



Policy feedback and climate change

This briefing note is intended as a resource for decision makers and other stakeholders who aim to improve the design and implementation of climate policy.

Key points

- All policies are shaped by political discussion and debate involving many stakeholders. But once adopted, the connections do not end there – new policies feed back into society, shaping the next round of policy making.
- Policy feedback relates to the ways in which existing policies shape subsequent politics and policy-making dynamics. It can be positive (reinforcing the original policy) or negative (weakening the original policy).
- There is mounting evidence from across Europe and in the U.S. that climate policies generate many policy feedbacks.
- Policy feedback research can inform future policy designs: decision makers should craft policies that intentionally nurture positive policy feedbacks that facilitate the attainment of emission reduction goals.
- The most well-known feedbacks affect specialised interest groups. Existing research has not fully analysed the feedback effects on the general public.
- As policy makers attempt to develop ambitious new policies in ‘hard to mitigate’ sectors such as diet and domestic heating that directly involve the public, this research gap will become more salient.



Introduction

After a public policy is created, it can create policy feedback, namely: “the ways in which existing policies shape subsequent politics and policy-making dynamics”.¹ This feedback process can occur via changes in the resources available to certain actors (via a resource/incentive mechanism), and by changing the way that actors view the original policy (via an interpretive mechanism).

In simple terms, positive policy feedback strengthens a policy, increasing the likelihood of its continuation and expansion. For example, after the adoption of the EU Emissions Trading System, positive feedback strengthened its position, turning an instrument with relatively weak initial political support to one with a strong constituency of policy makers, industry, and environmental NGOs supporting its expansion.

In contrast, negative policy feedback weakens the policy that creates it, decreasing the likelihood that it will continue. For example, the EU’s first attempt to regulate car CO₂ emissions, the 1999 Voluntary Agreement with the automobile industry, was widely and increasingly seen as ineffective, leading to its dismantling and replacement by a more stringent series of regulations. In the UK, protests by the public and lorry drivers in 2000 forced the government to freeze petrol and diesel tax increases in part designed to reduce driving and consequently greenhouse gas emissions. And in 2018, the Gilets Jaunes (Yellow Vests) movement in France was sparked by increases in a carbon tax on petrol.

Most of the literature on policy feedbacks relates to social and welfare policy. The examples above illustrate the mounting academic evidence that climate policies also generate policy feedbacks, e.g., in the European Union as well as in the U.S.² In our recent book – *Durable by Design? Policy Feedback in a Changing Climate* – we explored how positive and negative policy feedback influenced policy-making dynamics in three EU climate and energy issue areas: biofuels, carbon dioxide emissions from cars, and sectors covered by the EU Emissions Trading System.

Methods

In *Durable by Design*, we examined the role of policy feedback in three EU climate and energy policy areas. We used process tracing, a method to examine ‘evidence on processes, sequences, and conjunctures of events within a case for the purpose of either developing or testing hypotheses about causal mechanisms that might causally explain the case’⁵. We combined this with counterfactual analysis, comparing the “with policy” scenario to a “no policy” scenario⁶.

Using these methods, we examined sequences of policy change extending over many decades, showing how feedback from earlier versions of a policy instrument affected later political dynamics. Our analysis drew on policy documents, media reports, and secondary academic literature between 1990 and 2018⁷.

We found that policy feedback can impact not only a given policy instrument (a regulation or voluntary agreement), but also detailed design features such as the setting of the emission standards in a regulation. For example, in the EU ETS, the instrument itself locked in because of policy feedback, but the same feedback made it difficult to reform the system as policy makers struggled with low carbon prices that were not high enough to drive decarbonisation³.

On the other hand, the voluntary agreement on car CO₂ emissions was largely seen as ineffective; it was replaced by a much more stringent regulation in 2009. Although the policy itself was weakened and replaced, its lack of durability eventually helped to increase the stringency of policy in this area. In this case, negative feedback can act as a “policy alarm” that draws attention to weaknesses in a policy instrument, spurring policy makers to respond⁴.

Climate policy feedbacks

We identified policy feedback in three important areas of climate policy:

- 1. Biofuel production:** in the early 2000s, there was a broad coalition of farmers and car producers who wanted to increase the production of biofuels in order to reduce greenhouse gas emissions. The 2003 Biofuels Directive encouraged production, but this also led to increased problems with issues such as indirect land use change, calling into question the greenhouse gas reduction benefits of biofuels made from food materials (so-called first-generation biofuels). Interpretive feedback mechanisms brought these issues to the fore and fractured the original coalition, splitting companies that wished to recoup investments in first-generation biofuels from those that wanted to sell second- and third-generation alternatives that did not rely on food crops, as well as bringing in non-governmental organisations from the environmental sector but also international development (e.g., Oxfam). In parallel, the original directive also created positive feedback by underpinning the growth of production and a nascent industry which strongly backed further policy support. The result was continued encouragement of biofuels, but with increasingly extensive rules on the sustainability of its origins and limited support for the most potentially problematic first-generation fuels.
- 2. Heavy industry:** when the ETS was first discussed in the late 1990s, it received mixed reactions from member states, the European Parliament, industry, and NGOs. Once it was operational starting in 2005, however, it triggered strong positive policy feedback as it began distributing resources through free allocation of emission allowances to industry, bringing many former opponents on board with its existence, in parallel with increasing support for the policy from NGOs and the Parliament. This strengthening of the ETS also created powerful constituencies against some attempts to make the policy more stringent by, for example, moving to greater auctioning. Once auctioning did expand after 2013, member states especially had a greater incentive to support greater stringency and therefore higher prices (and auctioning revenues). But long-standing fault lines on how to reform the system forced the EU

to balance demands for greater climate ambition with the protection of industries such as steel and cement from international competition. Consequently, the complexity of the system increased considerably.

3. Car emissions: the use of a voluntary agreement, a softer form of regulation, to limit CO₂ emissions from cars was a relative novelty of EU environmental policy when it was adopted in 1999. The automobile industry had strongly lobbied for such an agreement, but after its adoption and the failure to meet its targets, negative interpretive feedback mechanisms caused support for the approach to drop. This was followed by the policy's removal and replacement by more stringent regulations which thereafter drove political and technological change, although opposition within parts of the automobile industry to rapid electrification remains.

Recommendations for research and policy

Focus on how policy feedback influences wider publics: in our three case studies, we focused on areas where general publics were not highly involved in the policy-making process, except for the campaign against 'dirty' biofuels. However, deeper forms of decarbonisation that are commensurate with net zero will likely lead to a re-politicisation of climate policy, especially as policies impinge on difficult-to-mitigate sectors such as food/diet, consumption, and mobility. For example, the EU recently launched proposals to expand emissions trading to the housing and transport sectors. Policy makers should therefore engage more directly with publics to collaborate on the formulation of policy goals and instruments (as has already been happening with citizens' assemblies in several European countries or the EU's newly launched European Climate Pact). Researchers should also focus on how policy feedback affects publics in cases where issues are more salient to a wider audience.

Recognise the scope for actively managing policy feedback: policy actors, especially decision makers, should pay attention to the scope for feedback to occur before policy making begins. They should ask what effects policies will have on different stakeholder groups and how policy can be better designed to make it more durable, i.e., longer lasting. Feedback can be designed that both helps with decarbonisation and builds resilient coalitions for climate mitigation. In addition, many instances of policy feedback are unforeseen. Adaptive policy-making strategies are needed to identify and deal with the results.

Design policy to make it more politically durable: the issue of policy feedback is closely tied to that of creating climate policies that are durable enough to convince political and industry actors that decarbonisation is here to stay. A key goal is what we termed "active durability" – namely, designing policies in such a way that they are durable enough to be resilient and flexible enough to adapt to changing economic and political conditions⁸. In our research, we found that the EU worked across many different policy instruments and levels of governance to increase the active durability of its policies.

UK policy after Brexit

The UK is no longer a member of the EU, and now has an opportunity to create a new approach to balancing policy flexibility and durability. Many of the building blocks are already in place: a binding net-zero target, an interim target for 2035 to cut emissions by 78% and a system of carbon budget setting overseen by an independent advisory body, the Committee on Climate Change.

The UK could borrow from the EU's strategy ('active durability'), or invent its own approach, to paraphrase the futurist Alvin Toffler, of 'thinking about the big policy things while doing the small things, so that all the small things continue to go in the right direction'. Whichever approach it selects, speed is of the essence. The 2020s are a critical decade for climate change policy.

References

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7. For more details on our methods, see Jordan and Moore, 2020, pp. 52-53 and Moore and Jordan 2020, pp. 292-293.
8. See Jordan, A. & Moore, B. (2021). UK climate policy: For the long haul. *Transform*. IEMA. Available at: <https://transform.iema.net/article/uk-climate-policy-long-haul>

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