Report of the

Committee on Funding for Energy Research and Education (CFERE)

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Glossary of Acronyms

CFERE Committee on Funding for Energy Research and Education

IAP Industrial Affiliate Programs

IARC Industrial Affiliates Review Committee

RPH Research Policy Handbook

SDSS Stanford Doerr School of Sustainability
VPDoR Vice Provost and Dean of Research

I. Executive Summary

The Committee on Funding for Energy Research and Education (CFERE) is a University committee established by Stanford's former President Marc Tessier-Lavigne in December 2022. The Committee was charged with examining the issues raised by the University's acceptance of funding from companies whose core business is the exploration, extraction, and sale of fossil fuels, particularly oil and gas. For reasons explained below, the Committee has focused particularly on Industrial Affiliate Programs (IAPs) that are recipients of such funding, especially those that are now part of the newly established Stanford Doerr School of Sustainability (SDSS).

Beginning with a petition by the student-led Coalition for a True School of Sustainability (Appendix A), which was motivated by the contribution of fossil fuels to climate change, critics of IAPs have raised concerns about IAPs' transparency and governance, and their independence from the influence of affiliated companies. Critics have also called for dissociation³ from affiliates that lack credible transition pathways for reducing greenhouse gas emissions or that have obstructed climate policy. Supporters of IAPs point to the valuable research they facilitate, including research designed to mitigate climate change, and to their protection by principles of academic freedom. The Committee sought the input of stakeholders with a wide range of views on these matters and consulted with several experts on specific issues.

IAPs bring business interests and Stanford researchers together for mutual benefit. However, IAPs have operated without sufficient university oversight. Better guardrails are needed to ensure scientific independence. Commercial imperatives—whether from fossil fuel, tech, pharmaceutical, or other business interests—can threaten Stanford's reputation and the impact of our science, even as industry partnerships present genuine opportunities for putting research into practice at the scale required to meet urgent challenges.

To protect researchers' independence from business interests, the university policies that structure these relationships should be strictly enforced. The Committee recommends that the Vice Provost and Dean of Research (VPDoR), School Deans, and IAP program directors ensure sustained adherence to the transparency and governance requirements for IAPs set out in Stanford's *Research Policy Handbook* (RPH), and that they consider whether those requirements need updating. Although our mandate was to examine research funded by fossil fuel companies, this recommendation has implications for all IAPs.

We are skeptical that dissociation based on companies' climate transition pathways could be consistent with the prohibition of institutional orthodoxy in Stanford's *Statement on Academic Freedom*. We believe, however, that work on transition pathways by Stanford researchers could

¹ In this report, fossil fuel "companies" includes trade associations for fossil fuel companies, such as the American Petroleum Institute.

² Our observations and analysis apply to other IAPs that have fossil fuel company affiliates, such as the School of Engineering's Energy Modeling Forum (https://emf.stanford.edu/), and more broadly to IAPs throughout the University.

³ That is, the elimination of financial sponsorship.

be useful to many faculty, students, and others in the field, including the companies themselves. We would therefore welcome the creation of a research working group in this area.

We are also skeptical about the University's capacity to determine whether a company has obstructed climate policies in a manner that would justify dissociation consistent with the *Statement on Academic Freedom*. However, we do not rule out the possibility of an extreme case in which, independently of any policy judgments about the nature of the company's business, a company that has consistently engaged in deliberate misrepresentation and falsification of scientific results would not be permitted to serve as an industrial affiliate.

At the same time as principles of academic freedom pose barriers to dissociation, they create an environment in which scientific inquiry can flourish, and an environment conducive to the robust debates within the University that have informed our report.

II. Background

A. Fossil Fuel Dissociation at Stanford and at Other Institutions

Global climate change is one of the most pressing issues of our time. The anthropogenic emissions of greenhouse gases, such as carbon dioxide, methane, and nitrous oxide, are major contributors to global warming. Fossil fuels (i.e., coal, oil, and natural gas) are the most significant factors in greenhouse gas emissions. Climate science has unequivocally established that an increase in the concentration of greenhouse gases in the atmosphere is associated with an increase in global average temperature. Higher concentrations of greenhouse gases in our atmosphere have had, and will continue to have, negative impacts on people and ecosystems. To mitigate the negative impacts of climate change, the world needs to transition to economic activities and energy sources that do not cause net emissions of greenhouse gases.

In the past, fossil fuel energy has spurred economic growth, lifted communities and nations out of poverty, and enabled the quality of life many of us enjoy.⁶ And even today, it provides much-needed means for economic prosperity and growth; eighty-four percent of today's global energy consumption still comes from fossil fuels.⁷ But clean energy sources (e.g., renewables like wind and solar) are ascendant. Their costs have decreased to the point that now they are often the cheapest way to provide energy in many parts of the world. Indeed, global investments in clean energy are increasing more rapidly than in fossil energy; the International Energy Agency reported that in 2023, the global investment in clean energy is about twice that of fossil fuels (about \$1.8Tr in clean energy compared to about \$1 Tr in fossil energy)⁸.

Thus, although the issues before CFERE involve relatively narrow matters of university governance, they arise in the context of the world's need to strike a balance between minimizing the consequences of climate change, on the one hand, and meeting the humanitarian and economic imperatives of energy access, especially in poor countries, on the other.

Universities have addressed these matters in various settings. Many institutions, including Stanford, have considered the question of whether to divest from fossil fuel company stocks in their investment portfolios and endowments. In 2014, Stanford's Board of Trustees announced the divestment of the University's endowment from companies whose primary business was in mining coal, a decision that withdrew investment funds from about 100 companies worldwide. In 2018, the university adopted a Statement on Investment Responsibility, which is described in

⁴ IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, doi:10.1017/9781009157896.001.

https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf

⁵ https://www.nytimes.com/interactive/2018/10/07/climate/ipcc-report-half-degree.html

 $^{^{6} \, \}underline{\text{https://www.iea.org/commentaries/the-relationship-between-growth-in-gdp-and-co2-has-loosened-it-needs-to-be-cut-completely\#}$

⁷ https://ourworldindata.org/grapher/global-primary-energy?stackMode=relative

⁸ The International Energy Agency reports that investment in clean energy in 2024 is set to be \$2 trillion, or twice the amount going to fossil fuels. https://www.iea.org/news/investment-in-clean-energy-this-year-is-set-to-be-twice-the-amount-going-to-fossil-fuels

https://www.nytimes.com/2014/05/07/education/stanford-to-purge-18-billion-endowment-of-coal-stock.html

Section E below. In 2020, the Stanford Faculty Senate and the Board of Trustees declined calls for a broader divestment from oil and natural gas companies.¹⁰

The matter of the present report, whether to reject fossil fuel company funding for research, presents a different set of issues for institutions of higher education. Several other universities have started to grapple with this issue. To the best of our knowledge, Vrije Universiteit Amsterdam in the Netherlands was the first university to adopt a general policy restricting fossil fuel funding for research. 11 At Princeton University, the Board of Trustees decided in 2021 to "dissociate from fossil fuel companies engaged in climate disinformation and those materially participating in the thermal coal and tar sands segments of the fossil fuel industry unless able to meet a rigorous standard for greenhouse gas emissions."12 A Faculty Panel on Fossil Fuel Dissociation was tasked with developing metrics, principles, and standards to support the implementation of this decision, especially the definitional challenges of identifying fossil fuel companies engaged in "climate disinformation," and those "materially participating" in thermal coal and tar sands extraction that were unable to meet a "rigorous standard" for emissions. 13 Between 2022 and 2024, Princeton dissociated its endowment and the university's research/gifts programs from 2,371 companies "active in the thermal coal or tar sands segments of the fossil fuel industry." ¹⁴ Due to concerns about feasibility as well as the "University's commitment to embracing the vigorous exchange of ideas," Princeton's Board of Trustees decided not to dissociate at that time from any additional companies based on climate disinformation.

Returning to Stanford, in the Fall of 2022 the University launched the Stanford Doerr School of Sustainability (SDSS), its first new school in 70 years. ¹⁵ Through a massive investment in faculty, student programs, and research centers, SDSS "strive[s] to create a future where humans and nature thrive in concert and in perpetuity through excellence in research, education, innovation, and service." ¹⁶

Michael Espinosa, "Noting fossil fuel industry's support of research, Faculty Senate votes against divestment, drawing criticism from students," *The Stanford Daily*, May 28, 2020, https://stanforddaily.com/2020/05/28/noting-fossil-fuel-industry-s-support-of-research-faculty-senate-votes-against-divestment-drawing-criticism-from-students/; Michael Espinosa, "Stanford will not divest from fossil fuels, Board of Trustees decides," *The Stanford Daily*, June 12, 2020, https://stanforddaily.com/2020/06/12/stanford-will-not-divest-from-fossil-fuels-board-of-trustees-decides/. https://www.unl/en/news/2023/vu-amsterdam-sets-new-course-on-behalf-of-energy-transition https://www.uva.nl/shared-content/uva/en/news/news/2023/07/climate-emergency-requires-new-policy-on-fossil-fuel-industry.html

¹² Princeton University Faculty Panel on Fossil Fuel Dissociation, "Metrics, Principles, and Standards for Dissociation from Fossil Fuels at Princeton University" (2022), p. 2.
<a href="https://fossilfueldissociation.princeton.edu/sites/g/files/toruqf2696/files/documents/Princeton_Faculty%20Panel%20Report%20on%20Dissociation%20From%20Fossil%20Fuels_Final_May%2031%202022%5B3%5D%5B97%5D.pdf

¹³ Op. cit., p. 6.

¹⁴ https://fossilfueldissociation.princeton.edu/ Only 29 of those companies had any then-current or recent financial relationship with Princeton. (ibid).

¹⁵ https://news.stanford.edu/2022/05/04/stanford-doerr-school-sustainability-universitys-first-new-school-70-years-will-accelerate-solutions-global-climate-crisis/

¹⁶ https://sustainability.stanford.edu/

The opening of SDSS led to the formation of a group called "the Coalition for a True School of Sustainability," which has advocated against research funding by fossil fuel companies. The Coalition's open letter, signed by a group of Stanford students, faculty, postdocs, staff, and alumni, urged SDSS to reject financial support from fossil fuel companies. The letter (reprinted in Appendix A) conveys the concern that fossil fuel companies' business model is inherently in conflict with the SDSS mission.

The controversy over funding by fossil fuel companies at Stanford has revealed significant tensions within our community and engendered passionate debate and media attention. We deeply appreciate the patient and respectful ways in which many diverse stakeholders have provided information and explained their positions to our committee.

B. The Work of the Committee on Funding for Energy Research and Education

Following receipt of the original open letter by the Coalition and discussions with some of its signatories, then Stanford President Marc Tessier-Lavigne created the present Committee on Funding for Energy Research and Education (CFERE) to explore and report on the issues involved for consideration by his office and the Stanford Board of Trustees. He charged the committee to:

- 1. Consider methods of defining a fossil fuel company.
- 2. Itemize, with minimal analysis and evaluation, the institutional benefits, concerns, risks, and values associated with funding from energy companies.
- 3. Inventory existing Stanford engagements with energy companies.
- 4. Review these engagements, focusing on the type of engagement, the source of funds, and the explicit and implicit terms and conditions.
- 5. Consider approaches being taken at peer institutions.
- 6. Analyze the pros and cons of Stanford's current policies and practices and of possible changes, including a categorical ban on certain funding arrangements; a case-by-case review, based on principles that respond to the benefits, concerns and risks; or heightened awareness of issues within our current policies and processes.
- 7. Consider approaches to better understand diverse viewpoints and concerns and engage the Stanford community, especially students, in thoughtful discourse to inform this discussion. The committee is particularly encouraged to consider a deliberative polling process and to suggest proposals for deliberation.

8. Identify the decision-maker (e.g., individual faculty, the Committee on Research, a dean, Office of Development, the president, the board) when conducting your analysis.¹⁷

The Committee announced its mission and solicited input from the Stanford community through advertisements in the *Stanford Report* and the *Stanford Daily*. A <u>website</u> invited comments via email and offered the opportunity to meet with interested stakeholders.

Through a series of small-group meetings, the Committee gathered comments from stakeholders including students, faculty, staff, alumni, and others. We also received more than 100 written comments from faculty, alumni, and industry representatives, and we received oral comments at three events at SDSS (described below). The co-chairs met with almost all the faculty directors of the School's IAPs. Appendix E summarizes the comments we received, which range from advocating the status quo to urging complete dissociation from fossil fuel companies.

The Committee also consulted with several subject-area experts within and beyond Stanford, including Naomi Oreskes, the Henry Charles Lea Professor of the History of Science at Harvard University, an expert on industry disinformation campaigns; Amory Lovins, co-founder of the Rocky Mountain Institute (now RMI), an expert on energy efficiency; Thomas Heller, emeritus professor at Stanford Law School and Faculty Director of the Steyer-Taylor Center for Energy Policy and Finance; and Amy Herhold, Senior Advisor, ExxonMobil Technology and Engineering Company.

Beginning in the Fall of 2023, members of the Committee entered into conversations with a group of student leaders composed of three members of the Coalition for a True School of Sustainability and three students from the Department of Energy Science and Engineering whose work is at least partly supported by fossil fuel funding. We refer to these students as the "Group of Six," or "G6." G6 issued recommendations of its own, which were published in the *Stanford Daily*, and which are reproduced in Appendix B. They recommended (1) assessing and eliminating conflicts of interest, especially by enforcing Stanford's existing policies to prevent them; (2) dissociating from any company or trade group that does not provide a credible transition plan, does not provide transparent data about its operations, is at odds with a Parisaligned transition pathway, or in the last five years has engaged in obstruction of climate policy; (3) establishing a third-party enforcement board to enforce Stanford's policies and to oversee dissociation cases, which would rely on data collected through strengthened disclosure requirements for industry partners and also create a process for reassociation of newly compliant companies; and (4) establishing a research initiative that would help evaluate fossil fuel companies' transition pathways and generate standards for greenhouse gas emissions accounting.

Conversations with G6 were exceptionally productive for our committee, and we are grateful for their time and insights. With their generous assistance, CFERE hosted and participated in discussions of the issues facing our committee at SDSS community-wide events attended by students, faculty, and staff. These events enabled dialogue and feedback across the spectrum of views on dissociation.

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¹⁷ This last item was subsequently added by Kam Moler, then the Vice Provost and Dean of Research and the transition dean of the School of Sustainability.

- 1. SDSS organized a meeting on May 31, 2023, that engaged stakeholders in framing issues for the Committee. We viewed this as a substitute for a deliberative poll of the sort mentioned in the charge to CFERE.
- 2. In collaboration with SDSS, CFERE held a meeting on February 22, 2024, to learn about and discuss in small groups the current state of evaluation of fossil fuel companies' records of interference with climate policy and their commitments to credible transitions. To kick off discussion in smaller groups with Committee members present in each group, we heard from:
 - Michael Burger, Executive Director of Columbia University's Sabin Center for Climate Change Law, which tracks litigation involving climate disinformation and related topics, and
 - Alicia Seiger and Julien Maire of SDSS's Sustainable Finance Initiative, which is developing a novel framework for assessing companies' greenhouse gas emissions.
- 3. Also in collaboration with SDSS, CFERE held a meeting on March 13, 2024, to examine the operations of the School's IAPs. Prior to discussions in smaller groups, we heard from:
- Professor David Studdert, Vice Provost and Dean of Research
- Professor Roland Horne, Thomas Davies Barrow Professor in the Stanford Doerr School of Sustainability, and Director, Precourt Institute for Energy
- Professor Hamdi Tchelepi, Chair, Department of Energy Science and Engineering and Director of the Stanford University Energy Transition Research Institute

C. The Funding of Research and Adjacent Activities at Stanford

Stanford University has three significant sources of research funding: sponsored research, gifts, and industrial affiliates programs.

Sponsored research accounts for the vast majority of external funding for research at Stanford. A sponsored research project is based on a written agreement with an external funder (the "sponsor"), which includes a detailed statement of the researcher's work, commitment to a specified project plan, a project schedule, a line-item budget, and deliverables. Although the agreement is formally between the University and the sponsor, it is the principal investigator who proposes the research topic and these other matters. Sponsored research is unequivocally protected by the principles of academic freedom described below. It is subject to the University's indirect cost charge of 55 percent.

Funding for research at Stanford also comes from **gifts**, which are defined as items of value given to the University by donors who expect no returns other than recognition and use of the gift in accordance with their wishes, as described in the gift agreement. In contrast to sponsored projects, Gifts are not subject to indirect cost charges, but only to an 8 percent

infrastructure charge. Stanford, like other universities, maintains the authority to reject gifts for a variety of reasons. ¹⁸ The need to protect the university's reputation is among such reasons.

The third means of funding research is through **industrial affiliate programs (IAPs)**, where companies (i.e., the affiliates) pay a membership fee that provides unrestricted financial support to the program for research, teaching, and administrative activities. IAPs, which were pioneered at Stanford about five decades ago, provide a mechanism for faculty and companies to explore broad research topics in areas of mutual interest. They allow Stanford researchers to gain insights into industry conditions and "real world" implementation challenges for scalable solutions to important problems. In addition to providing resources for research, IAPs support graduate students and postdocs, including some for whom no alternative funding is available. They allow participating companies to learn about "pre-competitive" research at Stanford that can spur innovation. IAPs are said to have played a role in the birth and success of Silicon Valley.¹⁹

Section 13.4 of the Research Policy Handbook (included in full in Appendix C) describes the nature of IAPs as compared to other funding streams. The relevant part of this section says:

Affiliate Programs are distinct from both gifts and sponsored research in the way Affiliates funds are treated and the benefits Affiliate Program members receive. Affiliate Programs are a "many-to-many" arrangement where multiple faculty engage with multiple companies in a forum for pre-competitive research of mutual interest. All results from Affiliate Program research are to be shared with all members and made available to the general public. Affiliate membership fees provide unrestricted income and are expended for research activities or administrative costs, at the discretion of the managing faculty.

Like gifts, fees for Affiliate Programs incur the University's infrastructure charge. [20] Unlike gifts, program members typically benefit from the Affiliate Program's annual research reviews, newsletters and organized recruiting events.²¹

Affiliate Programs differ from sponsored research in that Affiliate Programs involve no commitment to provide specific research reports, no budget or specific work plan. Because of their pre-competitive and multi-member nature, Affiliate Program membership cannot involve special rights to intellectual property. Research relationships that are more directed should be arranged through sponsored research agreements or gifts, as appropriate. ...

For several reasons, the Committee has focused on IAPs, particularly those at SDSS, rather than gifts or sponsored research. Gifts are not a significant vehicle for funding by fossil

¹⁸ See section III.B.6 below.

¹⁹ https://www.netvalley.com/silicon_valley/The_Birth_of_Silicon_Valley.html

²⁰ The current infrastructure charge is 8 percent]

²¹ Providing affiliates with preferential or early access to research results is not permitted. Rather, all results from IAP research must be "made available to members and to non-members alike in an open and timely manner." RPH Section 13.4.2.10

fuel companies. In contrast, fossil fuel affiliates of IAPs fund a substantial amount of research, as well as support graduate students at SDSS. As mentioned above, the funding and carrying out of sponsored research are highly circumscribed, and faculty independence is fiercely protected by principles of academic freedom as well as traditions of practice. In contrast, IAPs are "programs" rather than specified research projects and involve far more complex relationships with funders, including collaboration with them; accordingly, they should be subject to more administrative oversight.

There are currently 77 IAPs at Stanford University,²² with an annual funding in 2023 of \$40.1 million.²³ As shown in *Figure 1*, the School of Engineering is home to nearly half of these programs and the total funding drawn in through them, with the SSDSS representing the second-largest share. The research fields of the IAPs range widely beyond energy, including health, artificial intelligence, data science, aeronautics, astronautics, law, international security and cooperation, and transportation.

While this report focuses mainly on IAPs at SDSS, we believe that our recommendations should apply to all IAPs.

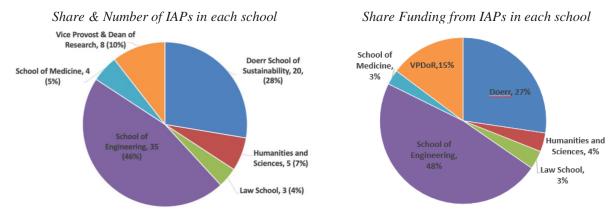


Figure 1. Number of IAPs by School (left) and share of IAP funding by School (right). Source: Figure provided by the Vice Provost & Dean of Research (FY2023).

D. Industrial Affiliates Programs at SDSS

At the outset of our work, we found it difficult to gather systematic information about the operation and funding of IAPs funded by fossil fuel companies. Through inquiries with individual IAPs and with the assistance of the Dean of SDSS, we learned that of the 77 IAPs at Stanford University, at least 13 receive funding from fossil fuel companies. Research conducted by these IAPs focuses on a wide set of energy-related topics, ranging from fossil fuel exploration and extraction (including minimizing emissions and collateral damages such as seismicity) to carbon removal and storage, to renewable energy production, including energy from geothermal

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²² https://cfr.stanford.edu/industrial-affiliate-programs

²³ Information provided by the VPDoR.

and hydrogen sources. Funding from fossil fuel companies contributes to all of these areas of research.

Based on SDSS's published data shown in Appendix D, we estimate that total annual funding for IAPs at SDSS that have at least some fossil fuel affiliates as part of their membership is about \$7.6 million, of which about \$5.5 million comes from fossil fuel companies. ²⁴ The funding levels for these IAPs and the contribution from fossil fuel companies to each vary widely. The IAPs differ considerably in their areas of focus, funding, and scale. For example, Stanford Energy Corporate Affiliates (SECA), the program with the greatest funding, encompasses four initiatives, comparable to four distinct IAPs. Only about one-third of SECA's funding comes from fossil fuel companies, with the balance coming from affiliates in government, the nonprofit sector, manufacturers, and utilities. Other IAPs receive most or all of their funding from fossil fuel companies.

A few companies—Shell Oil Company, Exxon Mobil Corporation, Chevron Corporation, and Aramco Services Companies—are members of more than one IAP. While some of the companies' funding sustains their memberships in IAPs related to oil and gas extraction, a significant amount is devoted to IAPs whose research focuses on decarbonization of the energy sector, reduction of harms from extraction processes, and development of new energy infrastructure in poor regions without reliable sources of electricity.

In meetings with the CFERE co-chairs, directors of SDSS's IAPs provided the following description of their programs' goals and operations. Many of these same representations about IAP governance were also made in a public setting on March 13, 2024, when CFERE worked with G6 to gather SDSS faculty, staff, and students to discuss the operations of the School's IAPs.

- IAPs are initiated by faculty with common academic interests based on their research, background, and expertise. The faculty then seek affiliates who they believe will be interested in those areas. These interactions typically are initiated by faculty rather than by the companies.
- A major purpose of many IAPs is to support and train graduate students through research
 fellowships. Affiliate fees are a major source of funding for foreign graduate students, for
 whom there may be no other sources of funding. For that reason, IAPs' student
 communities tend to be more diverse in terms of race, ethnicity, and national origin.
 Students often propose research ideas for the IAPs that faculty will vet, develop, and
 approve as appropriate if they further the students' knowledge of the field.
- IAP faculty directors and other associated faculty meet with representatives of industrial affiliates from time to time to discuss common interests and possible research projects. The affiliates indicate areas of interest for scientific research, and faculty discuss

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²⁴ We combined the annual funding for all IAPs shown in Appendix D that have at least one fossil fuel company in their affiliate members. (We did not examine IAPs at other schools, such as the School of Engineering, that may also receive funding from fossil fuel companies.)

²⁵ Meetings on November 17, 2023, and November 27, 2023.

particular projects of interest to them and their graduate students. All decisions to pursue research belong to faculty members. Unlike sponsored research, affiliate funds are pooled such that any given research project is not funded by any single affiliate, ²⁶ and all research directions are at the sole discretion of the faculty directors. Affiliates cannot veto or request a focus on particular projects as part of their regular membership.

- Several IAPs permit additional funding (through "research tokens") for specific thematic areas. We suggest that the Dean, VPDoR, and faculty program directors review those instances to ensure they comply with University policies.
- IAP faculty and graduate students sometimes collaborate with affiliates' senior scientists, whose (largely applied) research is directly relevant to Stanford faculty and student research. Stanford researchers and affiliates' senior scientists sometimes co-author papers. Affiliates meetings also provide a venue for scientists from different companies to share knowledge about basic (i.e., pre-competitive) scientific developments.
- In addition to the intended results of research, work by IAPs sometimes produces ancillary knowledge. For example, work on induced seismicity can also help understand earthquakes in general.

E. Academic Freedom at Stanford

Proposals that would restrict funding must be considered against the background of the University's commitment to academic freedom. This commitment is rooted in university policy documents, including Stanford's 1974 Statement on Academic Freedom, which provides:

Stanford University's central functions of teaching, learning, research, and scholarship depend upon an atmosphere in which freedom of inquiry, thought, expression, publication, and peaceable assembly are given the fullest protection. Expression of the widest range of viewpoints should be encouraged, free from institutional orthodoxy and from internal or external coercion.²⁷

That commitment is elaborated in the RPH Section 1.1.2, which applies the Statement on Academic Freedom to faculty research:

- Individual scholars should be free to select the subject matter of their research, to seek support from any source for their work, and to form their own findings and conclusions. These findings and conclusions should be available for scrutiny and criticism as required by the University's Policy on Openness in Research.
- Research techniques should not violate established professional ethics pertaining to the health, safety, privacy, and other personal rights of human beings or to the infliction of injury or pain on animals.

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²⁶ An exception may be some IAPs' use of "research tokens," discussed below.

²⁷ https://facultyhandbook.stanford.edu/index/chapter-4-core-policy-statements#statement-on-academic

• The University should foster an environment conducive to research. Where, because of limited resources, the University cannot support all research demands, it should allocate space, facilities, funds, and other resources for research programs based on the scholarly and educational merits of the proposed research, and not on speculations concerning the political or moral impropriety of the uses which might be made of its results. ²⁸

Stanford's tenets of academic freedom are undergirded by longstanding traditions of practice that afford faculty great autonomy in the research they conduct as well as the funding they seek to support it.

Two aspects of the principles of academic freedom particularly relate to the arguments for dissociation discussed below: (1) the guarantee that "individual scholars should be free to select the subject matter of their research [and] to seek support from any source for their work," and (2) the prohibition of "institutional orthodoxy."

The former principle is essentially a near-absolute protection of *sponsored research* from dissociation for reasons that take account of the nature of the research or its funder. This principle was reinforced by the Faculty Senate's 2007 rejection of a resolution to ban tobacco companies from funding University research. The proposed resolution stated that "Stanford University will not enter into sponsored research agreements with companies that make or market tobacco products." According to reporting in the *Stanford Daily*, proponents argued that the tobacco industry had leveraged university research to increase smoking, despite public health harms worldwide, and used their affiliations with universities to "legitimize" their operations. Opponents, including Stanford's then-Provost John Etchemendy, argued that the resolution would undermine academic freedom, because it could later be used to target other controversial industries or government agencies. Then-President John Hennessy specifically argued that the resolution would set a precedent that could lead to the ban of the U.S. Department of Energy, the Department of Defense, and oil companies such as BP and Exxon Mobil.²⁹ We return below to the question of its applicability to research supported by IAPs.

The prohibition of institutional orthodoxy comes into play when the rationale for dissociation embodies a decision of policy or morality that does not directly involve the University's internal affairs. Whereas the freedom to conduct research typically protects the rights of particular faculty members, the prohibition of institutional orthodoxy is designed to protect *all* members of the University community. It resembles the University of Chicago's principles of "institutional neutrality," which note that "there is no mechanism by which [a university] can reach a collective position without inhibiting that full freedom of dissent on

²⁸ https://doresearch.stanford.edu/policies/research-policy-handbook/conduct-research/principles-concerning-research

²⁹ Nick Parker, "Tobacco funding ban fails: Faculty Senate votes 21 to 10 against restrictions on research," *The Stanford Daily*, May 18, 2007,

https://archives.stanforddaily.com/2007/05/18?page=2§ion=MODSMD_ARTICLE10.

which it thrives."³⁰ The prohibition of institutional orthodoxy was recently reaffirmed by the Faculty Senate in response to an Ad Hoc University Committee on University Speech.³¹

The Stanford Board of Trustees essentially invoked the prohibition of institutional orthodoxy in response to calls to divest from fossil fuel companies. Its 2018 *Statement on Investment Responsibility* provides:

The Trustees believe that the primary mechanism through which the endowment advances social good is through its financial support of the university's academic mission. Just as the University does not take positions on partisan or political issues, the Trustees maintain a strong presumption against using the endowment as an instrument to advance any particular social or political agenda. The Trustees believe that in most cases divestment from the University's endowment is an ineffective means of exercising investment responsibility, especially in comparison to the value of encouraging the University community to engage in education, research and debate.

The mission of the university is the discovery, improvement, and dissemination of knowledge. ... To perform its mission in the society, a university must sustain an extraordinary environment of freedom of inquiry and maintain an independence from political fashions, passions, and pressures. A university, if it is to be true to its faith in intellectual inquiry, must embrace, be hospitable to, and encourage the widest diversity of views within its own community. It is a community but only for the limited, albeit great, purposes of teaching and research. It is not a club, it is not a trade association, it is not a lobby.

Since the university is a community only for these limited and distinctive purposes, it is a community which cannot take collective action on the issues of the day without endangering the conditions for its existence and effectiveness. There is no mechanism by which it can reach a collective position without inhibiting that full freedom of dissent on which it thrives. It cannot insist that all of its members favor a given view of social policy; if it takes collective action, therefore, it does so at the price of censuring any minority who do not agree with the view adopted.

³¹ "When speaking for the institution, Stanford University leaders and administrators should not express an opinion on political and social controversies, unless these matters directly affect the mission of the university or implicate its legal obligations. The Committee identified several concerns raised by such statements by administrators speaking for Stanford as an entity. First, there was concern that administrators might be inappropriately selective in which issues they chose to address, suggesting an implicit endorsement or lack thereof of certain political, religious, racial or ethnic groups. Second, there was a worry about consistency over time: one university administration might make frequent statements while a subsequent administration might eschew statements—the shift could inadvertently suggest a content-based inconsistency. Third, some statements could contradict the spirit of Stanford's 1974 Academic Freedom Statement and its effort to disclaim institutional orthodoxy. Fourth, statements made in the name of Stanford may appear to reflect a consensus of the faculty, when in fact the administration is not authorized to speak for the faculty as a whole. Fifth, by weighing into national and international politics, university administrators can fuel concerns about ideological bias, provoking distrust about the academic enterprise among the general public. Sixth, the statements on the part of administrators might chill contrary views, especially among more vulnerable members of the community who may fear retaliation if they contradict what appear to be official positions." SenD#8479, May 30, 2024. https://drive.google.com/file/d/1XWYIimLfiK2mspHKnL5okn_6fGHKB95K/view. Pp. 14-15.

³⁰ Then Dean (now Provost) Jenny Martinez cited the Chicago Principles in her March 22, 2023, letter to the Law School community:

The Trustees believe that the preservation of a community in which ideas may be freely and openly debated on their merits is central to the University's academic mission and to its assurance of academic freedom. ...

The Trustees recognize that many issues of broad social and political concern raised by members of the University community are worthy of debate and study. Consistent with the University's educational mission and its commitment to academic freedom, facilitating campus programs and processes by which these issues can be discussed and thoughtfully debated within the campus community is the most appropriate channel for most broad social and political issues to be addressed in the University context.

The Trustees recognize that very rare occasions may arise when companies' actions or inactions are so abhorrent and ethically unjustifiable as to warrant the University's dissociation from those investments. Such activities include apartheid, genocide, human trafficking, slavery, and violations of child labor laws. These instances may be reviewed on a case-by-case basis and must meet the very high bar articulated above. ³²

Stanford's prohibition of "institutional orthodoxy" is based on the inhibiting effect of statements or actions by university administrators on the faculty's freedom to express contrary positions and, more fundamentally, on the view that administrators lack authority to take positions on matters of public policy. We consider below whether dissociation of a company because it lacks credible transition pathways to reducing greenhouse gas emissions or obstructs climate policy violates this prohibition.

³² Stanford University, Statement on Investment Responsibility (2018), https://news.stanford.edu/wp-content/uploads/2022/10/stanford university statement on investment responsibility.pdf. Cf. https://fossilfueldissociation.princeton.edu/

III. The Committee's Findings

As described in Part II, the three significant sources of research funding are sponsored research (based on formal written agreements between the University and the sponsor); gifts (defined as items of value given to the University by donors who expect nothing significant of value in return); and IAPs (where companies pay a membership fee that provides unrestricted financial support to the program for research, teaching, and administrative activities).

Early in our process, CFERE focused on IAPs, which also were the focus of the critics' concerns. We excluded sponsored research from our purview because, as discussed above, such research is clearly protected from dissociation by Stanford's academic freedom policies. We did not focus on gifts, because they constitute a negligible source of research funding from fossil fuel companies.

A. The Transparency and Governance of Industrial Affiliate Programs

The Committee's inquiries elicited important questions about IAPs' operation, transparency, and compliance with University regulations. Interviews with School of Engineering and SDSS faculty (quite a few of whom are themselves involved in IAPs) indicated that many were not aware of the regulations governing IAPs, or believed the regulations were not enforced. When our committee began its work, information about IAP funding was scattered and incomplete. Some IAPs were large, relatively transparent programs with an array of faculty leaders and clear governance protocols. Others were smaller, lab-style programs, in effect run by a single faculty member. Large or small, whether in SDSS or not, all Stanford IAPs are subject to a set of regulations that the University should do more to enforce transparently and consistently. Dean Arun Majumdar has in fact begun a review of IAPs at SDSS, and the VPDoR and Dean Jennifer Widom of the School of Engineering and Dean Debra Satz of the School of Humanities and Sciences will initiate a review process for all other IAPs during the coming summer.

The Regulations Governing IAPs

Section 13.4 of the RPH (see Appendix C) describes the nature of IAPs and establishes requirements for their operations. These provide:

To safeguard the University's academic and research objectives, Industrial Affiliate Programs must be organized and maintained in ways that preserve the University's academic integrity and independence. Other principles that apply to Affiliate Programs at Stanford—as well as gifts and sponsored research—include:

- 1. Compliance with the University's Openness in Research Policy.
- 2. Publication and broad sharing of research results.
- 3. Faculty freedom to pursue research topics and methodologies of their choice.
- 4. Conformance to the University's primary mission of teaching and research.
- 5. Enrichment of the educational experience for students and postdocs.

Section 13.4 also includes Program Guidelines that state:

- 1. Approval. All new and ongoing Industrial Affiliate Programs must be approved annually by the cognizant Dean of the school or independent laboratory and the Vice Provost and Dean of Research. ...
- 2. Company Engagement. Membership in Industrial Affiliate Programs should be available equally to all companies prepared to meet the obligations of membership as set forth by each Affiliate Program, subject to constraints of the program's size and focus. ... Affiliate Programs may offer members active engagement with Stanford's research programs, relevant faculty, and students.
- 3. Program Director. Each Affiliate Program must have a faculty director, who is a voting member of the Academic Senate.[33] The director is responsible for compliance with Industrial Affiliate Program policies and guidelines.
- 4. Students and Project Participation. No Affiliate Program shall violate the rights and privileges of faculty or students or impair the education of students or restrict their subsequent career choices. ...
- 5. Class Support. Companies sometimes support University classes through an Affiliate Program. ...
- 6. Multiple Members. Each Industrial Affiliate Program must have, at a minimum, two active corporate members and two active faculty members. Programs with fewer members or faculty will be reviewed and may be deactivated.
- 7. Program Website. Each Industrial Affiliate Program must create and maintain a public website that is operational and up-to-date. The website must include, at a minimum, a description of the program's research activities, the names of current members, the program's benefits, and the cost of participation. ...
- 8. Additional Program Funding. Industrial Affiliate Programs may permit companies to provide additional funding above the membership fee to support an area of ongoing research within the program. ...
- 9. Website Link. The website for an Industrial Affiliate Program must also include a link to the Stanford University Policies for Industrial Affiliate Programs, or otherwise display the entire text of these policies on the site.
- 10. Public Access to Research Results. Principles of openness in research and dissemination of research results shall in no way be violated or abridged by interactions with member companies. Results of research activities in Affiliate Programs shall be made available to members and to non-members alike in an open and timely manner. ...
- 11. Visiting Scholars. Programs may allow members to send representatives to campus to collaborate on research with participating faculty as "Visiting Scholars." ...
- 12. Faculty Control. While member companies may offer suggestions for research activities, the faculty selects research topics and participants, and directs program research.
- 13. Agreements. When an Industrial Affiliate Program uses formal agreements to enroll companies into the Program and collect membership fees, the agreements, including any revisions, must be approved in advance by ICO [Industrial Contracts Office].

³³ We believe this means to refer to the Academic Council.

14. Visits to Member Sites. Programs may offer a site visit by faculty and students as one of the membership benefits. The purpose is to give technical presentations and discuss with the company areas of mutual interest. ...

RPH section 13.4 also specifies the procedure for establishing an industrial affiliate program. Among other things it provides: "Each program must submit an annual renewal request form to ICO by February 15 of each year in order to continue to operate as an Industrial Affiliate Program. ..."

Adherence to the Requirements of RPH 13.4

CFERE did not have the charge, resources, or access to undertake a comprehensive analysis of IAP governance at SDSS or at the University more broadly. We were not able to investigate compliance with many of the requirements the Program Guidelines and Procedures establish for creating and renewing an IAP. But at the outset of our work, in order to establish a baseline set of facts, we surveyed randomly chosen IAP websites across the University. We found that many of them do not provide the information required by RPH 13.4, such as those specified by the program guideline related to faculty program directors (no. 3 above), the minimum number of active faculty members (no. 6 above), the minimum number of industry affiliates (also no. 6 above), and website/disclosure requirements (nos. 7 and 9 above). The absence of identified faculty on an IAP website gave rise to questions involving the key requirement of faculty control (no. 12 above).

These are not trivial concerns. Indeed, the "many to many" requirement (i.e., multiple faculty, multiple affiliates)—though some sponsored research also involves multiple researchers and funders—is a core justification for IAPs' existence as a distinct, collaborative research model with richer potential than single-leader faculty labs. That distinction presumably justifies the University's exemption of IAPs from the substantial overhead charge of 55 percent that is applied to all sponsored research.³⁴

CFERE inquiries have raised the visibility of these rules, and compliance has improved even over the course of our process. To ensure IAP compliance, in February of 2024, SDSS Dean Arun Majumdar and VPDoR David Studdert announced the formation of the Industrial Affiliates Review Committee (IARC), independent of CFERE, designed "to ensure that all industrial affiliate programs in the school are conforming with university guidelines and to make recommendations for improvements in the programs and their oversight." (IARC plans to produce its own report in 2024.) In addition, to ensure compliance among the IAPs based outside SDSS, VPDoR, the School of Humanities and Sciences, and the School of Engineering are in the process of appointing a faculty-led committee that will begin its work in summer 2024. Modeled on the IARC, this group will review the remainder of the IAPs and report back to the Provost and deans during the 2024-25 academic year.

³⁴ With respect to this distinction, we suggest that the IAP directors, deans, and the Office of the VPDoR assess the role and value of "research tokens," through which affiliates may "support a particular area of program research, or the program research of a named faculty member or lab." https://hai.stanford.edu/corporate-affiliate-program

³⁵ https://sustainability.stanford.edu/news/new-committee-will-evaluate-stanford-doerr-school-sustainability-affiliate-programs

As a result of conversations with CFERE and his own commitment to improved transparency, Dean Majumdar has now committed to full and exemplary compliance with university rules for all IAPs housed at SDSS. Indeed, Dean Majumdar made an important step in the direction of transparency and compliance by posting the funding provided by each member and for each of the IAPs that are now under the umbrella of SDSS for both FY23 and FY22.

B. Considerations for and against Dissociation

In this section we discuss several different considerations that bear on IAPs' potential dissociation from some or all fossil fuel affiliates. First, however, we return to the overarching issue of the extent to which the principles of academic freedom outlined in Part II apply to research funded by IAPs, and address the question whether current University regulations permit dissociation of an IAP from a particular member (where "dissociation" includes the exclusion of a particular entity from membership at the outset).

Recall that Stanford's principles of academic freedom state that "individual scholars should be free to select the subject matter of their research, to seek support from any source for their work, and to form their own findings and conclusions."

In our view, the structure of IAPs does not compromise faculty's freedom to select the subject matter of their research and to form their own findings and conclusions. However, the freedom "to seek support from any source for their work" in context of IAPs must be understood in the context of two key provisions of RPH 13.4:

- All new and ongoing Industrial affiliate Programs *must be approved annually* by the cognizant Dean of the school or independent laboratory and the Vice Provost and Dean of Research. (Program Guideline 1)
- Affiliate membership fees provide unrestricted income and are expended for research activities or administrative costs, *at the discretion of the managing faculty*. (Introduction)

While no intermediary may reject sponsored research because of the nature of its funder, these intermediaries (VPDoR, deans, program directors) with discretionary authority lie between an IAP affiliate and a researcher. It is worth emphasizing that the decision to create and continue an affiliates program is within the discretion of the dean of the particular School in which it is situated and the VPDoR.

Thus, dissociation based on characteristics of the funder is not absolutely forbidden by principles of academic freedom. Nonetheless, certain *grounds for dissociation* may violate the Academic Freedom Statement's prohibition of institutional orthodoxy.³⁶

³⁶ One other regulatory question remains to be answered: Might dissociation of a particular IAP member for its extramural behavior violate the provision of RPH Section 13.4 that "Membership in Industrial Affiliates Programs should be available equally to all companies prepared to meet the obligations of membership as set forth by each Affiliates Program. ..."? If the program's stated "obligations of membership" include certain norms of behavior

We now turn to considerations that arguably would justify dissociation of IAPs from fossil fuel companies.

1. Is there a risk that fossil fuel funding distorts research agendas?

Work funded through IAPs includes research to make fossil fuel exploration and extraction safer or more efficient, or to develop techniques for removing greenhouse gases from the atmosphere. Based on this observation, it has been argued that the funding of research by fossil fuel companies could distort faculty's research agendas in favor of projects that facilitate or at least assume continued fossil fuel extraction. Though not denying that these are legitimate research topics, proponents of dissociation have suggested that the ready availability of fossil fuel funding attracts faculty who might otherwise engage in research on other topics, especially renewable energy.

However, dissociation for this reason would violate faculty's right to select the subject matter of their research. Also, as a practical matter, Dean Majumdar of SDSS has noted the ample funding for research on renewable resources, which is evident (to take one source) in the Precourt Institute for Energy's monthly compilation of current California Energy Commission and federal energy research funding opportunities,³⁷ and a similar compilation from VPDoR's Research Development Office.³⁸ Faculty can and do seize opportunities to fund renewable energy research through grants, gifts, or membership fees in affiliates programs dedicated to such research. For example, SDSS's most recently established IAP is Stanford Mineral-Xi, which "focuses on technological innovation needed to create a resilient mineral supply chain to achieve clean renewable energy."³⁹

Finally, we should note that *all* funded research in the university, including sponsored research, is susceptible to influence by the availability of funding. Faculty judgment—which is always the bulwark of academic ethics—is the appropriate constraint on this concern.

2. Is there a significant risk that funding from fossil fuels could compromise research integrity?

It also has been argued that the funding of energy research by fossil fuel companies, together with their interactions with faculty and students, compromises the integrity of that research and skews research findings to please corporate affiliates. The Committee met with Naomi Oreskes, an expert on this topic, and reviewed the scholarly literature indicating that

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applicable to all affiliates, we do not believe that this provision would be violated by dissociation from a member who does not satisfy those norms. Indeed, the VPDoR's 2021 decision to impose a moratorium on accepting IAP fees from the Chinese company Huawei because of possible threats to national security is an example of dissociation, albeit in an extraordinary situation, even in the absence of a stated policy.

 $[\]frac{https://doresearch.stanford.edu/announcements/stanford-university-moratorium-funding-huawei-and-affiliates}{^{37}\,E.g.,}$

 $[\]frac{https://docs.google.com/spreadsheets/d/1K8gkGzVCcPJi0}{440507330482492\&rtpof=true\&sd=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{440507330482492\&rtpof=true\&sd=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{440507330482\&rtpof=true\&sd=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{440507330482\&rtpof=true\&sd=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{440507330482\&rtpof=true\&sd=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{44050730484\&rtpof=true\&sd=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{44050730484\&rtpof=true\&sd=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{44050730484\&rtpof=true\&sd=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{44050730484\&rtpof=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{44050730484\&rtpof=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{4405070484\&rtpof=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{4405070484\&rtpof=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{4405070484\&rtpof=true} \\ \frac{8xnwSFbiP2mhiUhdBf/edit?usp=sharing\&ouid=115014}{4405070484\&rtpof=true} \\$

³⁸ E.g., https://mailchi.mp/da686ddf8033/welcome-to-the-stanford-research-development-office-newsletter-6688778?e=1afda272db

³⁹ https://mineralx.stanford.edu/mineral-xi

policy-related research funded by fossil fuel companies displays attitudes favorable to fossil fuels.

Stanford's principles of academic freedom protect individual scholars' freedom "to form their own findings and conclusions." As a corollary to its protections of academic freedom, the RPH emphasizes that they "in no way diminish, and indeed they reinforce, the individual researcher's personal responsibility to assure that the conduct of research, the sources of funding for that research, and its perceived applications are consistent with the individual researcher's judgment and conscience, and with established professional ethics." Responsibility for research integrity begins with the individual faculty, and is augmented by university, professional, and publication requirements concerning disclosure, transparency, peer review, conflict of interest, and other matters.

We should note again that the possibility of funders' influence on the outcome of research is not specific to SDSS's IAPs but is common to all IAPs in the University, and to all sponsored research as well. An assumption that research funded by corporations—or, for that matter, by governments or nonprofit organizations—biases the research in favor of the funders' interests might suggest that almost all university research is tainted. To whatever extent this is a problem, it is mitigated by researchers' acknowledgment of sources of funding in their published work.⁴¹

3. Are IAP members improperly publicizing their Stanford affiliation?

A third concern pertains to the conduct of corporate affiliates who may publicize their connections with Stanford in ways that help them represent their business in a more positive light. The policies regarding the use of the Stanford name and image are well established by the university,⁴² but more oversight from program directors and the VPDoR may be warranted to ensure that they are informed of corporate affiliates' public statements regarding their affiliation with Stanford.

4. May dissociation be based on a company's failure to develop a credible transition pathway?

The Coalition and G6 have argued that Stanford should dissociate from companies that do not have a credible Paris-aligned transition pathway for decreasing their emissions. However, making such a determination would necessarily involve the University in taking positions on matters of public policy and would thus violate the prohibition of institutional orthodoxy. Indeed, judging what constitutes a credible transition pathway presents many complex policy issues. For example, is it relevant that a company is a major supplier of energy for developing countries that lack renewable resources, or for industries essential to national security? May a company meet

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⁴⁰ Id

⁴¹ Where a journal permits, it would be desirable for articles supported by IAP funding to note the names of the affiliates and not only the name of the IAP.

⁴² https://identity.stanford.edu/visual-identity/stanford-logos/#:~:text=Stanford's%20name%20and%20logos%20are,Stanford%20to%20use%20these%20trademarks.

its obligations by purchasing offsets or by selling its assets to another company? Should the decision take into account whether a company's capital asset structure or business model plausibly permits developing a credible pathway?

The Committee learned that the UK government's Transition Planning Taskforce (TPT)⁴³ may eventually establish comprehensive benchmarks for assessing the credibility of private companies' transition plans. However, a recent paper by Stanford researchers at the Sustainable Finance Initiative criticizes previous approaches and offers a completely new approach, termed Emissions Liability Management (ELM).⁴⁴ Given the history of efforts to develop emissions metrics, it is reasonable to predict that the ELM approach will also be subject to debate and revision. The prohibition of institutional orthodoxy is designed to prevent university officials—including the president, provost, and deans—from stifling precisely this kind of debate.⁴⁵

G6's proposal that SDSS "support the creation of an initiative tasked with evaluating corporations' transition pathways and creating standards for emissions accounting" would continue the inquiry into the assessment of transition plans. We believe that this would be valuable to faculty, students, companies, and to the field as a whole.

5. May Stanford dissociate from companies that have obstructed climate policy?

The Coalition and G6 also argue that Stanford should dissociate from companies that have obstructed climate policy by downplaying or contradicting peer-reviewed climate science, lobbying against pro-climate legislation, opposing renewable energy projects, or engaging in advertising campaigns found by courts to be false or misleading. Funds from such companies might be considered to be morally tainted, and affiliation with such companies to be hypocritical or even to make the University complicit in their behavior.

Such concerns about the behavior of some fossil fuel companies are set out in the April 2024 Joint Staff Report of the U.S. Senate Committee on the Budget and the House Committee on Oversight and Accountability Democrats, "Denial, Disinformation, and Doublespeak: Big Oil's Evolving Efforts to Avoid Accountability for Climate Change." With respect to universities, the report finds that:

⁴³ https://transitiontaskforce.net/

⁴⁴ Roston, M., Seiger, A., & Heller, T. (2023). *What's Next After Carbon Accounting? Emissions Liability Management*. Oxford Open Climate Change. https://academic.oup.com/oocc/article/3/1/kgad006/7227721

⁴⁵ We should note that dissociation of affiliates based on the absence of a credible Paris-aligned transition pathway could not properly be limited to fossil fuel companies, but rather would have to apply to the corporate affiliates of *all* IAPs throughout the University, all of which generate greenhouse gas emissions. Depending on how one attributes responsibility for emissions, the contribution of fossil fuel companies are probably greater—possibly orders of magnitude greater—than those of companies in most other sectors, but that is something to be determined rather than assumed.

⁴⁶ https://www.budget.senate.gov/chairman/newsroom/press/new-joint-bicameral-staff-report-reveals-big-oils-campaign-of-climate-denial-disinformation-and-doublespeak/

The fossil fuel industry strategically partners with universities to lend an aura of credibility to its deception campaigns while also silencing opposition voices. Fossil fuel companies establish funded partnerships with academic institutions to enhance their credibility, shape academic research programs to provide studies supportive of a prolonged life for oil and gas, leverage the resulting research to their advantage, and bolster access to policymakers. New documents reveal previously unknown funding levels and show how companies condition their funding on academics' cooperation and alignment with companies' business needs.

Without doubting the legitimacy of these concerns, we believe that, to avoid policy decisions that veer into institutional orthodoxy, any decision to dissociate based on the behaviors of particular companies must be based on clear and objective criteria. The systematic propagation of "disinformation" would seem more likely to meet such criteria than "obstruction of climate policy." Disinformation, which the report of the Princeton University *Faculty Panel on Fossil Fuel Dissociation* describes as communication "with the intent to mislead," is fundamentally at odds with the university's core mission of searching for the truth, and affiliation with business interests that engage in disinformation campaigns may threaten the university's reputation. The Princeton report comprehensively addresses the question of dissociation based on disinformation. Among other things, it describes five categories of potential disinformation and considers whether a company should be barred based on its membership in a trade association that engages in disinformation campaigns. The report also includes a scorecard to evaluate evidence of disinformation by "mapping sources of data against different types of climate-claims made in company communications."

Moving from the scorecard to actual determinations of disinformation is a big step, however, and Princeton's Board of Trustees declined to implement a dissociation procedure. Paralleling Stanford's Committee on Investment Responsibility, the Board noted that "the bar for dissociation on the basis of disinformation is exceedingly high, especially in the absence of quantitative standards and in light of the University's commitment to embracing the vigorous exchange of ideas. The Board may in the future identify companies that meet this exceedingly high bar." ⁴⁸

Without predicting the outcome, our committee believes that it would be worth exploring whether it is possible to develop clear and objective standards for determining whether a company or trade association has systematically engaged in propagating disinformation.

https://fossilfueldissociation.princeton.edu/sites/g/files/toruqf2696/files/documents/Princeton_Faculty%20Panel%20Report%20on%20Dissociation%20from%20Fossil%20Fuels_Final_May%2031%202022%5B3%5D%5B97%5D.pdf. Brown University has also decided, in principle, not to associate with individuals or organizations that knowingly spread false information with the intent to deceive. See https://today.brown.edu/announcements/149790. See also https://president.brown.edu/president/enhancing-gifts-and-grants-policies. We do not know whether any gifts or grants have actually been refused under these policies.

⁴⁷ Princeton University Faculty Panel on Fossil Fuel Dissociation, "Metrics, Principles, and Standards for Dissociation from Fossil Fuels and Princeton University.

grants have actually been refused under these policies.

48 https://www.princeton.edu/news/2021/05/27/princeton-university-widens-net-zero-goals-and-lays-out-dissociation-process At the same time, the Board dissociated the University from companies involved in thermal coal and tar sands.

Litigation under statutes prohibiting false and misleading advertising⁴⁹ is a possible source both of standards and of particular determinations of misconduct. The statutory standards vary considerably, however, and much of the litigation is still in process. While legal adjudication may have promise as an objective basis of decision-making by universities, Michael Burger, Executive Director of Columbia University's Sabin Center for Climate Change Law, a leading expert on such litigation, was skeptical about whether we could create reliable screening metrics in the foreseeable future.

Under these circumstances, we believe that a productive next step would be to encourage the offering of a Law School Policy Lab⁵⁰ that would examine the applicability of litigation to the possible dissociation from particular companies.⁵¹ Among the issues that the Policy Lab should consider are the appropriate standard of culpability⁵² and the processes that should apply to a decision to dissociate, including where the loci of decision-making might lie.

6. May dissociation be based on risk to Stanford's reputation?

We have heard arguments that association with a corporate affiliate may subject the University to reputational harms that interfere with student and faculty recruitment, or even undermine the credibility of scientific research published by Stanford faculty.

Although no policy bears specifically on reputational harm created by association with an industrial affiliate, the University does have relevant guidelines concerning gifts. Chapter 4, Section 4.1.1.3. of the Stanford Administrative Guide specifies that the Board of Trustees, President, and Provost enact policies for gifts, which are then implemented by the Vice President for Development. *Stanford Giving*, a publication of the Stanford Office of Development, states:⁵³

While most gifts offered to Stanford are helpful and acceptable, Stanford does reserve the right to forgo any offered gift because (i) the source of the gift was acquired by illegal or immoral activities, (ii) restrictions proposed on the gift are overly burdensome or might compromise the independence or integrity of university research or its people, (iii) there is significant risk of damage to Stanford's reputation if the gift is accepted, (iv) the donor expects something inappropriate in return for the gift, or (v) the gift is otherwise deemed not appropriate by Stanford. ...

The academic independence and integrity of the university is critical to its mission. Gifts and conditions on gifts that might compromise the integrity, independence, accuracy, or autonomy of the work of the university and its students, faculty, or other researchers will not be accepted.

⁴⁹ See, e.g., City of New York vs. Exxon Mobil Corp., et al.; Columbia University Sabin Center, Climate Change Litigation Databases. http://climatecasechart.com/

⁵⁰ https://law.stanford.edu/education/only-at-sls/law-policy-lab/

⁵¹ It would not be difficult to identify faculty interested in offering such a course, including Paul Brest, one of CFERE's co-chairs.

⁵² Without necessarily adopting the "abhorrent and ethically unjustifiable" standard adopted by the Trustees for investment decisions, we agree with the Princeton report that the bar for dissociation on this basis should be high. ⁵³ https://giving.stanford.edu/gift-policies/

Accordingly, Stanford will reject gifts that the president and trustees believe would hinder the University's aims or injure its reputation.⁵⁴

In our view, fees paid to affiliates programs are closely analogous to gifts. Indeed (as noted above), like gifts, they are only subject to an infrastructure charge of 8 percent rather than the 55 percent indirect cost rate applied to sponsored research.⁵⁵

Like the decision to reject a gift, the decision to dissociate from an affiliate for reasons of reputational harm does not appear to create the same dangers of institutional orthodoxy as those described above. Stanford is not imposing its standards of behavior on the affiliate, but rather is making a judgment that stakeholders important to the University will think poorly of the University because of its association with that affiliate.

The Coalition has argued that collaboration between SDSS and the fossil fuel industry "threatens our school's credibility, reputation, and attractiveness for current and prospective students, staff, and faculty ... [and] threatens to erode trust in Stanford's scientific and cultural commitment to climate action." But the Committee has also heard arguments from SDSS community members that a decision by the University to *reject* fossil fuel funding would reduce faculty members' and students' autonomy in conducting research and might have negative reputational consequences.

Princeton's decision to entirely dissociate from companies active in the thermal coal or tar sands segments of the fossil fuel industry⁵⁶ may have been partly motivated by concerns about reputational harm. We do not believe that any of Stanford's principles and policies described above in this report would foreclose the relevant administrators from dissociating from affiliates if they had a credible basis for believing that the association significantly harms the University's reputation.⁵⁷

⁵⁴ See Stanford Giving: Gift Policies, https://giving.stanford.edu/gift-policies/. See also Ad Hoc Committee to Review MIT Gift Processes, Revised Final Report (December 18, 2020), which describes MIT's red- and yellow-light issues in prospective gifts. Section 10.4. https://facultygovernance.mit.edu/committee/ad-hoc-committee-review-mit-gift-processes

⁵⁵ https://giving.stanford.edu/gift-policies/

⁵⁶ https://fossilfueldissociation.princeton.edu/

⁵⁷ Perhaps no peer institution has given more systematic thought to the criteria relevant to reputational harm than MIT, which convened an ad hoc committee in the aftermath of the Institute's embarrassing acceptance of gifts from Jeffrey Epstein. https://facultygovernance.mit.edu/committee/ad-hoc-committee-review-mit-gift-processes

IV. Conclusions

This Committee's process has highlighted the complexities of Stanford's relationships with affiliate corporations. It has also led us to a deeper understanding of the significant benefits of IAPs to Stanford as well as the costs of failing to comply with the letter and spirit of university regulations.

IAPs, including those at the Stanford Doerr School of Sustainability, have added great value to faculty research, to student funding, and ultimately to the University's contributions to practical knowledge. We believe that this value will only be enhanced by ensuring compliance with the requirements of the RPH and ensuring that faculty directors have full autonomy in fact and appearance. The work of SDSS's newly formed Industrial Affiliates Review Committee could serve as a pilot for the VPDoR's University-wide effort "to ensure that all industrial affiliate programs ... are conforming with university guidelines and to make recommendations for improvements in the programs and their oversight."

As we have noted, IAPs enjoy important advantages with respect to cost burdens. They are subject only to an 8 percent infrastructure charge rather than the 55 percent indirect cost rate applied to sponsored research. This privilege is based on their many-to-many structure and on the requirement that membership fees paid by affiliates constitute unrestricted support for broadly defined areas of research. This structure is compromised where fees are designated for particular faculty members or research projects; for this reason "research tokens" should be carefully looked into. We recommend that VPDoR, SDSS, and other campus leaders ensure that IAPs are constituted and governed as required by Stanford rules.

IAPs' program directors exercise broad discretion about what research and other activities to fund. While the RPH provides that membership in an IAP "should be available equally to all companies prepared to meet the obligations of membership as set forth by each Affiliate Program," the drafters of this section likely were focused on affiliates' internal obligations involving their participation in program activities and the timely payment of fees. The RPH thus does not foreclose the possibility of an IAP imposing uniform external obligations.

The Committee has considered proposals that affiliates' obligations should include (1) establishing credible climate transition pathways and (2) refraining from disseminating disinformation about climate-related policies and practices. Assessing transition pathways would, however, require University officials to make judgments about matters for which there are no agreed-upon objective and reliable criteria. Stanford's Statement on Academic Freedom makes clear that such judgments, which will inevitably be the subject of academic controversy, must be left to individual faculty members. That said, it would benefit the field if faculty at SDSS or other schools at Stanford engaged in research aimed at improving methods for assessing companies' climate transition pathways.

In contrast, the propagation of outright misinformation about scientific results by an entity affiliated with Stanford—and recall that industrial affiliates are not merely donors, but are often active participants in programs with faculty and students—may be seen to compromise the

University's truth-seeking mission. Research, perhaps undertaken by a Law School Policy Lab, could usefully explore the possibility of developing well-defined and adjudicable criteria for this kind of conduct.

These more specific findings in this report should not obscure the bigger picture. The fossil fuel divestment movement at Stanford and elsewhere is motivated by worthy, urgent concerns. Climate change threatens innumerable harms to landscapes and species we hold dear. Disasters resulting from global warming will cause serious human hardships worldwide, harming vulnerable people and places above all. The fossil fuel industry has helped to enable unprecedented global prosperity—yet it also has a history of protecting its business interests by obscuring science concerning greenhouse gas emissions and climate change. Industry actors and trade associations have a record of disrupting the credibility of university science in the public arena and of distorting scientific facts for political ends.

The process of dialogue and debate that occasioned this report has convinced all of us on this committee that categorical, university-mandated research dissociation is not the right solution to these problems. That strategy reacts to a history of suppressing the scientific process with actions that would themselves suppress the scientific process. We are now a university with one of the world's greatest schools for the environmental sciences. It should be our university's mission to search for next-generation solutions to the climate crisis wherever our faculty and our students believe they will be found. For the foreseeable future, that search may involve fossil fuel industry data, partners, and resources.

Academic freedom is not an enemy of progress on the climate crisis. Indeed, the opposite is true. The scale and seriousness of this crisis, especially given the acute energy poverty remaining in much of the world, requires a robust and diverse community of views, actors, and tools. Academic freedom is an underpinning of good science and the translation of that science for the public interest.

People sometimes say that committees are a technique for universities to defer decisions about hard issues. But at their best, committees are a chance for a large, heterogeneous university community to talk through hard issues with care. As we wrap up this particular committee, we share our reflection that our community's deliberations have been more important than any finding in this report. We have disagreed internally on this committee. We have listened to patient and respectful disagreement among our faculty colleagues and university staff. We have admired the research, passion, and wise judgments that our students have offered on all sides of these difficult issues. Through it all, Stanford students, staff, and faculty have shown a commendable resolve to maintain productive, good-faith engagement with each other.

We are personally grateful for our community's patience, hard work, and respectful dialogue during this process. We believe that those same factors will power the next generation of energy and climate solutions.

V. The Committee on Funding for Energy Research and Education Members and Staff

The Committee's members:

Paul Brest, Co-chair (Law School)

Debra Satz, Co-chair (Philosophy and Humanities and Sciences Dean)

Michelle Anderson (Law School and SDSS)

Inês Azevedo (SDSS)

Jonathan Levin (GSB Dean, through spring 2024, when he became President-elect)

Jennifer Martinez (through summer 2023, when she became Provost)

Adam Nayak (through May 2023, when he graduated)

Narasimha Rao (through summer 2023, prior to the Committee's deliberations)

Leif Wenar (Philosophy)

The Committee was ably staffed by:

- Eeshan Chaturvedi, Graduate student in Law and E-IPER
- Ben Clark, Graduate student in Law and E-IPER
- Jennifer Faith Lee, Master's student in the Sustainability Science and Practice Coterminal Program
- Ellie Fischbacher Maldonado, Academic Operations, School of Humanities and Sciences
- Janeen Giusti, Executive Assistant, School of Humanities and Sciences

The Committee's outreach to the SDSS community was generously facilitated by G6:

- June Choi, PhD candidate in Earth System Science
- Cedric Fraces, PhD candidate in Energy Science and Engineering
- Rebecca Grekin, PhD candidate in Energy Science and Engineering
- Yannai Kashtan, PhD candidate in Earth System Science
- Wennan Long, PhD candidate in Energy Science and Engineering
- Daly Wettermark, Master's candidate in Civil and Environmental Engineering

Appendix A. Open Letter from the Coalition⁵⁸

Dear Dr. Arun Majumdar, Dean of the Stanford Doerr School of Sustainability,

Congratulations on your recent appointment as Dean of the newly established Doerr School of Sustainability. We are grateful for your leadership, vision, and career dedicated to a sustainable energy future.

The formation of this new School marks a historic opportunity for Stanford University to take a bold effort toward mitigating climate change. We believe that fossil fuel funding represents an inherent conflict of interest, is incompatible with the university's core academic and social values, and supports industry greenwashing.

We, the undersigned faculty, students, postdocs, staff, and alumni of Stanford University, therefore call for the Doerr School of Sustainability and affiliated institutions to decline funding from fossil fuel companies. Instead, the School should seek out partnerships with organizations and companies who are fully aligned with Stanford's vision of achieving carbon neutrality. We want to note that our call applies to the Doerr School of Sustainability and its affiliated institutions, not to the funding obtained by individual faculty members.

Continuing to accept funding from and collaborating with the fossil fuel industry presents a conflict of interest for the School of Sustainability, as many fossil fuel companies have a proven record of actively obscuring the scientific consensus on climate change, obstructing climate policy, and knowingly and willingly perpetuating the climate crisis. Contrary to messages promoted by the industry, the core business of fossil fuel companies remains the production and distribution of fossil fuels, and substantial diversification into clean and renewable energy https://doi.org/10.21/ collaborating with fossil fuel companies, the School endangers.its.academicintegrity. It is difficult to imagine that fossil fuel companies—whose core business model is diametrically opposed to science-led climate action—are appropriate partners for climate-related research. It is no longer reasonable, let alone ethical, for the School to maintain its ties with the industry most responsible for perpetuating the climate crisis.

Strong collaboration between the School of Sustainability and the fossil fuel industry also threatens our school's credibility, reputation, and attractiveness for current and prospective students, staff, and faculty. Though these companies present themselves as leaders in sustainability, their investments in oil and gas continue to dwarf their renewable energy investments, which represent just a small percentage of their total capital expenditure. Collaborating with these companies is <u>inimical to academic institutions' pledges for climate action</u>. Continued funding from fossil fuel companies threatens to erode trust in Stanford's scientific and cultural commitment to climate action. The research conducted at Stanford carries significant weight in the conversation around tackling the climate crisis, and the university cannot afford to lose out on the brightest talents or have its voice compromised.

⁵⁸ <u>https://www.truesustainabilityschool.com/sign-our-letter</u>

We appreciate the impacts that a change in the attitude towards fossil fuel funding will have on the Doerr School of Sustainability and its affiliated institutions. However, we believe that Stanford's location, history, and connections to the private sector will enable the School of Sustainability to forge new relations and partnerships that are aligned with its vision and values. Scientific research tells us that the window for action is closing, and we believe that as one of the world's leading academic institutions, we have a moral responsibility to act. Sincerely yours,

The undersigned faculty, students, postdocs, staff, and alumni of Stanford University.

Appendix B. Recommendations from the Group of Six

Published in The Stanford Daily

Letter to the Editor | Across diverse backgrounds, we are more aligned on how to approach Stanford's fossil fuel engagement than you might think

Oct. 5, 2023

Dear Editor,

We are a group of six graduate researchers with diverse professional backgrounds and opinions on fossil fuel companies' role in funding affiliate program research. Three of us have been actively protesting fossil fuel funding at the Doerr School. Three of us are in favor of maintaining an open dialogue with fossil fuel companies. We agree that addressing climate change is serious enough to demand a clear strategic response from the University. Working together, we have reached a consensus on recommended criteria for evaluating the sources and objectives of research funding through affiliate programs, as well as a set of actions for enforcing these criteria.

We all endorse the following recommendations and we hope that they will contribute to a university-wide decision to adopt enforceable standards for research funding provided by fossil fuel companies through affiliate groups.

In December of 2022, Stanford's Office of the President established the Committee on Funding of Energy Research and Education (CFERE), charged with "exploring and reporting on the issues raised by Stanford's accepting funding from fossil fuel companies." The committee has thus far not made any findings publicly available. We are concerned that the committee's recommendations may come too late or fail to embody the leadership that Stanford must play in the energy transition.

Our alignment on these recommendations demonstrates that stakeholders with different backgrounds and interests can find common ground rooted in our values of integrity and transparency. This work represents a model that we believe could achieve widespread support for reasonable, actionable and verifiable criteria for supporting research at Stanford. We have shared the below recommendations with the CFERE and hope they will incorporate them into their own findings. There is no cause for further delay.

Recommendations prepared and approved by: Choi, June Fraces, Cedric Grekin, Rebecca Kashtan, Yannai Long, Wennan Wettermark, Daly

Summary of recommendations for industrial affiliate programs

To take effect immediately: Review, identify and eliminate benefits to industry donors that present a direct conflict of interest. In particular, by enforcing Stanford's existing policies for industrial affiliate programs.

<u>Dissociate:</u> Eliminate financial sponsorship from any company, trade group or other organization that engages in any of the following (see below for details on each criterion):

<u>Does not provide a credible transition plan, does not provide transparent data, has plans to conduct their operations in a manner that is at odds with a <u>Paris-aligned transition</u> pathway.</u>

Establish a third-party enforcement board tasked with: Enforcing existing policies for industrial affiliate programs, including establishing consequences for any violations in line with Stanford's Code of Conduct, overseeing dissociation and future re-association processes with industry partners on a case-by-case basis. Develop a concrete timeline for the above

Disclose: Strengthen existing disclosure requirements across the University, including by writing specific guidance for conflicts of interest involving the fossil fuel industry.

Establish a transition pathways research initiative: Support the creation of an initiative tasked with evaluating partners' transition pathways and creating standards for emissions accounting.

Details for Recommendation #2:

Dissociate: Eliminate financial sponsorship from any company, trade group, or other organization that engages in any of the following:

- 1. Does not provide a credible transition plan. A credible transition includes, but is not limited to, all of the following:
 - 1. A <u>plan for diversification of assets</u>, such as increasing percentage investment (i.e., capital expenditures) for clean energy supply and end use efficiency
 - 2. <u>Net-zero emissions pathway</u> that achieves a significant reduction in absolute level of emissions and does not rely on carbon offsets
 - 3. Changes in management incentive structures, for example through <u>Key</u> Performance Incentives
- 2. Does not provide transparent data necessary to evaluate the above, including:
 - 1. Its emissions and carbon intensity of its upstream operations (Scope 1 and 2 emissions)
 - 2. Lobbying expenditures and funding of citizens groups/front groups
- 3. In the last five years, has obstructed climate policy, as evidenced by actions including, but not limited to, the following:
 - 1. Documented decisions to publicly downplay or contradict peer-reviewed climate science
 - 2. Documented lobbying against pro-climate legislation, including but not limited to, lobbying
 - 1. For a lower social cost of carbon
 - 2. For less stringent greenhouse gas emissions regulations
 - 3. Documented opposition to renewable energy projects, directly or via "astroturf" front groups (e.g., the California Drivers' Alliance)

4. A record of false or misleading advertising, as adjudicated in court decisions and/or peer-reviewed literature (for a database of court decisions, see Columbia Law School's Global Climate Change Litigation database)

Details for Recommendation #3:

Establish a third-party enforcement board: We define "third party" as a panel of Stanford affiliates, including students, who are not directly responsible for financing of industrial affiliate programs. To address conflicts of interest, any board members must disclose funding from fossil fuel companies. This board shall review existing industry partners based on the above criteria and oversee the dissociation and re-association process. This would involve:

- 1. Communicating to any violating industry partners and associated principal investigators the actions they must take in order to abide by the above criteria and provide a 60-day period for them to respond. The 60-day timeline originates from Princeton Fossil Fuel Dissociation. This serves as an example to demonstrate a concrete timeline.
- 2. Appropriately sanctioning affiliate programs who continue to receive funding from violating industry partners after the 60-day period
- 3. Establish a process by which an industry partner may re-associate (i.e., re-enter as a funder in an affiliate program) with the University if it has demonstrated compliance with the above criteria
- 4. Oversee implementation of a phase out fund to support the transition of any research programs whose operations would be impacted by dissociation

Appendix C. Research Policy Handbook. 13.4. Establishment of Industrial Affiliates and Related Membership-Supported Programs

Presents policies, principles, and procedures for the establishment and operation of membership programs designed to promote a productive relationship between Stanford and industry.

1. Introduction

Industrial Affiliate Programs offer companies an opportunity to engage with University faculty, researchers, students, and industry peers in an open environment to discuss pre-competitive research and teaching activities in a field of mutual interest. In parallel, Industrial Affiliate Programs provide faculty and students with insight into the challenges and opportunities that face industry. The membership fees paid by members provide unrestricted financial support for the Affiliate Program's research, teaching and administrative activities.

To safeguard the University's academic and research objectives, it is important that Industrial Affiliate Programs be organized and maintained in ways that preserve the University's academic integrity and independence. Other principles that apply to Affiliate Programs at Stanford—as well as gifts and sponsored research—include:

- 1. Compliance with the University's Openness in Research Policy.
- 2. Publication and broad sharing of research results.
- 3. Faculty freedom to pursue research topics and methodologies of their choice.
- 4. Conformance to the University's primary mission of teaching and research.
- 5. Enrichment of the educational experience for students and postdocs.

Affiliate Programs are distinct from both gifts and sponsored research in the way affiliates funds are treated and the benefits Affiliate Program members receive. Affiliate Programs are a "many-to-many" arrangement where multiple faculty engage with multiple companies in a forum for pre-competitive research of mutual interest. All results from Affiliate Program research are to be shared with all members and made available to the general public. Affiliate membership fees provide unrestricted income and are expended for research activities or administrative costs, at the discretion of the managing faculty.

Like gifts, fees for Affiliate Programs incur the University's infrastructure charge. Unlike gifts, program members typically benefit from the Affiliate Program's annual research reviews, newsletters and organized recruiting events.

Affiliate Programs differ from sponsored research, in that Affiliate Programs involve no commitment to provide specific research reports, no budget or specific work plan. Because of their pre-competitive and multi-member nature, Affiliate Program membership cannot involve special rights to intellectual property. Research relationships that are more directed should be arranged through sponsored research agreements or gifts, as appropriate.

2. Program Guidelines

- 1. Approval. All new and ongoing Industrial Affiliate Programs must be approved annually by the cognizant Dean of the school or independent laboratory and the Vice Provost and Dean of Research. The Dean of Research has delegated this responsibility to the Industrial Contracts Office (ICO) within the Office of Technology Licensing. Faculty who wish to establish a new Industrial Affiliate Program or to continue an existing program must complete and submit the "Request for Approval/Renewal of Affiliate Program" to their cognizant dean's office for approval. The cognizant dean's office will send the approved Request form to ICO. ICO will coordinate its review and approval of each new and ongoing industrial Affiliate Programs with the relevant school dean's office or, for the independent laboratories, the office of the Dean of Research.
- 2. Company Engagement. Membership in Industrial Affiliate Programs should be available equally to all companies prepared to meet the obligations of membership as set forth by each Affiliate Program, subject to constraints of the program's size and focus and, in rare cases, to the approval of the Vice Provost and Dean of Research. Affiliate Programs may offer members active engagement with Stanford's research programs, relevant faculty, and students.
- 3. Program Director. Each Affiliate Program must have a faculty director, who is a voting member of the Academic Senate. The director is responsible for compliance with Industrial affiliate Program policies and guidelines. Directors are accountable for program activities and assuring appropriate program expenditures.
- 4. Students and Project Participation. No Affiliate Program shall violate the rights and privileges of faculty or students or impair the education of students or restrict their subsequent career choices. Signing confidentiality agreements with one or more members is not appropriate if access to the confidential data is so centrally related to the research that a member of the research group without access to the confidential data would be unable to participate fully in all of the intellectually significant portions of the project.
- 5. Class Support. Companies sometimes support University classes through an Affiliate Program. In these cases, companies may not require completion of a project or the delivery of prototypes in a manner that could be construed as "work for hire." Students may not be required to participate in class projects that require them to sign non-disclosure agreement nor can they be excluded from the class or a class project if they do not sign a non-disclosure agreement. Students may not be excluded from participation in a class or a class project based on citizenship or other factors that would violate Stanford's Openness in Research policy.
- 6. Multiple Members. Each industrial Affiliate Program must have, at a minimum, two active corporate members and two active faculty members. Programs with fewer members or faculty will be reviewed and may be deactivated.
- 7. Program Website. Each Industrial Affiliate Program must create and maintain a public website that is operational and up-to-date. The website must include, at a minimum, a description of the program's research activities, the names of current members, the program's benefits, and the cost of participation. The website must be operational before a new Affiliate Program can be approved.
- 8. Additional Program Funding. Industrial Affiliate Programs may permit companies to provide additional funding above the membership fee to support an area of ongoing research within the program. The Affiliate Program website must contain a statement that companies may provide additional funding and state that all research results arising from

- the use of the additional funding will be shared with all program members and the general public. The website must state that an Affiliate Program member may request the additional funding be used to support a particular area of program research identified on the program's website, or the program research of a named faculty member, as long as the faculty is identified on the program website as participating in the Affiliate Program. In either instance, the director of the Affiliate Program will determine how the additional funding will be used in the program's research.
- 9. Website Link. The website for an Industrial Affiliate Program must also include a link to the Stanford University Policies for Industrial Affiliate Programs, or otherwise display the entire text of these policies on the site.
- 10. Public Access to Research Results. Principles of openness in research and dissemination of research results shall in no way be violated or abridged by interactions with member companies. Results of research activities in Affiliate Programs shall be made available to members and to non-members alike in an open and timely manner. Research results may be shared on a website as long as the general public can also gain access to those results in the same manner. Programs that provide research results to members on their websites through a password portal must provide access to the general public, as well.
- 11. Visiting Scholars. Programs may allow members to send representatives to campus to collaborate on research with participating faculty as "Visiting Scholars." The selection procedures and criteria for the Visiting Scholar must be consistent with procedures and standards applicable to other Visiting Scholars at the University. Industrial Affiliate Program visitors should not detract from University resources available to Stanford faculty or students. See the Research Policy Handbook regarding Visiting Scholars on the Dean of Research website.
- 12. Faculty Control. While member companies may offer suggestions for research activities, the faculty selects research topics and participants, and directs program research.
- 13. Agreements. When an Industrial Affiliate Program uses formal agreements to enroll companies into the Program and collect membership fees, the agreements, including any revisions, must be approved in advance by ICO.
- 14. Visits to Member Sites. Programs may offer a site visit by faculty and students as one of the membership benefits. The purpose is to give technical presentations and discuss with the company areas of mutual interest. The following conditions apply to the visit:
- a) the presentation at the member's site is the same as given to all members, and such presentations are shared with the public;
- b) the research/interactions conducted at a member's site are within the program's stated research areas on the program's website;
- c) the information, data and results of the visit are shared with all members and the public;
- d) the program's website specifically states that "the site presentations and all information, data and results arising from such visitation interactions will be shared with all members and the public"; and,
- e) no individual consulting fees are received by faculty or students for these visits.

Questions regarding the appropriateness of Stanford's interaction with a company, organization or individual should be directed to the cognizant deans and the Vice Provost and Dean of Research.

3. Procedure for Establishing an Industrial Affiliate Program

Requests to establish or to continue an Industrial Affiliate Program must be submitted using the "Request for Approval/Renewal of Affiliate Program" form to the Industrial Contracts Office, after obtaining the concurrence of the Department Chair and School Dean. Before it can access funding from members, a new or continuing Affiliate Program must be approved by ICO to operate in the current fiscal year. The request form must include:

- 1. The name of the Affiliate Program, the faculty department(s), school(s), and the name and email address of both the faculty director and the program's administrator.
- 2. The link for the Affiliate Program's website.
- 3. The purpose of the Affiliate Program. The program's purpose should include a description of its research focus and goals.
- 4. For continuing programs, the request form must provide the total income received by the Affiliate Program in the prior Stanford fiscal year. If no income is reported, an explanation must be provided.
- 5. The membership fee. If the Affiliate Program offers different membership tiers, the tiers and the cost for each tier should be identified.
- 6. For continuing programs: A list of current members. If this is fewer than two companies, an explanation and list of companies who have expressed an interest in joining the program is required.
- 7. For new Affiliate Programs, a list of companies expressing an interest in the proposed program.
- 8. Names of the faculty who participate and perform research activities under the Affiliate Program. The faculty named must meet the Principal Investigator Eligibility Policy specified in the Research Policy Handbook on the Dean of Research website.
- 9. A description of when and how research results will be made available to members and non-members. If research results are to be shared via a website, a description how members and non-members will access the research results through this website interface.
- 10. Identification of participating faculty who have another relationship with a member company and a description of the relationship (advisory board member, consultant, licensing, stock ownership, etc.). Industrial Affiliate Programs and their investigators must comply with University policies on conflicts of interest.
- 11. A copy of the proposed membership agreement, if any, or a copy of the proposed invoice for companies joining the Affiliate Program. Invoices should reference the program's website.

Annual Review

Each program must submit an annual renewal request form to ICO by February 15 of each year in order to continue to operate as an Industrial Affiliate Program. Affiliate Programs that do not

submit the completed form by February 15 will not be permitted to deposit membership fees into the program's account until the program's renewal is approved by ICO.

Appendix D. FY2023 SDSS IAP Affiliates Contributions

FY23 IAPs under SDSS with some fossil fuel membership and respective funding levels⁵⁹

IAP	thousand \$
Basin Processes and Subsurface Modeling	259
Aramco Services Company	129
ConocoPhillips	130
Natural Gas Initiative	930
American Petroleum Institute	100
Baker Hughes	35
BPX Energy	100
Chesapeake Energy Corporation	100
EQT Corporation	35
GTI Energy	75
John Crane Company	175
Kinder Morgan Inc.	100
PROMIGAS	35
Shell Oil Company	175
Smart Fields Consortium	300
Aramco Services Company	50
Chevron Oil Company	50
China National Tech. Import & Export Corp.	50
Exxon Mobil Corporation	50
Inpex Corporation	50
Tracy Energy Technologies	50
Stanford Center for Carbon Storage	500
Aemetis Advanced Fuels	100
Aramco Services Company	100
Ecopetrol	100
Exxon Mobil Corporation	200
Stanford Center for Earth Resources Forecasting	410
Chevron Corporation	60
Exxon Mobil Corporation	60
Japex Geoscience Inst	60
Kobold Metals Company	50
Oyo Corporation	60
Petroleo Brasiliero Sa	60
Repsol	60
Stan. Center for Induced & Triggered Seismicity	150
Chevron Corporation	50
Exxon Mobil Corporation	50
Shell Intl Exploration & Prod, Inc.	15
Shell Oil Company	35
Stanford Earth Sciences Algorithms & Architect.	80
Chevron Corporation	20
JX Nippon Oil & Gas Exploration	20
Petroleum Geo-Services (U.S.), Inc	20
Total American Services Inc.	20
Stanford Earth Imaging Project	715
Aramco Services Company	55
BP America Production Company	55
CGGVeritas	55
Chevron Corporation	55
China National Petroleum Corporation	55
Petroleo Brasiliero Sa	55
Petroleum Geo-Services (U.S.), Inc	55
Repsol YPF	55
Shell Oil Company	110
	55
TGS-NOPEC Geophysical Company Total E&P Recherche development	55 55

IAP	thousand \$
Stanford Rocks and Geomaterials Project	51
Aramco Services Company	51
SEUTRI-A	240
Aramco Services Company	40
Chevron Corporation	40
CNPC USA Corporation	40
OMV Austria Exploration & Production GmbH	40
Shell Intl Exploration & Prod, Inc.	40
Tracy Energy Technologies	40
SEUTRI-B	330
Chevron Corporation	60
China National Tech. Import & Export Corp.	150
Schlumberger Limited	60
Shell Intl Exploration & Prod, Inc.	60
SEUTRI-D	330
Chevron Corporation	30
China National Technical Import & Export Corp.	30
Exxon Mobil Corporation	30
Geothermal Energy Rsch	20
JAPAN CCS CO., LTD	20
Kappa North America, Inc.	30
Stanford Energy Corporate Affiliates includes	3,471
Bits&Watts, Hydrogen, StorageX, Sust. Finance	
Applied Materials, Inc.	250
Azimuth Capital Management	100
BASF Corporation	100
Central Intelligence Agency	100
Chevron Corporation	250
Electric Power Research Institute	100
	200
Exxon Mobil Corporation	200
Exxon Mobil Corporation GTI Energy	20
Exxon Mobil Corporation	
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Exxon Mobil Corporation GTI Energy Murata Mfg NEOM Origin Energy (AU – Originen)	20 200
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⁵⁹ https://drive.google.com/file/d/11dEMkcsVSxbLfET-3znxhIDvWhi9jeb9/view

Appendix E. Summary of Comments

Through a series of 10 small-group meetings, this committee heard comments from stakeholders including students, faculty, staff, alumni, and others. We also received more than 100 written comments from faculty (including almost all the faculty directors of IAPs), alumni, and industry representatives; and received comments at three events at the Stanford Doerr School of Sustainability. The following is a summary of the commentary, which ranged from advocating the status quo to urging complete dissociation from fossil fuel companies.

Maintain the Status Quo

Many commentators supported maintaining the status quo, arguing that engagement with fossil fuel companies ultimately would yield more climate-friendly results than shutting them out of the research, debates, and conversations: "We need to engage with all the companies involved in the energy sector, including companies producing and promoting fossil fuels. ... Our role is to engage, work with them and help them innovate to reduce the environmental impact." "Stanford's voice should be heard at their board meetings." Several said that because fossil fuel companies continue to play an outsized role in the energy industry, excluding them from university spaces would hamper innovation. Others said that the argument to exclude them from IAP programs takes a "too-narrow" view of the energy industry. "The notion that we can avoid these companies in our investment/research portfolio seems irresponsible ... we can impact reduction and safety by informing and working with those exact companies."

A number of people noted that funding from fossil fuel companies was put to good use at Stanford, and that there is no substitute funding for research and graduate students supported by IAP fees. Similarly, commenters pointed out that not accepting money from fossil fuel companies "will not change anything they do and will diminish Stanford's ability to generate income that can be used elsewhere."

Existing collaborations and research involving fossil fuel companies already have a track record of producing climate-friendly results, according to some commentators. "Much of this work has indeed been partially or even fully funded by oil and gas companies, many of whom also work in these areas at the same time that they produce fossil fuels." "The idea that funding from 'fossil fuel' companies is incompatible with making advances against climate change is not an idea that we can agree with."

Several commentators noted that it would be counterproductive to exclude fossil fuel companies from the benefits of research. "It would be counterproductive, both from the perspective of enabling an energy transition and from the perspective of training Stanford students to be leaders in this transition, to eliminate these connections." "It is unrealistic to believe that Stanford students and faculty can facilitate and lead the energy transition or contribute in significant ways to decreasing the carbon footprint of the current energy system, while disassociating ourselves from the major players."

Other commentators supporting the status quo stressed the continued relevance of fossil fuels. It will be "decades before fossil fuels no longer dominate our energy systems. Research into improving fossil fuel production, limiting the climate impacts of producing and using fossil fuels, and transforming our current system into a future energy system" remain relevant and "essential."

"Unless Stanford discovers a way to control China, India, and Africa, and keep them poor and hungry, the utopian goal of zero CO₂ is not achievable and research on improving current energy sources and developing new energy sources must continue apace."

One commentator noted that fossil fuel companies will remain relevant "even after the world achieves net-zero greenhouse gas emissions" because "there will remain a need for the production of hydrocarbons for petrochemicals, plastics ..." "Oil companies will continue to be dominant players in the energy system, and thus in the energy transition, for many years to come. Oil and natural gas in 2021 represented 68% of primary energy consumption in the US. Renewables represented 12.4% in total, with wind and solar combined comprising only 5.0% (latest full-year numbers from Energy Information Administration)."

A professor summed it up: "As distasteful as it may feel, we literally have no option but to keep—for the time being—using fossil fuels. Lives quite literally depend on it. Any reasonable definition of sustainability includes human prosperity, and we must work to maintain adequate living standards around the world."

Several of the commentators cited principles of academic freedom. One professor said: "I believe that banning fossil-fuel funded research at Stanford is in direct contradiction to the core principles of academic freedom adopted by the university. ... At a liberal research university ... faculty, students, postdoctoral scholars, and research staff should be free to collaborate and pursue the research that they believe will be most impactful to society even if others may object."

Furthermore, there is a slippery slope concern: A ban on funding "opens up a plethora of other possibilities that will be very difficult for the university to navigate" and advocacy groups may "seek to ban a variety of funding from other industries for what they believe are objectionable traits."

Several commentators pointed out that IAP funds have expanded and enhanced opportunities for students. One professor wrote that, because of IAP funding, he was able to obtain about double the amount he could otherwise have received from government agencies, "which meant we could support about twice as many students and postdocs, offer them more field trips and scientific meeting opportunities, and greatly enhance our laboratory and computational facilities." In addition, "Recognition of the scope and benefits of the program ... encouraged prospective graduate students with outstanding credentials to apply to our program ... [and] their accomplishments after graduation brought positive attention to Stanford University." In short, "the breadth of viewpoints, methodologies, and applications was a hallmark of our program that would have been impossible without the participation of industry scientists and engineers, and

the availability of industry data." One former student said: "The financial support derived from both federal grants as well as oil industry funding made my attendance at Stanford possible."

An ExxonMobil employee cited several reasons why collaboration between the university and his industry is a net positive for the planet: "Meeting the world's ever-growing energy demand and delivering solutions to reduce emissions at scale will require greater collaboration between industry, academia and others—not less." From 2022 to 2027, he said, "ExxonMobil plans to invest approximately \$17 billion on initiatives to reduce emissions."

A handful of comments favored maintaining fossil fuel funding, without conditions. For example: "Reservations over fossil fuel use and funding are actually [detrimental to] our country's well-being." And: "Stanford's concern about research monies from fossil fuel companies is ethically groundless."

One commentator in this group criticized the campaign to push SDSS to decline funding from fossil fuel companies, arguing that it "launched extremely aggressive and misinformative webpages (e.g., truesustainabilityschool.com), condemning Stanford groups and individuals who are involved in research projects and institutes funded in part by fossil fuel companies. The campaign paints research in extremely broad strokes and misses the nuance."

Accept Fossil Fuel Funding, but with Conditions and Safeguards; Dissociate Where Necessary

Many commentators took something of a middle ground: Stanford should accept fossil fuel funding for some research, but only under specified conditions. In particular, these commenters recommended improved measures to avoid undue influence or corruption of research, greater transparency, greater selectivity in research projects, and careful oversight of research. "In an ideal world, accepting no fossil fuel money would be best. However, it seems acceptable to accept funding to advance climate solutions *only* if there are airtight policies that prevent fossil fuel agendas from influencing education and the direction of research."

Banning all fossil fuel money is not realistic, commentators said, but "more effort should be made to ensure that this money is not corrupting the research agenda of an individual lab, school, or university." If Stanford is to receive research funding from fossil fuel companies, CFERE ought to implement measures to ensure that doing so does not jeopardize the impartiality of the research (e.g., by producing a list of faculty members who are receiving such funding to increase transparency). The Committee "should define exactly what value (if there is [any]), besides money, they can bring and what boundaries are needed to keep them from influencing research, analysis, and policy."

Some commentators suggested a dissociation filter focused on *outputs* (research purpose/focus) rather than *inputs* (research funding source). For example, one suggested that fossil fuel money should be accepted only where it can be demonstrated that the funded work is for the betterment of the planet: "It all depends on what research is being funded. If it provides more information on how to deal with the climate issue, or cleaner and less wasteful energy production etc., the financial support should be accepted."

Commenters who focused on refusing funds based on the identity of the funder (the inputs frame above) emphasized that this dissociation could be *based on past acts of disinformation*. "I suggest starting with the well-known list of major companies that knew about the anthropogenic warming effects yet hid the research and lobbied decision-makers and purposefully misled the public. Those should be automatically blacklisted (e.g., Exxon, Shell, etc.)." An alternate approach focuses more on the present or the future, as reflected here: "I'd suggest investigating the extent to which the company profits from non-renewable/polluting forms of energy, with the company's recent environmental actions (NOT commitments, words are empty without real action!) taken into consideration as mitigating factors." Another wrote: "I strongly advocate that this Committee recommend that Stanford dissociate from fossil fuel companies who do not make meaningful, measurable, and verifiable steps to comply with the Paris Climate Accord." Additionally, "the university should identify or develop a set of criteria to evaluate the climate pledges of any oil and gas company seeking a financial relationship with Stanford," and the dissociated companies "could have the opportunity to change their actions to align them with the Paris Accord and regain access to all that Stanford has to offer them."

Some among these commenters stressed that refusing fossil fuel funding did not necessarily mean barring research opportunities or collaborations. "It is fine for the school to collaborate with fossil fuel companies (to help them chart a different future), but it should not take money from them." Another idea for minimizing conflicts of interest was to suggest that fossil fuel funded research could perhaps continue at Stanford, but not within the Stanford Doerr School. "Accepting fossil fuel funding does not make sense within the context of a 'sustainability' school given the unsustainable nature of fossil fuel use," said one. Another said: "It is an embarrassing non sequitur for a 'School of Sustainability' to take fossil fuel funding—use of fossil fuels is the most significant non-sustainable practice there is! ... It was organizationally unsound to sweep all of the former School of Earth Sciences into a School of Sustainability. There should be a place for petroleum and mining engineers at Stanford, but it cannot be in a 'Sustainability' school." IAPs who accept such funds, other commenters recommended, could be separated out from the rest of SDSS in some way.

Advocates for dissociation based on inputs acknowledged some challenges in doing so. For example, defining what qualifies as a fossil fuel company is challenging, said one commentator. "As the energy landscape evolves, defining a fossil fuel company in strict terms is becoming increasingly challenging. This complexity underscores the importance of considering a company's entire energy portfolio rather than relying on a single label when evaluating its environmental impact and alignment with global sustainability goals."

Some commentators said the university should engage in *a cost-benefit analysis* of such research funds overall by weighing the benefits of taking research funds against public relations implications. "Please add to your list of things to consider the question whether or not Stanford's participation in any particular relationship with a fossil fuel company provides that company with public relations benefits ('greenwashing'), and—if so—are the benefits Stanford and the environment receive from that relationship commensurate with the public relations benefits the corporation receives?" Another commenter argued: "We can decide to subject industry partners to strict vetting before accepting their money. This evaluation process should be transparent and

should regularly reassess partners. ... Such strict criteria will signify actual climate-alignment from partners that work with us."

A number of commentators focused on *transparency*. One said: "If individual faculty members chose to take funding, a list of such faculty members and the funding source and amount should be published publicly so it is truly transparent who is taking such funding." "There ought to be more transparent and in-person avenues (such as a public hall meeting) to discuss this topic with the larger Stanford community and to receive feedback."

Other commentators said the university should implement more robust measures to oversee engagement with the fossil fuel industry to guard against *conflicts of interest*, including by strengthening "existing disclosure agreements across the university, including by writing specific guidance for conflicts of interest involving the fossil fuel industry."

Dissociate from Fossil Fuel Funding

Many commentators fell more firmly on the side of advocating cutting all or most research and financial support ties with fossil fuel companies. Most of these comments stressed moral and scientific integrity, the need for the university to lead by example, concerns over conflicts of interest, and the university's reputation. "We cannot set aside our stated core values for monetary interests and be viewed with integrity. ... [G]lobally we are in the top 1%, we can invest in mitigation and resiliency and make repairs to damaged infrastructure. ... Activities like [accepting fossil fuel money] erode public trust and undermine efforts to build a more just and sustainable society."

Many other comments echoed these sentiments. "By allowing the fossil-fuel companies to support research, Stanford is selling its brand in exchange for research funding. ... By accepting their money, we are complicit and are supporting the moral atrocities they commit." Also: "Stanford has a responsibility as a world leader and an educational institution founded on truth to invest on behalf of its community in socially and environmentally responsible ways which includes divesting from fossil fuel companies and funding." Another noted: "Several universities in the U.S. and abroad, such as Princeton and the university of Amsterdam, have arrived at concrete dissociation criteria for fossil fuel companies, so we know this is possible."

Other commentators stressed the potential for conflict of interest, both real and perceived. "Partnering with fossil fuel companies is clearly a conflict of interest and puts graduate students who are morally against taking this funding but are in the sustainability school in a terrible position." Also: "The credibility of research that is funded in this way is deeply undercut by even the appearance of a conflict of interest, which I think is irresponsible for such an urgent and vital area of inquiry." "Stanford, and especially SDSS, cannot and should not accept funding from fossil fuel companies that not only directly caused the crisis we are all working on solving, but knowingly tried to hide this fact from the public for decades. Our scientific credibility and leadership authenticity hinges on this crucial point."

A professor noted: "Directly and indirectly, the priorities of funders shape the kinds of research we pursue and the way we frame our results." Additionally, "the public recognizes the power of these real and perceived conflicts of interests, which undermine public confidence in science and scientists." One commenter wrote: "It is so demoralizing to know that my university, my school, is actively collaborating with, taking money from, and burnishing the image of the very same companies that pay to malign my and my colleagues' work."

Furthermore, the funding is arguably not even necessary due to other current or potential sources of money, argued some commentators: "With the billions of dollars in gifts and the transformational levels of resources and energy that SDSS has received at Stanford, there is no reason that our researchers and educators should be beholden to fossil fuel companies any longer." Another said: "Stanford is one of the most well-resourced universities on the globe and claims that eliminating fossil fuel funding is impractical strikes me as either a lame excuse from an entity that has already been captured by fossil fuel interests (thus proving that the funding is persuasive) or a shameful lack of moral imagination."

While commentators advocating for the status quo said that fossil fuel funds greatly expand opportunities for more graduate students and more research opportunities, those on the side of dissociation argued that the reputational harm brought by accepting research funds from fossil fuel companies would cause students to choose other schools over Stanford. "Stanford's acceptance of fossil fuel funding stands contrary to the values held by potential student and faculty members and may thus result in the loss of quality human capital."

One student said: "If I had known that Stanford takes millions of dollars in fossil fuel money to fund greenwashed 'sustainability' research, I would have turned down Stanford's offer, gone to one of the many universities that have taken steps to cut off fossil fuel funding (such as Oxford or Princeton) and been a happier, more productive graduate student."

Others commented that reputational harm was a concern that extends beyond students. A University of California, Irvine, professor indicated that he "considered not speaking at Stanford's environmental justice conference due to Stanford's fossil-fuel funding. Also: "Naomi Oreskes declined to speak for the Doerr School last year but spoke for the Coalition for a True School of Sustainability about the harms of fossil research funding instead."

Many of the commentators stressed that Stanford could make a strong statement by declining fossil fuel research funds. "We can make a bold statement to the world about the urgency of transitioning away from fossil fuels or we can make ourselves symbols of complacency and corporate thinking." Another said: "Stanford should be a leader, not a follower, and use its investment programs, buying power, and reputation to get itself and others off of fossil fuels, refuse funding by fossil fuel companies and lobbies, and put resources to work for non-carbon-based energy."

Some comments conveyed the anxiety and pressure that students feel about climate change in their future and the ways that fossil fuel funding at SDSS undermines their attachment to the school and stresses their mental health: "Stanford's acceptance of fossil fuel funding makes members of Stanford's community (many of whom have little control over the sources funding

their research) uncomfortable, posing negative consequences for their mental health, motivation, and well-being." A PhD candidate said: "The announcement that the new school would take fossil fuel funding was very upsetting to hear and made me very emotional and frustrated for a few days following the news. This made me question whether Stanford was still a good fit for me."

A university alum who received his PhD at Stanford pointed to his personal experience working for oil and gas companies for more than 30 years. "My services were a cost to the companies and were tolerated but not embraced. I was told that my teams' work was a necessity of their social license to operate, and we were to do no more than was legally required. It is from that perspective that I view with great skepticism and little faith the claims and promises that these companies are working toward compliance with the Paris Climate Accord."