



Universiteit  
Leiden  
The Netherlands

## On the emergence of the energy transition

Kraan, O.D.E.

### Citation

Kraan, O. D. E. (2019, April 25). *On the emergence of the energy transition*. Retrieved from <https://hdl.handle.net/1887/71807>

Version: Not Applicable (or Unknown)

License: [Leiden University Non-exclusive license](#)

Downloaded from: <https://hdl.handle.net/1887/71807>

**Note:** To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The following handle holds various files of this Leiden University dissertation:

<http://hdl.handle.net/1887/71807>

**Author:** Kraan, O.D.E.

**Title:** On the emergence of the energy transition

**Issue Date:** 2019-04-25

# Propositions belonging to the dissertation: “On the Emergence of the Energy Transition”

Oscar Kraan

- I. A reliance on technology alone for the future supply of the remaining demand for hydrocarbon fuels ultimately leads to a bet on solar fuels. (Chapter 3)
- II. Total Primary Energy is a misleading metric that potentially misdirects low-carbon investments based on statistical artefacts. (Chapter 4)
- III. Insights from simulation models incorporating realistic actor behaviours can improve climate change policy development. (Chapter 6)
- IV. Fully liberalised electricity markets will fail to meet deep decarbonisation targets even with strong carbon pricing. (Chapter 7)
- V. *Axelrod's* KISS principle makes modelling the art of leaving things out.  
*R. Axelrod, The Complexity of Cooperation: Agent-Based Models of Competition and Collaboration, Princeton University Press 1997*
- VI. The success of the energy transition will rely on the scrutiny of carbon accounting.  
*K. W. Steininger et al. Multiple carbon accounting to support just and effective climate policies, Nature Climate Change 6 (2016)*
- VII. In contrast to *Edmonds'* anti-simplistic approach and deliberating *Pindyck's* critique; complex models bring most insights through their simplicity.  
*B. Edmonds, S. Moss, From KISS to KIDS—an 'anti-simplistic' modelling approach, International workshop on multi-agent systems and agent-based simulation, Springer Berlin 2004*  
*R. S. Pindyck, The Use and Misuse of Models for Climate Policy, Review of Environmental Economics and Policy 11 (1) (2017).*
- VIII. Policies to reduce the plastic soup and/or stimulate a circular economy should be designed consistent with climate change policy.  
*R. Stafford, P. J. S. Jones, Viewpoint – Ocean plastic pollution: A convenient but distracting truth?, Marine Policy (2019)*
- IX. The energy transition will only succeed when it is inclusive.
- X. A dance emerges from the complex interactions of irrational decisions.
- XI. One cannot count the things that really count in life.