



Supply-Side crediting for accelerated decarbonization: A political economy perspective

EPRG Working Paper 2314

Cambridge Working Paper in Economics CWPE2346

Michael A. Mehling

Despite the recent proliferation of commitments to achieve net-zero emissions around the middle of the century, actual policies implemented to date have proven unable to halt or reverse the continued accumulation of greenhouse gas emissions in the atmosphere.

One reason for the lack of climate policy ambition are daunting political economy challenges that have so far impeded action at a scale and pace commensurate with pledged temperature stabilization targets. Conventional policy options that seek to curb emissions through mandates, standards or pricing distribute costs and benefits unevenly across time and space, concentrating near-term costs on a subset of articulate and highly organized stakeholder in order to secure diffuse long-term benefits for the broader public.

Inertia in the global energy system further complicates decarbonization efforts, with a large share of existing and all planned assets related to fossil fuel extraction, transportation and processing at risk of becoming stranded. Fossil fuel producers are thus incentivized to oppose or delay meaningful climate action, as they lock in future emissions with each newly commissioned asset.

A policy innovation described in the paper, supply-side crediting, can improve the political economy of climate action by offering a revenue stream for the decommissioning of fossil fuel reserves and altering the incentive structure of key stakeholders in the energy economy. Incumbent energy producers and mineral rights holders gain a financially attractive option to discontinue fossil fuel extraction, diversify their portfolios, and leverage their considerable resources and capabilities to advance decarbonization technologies.

Revenue from supply-side crediting, in turn, could accelerate the commercialization of necessary low-carbon solutions, such as carbon dioxide removal technologies, and also help address socioeconomic impacts of the energy transition. Over time, supply-side crediting could thus unlock a virtuous sequence that strengthens overall climate ambition, scales up investment in low-carbon technologies, promotes the objectives of a just transition domestically and abroad, and helps unpopular, but necessary carbon constraints such as carbon pricing become politically more viable.

The paper surveys the literature on the political economy of different types of climate policies, and also the literature on low-carbon technology innovation and diffusion. It proceeds to describe how supply-side crediting could be implemented to expand the climate policy toolbox and improve the political economy of climate action. If properly designed and governed, supply-side crediting could thus become a valuable complement to existing climate policy portfolios, and could help overcome political economy barriers that have contributed to lacking climate policy ambition in the past.

Contact	mmehling@mit.edu
Publication	June 2023
Financial Support	Ontario Teachers' Pension Plan