

# COMPLIANCE TECHNOLOGY AND SELF-ENFORCING AGREEMENTS

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**Bård Harstad**

University of Oslo, the Frisch Centre,  
and Toulouse School of Economics.

**Francesco Lancia**

University of Salerno and CSEF

**Alessia Russo**

BI Norwegian Business School

## Abstract

This paper analyzes a game in which countries repeatedly make emission and technology investment decisions. We derive the best equilibrium, i.e., the Pareto-optimal subgame-perfect equilibrium, when countries are insufficiently patient for folk theorems to be relevant. Relative to the first best, the best equilibrium requires countries to overinvest in technologies that are green, i.e., strategic substitutes for polluting, but to underinvest in adaptation and brown technologies, i.e., strategic complements to polluting. Technological transfers and spillovers might discourage investments but can be necessary to motivate compliance with emissions when countries are heterogeneous. (JEL: D86, F53, H87, Q54)

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*The editor in charge of this paper was Juuso Välimäki.*

Acknowledgments: We are particularly grateful for comments from the editor, Juuso Välimäki, and three referees, as well as Dilip Abreu, Alberto Bennardo, Sylvain Chassang, Prajit Dutta, Daniel Garcia, Marina Halac, Anirban Mitra, Francesco Nava, Francois Salanie, and Karl Schlag. We have also benefitted from audiences at Columbia, Harvard, Yale, Oslo, and UC Berkeley, and from participants at the 11th World Congress of the Econometric Society, Montreal; Workshop on Rational Expectation Equilibrium in honor of Roy Radner, Vienna; the 10th Conference on the Economics of Energy and Climate Change, Toulouse; the Annual Conference of the European Association of Environmental and Resource Economists, Helsinki; CREE Workshop for Research on Environmentally Friendly Energy, Oslo; the 37th Meeting of the Norwegian Association for Economists, Bergen. This research received funding from the European Research Council under the EU's 7th Framework Programme, ERC GA no. 283236 and 683031.

E-mail: bard.harstad@econ.uio.no (Harstad); flancia@unisa.it (Lancia); alessia.russo@bi.no (Russo)