Research funding

https://doi.org/10.1038/s41558-022-01522-2

Academia–industry ties under scrutiny

Maria Sharmina

Corporate funding for academia often causes unease about the independence and integrity of such research. Now, a study shows that academia partnerships with the energy sector are more favourably inclined towards fossil fuels than to renewables.

The capture of science by corporate interests has been a concern for decades across a wide range of areas, from cigarette smoking to climate change and COVID-19. When it comes to climate change, naysayers have adopted more subtle measures over the years than an outright undermining of science[1]. Fossil fuel greenwashing is one such strategy. Methane, or natural gas, has seen its fair share of greenwashing in an anticipated 'golden age of gas'[2]. However, the impartiality of university-based research on methane and on mitigating climate change more generally has not been sufficiently investigated to date. Writing in *Nature Climate Change*, Douglas Almond and colleagues argue that academic research funded by oil and gas companies tends to treat methane more positively than renewable energy as compared with publicly funded academic research[3].

While university–industry collaborations are common, with project partners usefully sharing scientific facilities, data and expertise, concerns about trust in the university–industrial complex abound[4]. Studies on whether universities' industry-funded research is more biased towards industry views as compared to publicly funded research have so far focused on medical and life sciences[5,6]. Broader studies have explored how universities might contribute to greenwashing by pursuing 'sustainable development' league tables[7] and by promoting sustainability superficially[8], with an ensuing loss of credibility.

In general, non-profit organizations holding industry-sponsored grants tend to align their views more closely with their sponsors than non-profits without such financial links[9]. The extent to which this tendency applies to university-based energy research centres has been unclear.

Almond and colleagues help shed light on the impartiality of academic research on energy and climate change specifically. The authors analyse nearly 2,000 reports published by 26 university-based energy research centres for which funding information is available. Three of those centres are funded primarily by fossil fuel companies. Publications by these three research centres show a strong positive sentiment towards natural gas while being neutral towards renewables or other fossil fuels.

This positive sentiment aligns clearly with other attempts to portray natural gas as a bridge fuel in a low-carbon transition[2]. Such attempts have been discredited at least for high-income countries, being incompatible with the remaining carbon budget[10]. A 'carbon budget' corresponds to a limited and rapidly dwindling amount of carbon dioxide that remains to be emitted before causing dangerous levels of climate change. Burning natural gas and other fossil fuels depletes the remaining budget.

Findings by Almond and colleagues provide fresh evidence for the association between greenwashing and fossil fuel funding, extending earlier work on 'discourses of climate delay'[1]. Greenwashing is often supplemented by shifting responsibility from the production to the use of fossil fuels, whereby oil and gas companies are merely responding to consumers' demand. Another strategy, particularly applicable to natural gas, extols untested and expensive technologies that would solve the problem at some future point. For example, 'blue hydrogen' would be produced from methane, with carbon captured during the manufacturing process, resulting in 'negative' emissions. Such techno-optimism is not new and has persisted, for example, in discussions about decarbonizing the aviation industry[11], as well as in the hopes currently pinned on large-scale negative emission technologies[12].

'Discourses of climate delay' would not be so problematic if we had plenty of time for addressing climate change. As it stands, however, any delay means that the remaining carbon budget will be spent in under a decade. The urgency of the problem, the time it takes to build new energy supply infrastructures, and the long lifespan and sunk costs of existing energy infrastructures show the importance of unbiased research and action for decarbonizing our economy. Here, the contribution by Almond and colleagues is most timely. It shows that non-fossil-fuel-funded centres are more positive towards renewable energy such as solar, hydro and wind power than to methane. Their study also suggests that the positive bias by fossil-fuel-funded centres towards methane is as strong as that of the oil and gas lobby, such as that demonstrated by the American Gas Foundation.

Almond and colleagues are careful to point out that their results do not indicate causality. In other words, we cannot tell whether the fossil-fuel-funded centres have become more pro-methane after receiving funds from oil and gas companies or whether oil and gas companies have provided their grants to the centres that were originally more favourable towards methane. Paucity of information on the timing, size and conditions of industry grants limit the scope of the research and conclusions that we can draw from it. The authors of the study rightly call for more transparency on how university centres are funded.

The impartiality of academic research is essential to public trust in science-based solutions[4], particularly for complex societal problems such as climate change. Policymakers rely on evidence from a range of sources, ideally independent from each other[9], when making their decisions and so need to be aware of the nature of academia–industry links. While Douglas Almond and colleagues accept that bias can lead to industry funding just as industry funding can cause bias, a lack of transparency can only dent that trust.

Maria Sharmina
Tyndall Centre for Climate Change Research, School of Engineering, The University of Manchester, Manchester, UK.
e-mail: maria.sharmina@manchester.ac.uk

Published online: 10 November 2022

References

1. Lamb, W. F. et al. *Glob. Sustain.* **3**, e17 (2020).
2. *Golden Rules for a Golden Age of Gas* (IEA, 2013).
3. Almond, D., Du, X. & Papp, A. *Nat. Clim. Change* https://doi.org/10.1038/s41558-022-01521-3 (2022).
4. *Nature* **409**, 119 (2001).
5. Rothman, D. J. *JAMA* **299**, 695–697 (2008).
6. Triggle, D. J. *Drug Dev. Res.* **63**, 139–149 (2004).
7. Jones, D. R. *J. Organ. Change Manag.* **25**, 630–647 (2012).
8. Disterheft, A., Caeiro, S., Azeiteiro, U. M. & Leal Filho, W. in *Universities: A Way for Transition* (eds Caeiro, S., Filho, W., Jabbour, C. & Azeiteiro, U.) 3–27 (Springer, 2013).
9. Bertrand, M., Bombardini, M., Fisman, R., Hackinen, B. & Trebbi, F. *Q. J. Econ.* **136**, 2413–2465 (2021).
10. Anderson, K. & Broderick, J. *Natural Gas and Climate Change* (Univ. of Manchester, 2017).
11. Peeters, P., Higham, J., Kutzner, D., Cohen, S. & Gössling, S. *Transp. Res. D* **44**, 30–42 (2016).
12. Larkin, A., Kuriakose, J., Sharmina, M. & Anderson, K. *Clim. Policy* **18**, 690–714 (2018).

Competing interests

The author declares no competing interests.