. Others rely on the purchase of carbon credits of questionable quality. Other still lack sufficient short-term action.

At the same time, beyond the country level, many significant emitters have yet to make a commitment to net zero. According to the Net-Zero Tracker, three out of five of the world's 2000 largest listed companies have not set a target (Net-Zero Tracker 2022). Amongst privately held firms, two-thirds have yet to make a pledge, including none of the largest privately held fossil fuel companies (Lang and Black 2022).

Moreover, as net-zero plans and targets are operationalized and implementation proceeds, recalcitrant interest groups have pushed back. In the United States, a coalition of Republican state officials have, in the name of fighting "woke capitalism," stopped investing state funds with financial institutions committed to net zero, and have attacked banks committed to net zero on the questionable grounds of violating anti-trust laws because of their efforts to transition away from fossil fuels (Paxton 2022).

Meanwhile, within governments and companies working toward net zero, operationalization is raising hard questions around, for example, how best to track and remove carbon from corporate supply chains, or how to support investments in restoring and protecting nature—essential for the world to reach a state of net zero—without allowing entities to use potentially spurious carbon credits to substitute for or delay decarbonization.

While there are emerging principles on these and similar questions of operationalization, many key details and standards and systems for implementing them remain nascent. While the general principles for credible alignment to net zero are clear, their operationalization in many areas remains a work in progress (Fankhauser et al. 2022).

The next phase of net zero therefore requires three things:

1. Expanding the quantity and quality of net-zero targets;
2. Finding new pathways to operationalize net zero;
3. Building political power to shift rules and institutions that drive change.

In short, net zero requires governance. What could an effective net-zero governance system look like? This report, which updates and expands an earlier memo, outlines a "conveyor belt" model for how the groundswell of voluntary action on net zero can become ground rules for the economy overall (Hale 2021).

VOLUNTARY GOVERNANCE FACES LIMITS

To date, governance of net zero has been largely voluntary. Companies, cities, regions, and investors have increasingly set targets through initiatives like the Science Based Targets Initiative, Cities Race to Zero, the Net-Zero Asset Owners Alliance, or similar efforts.

Many of these initiatives now have reached a critical mass. Companies that have signed up to the Science Based Targets Initiative account for $38 trillion of market capitalization, including 27% of the companies with greatest emission impact. The various sector-specific alliances that make up the Glasgow Financial Alliance for Net Zero hold over $150 trillion in assets.

These initiatives aim both to mobilize commitments and to set quality standards. Some are robust, often when led by a credible NGO or a UN agency. Others are not. For example, the Canadian tar sands producers net-zero alliance seeks to meliorate the side effects of hydrocarbon extraction but not transition beyond it (Reuters 2021).

Those non-state actor initiatives that meet a threshold of robustness criteria, as judged by an independent expert peer review group (which I co-chair), have been invited to join the UN Race to Zero campaign, which seeks to promote "upward convergence" toward the frontier of best practice (UNFCCC 2021, UNFCCC 2022b).

The campaign's criteria include setting a target to reach net-zero (or better) emissions by at least the middle of the century, to contribute a fair share to halving emissions this decade, to do so without allowing offsets to delay or substitute for decarbonization, to publish annual progress, etc. More than half of the applicants have not yet met this criteria, and all current members are reviewed annually. (Race to Zero 2021).

At COP26, UN Secretary-General Antonio Guterres announced a high-level expert group to assess the integrity of non-state actor net-zero pledges, chaired by former Canadian Environment Minister Catherine McKenna, which published its findings at COP27 in November 2022 (Guterres 2021, UN Expert Group 2022).

Building on high quality voluntary standards, the committee's recommendations further crystalized the emerging frontier of best practice on net zero. It found that net-zero plans must include all emissions, have regular interim targets, not use offsets to delay or replace emissions reductions, include the phasing out of fossil fuels, etc. Reinforcing the criteria of orchestration campaigns like the Race to Zero or voluntary initiatives like the Science Based Targets Initiatives, the McKenna report helped establish a clear, if high-level vision of what "good" net-zero commitments look like.

In contrast, national governments have not yet agreed to standards for their own net-zero pledges. However, experts have suggested benchmarks on which to judge, and the Climate Neutrality Coalition has put forward a framework for operationalizing them (Rogelj et al. 2021, Net-Zero Tracker 2022, Carbon Neutrality Coalition 2022).

While these voluntary initiatives are not binding, they are not toothless. For entities facing pro-climate consumers, investors, citizens, or courts, these “soft” governance schemes leverage market and reputational power and can influence legal outcomes. For example, in 2021 a Dutch court ruled that Shell had to increase its short-term action under its net zero, citing, amongst other sources, a summary of the consultations the UN Race to Zero campaign held on what best practice looks like (University of Oxford 2020).

In many sectors and jurisdictions, these are powerful forces—but not everywhere. To create a safe climate we need decarbonization not just in California or the Netherlands, but also in Texas and Saudi Arabia. Not just in tech companies or retailers, but also in oil and gas firms and cement makers. The reality is that voluntary efforts alone are unlikely to get us there, especially as climate politics gets more existential (Green, Hale, and Colgan 2019).

EMERGENCE OF NET-ZERO STANDARDS

As voluntary initiatives have proliferated, often driven by the UN or NGOs, global standard-setting bodies have also increased their work on defining net zero. In September 2021 the International Organization for Standardization (known as ISO) announced it would review all of its 24,000 standards for alignment with the Paris Agreement. Though voluntary, these standards are woven into the fabric of the global economy, covering everything from bars of steel, to computer plugs, to carbon accounting systems (ISO 2021, Green, and Hale 2021).

At COP26 the ISO, along with the British Standards Institute (one of its member national standards bodies), announced a collaboration with Race to Zero to pursue a new family of net-zero standards. At COP27 in November 2022, this led to a new set of net-zero guidelines that strongly align with both the Race to Zero criteria and the UN High-level Expert Group recommendations (ISO 2021).

This result defied many expectations. Because ISO works through consensus, observers have noted that ISO processes can be slow, cumbersome, and prone to result in lowest common denominator outcomes (Green and Hale 2021). Indeed, the guidelines published by ISO in November 2022 provide a general framework through which more specific, operational standards will be developed. Bringing the high level of rigor from the general framework into individual standards will remain an ongoing challenge.

Beyond ISO, an International Sustainability Standards Board (ISSB) was created in 2021 to address the issue of corporate sustainability reporting specifically. In November 2022, CDP—the primary NGO through which companies disclose sustainability information—agreed to use the ISSB standard going forward.

While standards are proliferating, there is encouraging correspondence amongst them. A review of 33 voluntary climate standards in October 2022 identified a relatively high degree of similarity (Axelsson, McGivern, and Straub 2021).

GROWTH OF REGULATION[1]

Encouragingly, we now see moves to make net zero mandatory across a wide variety of regulatory domains. Net-zero-related regulations take several forms (Pivot Point Report 2022). Some are climate-specific rules designed to advance net-zero alignment across the economy, while others are embedded in broader sustainability measures, or in areas not specifically directed at climate, such as consumer protection or financial risk. Net-zero regulations can be found in specific laws, or in rules adopted by independent regulatory agencies, central banks, or similar bodies.

Disclosure is the most mature domain of net-zero regulation. At present, climate- or sustainability-related risk disclosure of some kind is mandatory in China and the United Kingdom, and it will become mandatory in the next few years in Canada (2024), the EU (2023), India (2023), New Zealand (2023), South Korea (2025), and Switzerland (2023). Together these jurisdictions already account for nearly half of global GDP (47.9% of 2021 GDP) and global emissions (46.6% of 2019 emissions). They are also collectively home to 874 of the 2000 largest listed companies in the world.

Mandatory disclosure is also proposed by regulators in the United States, which, if it were to be adopted, would bring mandatory disclosure to an additional 24% of global GDP, 13% of global emissions, and 590 of the largest 2000 companies globally, cementing disclosure as a ground rule for operating in the global economy.

A related regulatory tool requires companies to publish transition plans for how they will achieve net zero.

For example, at COP26 the UK announced it will require transition plans from all listed companies, and published proposed guidance on what transition plans should contain at COP27. Spain's climate law requires corporate climate action plans for large companies (HM Treasury 2021, Transition Plan Taskforce 2022, European Climate Foundation 2021).

Governments are also regulating what companies can claim about net zero. The European Commission has proposed a new regulation which ensures that businesses substantiate claims of being "carbon neutral" and "climate neutral" with evidence.

Similarly, the French government has passed a law which makes carbon neutrality claims dependent on a greenhouse gas emissions report which examines the product or service's entire life cycle emissions based on the requirements of the ISO 14067 reference standard and will come into force in 2023.

In the United Kingdom and the United States, regulatory recommendations and guidance have been issued regarding the corporation's carbon neutral and net-zero claims and advertising.

Procurement is another domain of net-zero regulation. At COP26 the UK announced that bidding for large government contracts will depend on net-zero alignment, and at COP27 the U.S. government—the world's largest purchaser of goods and services—proposed rules that would require any company with government contracts worth more than $50 million annually to set a target via

1 Parts of this section draw on the *Pivot Point* report published in September 2021. See that report for a comprehensive mapping of regulations related to net zero.

the Science Based Targets Initiative, and all companies except the smallest to report to CDP (Cabinet Office 2021). The U.S. also launched the Global Net-Zero Government Initiative, a coalition of 18 countries pledging to set their own rules on net-zero aligned procurement (White House 2022).

Alongside these moves to embed net zero in regulation, climate concerns are also prompting efforts to revamp existing regulatory frameworks. One dynamic area is competition law, which aims to stop collusion between firms that can prevent price competition and harm consumers.

Because voluntary collaboration on climate action—like the initiatives noted above—involve cooperation between competitors, there is a concern that anti-collusion rules could impede such efforts because they tend to be stated extremely broadly (OECD 2021). Regulators are therefore seeking to reformulate rules that protect environmental goals while maintaining consumer protections. Such reforms are needed because anti-climate interest groups have attempted to weaponize competition law to block voluntary action on climate change (Hale 2022).

Another "negative" regulation under scrutiny is protection of foreign investment through investor–state arbitration. Typically embedded in treaty law, these rules allow foreign investors to seek claims against the host government should regulations amount to expropriation of investor assets.

Such rules are therefore thought to have a chilling effect on climate action, because they could empower emissions-intensive investors to bring claims against countries for adopting climate policies. In 2022 the OECD began a process that will review the broader investment protection regime for climate alignment, while a number of countries have announced their plans to exit the Energy Charter Treaty, one of the primary tools through which claims could be brought (OECD 2022).

IS REGULATION THE (ONLY) ANSWER?

The rapid expansion of net-zero regulation raises a critical question about the mainly voluntary nature of net-zero regulation to date. Is the end goal simply to make net-zero alignment based on robust climate science mandatory across the entire world? While there is no doubt that regulation can play a critical role in overcoming opposition from recalcitrant actors and leveling the playing field, two challenges arise.

Challenge #1: First, the possibility and quality of regulation depend on the balance of power between pro- and anti-climate interest groups in a given jurisdiction, and in too many places this ratio still tilts toward the latter. In the United States, for example, efforts by the Securities and Exchange Commission to simply require disclosure of climate-related risks, already law in much of the world, is facing significant pushback.

Moreover, even when regulation is strong on paper, it requires state capacity and resources to be implemented effectively. To wit, illegal deforestation is one of the largest drivers of climate change today. For many countries, cities, regions, and companies, particularly in the Global South, the barrier to robust net-zero pathways is capacity as much as will.

Ultimately there is no substitute for building an enduring pro-climate political consensus in all countries that makes net zero the law of the land globally, and ensuring states have adequate capacity to enforce those laws. But given the urgent need to reduce emissions, the real question is: what kind of net-zero governance system could create conditions that push toward that outcome as quickly as possible?

Establishing a core of first movers who establish what is feasible, pioneer practical ways to do it, shift norms, and advocate for stronger rules for all can be a way to reshape what is politically feasible. Voluntary action therefore plays a key catalytic role in the political economy of shifting toward high-integrity net-zero regulation (Hale 2020).

The Taskforce on Climate-Related Financial Disclosures offers a salient example. The taskforce began with a voluntary process of climate risk disclosure through NGOs like CDP. This process was then elevated and refined by the G20 through the Financial Stability Board. Now it is increasingly becoming a mandatory requirement in national regulations (Taskforce on Climate-Related Financial Disclosures 2022).

Challenge #2: While a high-level view of what "good" net zero looks like now exists, the difficulty is in the details. Operationalizing net zero will be a dynamic, multi-decade process characterized by significant uncertainty. Climate models can give us scenarios describing what kinds of macro pathways will lead to what degree of climate change, but there is no scientific answer on the single right path to net zero for a given country, sector, company, city, or region.

Some things can and should be ruled out. For example, we must dramatically reduce emissions during this decade, not wait until later; we can't rely on offsets to substitute for or delay emissions reductions (Oxford University 2020). But at a more granular scale, no one today can know exactly what mix of technologies, rules, behavioural shifts and other changes can deliver a net-zero world by the middle of the century.

What's more, these "how" questions are profoundly political, entailing sharp distributional and moral trade-offs. There are many paths to net zero, each with different costs and benefits to different countries, sectors, and communities. Within the boundaries of what science deems robust, there are many choices to be made.

Salient examples of current open questions in operationalizing net zero include:

- How to address questions of climate equity across different regions
- How to incentivize entities to make positive contributions to reaching a global state of net zero (e.g. by investing in protecting or restoring nature, or phasing out coal plants ahead of schedule) without reducing their efforts to decarbonization internally (sometimes called "beyond value chain mitigation")
- How to assess net-zero alignment for service providers like accountants, management consultants, lawyers, or advertisers.

Analysis paralysis cannot delay action. We know the most important things to do now, even if we don't know every step to 2050. But this uncertainty means that governance of net zero needs to be adaptive and dynamic. We need a system that encourages experimentation and learns as it goes. Regulation that is too static (e.g. locking in a system that is too tilted to the needs of current interest groups) risks creating unintended barriers to achieving net zero in the decades to come (Sabel and Victor 2021).

So while ultimately we will need binding rules around net zero, to get there we need a governance system that helps us shift the bounds of political feasibility while also remaining flexible. We need to continuously push forward the frontier of best practice while also scaling best practice globally and making it as binding as possible. What could that look like?

MOVING TOWARD HIGH INTEGRITY GOVERNANCE

No single governance technology is by itself likely to deliver net zero on the timescale we need. Instead, we should think about a governance "ecosystem" that links voluntary initiatives, UN orchestration efforts, the standard-setting system, and regulations. Each of these has strengths and weaknesses, as outlined in Table 1.

Moving from the top to the bottom of Table 1, a trade-off emerges. More voluntary initiatives have the advantage of greater flexibility. When they are designed around scientific principles, they can achieve a very high-level of quality, pushing forward the frontier of best practice.

Of course, they can also be very weak and amount to little more than greenwashing (i.e. the tar sands example above). Separating the strong from the weak, and therefore consolidating the frontier of best practice, is therefore a critical function that processes like the Race to Zero and the UN Secretary General's high-level expert group can add to orchestrate the heterogenous landscape of voluntary initiatives.

But these approaches of course suffer from the limits of voluntarism. They lack power to compel alignment from those who do not sign up and can only exert reputational pressure on those who do. Moving down the table, standards and regulations have more power to coerce, but come with their own limits.

ISO standards, for example, are decided through consensus-based committees of experts from national standards bodies. That process is powerful because it can align expectations and ultimately create voluntary but influential rules across the world economy. But precisely for this reason, international standards reflect the views of a wide range of interests, including incumbent industries.

While ISOs have been able to largely reflect the same substantive principles as the leading voluntary programs thus far, it remains to be seen how they will be operationalized into more specific standards. Helpfully, standards have a built-in review and update process, but each iteration will take time.

Regulations, in turn, can be very binding, whether at the sub-national, national, or intergovernmental (e.g. EU) level. But they will likely be mixed in terms of robustness. Where pro-climate interests are able to exercise power, we may find strong outcomes. In other jurisdictions, particularly those heavily reliant on fossil fuels, prospects for strong rules are dim.

At the same time, laws tend to change slowly, or rely on circumstantial windows of opportunity around elections or key moments. Relying only on regulation will therefore risk creating a patchwork of outcomes that will be difficult to update and may provide little additional leverage in the most emissions-heavy jurisdictions. Governments can ameliorate that risk by working with each other across jurisdictions and across regulatory domains (see below).

Given these trade-offs, an effective governance ecosystem should aim to marry the high quality and flexibility obtainable toward the top of the table with the scale and bindingness delivered by elements toward the bottom of the table. It should also be dynamic, pushing forward the frontier of best practice and progressively scaling it and making it more binding. If hard rules everywhere are the ultimate goal, a fit-for-purpose governance system should provide a process for moving toward that outcome.

TABLE 1: STRENGTHS AND WEAKNESSES OF DIFFERENT GOVERNANCE APPROACHES TO NET ZERO

Governance	Strengths	Weaknesses
Private voluntary initiatives (e.g. SBTI)	▪ Promote experimentation, push forward frontier of best practice ▪ When designed by pro-climate actors (e.g. scientific NGOs), can achieve high quality. When not, can be low quality. ▪ Easy to ratchet in line with changing science / opportunities	▪ Hard to compel laggards (rely on reputational pressure, market pressure) ▪ Limited geographic reach (currently) ▪ Limits to scale
Orchestrated campaigns (e.g. Race to Zero)	▪ Can steer private initiatives toward common (higher) standards ▪ Include wider range of stakeholders ▪ Consolidate frontier of best practice	▪ Still voluntary (but stronger reputational pressure) ▪ Greater scale, but still limits
Standards (e.g. ISO)	▪ Global scale ▪ More binding (still voluntary) ▪ Influence regulation and litigation ▪ Uses commercial auditing / accountability system ▪ Influence trade rules (technical cooperation can put guardrails on climate-trade tensions)	▪ Voluntary (stronger market pressure) ▪ Slow to create / update ▪ Global consensus process —> Less influence for pro-climate voices than private/orchestrated initiatives
Regulation	▪ More binding (but in practice varies and is dependent on balance of power between pro/anti-climate interest groups) ▪ Can compel laggards	▪ Vulnerable to lobbying and regulatory capture à Will be strongest in countries without significant carbon interest groups ▪ Slow to create / update ▪ Fragmented across jurisdictions

Imagine a governance conveyor belt, as outlined in Figure 1. At the right side of the figure, voluntary initiatives like the Science Based Targets Initiative are experimenting and updating, pushing forward the frontier of what is possible. Orchestration initiatives like Race to Zero, in turn, work to curate and consolidate this frontier, ensuring alignment to the requirements of climate science and weeding out greenwashing.

In parallel, standard setting bodies like ISO consider the best practices emerging from these leadership groups and seek to write rules that scale globally. Though consensus based, these technical committees of standard setters can point to the frontier of best practice. This process of scaling also exposes new challenges that can be fed back up to the voluntary initiatives and the UN orchestrators.

At the same time, governments make laws and regulations. Advocates for stronger rules at the national level are able to point to international best practices as a benchmark for success, and businesses plead for rules that align to international standards. Both of these forces exert upward pressure on national rule making above and beyond what pro-climate advocates could achieve in isolation.

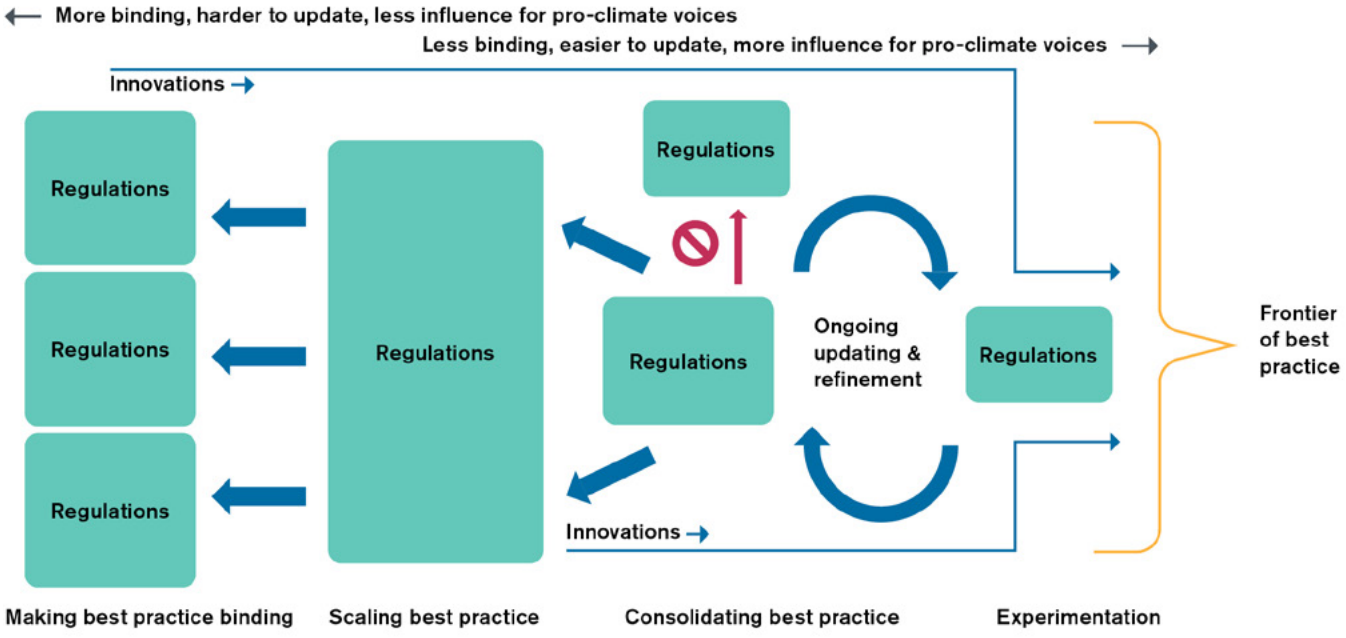
To be clear, the frontier of best practice of course does not emerge only from voluntary standards. National laws and regulations can, under the right conditions, generate important innovations. Standard setting bodies can harvest new insights from their broad spectrum of constituents. Orchestrating campaigns can act as a lighthouse to promote alignment toward certain principles. Feedback loops are therefore needed throughout the system, as the rightward arrows in Figure 1 suggest.

The whole can also yield more than the sum of its parts. Private standards are able to be ambitious and flexible in part because they restrict who is at the table to "leaders" focused on a relatively narrow issue in isolation, in this case decarbonization. This kind of targeted scope is needed to push forward the frontier of what is possible at speed.

But to achieve global net zero such innovations need to be brought into contact with other priorities (e.g. human rights, social welfare, etc.) and entities and interests that are not leading the charge on decarbonization. The "race to zero" is peculiar in that we win when the last entity crosses the finish line, not the first. A wider range of institutions is needed to complement the focus of targeted schemes.

Perhaps most importantly, this conveyor belt is not a one-off occurrence. It is a system that runs for the next several decades until global net zero is achieved. As new problems are surfaced and solutions identified, new ways of approaching net zero make their way through the conveyor belt.

FIGURE 1: A 'CONVEYOR BELT' GOVERNANCE SYSTEM FOR NET ZERO



WHAT NEXT? A TASK FORCE

The elements of this ecosystem already exist or are emerging. We have a number of strong initiatives helping to forge the frontier of best practice. The Race to Zero has already begun to curate and consolidate the frontier of best practice, and the UN Secretary-General's high level expert group has brought new heft to these efforts.

The world of standard setting, led by ISO and, in disclosure, ISSB, is rapidly diving into the net-zero challenge, and national regulations are forming across many jurisdictions. Each element now needs to grow stronger at speed.

Regulation, in particular, requires further effort. One of the most ground-breaking recommendations from the McKenna report is "Accelerating the road to regulation," ensuring that the groundswell of voluntary action on net zero becomes part of the ground rules for the economy overall. In addition to calling for regulators to align their work to rigorous and consistent operationalization of net zero, the HLEG calls for a Task Force on Net-Zero Regulation (TFNZR). Specifically, the committee argued:

> "Following the model of the TCFD process, countries should address the challenge of fragmented regulatory regimes by launching a new Task Force on Net-Zero Regulation to convene regulators across borders and across regulatory domains, alongside leading voluntary and standard-setting initiatives and independent experts, to drive reconfiguration of the ground rules of the global economy to align to the goals of the Paris Agreement."

Such a task force could help to address the two major weaknesses of the nascent regulatory landscape. First, it could tackle fragmentation across regulatory domains and jurisdictions. Within a single jurisdiction, definitions and requirements for net zero differ across regulatory domains. For example, what a financial regulator may require in terms of disclosure around net-zero pathways may not be the same as what an advertising regulator may require to make claims regarding alignment to net zero.

Across jurisdictions, regulators in the same area may exact different requirements. For example, regulators in one country may require inclusion of scope 3 emissions—that is, the emissions that come from a company's supply chain, not its own operations—while another jurisdiction may not.

Second, a task force could provide a bulwark against weak operationalization of net zero. Some emerging standards and regulations risk locking approaches to net zero that do not rise to the frontier of best practice. For example, at the time of writing it remains to be seen whether the proposed U.S. SEC rules on disclosure cover scope 3 emissions or not.

Should this not be required, net-zero regulation risks descending into an uneven playing field that can lead to regulatory arbitrage and carbon leakage. In narrow, technocratic domains the risk of regulatory capture grows as only the most directly affected, concentrated interests possess the expertise needed to shape detailed rules. Bringing such efforts under a broader umbrella can therefore shift the political economy of regulatory rulemaking.

Designed well and endorsed by a critical mass of influential regulators, a task force could build rigor and coherence to the fast-proliferating landscape of net-zero regulations by bringing regulators together around common approaches both within and across domains and jurisdictions. Ideally such a task force would cover all regulatory domains that have a significant influence on companies' net-zero alignment. This could include areas like disclosure, transition plans, advertising,

product standards, procurement, competition, though defining the exact scope of the body would be a critical first task.

The primary participants in the task force would be national regulators in the domains listed above, but other participants might include:

- International regulatory organizations and networks in the relevant domains, where they exist, including the OECD as one of the few international organizations with expertise across a range of regulatory domains
- International standard-setting bodies
- Voluntary standard-setters and orchestration campaigns
- Representatives of business
- Representatives of civil society

While the task force would not be a decision-making body, it could aim to follow the successful models of previous bodies. It could establish a process for regulators to share with each other how they are approaching net-zero alignment, create a confidential space for regulators to exchange ideas on implementation challenge, and produce joint recommendations to guide regulatory efforts within and across domains and jurisdictions.

Such a task force could also be of particular value to developing countries. While net-zero regulations are most advanced in G7 economies, the effects of regulation reach beyond borders. For example, disclosure rules in the EU and (proposed) in the U.S. require companies to report on their global emission footprints. This in effect requires suppliers around the world to follow rules made in Brussels or Washington.

While such requirements advance global climate priorities, a task force could allow a wider range of countries to discuss how best to address their extraterritorial implications. While no panacea, a Task Force on Net-Zero Regulation would fill a critical gap. The growing regulatory nature of net zero creates a vast need for coordination and alignment to fully take advantage of the emerging “conveyor belt” around net zero.

BIBLIOGRAPHY

Allen, Myles R., Pierre Friedlingstein, Cécile A.J. Girardin, Stuart Jenkins, Yadvinder Malhi, Eli Mitchell-Larson, Glen P. Peters, and Lavanya Rajamani. 2022. "Net Zero: Science, Origins, and Implications." *Annual Review of Environment and Resources* 47:1, 849-887. *https://www.annualreviews.org/doi/pdf/10.1146/annurev-environ-112320-105050*

Axellson, Kaya, Alexis McGivern, and Saskia Straub. 2022. "Defining Net Zero: How Do Climate Criteria Align Across Standards and Voluntary Initiatives?" *Smith School of Enterprise and the Environment. https://netzeroclimate.org/oxford-net-zero-publishes-report-on-the-voluntary-net-zero-initiatives-landscape/*

Black, Richard, Kate Cullen, Byron Fay, Thomas Hale, John Lang, Saba Mahmood, and Steve Smith. 2021. "Taking Stock: A Global Assessment of Net Zero Targets." *Energy & Climate Intelligence Unit and Oxford Net Zero. https://ca1-eci.edcdn.com/reports/ECIU-Oxford_Taking_Stock.pdf?v=1616461369*

Black, Richard and Thomas Hale. "The End of the Beginning of Net Zero." *Business Green.* 2021. *https://www.businessgreen.com/opinion/4039751/end-beginning-net-zero*

Carbon Neutrality Coalition. 2022. *https://carbon-neutrality.global/*

Cabinet Office. 2021. "Companies Bidding for Major Government Contracts Face Green Rules." *https://www.gov.uk/government/news/companies-bidding-for-major-government-contracts-face-green-rules*

European Climate Foundation. 2021. "Topping Off a Decade of Work: Spain Adopts Its First Climate Law." *https://europeanclimate.org/stories/topping-off-a-decade-of-work-spain-adopts-its-first-climate-law/*

Glasgow Financial Alliance for Net Zero. 2022."The Glasgow Financial Alliance for Net Zero 2022 Progress Report." *https://assets.bbhub.io/company/sites/63/2022/10/GFANZ-2022-Progress-Report.pdf*

Government of UK. 2021. "UK Will be the World's First Net Zero Financial Centre." *https://www.gov.uk/government/news/chancellor-uk-will-be-the-worlds-first-net-zero-financial-centre*

Green, Jessica, Thomas Hale, and Jeff Colgan. 2019. "The Existential Politics of Climate Change." Global Policy Journal. *https://www.globalpolicyjournal.com/blog/21/02/2019/existential-politics-climate-change*

Hale, Thomas. 2021. "Governing Net Zero: The Conveyor Belt." Blavatnik School of Government, Oxford University. *https://www.bsg.ox.ac.uk/sites/default/files/2021-11/2021-11%20Hale%20Net%20Zero%20Policy%20Memo.pdf*

Hale, Thomas, and Jessica Green. 2021. "New 'Net Zero' Standards Could Transform the Climate—Unless They're Derailed." *The Washington Post. https://www.washingtonpost.com/politics/2021/10/04/iso-london-declaration-climate/*

Hale, Thomas. 2020. "Catalytic Cooperation." *Global Environmental Politics.* 20 (4): 73–98. *https://doi.org/10.1162/glep_a_00561*

Hans, Frederic, Takeshi Kuramochi, Richard Black, Thomas Hale, and John Lang. 2022. "Net Zero Stocktake." NewClimate Institute, Oxford Net Zero, Energy & Climate Intelligence Unit and Data-Driven EnviroLab. *https://zerotracker.net/analysis/net-zero-stocktake-2022*

International Organization for Standardization. 2021. "London Declaration: ISO Commits to Climate Agenda." *https://www.iso.org/news/ref2726.html*

International Organization for Standardization. 2022. "Net Zero Guidelines." ISO. *https://www.iso.org/netzero*

International Financial Reporting Standards. 2022. "International Sustainability Standards Board." *https://www.ifrs.org/groups/international-sustainability-standards-board/*

Lang, John and Richard Black. 2022. "Everybody's Business: The Net Zero Blind Spot, Net Zero Tracker." *Energy and Climate Intelligence Unit, Data-Driven EnviroLab, NewClimate Institute, Oxford Net Zero. https://zerotracker.net/analysis/everybodys-business-private-companies-net-zero-blind-spot*

"Net Zero Tracker." 2022. *https://zerotracker.net/*

Organisation for Economic Co-Operation and Development (OECD). 2021. "Environmental Considerations in Competition Enforcement." *https://www.oecd.org/daf/competition/environmental-considerations-in-competitionenforcement.htm*

Our 2050 World. 2022. *https://our2050.world/*

Oxford University Net Zero Network. 2020. "Mapping of Current Practices Around Net Zero Targets." *https://4bafc222-18ee-4db3-b866-67628513159f.filesusr.com/ugd/6d11e7_347e267a4a794cd586b1420404e11a57.pdf*

Oxford University Smith School of Enterprise and the Environment. 2020. "The Oxford Principles for Net Zero Aligned Carbon Offsetting." *https://www.ox.ac.uk/news/2020-09-29-oxford-launches-new-principles-credible-carbon-offsetting*

Reuters. 2021. "Canada's Oil Sands Producers form Alliance to Achieve Net-Zero Emissions by 2050." *https://www.reuters.com/business/sustainable-business/canadas-oil-sands-producers-form-alliance-achieve-net-zero-emissions-by-2050-2021-06-09/*

Rogelj, J. 2021. "Net-Zero Emissions Targets Are Vague: Three Ways to Fix." *Nature. https://www.nature.com/articles/d41586-021-00662-3*

Sabel, C. and Victor, D. "How to Fix the Climate." *Boston Review.* 2021. *https://www.bostonreview.net/forum/charles-sabel-david-g-victor-how-fix-climate/*

Science Based Targets Initiative. 2022. *https://sciencebasedtargets.org/*

Task Force on Climate-related Financial Disclosures. 2022. "Climate Change Presents Financial Risk to the Global Economy." *https://www.fsb-tcfd.org/*

The Sabin Center for Climate Change Law. 2020. "Milieudefensie et al. v. Royal Dutch Shell plc." *Global Climate Change Litigation. http://climatecasechart.com/non-us-case/milieudefensie-et-al-v-royal-dutch-shell-plc/*

Texas Attorney General. 2022. "Paxton Launches Investigation into Six Major Banks for Collusion in Lending Practices that Potentially Violate Consumer Protection Laws." *https://www.texasattorneygeneral.gov/news/releases/paxton-launches-investigation-six-major-banks-collusion-lending-practices-potentially-violate#:~:text=Attorney%20General%20Paxton%20joined%20a,violations%20of%20consumer%20protection%20laws.*

Transition Plan Taskforce. 2022. "The Transition Plan Taskforce Disclosure Framework." *https://transitiontaskforce.net/wp-content/uploads/2022/11/TPT-Disclosure-Framework.pdf*

Tubiana, L. 2022. "Greenwashing Is the New Climate Denial." Alliance of Small Island States (AOSIS). *https://www.youtube.com/watch?v=6jV9fulRV5E&ab_channel=NewScientist*

U.N. Convened Net Zero Asset Owner Alliance. n.d. *https://www.unepfi.org/net-zero-alliance/*

U.N. High Level Expert Group. 2022. "Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions United Nations' High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities." *https://www.un.org/sites/un2.un.org/files/high-level_expert_group_n7b.pdf*

U.N. Secretary General. 2021. "Secretary-General's Remarks to Global Climate Action High-Level Event." *https://www.un.org/sg/en/content/sg/statement/2021-11-11/secretary-generals-remarks-global-climate-action-high-level-event-delivered*

UNFCCC. 2021. "Starting Line and Leadership Practices 2.0." Race to Zero. *https://racetozero.unfccc.int/wp-content/uploads/2021/04/Race-to-Zero-Criteria-2.0.pdf*

UNFCC. 2022a. "The Pivot Point." *https://climatechampions.unfccc.int/wp-content/uploads/2022/09/R2Z-Pivot-Point-Report.pdf*

--- 2022b. "Race to Zero Campaign." *https://unfccc.int/climate-action/race-to-zero-campaign#eq-6*

--- 2022c. "Race to Resilience." *https://climatechampions.unfccc.int/*

White House. 2022. "CEQ Launches Global Net-Zero Government Initiative, Announces 18 Countries Joining U.S. to Slash Emissions from Government Operations." *https://www.whitehouse.gov/ceq/news-updates/2022/11/17/ceq-launches-global-net-zero-government-initiative-announces-18-countries-joining-u-s-to-slash-emissions-from-government-operations/*

ABOUT THE AUTHOR

Thomas Hale is a professor in public policy at the University of Oxford Blavatnik School of Government. Hale is also a 2021–2022 Kleinman Center visiting scholar.

STAY UP TO DATE WITH ALL OF OUR RESEARCH:

kleinmanenergy.upenn.edu

Kleinman Center for Energy Policy

University of Pennsylvania
Stuart Weitzman School of Design
Fisher Fine Arts Building, Suite 401
220 S. 34th St.
Philadelphia, PA 19104

P 215.898.8502
F 215.573.1650

kleinmanenergy@upenn.edu