

Abstract

This paper examines the dynamics of innovation in low-carbon energy technologies distinguishing between research and development and technology diffusion as a response to alternative climate policies. We assess the implications of second-best policies that depart from the assumption of immediate and global participation and of full technology availability. The analysis highlights the heterogeneous effects of climate policy on different energy R&D programs and discusses the contribution of important determinants such as carbon price and policy stringency, policy credibility, policy and technological spillovers and absorptive capacity.