

My journey out of fossil fuel-funded research



By Jef Caers

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Research on the energy transition needs to involve all communities and requires breaking the paradigm of traditional industry-funded research, argues Jef Caers from his personal story.

I – a professor of Earth and planetary sciences and previously professor of petroleum engineering at Stanford University – will no longer accept new funding from the fossil fuel industry.

When I entered Stanford University as an assistant professor of petroleum engineering, I had the opportunity to perform research funded entirely by the oil and gas industry. Industrial affiliate funding was essentially ‘free money’: there was no project definition, no deadline, and no deliverables. I collaborated closely with 37 oil and gas companies and met many wonderful scientists and engineers. However, eventually, this work was uprooted by personal challenges, most importantly methamphetamine addiction¹. I was hiding my sexual identity at work, given the conservative nature of the fossil fuel industry, and certainly when visiting countries where being gay was a capital offence. I worked through my many issues by creating communities that I enjoyed being part of². As the fear of being myself dissipated into the joy of opening my heart to better life choices, I started to reconsider my research focus at Stanford.

In 2015, I left the department of energy resources engineering and moved to geological sciences to shift the focus of my research from petroleum engineering to collaborating around water resources, geothermal energy, and mineral exploration. Instead of going to petroleum engineering workshops, I attended the annual meeting of the American Geophysical Union, where I experienced a diverse research community for the first time:

scholars from all walks of life working together for a common good. Still, funding by the fossil fuel industry remained a safety blanket; it is convenient and predictable. I know all too well how dependency can make the mind justify the unjustifiable. I could not justify working with companies that continue exploring new fossil fuel sources.

Before my decision to forego all new funding from the fossil fuel industry, I debated for a long time whether I should collaborate with the industry to develop climate solutions. During my involvement in the industry, I witnessed a divide between the opinions of the scientists and engineers and some executives with a disregard for the truth similar to what has been reported³. I was aware that some oil and gas companies are not quite honest about the CO₂ they are sequestering³. I listened to students of the fossil fuel-free coalition at Stanford as well as my students, who believe that research requires an ethical perspective and that impact in science includes a human dimension. However, the ultimate reason for me to decline fossil fuel funding is simple: my skills and life experience are needed much more elsewhere. Hard skills such as applying quantitative modelling, data science, and artificial intelligence to geoscience and soft skills around community organizing for a common good are key to bringing humanity to a renewable energy future while ensuring that everyone is represented.

Renewable energy is the only energy future we need to imagine. I have started an initiative – **Mineral-X** – that focuses on increasing critical mineral supplies that will enable 100% renewable energy. I didn’t want to start just another industrial affiliate program: building renewable infrastructure requires a new approach, ensuring that the new energy system that affects everyone leaves no one behind. Traditional industrial funding models cannot achieve this, as they focus primarily on

technological innovation and acceleration, leaving the human impact vague and abstract at best. Industries are but one partner in building a community; all stakeholders need to be involved: exploration and mining companies, government and non-government organizations, environmental justice groups and communities affected by mining for the energy transition. It is only collectively that we have agency in solving this century’s challenges.

Like I have in my life, I am starting over in my research and the support for this that I seek. Since making this decision, I have been amazed by the moral and financial support from those working to ensure an equitable and just critical mineral supply. I am not the only geoscientist seeking to reconcile my research with my conscience. I am hopeful, because of the many young scientists, as brilliant in their research as in their passionate advocacy for the planet we live on. I reach out to all of you, to collaborate, to build a community for a common good, wherever and whoever you are, to save our dearest Earth.

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Competing interests

The author declares no competing interests.