

Agent-Based Modelling of EU Energy and Climate Policy: Investment, Uncertainty and Policy Imperfections

Chappin, E.J.L.; De Vries, Laurens

Publication date

2020

Document Version

Final published version

Citation (APA)

Chappin, E. J. L., & De Vries, L. (2020). *Agent-Based Modelling of EU Energy and Climate Policy: Investment, Uncertainty and Policy Imperfections*. Abstract from EMP-E 2020, online event. <https://www.youtube.com/watch?v=HWXevxb5DK8>

Important note

To cite this publication, please use the final published version (if applicable). Please check the document version above.

Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights. We will remove access to the work immediately and investigate your claim.



Agent-based modelling of EU energy and climate policy: investment, uncertainty and policy imperfections

*Emile J. L. Chappin¹ and Laurens J. de Vries¹

¹ Faculty Technology Policy and Management, Delft University of Technology, Delft, the Netherlands

e.j.l.chappin@tudelft.nl, l.j.devries@tudelft.nl

KEYWORDS

Agent-based modelling; Energy transition; Energy and climate policy; Energy modelling laboratory; Investment

ABSTRACT

We simulate climate and energy policy for the EU using a flexible and modular agent-based modelling approach, we named Energy Modelling Laboratory (EMLab). The agent-based model focuses on investment in power generation and studies long run effects of various interacting European energy policies, and incorporates differences between countries. On the basis of investment theory, and with the inclusion of key uncertainties, this allows us to step away from lowest cost investment paths and study more realistic investment conditions. We see this as an important complementary approach to studying scenarios for the energy transition in Europe by simulating the effects of EU's energy policy reality. We have developed modules with rich analyses of carbon and renewables policies, capacity mechanisms, investment behaviour and representation of intermittent renewables. On the basis of recent work, we present an overview of modelling results, and we show their relevance in the EU context.