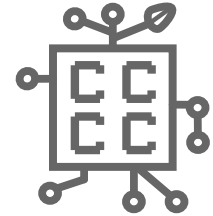


POLICY AND

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>> How Climate Policy is Guided by Tech

Computers are at the heart of climate policy. Computationally-intensive models identify the problems that policy tries to address, and computer-generated data define the means by which increasingly technical solutions are imagined to fix those problems in the broader world.

Models are an invaluable, but never neutral, tool. They can drive the formation of policy priorities and directions in ways that preclude wider political debate and ignore the social and material challenges of realizing specific futures. The role of 1.5 and 2°C targets in the 2015 Paris Agreement is a case in point. The climate modeling community could tune their models to show a pathway to these targets, but only with unprecedented and, to most, implausible amounts of [‘negative emissions’](#) (technologies to remove carbon dioxide from the atmosphere and sequester it, largely underground). Realizing this feat of geoengineering using the technology contemplated in existing models would require a landmass the size of India dedicated to creating and burning biomass with carbon capture and sequestration—a geopolitical (if not geophysical) absurdity. Yet, this key detail was largely lost on policy makers, who instead proceeded with the simple message that 1.5 and 2°C were possible. In this way, [climate modelers did more than just inform policy—they shaped it.](#)

This problem continues. Since the Paris Agreement, climate policy has often been organized around "science-based pathways" that outline specific targets and technologies by which a nation, industrial sector, or company can align its emissions profile with a 1.5 or 2°C future. The [ICT sector has its own such pathway](#), calling for a 45% reduction by 2030 in order to give industry a chance to coordinate with these goals by the end of the century. Yet, these **private sector pathways are not apolitical**. The model-derived predictions that undergird these optimistic projections often make implausible assumptions about policy outcomes, or "greenwash" complications that arise from economic growth models.

More recently, and in light of these targets, many nations have embraced industrial policy as a climate necessity, with further consequences for the role of ICT in the imagined green economies of the future. The EU Green Deal, which aims to make Europe the first ‘climate neutral continent,’ treats tech as a green growth pathway, arguing that [digital technology is key to reducing carbon emissions](#). The [Korean New Deal](#) recently committed ₩60 trillion in ICT spending alongside ₩70 trillion in green tech. In the United States, the [Inflation Reduction Act](#) (IRA) of 2022 is a landmark \$370 billion effort largely focused on advancing clean energy by subsidizing and re-nationalizing the production of renewable electricity and electric vehicles. Some question the sustainability of an ICT-centric climate policy—for

example, in 2021, the European Commission held a caucus to [confront artificial intelligence \(AI\) in the Green New Deal](#).

>> **How Tech is Guided by Climate Policy**

The business decisions and climate trajectories of big tech companies, in turn, are also shaped by policy efforts—internal and external, formal and informal. Policy debates are important areas of activist engagement and worker struggles. However, despite the upwelling of climate bills, **there is currently minimal existing legislation** (especially outside of Europe) that requires explicit climate action from the tech sector. In the United States, the largest impact governments have historically had may be as small as [setting efficiency standards for government data center procurements](#).

Nevertheless, **the mere threat of regulatory action is often effective**. Many U.S. tech companies pursued internal carbon accounting efforts in anticipation of 2009’s Waxman-Markey bill, even though the legislation ultimately did not pass. Large international corporations increasingly proactively include some form of climate monitoring and mitigation efforts in their internal management evaluations, simply because it’s easier to use a unified framework across global operations than adopt a piecemeal approach to different national requirements. In this way, small wins and ongoing struggles can have cascading effects on climate action.

Absent state action, **the tech industry continues to form its own internal standards**. Sometimes this proceeds through formal standard-setting bodies, such as the Green Software Foundation’s [proposed software carbon intensity specification](#) or the [International Telecommunication Union’s efforts](#) to establish metrics and pathways that could lead the industry towards a future compatible with the Paris Agreement. These valuable efforts produce social coordination and consensus within expert knowledge communities, but do not yet forge strong links to actual business decisions or broader citizen engagement. Additionally, internal metrics may not always measure the right thing; an emphasis on efficiency, for instance, can downplay overall trends in emissions and energy use.

Competition has also played a large role in directing sustainability efforts within the industry. From [Greenpeace’s Clicking Clean report cards](#) to the escalating carbon neutral/negative pledges from big players in the industry, external consumer perceptions and internal rivalry has led to escalating climate ambitions within ICT. Further [competition to attract tech talent](#), which is [increasingly outspoken](#) on climate issues, has intensified these concerns within management.

Yet, **without stronger policy signals, these efforts can only go so far**. As [backsliding and evasive accounting](#) threaten the credibility of current corporate climate pledges, and as the labor market in tech cools, it’s not clear that previous internal pledges of voluntary climate action will be maintained. It is also the case that existing state regulations can be bent for the industry, as seen in [exemptions to air pollution standards](#) contemplated in Virginia, where a large number of energy-intensive data centers are concentrated.

Overall, **we can’t wait for the industry to write its own rules, nor trust that they will be sufficient**. Within tech worker coalitions and the broader climate movement, we must push on both fronts for stronger internal measures and firmer external regulations.

