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When Oil and Gas Companies Go to School

Funding for university research programs by the oil and gas (O&G) industry is increasingly controversial in the United States. A 2023 *Guardian* article, for instance, described student "unease" upon learning that an Exxon employee maintained an office and teaching responsibilities at Princeton University. A 2024 bicameral congressional report, *Denial, Disinformation, and Doublespeak: Big Oil's Evolving Efforts to Avoid Accountability for Climate Change*, found that more than 80 US universities receive funding from O&G corporations, which sometimes includes the payment of hundreds of millions of dollars and can go on for decades.

In light of such investigations, many students and administrators have concluded that all engagement with O&G companies should be off limits to academic researchers. Some academic institutions have not only stopped accepting research funding; they have also divested from any financial engagement with O&G companies, including withdrawing their endowment investments. While I am firmly in agreement that we need to take decisive, rapid action to address climate change, I argue that there is no good one-size-fits-all answer to the question of whether accepting O&G funding is ethical or compatible with a university's objectives. Instead, I propose a framework that schools can use to evaluate potential research funding relationships with O&G companies in light of their own values.

Researchers, administrators, and the broader academic community are best served by a practical approach to the question of engaging with corporations in the O&G business—one that appreciates the ubiquitous role of fossil fuels in the modern world in providing low-cost energy and transportation, the urgency in addressing climate change, and the variety of ways that labs and O&G companies can engage, as well as the many types of research that are possible. It's also important to recognize the many important societal values that intersect around the O&G industry—including equity, climate change mitigation, energy availability and cost, societal resilience, and energy security.

Accepting research funding from O&G companies involves making complex trade-offs among those societal values. For example, research dedicated to helping O&G companies increase the supply of fossil fuel resources is the most controversial kind of engagement, but many people would argue that fossil fuels are an inexpensive and ubiquitous source of energy—particularly in regions where fossil fuel is extracted—and is a necessary part of an overall energy solution. Moreover, the expertise associated with fossil fuel extraction is increasingly being deployed for decarbonization efforts, such as carbon storage or geothermal energy.

Similarly, O&G companies are also investing in university research and development in areas like green hydrogen or sustainable aviation fuel production, again

FUNDING PURPOSE	EXAMPLES	CONSIDERATIONS FOR	CONSIDERATIONS AGAINST
1. Increase supply and/or decrease cost of fossil fuel resources	• High-performance computing architectures and artificial intelligence for analyzing seismic imaging data • High-temperature materials • Sensors for boreholes	• Energy security and geopolitical strategy • Locally sourced energy • Benefits of low-cost energy supply	• Accelerate climate change
2. Decrease the environmental impact of devices that process or utilize fossil fuels	• Improving membranes to increase efficiency of the hydrocarbon separations process • Reducing pollutant emissions from an industrial process • Reducing waste-heat losses	• Reduce human health-harming emissions • Decrease carbon intensity of devices using fossil fuels	• Perpetuate reliance on high-carbon energy sources
3. Develop new approaches to climate change or carbon mitigation	• Point-source carbon capture from a power plant • Extraction of CO_2 from the atmosphere • Subsurface characterization of potential CO_2 reservoirs • Climate geoengineering, such as seeding light-reflecting particles into the atmosphere	• Enable net-zero climate solutions that reduce overall cost of decarbonization	• Perpetuate reliance on high-carbon energy sources
4. Develop renewable energy sources and carriers	• Geothermal well characterization • Hydrogen production from water using solar energy • Improved wind turbine blade aerodynamics	• Corporations have deep knowledge and expertise from their work in fuels extraction and processing • All key enablers of decarbonized energy system	• Depends on context
5. Conduct techno-economic analysis, integrating cost and technology considerations with the goal of mapping financial costs and benefits of various deployment pathways	• Determining relative costs of various biofuel production pathways • Macro-energy analysis of least-cost pathways to a net zero future that would quantify the relative roles of different energy infrastructure and technologies—such as carbon capture, hydrogen, or solar energy	• Corporations are often most knowledgeable about key inputs to such models, e.g., manufacturing or scale-up costs • Could help government agencies appropriately prioritize R&D and infrastructure investments	• Corporations will be financially invested in the outcomes; they stand to lose or gain based upon the results of analyses • Possible conflicts of interest if studies are used for policy recommendations
6. Analysis of additional political, regulatory, and policy considerations	• Analysis of offshore oil permitting impacts on jobs in a particular region • Qualitative analysis of US geopolitical influence with respect to liquified natural gas exports		
7. Restricted or unrestricted gifts for university programs	• Discretionary funds for administrators • Endowed faculty chairs • STEM diversity programs • Student professional society clubs	• Provide resources for universities in hard to fund areas	• Enable industry representatives access and goodwill with undergraduate students

leveraging the deep expertise of the O&G industry in fuels processing, but toward a greener energy transition. For some observers, these societal costs and benefits warrant carefully designed partnerships, but others argue that *any* engagement with the O&G industry is inherently unethical because of the role these companies have played in climate change.

Naturally, different researchers engage with these different points of energy availability, resilience, and security in different ways. Moreover, while science can answer questions about the climate effects of putting more carbon into the atmosphere, it cannot quantify how to weight the important societal values of climate change mitigation, job stability, or energy security. Distinct academic communities, emphasizing different values, will understandably reach different conclusions about what kinds of relationships between the university and O&G industry are worthwhile or justified. The important thing is that these communities carefully examine the ramifications of those conclusions and proceed intentionally and thoughtfully.

organizations (such as Little League Baseball) that have little relationship with their core business. A university may not want to approve such corporate relationships with its community.

By clarifying the different kinds of relationships and purposes of the research, academic communities can look more carefully and specifically at individual projects and their potential contributions. They can also discuss the dangers such projects raise for conflicts of interest. For example, funding for research aimed at making the extraction of oil cheaper or faster will be controversial in many university departments, while funding for research devoted to the development of sustainable carbon-free alternative energy technologies will be less so.

Determining the purpose of an engagement—from both the university's point of view and industry's—will not necessarily settle the question of whether to embrace a project or not, but it can serve as the foundation from which to launch a constructive debate. There may even be cases where industry collaboration is essential for research progress because O&G companies hold the only

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Inherent in these considerations is that the various forms of engagement with the O&G industry can be radically different, and it is not helpful to paint all O&G engagements with the same brush. To help researchers, students, and administrators explore these funding relationships systematically, I have composed the table at left depicting a range of engagement points based on the funding purpose.

Although the trade-offs among items 1–4 are relatively straightforward, items 5 and 6 introduce additional conflict-of-interest considerations, particularly in the area of making policy recommendations, which could include government regulations or use of government funds. Managing such possible conflicts of interest is very difficult and may be impossible in some cases. And then there are more general issues of companies' building goodwill with a community, which are covered in item 7. Here, a company may support a student, faculty member, or leadership position in a university, in much the same way as companies provide grants to a broad set of societal data and expertise needed to even conduct the research. There may be others where the conflict of interest—or perceived conflict—is so great it would disqualify almost any research.

The stakes could hardly be higher. It is imperative that society moves quickly to reduce its climate impacts, but also to support marginalized communities and avoid economic or social disruption. The university research community plays a central role in that process, but it must adhere to high standards. Fostering nuanced thinking and transparent disclosure processes can help balance the pursuit of knowledge and innovation with the imperative to promote sustainability, equity, and economic opportunities for all.

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