

Use and Abuse of Energy and Climate Scenarios – A Week of Controversy on Scenarios

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Executive summary

Motivations underlying the research

Energy and climate scenarios, and all other scenarios, are controversial, because they touch strategic issues, and also affect very basic operational discussion, such as the choice of the fuel mix, or the degree of trading between companies and nations. This article documents a controversial exchange of ideas via email between the two opponents, about energy and climate scenarios, following the Plenary Session on “Long-term Energy Scenarios at the 41st International IAEE conference in Groningen (June 12, 2018), concretely between June 16 and 22, 2018 (with the panel organizers and IAEE staff always kept in cc). One of the opponents, Michael Jefferson, contributed to the first scenario exercise by Shell, the World Energy Council, and others; the other opponent, Christian Breyer, is Professor of Solar Economy at LUT University, and focusses on scenarios with 100% renewable energies. In addition to the lively and open debate, the controversy also contains a wealth of important references to scenario analysis.

Useful references

Breyer, Christian. 2011. “The Photovoltaic Reality Ahead: Terawatt Scale Market Potential Powered by Pico to Gigawatt PV Systems and Enabled by High Learning and Growth Rates.” presented at the 26th EU PVSEC, September 5-9, Hamburg. DOI: 10.4229/26thEUPVSEC2011-6EP.1.2.

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Breyer, Christian, Otto Koskinen, and Philipp Blechinger. 2015. “Profitable Climate Change Mitigation: The Case of Greenhouse Gas Emission Reduction Benefits Enabled by Solar Photovoltaic Systems.” *Renewable and Sustainable Energy Reviews* (49:610-628). <https://doi.org/10.1016/j.rser.2015.04.061>.

Jefferson, Michael. 1983. “Economic Uncertainty and Business Decision-Making.” In *Beyond Positive Economics?*, edited by Jack Wiseman, 122-159. London: Macmillan.

Jefferson, Michael. 2012. “Shell Scenarios: What Really Happened in the 1970s and What May Be Learned for Current World Prospects.” *Technological Forecasting and Social Change* 79 (1): 186–97. <https://doi.org/10.1016/j.techfore.2011.08.007>.

Jefferson, Michael. 2016. “Energy Realities or Modelling: Which Is More Useful in a World of Internal Contradictions?” *Energy Research & Social Science* 22 (December): 1–6. <https://doi.org/10.1016/j.erss.2016.08.006>.

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