

Fossil-Fuelled Universities

A call for universities to end links with the fossil fuel industry.



STUDENTS FOR A FOSSIL FREE FUTURE





ABOUT US

Students for a Fossil Free Future (S4F) was formed to hold our universities accountable for their role in the climate crisis and their capacity to address it. We are an **inter-university, student-led campaign**. We urge Singaporean universities to **critically reassess and transition away from their current associations with the fossil fuel industry, and work towards a more just and livable future for all**. We are inspired by the global Fossil Free movement to end the age of fossil fuels and build a world of community-led renewable energy.

Our team consists of students from **four local universities**: NUS/Yale-NUS, NTU, SMU, SUTD. Since 2017, student groups in Yale-NUS, NUS, and NTU have been engaging our respective institutions about fossil fuel divestment. Fossil Free Yale-NUS (FFYNC) has been engaging the Yale-NUS administration since 2017. Both FFYNC and Students Taking Action for NUS to Divest (STAND) have been engaging the NUS administration since 2019. NTU Divest has been doing the same in NTU since early 2020. Given the rate of progress, however, we believe that greater awareness on the part of all stakeholders is necessary to incentivise university leaders to make this urgent transition.

In this report, we have sought to provide an overview of the partnerships and affiliations that exist between our universities and the fossil fuel industry. Uncritical institutional support enables the industry to continue operating in a manner that is **fundamentally unsustainable**. As **our universities are forward-looking, value-driven, and on the cutting edge of scientific and social research**, we believe that this cannot continue. This report aims to move universities to critically reassess their links with the fuel industry. We hope that universities will transition away from associations with this industry, and instead **lead the just transition towards a low-carbon economy**.

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ACKNOWLEDGEMENTS

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Additionally, there are over 30 contributors who chose to remain anonymous. Many contributors preferred to remain anonymous because involvement in this campaign could impact their livelihoods or positions within their universities, an unfortunate reality of the current socio-political climate. Nonetheless, we are eternally grateful to all contributors for the countless hours they put into writing, reviewing, editing, and illustrating the report.

ABBREVIATIONS

FFYNC	Fossil Free Yale-NUS
IPCC	Intergovernmental Panel on Climate Change
NP	Ngee Ann Polytechnic
NTU	Nanyang Technological University
NUS	National University of Singapore
S4F	Students for a Fossil Free Future
SIM	Singapore Institute of Management
SIT	Singapore Institute of Technology
SMU	Singapore Management University
SP	Singapore Polytechnic
STAND	Students Taking Action for NUS to Divest
SUTD	Singapore University of Technology and Design

EXECUTIVE SUMMARY

The fossil fuel industry has a significant presence in local universities, including the following: associations with university Boards of Trustees, funding for academic research and positions, donations to school programs, scholarships for students, and access to campus spaces. Because of this, we believe local universities have inadvertently become a component in fossil fuel companies' rebranding efforts, which may delay the necessary post-carbon transition. Furthermore, through scholarships, recruitment, and academic funding, universities produce a pipeline of talent and technology for the fossil fuel industry. As the climate crisis becomes increasingly severe, posing a dire threat to the futures of our universities' students, these associations become increasingly questionable. A summary of the key associations can be found in the following list, which will be elaborated upon later in this report.



FINANCE & MANAGEMENT

By investing in the fossil fuel industry, universities may convey support for the industry and confidence in its long-term viability. By accepting donations from and having senior leaders with connections to the industry, universities may open themselves to influence from fossil fuel companies.

-

■ NUS

 - A "low single digit" percentage of endowment is currently indirectly invested in fossil fuels. This means that at least S\$59 million of the endowment is invested in fossil fuels.
 - One member of the board was a senior leader in a fossil fuel company.

.....
- NTU

 - An undisclosed percentage of endowment is currently indirectly invested in fossil fuels.
 - Two members of the board were senior leaders in fossil fuel companies.

.....
- SMU

 - It is undisclosed whether the endowment is invested in fossil fuels.
 - By 2021, Emirates National Oil Company LCC had donated over S\$1m to SMU.¹
 - Swiss Singapore Overseas Enterprise and Shell International Eastern Trading Company each donated over S\$500,000 to SMU.²
 - One member of the board was a senior leader in a fossil fuel company.

.....
- SUTD

 - It is undisclosed whether the endowment is invested in fossil fuels.
 - One member of the board was a senior leader in a fossil fuel company.

.....
- SIM

 - It is undisclosed whether the endowment is invested in fossil fuels.
 - One member of the board is currently a senior leader in a fossil fuel company.

■ SIT • It is undisclosed whether the endowment is invested in fossil fuels.

■ YALE-NUS • Yale-NUS's endowment is pooled together with NUS's.
 • One member of the board was a senior leader in a fossil fuel company.

ACADEMIA

By obtaining academic and research funding from the fossil fuel industry, universities may lend their credibility to fossil fuel companies' brand images. Universities may also be accepting fossil fuel companies' influence on academic research, potentially impinging on academic integrity.

■ NUS • ExxonMobil sponsors research fellowships such as the ExxonMobil-NUS Research Fellowship and the stay of two visiting professors in the NUS Engineering Faculty.³
 • Offers at least 6 prizes sponsored by fossil fuel companies to its students (e.g., BP Gold Medal Award).⁴

■ NTU • Offers its students 4 prizes sponsored by fossil fuel companies (e.g., Shell Gold Medal⁵ and sponsored scholarships from the Keppel Corporation⁶)

■ SMU • The Keppel Professorship in Financial Economics was established in October 2011 within the Sim Kee Boon Institute for Financial Economics (SKBI) in recognition of Keppel's funding of SKBI.⁷
 • Offers 4 scholarships by fossil fuel companies (e.g., BB Energy Scholarship).⁸

■ SUTD • Offers 2 prizes to its students (e.g., the Keppel Bursary award).⁹
 • Received a donation of S\$2 million in support of Keppel Awards for Excellence and Keppel Bursary Awards.¹⁰

■ SIT • Offers 2 prizes to its students (e.g., SP Group Book Prize in Electrical Systems).¹¹
 • Offers 3 study awards or scholarships associated with fossil fuel companies to its students (e.g., the Geo Energy Bursary).¹²

PROFESSIONAL DEVELOPMENT

By associating their professional development functions with the fossil fuel industry, universities may be encouraging talented students to pursue careers in the industry and showing support for the industry's status quo activities.

■ NUS • NUS hosted the Women in Shell event in August 2019, where female undergraduate students learnt about the career experiences of Shell's female senior leaders and women in the Shell Graduate Programme.¹³

- Shell holds career talks which have continued in virtual form during the pandemic.¹⁴

-
- NTU
 - The International Trading Programme (ITP) at NTU has corporate partners such as BP, Shell, ExxonMobil and Trafigura, who are involved in advising the curriculum's design and providing students with internship opportunities.¹⁵
 - In NTU, BP held regular recruitment talks and a personal branding workshop for students in the first semester of Academic Year 2019/20.¹⁶
-
- SMU
 - In 2007, SMU's new Introductory Trading Track (ITT) for undergraduate Finance majors, which is housed under the International Trading Institute (ITI), was supported by prominent fossil fuel companies such as ABN Amro Bank, Shell, Wilmar and Total, and they continue to offer students internships to this day.¹⁷
 - The ITI@SMU Networking Night is organised annually for professionals in trading, alumni and students to get together.¹⁸ The event is hosted by SMU's International Trading Institute (ITI@SMU), which seeks to cultivate talent for international trading. As key partners of the ITT programme, it is likely that the fossil fuel companies mentioned above are invited.¹⁹

CO-OPTING OF CAMPUS SPACES

By allowing fossil fuel companies to be present in and lend their name to public spaces and events, universities may be allowing fossil fuel companies to burnish their credibility and purchase the social license to continue their status quo activities.

-
- NUS
 - ExxonMobil has been sponsoring the ExxonMobil Campus Concerts series in NUS since 1986.²⁰
 - ExxonMobil also sponsors programmes with the Lee Kong Chian Natural History Museum. In 2017²¹, 2018²², and 2019²³, the company sponsored the Endangered Species and Conservation programme. Aimed at primary and secondary school students, it sought to educate them about endangered species and the threats to their survival.²⁴
-
- SUTD
 - SUTD and ExxonMobil collaborated and launched a mobile fabrication lab in 2017.²⁵ ExxonMobil had also paired this with various other talks and events on campus regarding lubrication technology in the advancement of aviation.²⁶

We recommend that our universities and other relevant stakeholders take the following steps to critically address their associations with the fossil fuel industry by 2030:

IN THE SHORT TERM (1-2 YEARS):

Finance and Management:

1. Develop and publish a timeline for complete divestment from fossil fuels.
2. Commit to ceasing new direct and indirect investments in fossil fuels.
3. Sign on to the United Nations-supported Principles for Responsible Investment (UN PRI).
4. Restrict the appointment of individuals who currently hold or previously held senior leadership positions in a fossil fuel company to universities' Boards.

Academia:

1. Regarding scholarships and prizes where the money is guaranteed in trusts, remove the name branding of fossil fuel companies.
2. Develop and publicly announce a plan to secure alternative modes of funding from companies which are committed to a post-carbon transition.
3. Implement climate crisis education for all students in our universities.

Professional development:

1. Stop seeking new industry partnership programmes with fossil fuel companies which are related to the extraction, refinement, or use of fossil fuels.
2. Seek to increase the advertisement of roles centred on alternative and sustainable industries to replace fossil fuel companies' advertisement of roles related to the extraction, refinement, or use of fossil fuels.

Use of campus spaces

1. Secure funding for campus events and spaces from companies committed to the post-carbon transition.
2. Continue holding and promoting events which critically engage with the climate crisis on a systemic level.

IN THE MEDIUM TERM (3-5 YEARS):

Finance and Management:

1. Divest from investments in fossil fuel companies that receive >10% of their revenue from coal and tar sands, and assets that seek to exploit coal and tar sands.

Academia:

1. Secure alternative funding from industries committed to a post-carbon transition to replace scholarships and prizes that are currently associated with the fossil fuel industry.
2. Expand opportunities, resources, and support for university stakeholders to research, learn about, and take action on climate change and climate justice within their departments and units.

Professional development:

1. Secure alternative partnerships with companies in sunrise industries that are committed to a post-carbon transition.
2. Develop and publicise training, certification, and job transition pathways for employees of fossil fuel companies seeking to move to renewable or other sustainability-related sectors.

Use of campus spaces:

1. Discontinue existing sponsorship programs with fossil fuel companies.

IN THE LONG TERM (BY 2030):

Finance and Management:

1. Fully divest all financial holdings from fossil fuel companies and fossil fuel-linked assets.

Academia:

1. Discontinue all funding for scholarships and prizes associated with the fossil fuel industry.
2. Discontinue research funding associated with the fossil fuel industry.

Professional development:

1. Cease prevailing industry partnership programmes with fossil fuel companies and the hosting of fossil fuel companies at on-campus career events.

The details of these points will be elaborated in the later parts of this report.

INTRODUCTION

Across the globe, the climate crisis is unfolding in tangible and increasingly severe ways. Fires of unprecedented scale raged across large swathes of Australia in 2020 and temperatures in Antarctica reached a record high of 20.75°C in February 2020.²⁸ 2021 has only brought more wildfires across multiple countries.²⁹ Closer to home, Thailand suffered its worst drought in 40 years³⁰ and Typhoon Rai has destroyed numerous communities in the Philippines.³¹ On our doorstep, Malaysia is still recovering from once-in-a-century flooding which wreaked havoc, displaced thousands, and claimed numerous lives.³²

While Singapore may be spared the worst effects of the climate crisis for now, we are not unaffected. Singapore depends on our neighbours for food, water, and other imports. Any disruption caused by climate change, such as droughts in Johor³³ and the potential sinking of Jakarta,³⁴ would be disastrous to our local resource-scarce economy. Even though Singapore's current primary concern is the COVID-19 pandemic, the climate crisis and climate action remain as urgent as ever.

Globally, it is a recognised scientific fact that fossil fuels are a dominant contributor to the climate crisis. Yet, some governments and companies remain committed to status quo models of relentless economic growth driven by the extraction and consumption of fossil fuels. Researchers at the Global Carbon Project (GCP) found that 89% of global carbon emissions in 2018 came from the fossil fuel industry.³⁵ Thus, it is not surprising that the 2018 special report by the IPCC showed that, in all major scenarios examined, fossil fuel use must decline.³⁶ As such, the profitability of the fossil fuel industry has become much more volatile³⁷— even more so during the COVID-19

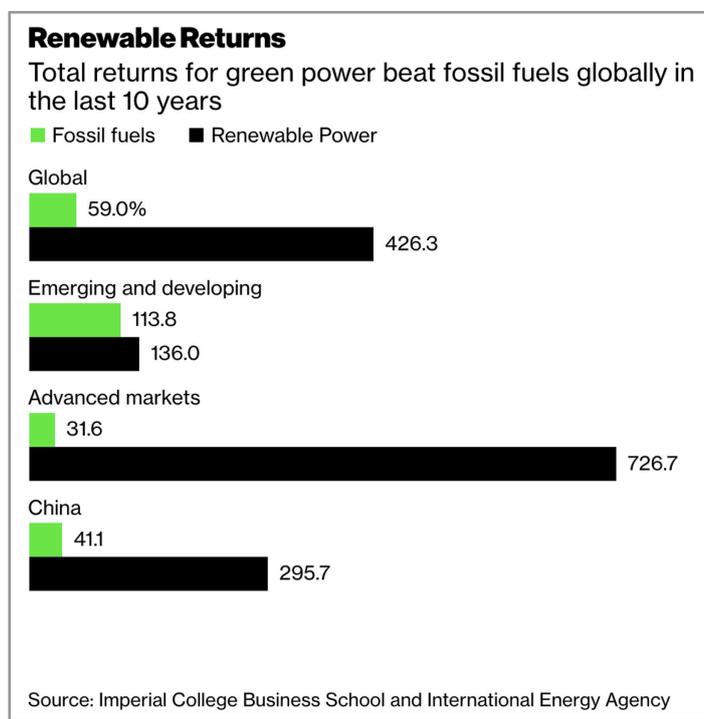


Fig. 1: Renewable investments have outperformed fossil fuel investments worldwide in the last decade.⁴¹

pandemic³⁸—and fossil fuel investments are increasingly recognised as “stranded assets”.³⁹ Meanwhile, researchers have found that, in the last decade, investments in publicly-listed renewable energy companies have consistently outperformed those in fossil fuel companies worldwide, with more stable returns.⁴⁰

The climate crisis is not surprising news for Singaporean universities. In our world-class research and education institutions, professors have been documenting the progress and impacts of the climate crisis for years⁴². Nonetheless, our universities have continued building close relationships with fossil fuel companies. In exchange for a variety of benefits, companies such as Shell, ExxonMobil, and BP have entered our education systems to promote their brands and recruit new talent. By doing so, they have gained broad social acceptance and approval as partners in developing Singapore’s education and economic landscape—

In other words, they have purchased a “social license” from our universities to continue their status quo activities.

We believe that our universities’ passive relationship with the fossil fuel industry is not acceptable in today’s environmental and social context. These partnerships have been marketed by these companies as proof of their commitment to a greener future,⁴³ despite their ongoing activities which continue to harm our climate.⁴⁴ As a result, our universities’ credibility has been utilised for fossil fuel companies’ branding campaigns. Marketing aside, fossil fuel companies have shown reluctance to assist or participate in the inevitable post-carbon transition.⁴⁵ Despite knowing for decades that their actions would create a climate crisis, Shell and ExxonMobil have invested in climate denialism campaigns instead of renewable energy.^{46,47} Despite promises to clean up their production chains, such as BP’s pledge to go carbon-neutral,⁴⁸ a 2019 InfluenceMaps report found that the five largest public oil companies⁴⁹ invested US\$3.6Bn in low-carbon energy but US\$110.4Bn in oil and gas.⁵⁰ Research by the Guardian in 2019 also forecasts that Shell and ExxonMobil’s fossil fuel production levels will increase by more than 35% between 2018 and 2030, despite warnings from scientists that this will push global warming towards catastrophic levels.⁵¹ We no longer have time to give companies ‘space’ to transition at their own pace. Their exacerbation of the climate crisis makes our universities’ uncritical association with them highly questionable. Fossil fuel companies must transition or be rejected, and only the serious threat of the latter can incentivise the former.



Fig. 2: Pie charts from InfluenceMap showing the proportion of Big Oil's spending on low-carbon energy and climate branding, in comparison to oil and gas, and non-climate branding respectively.⁵²

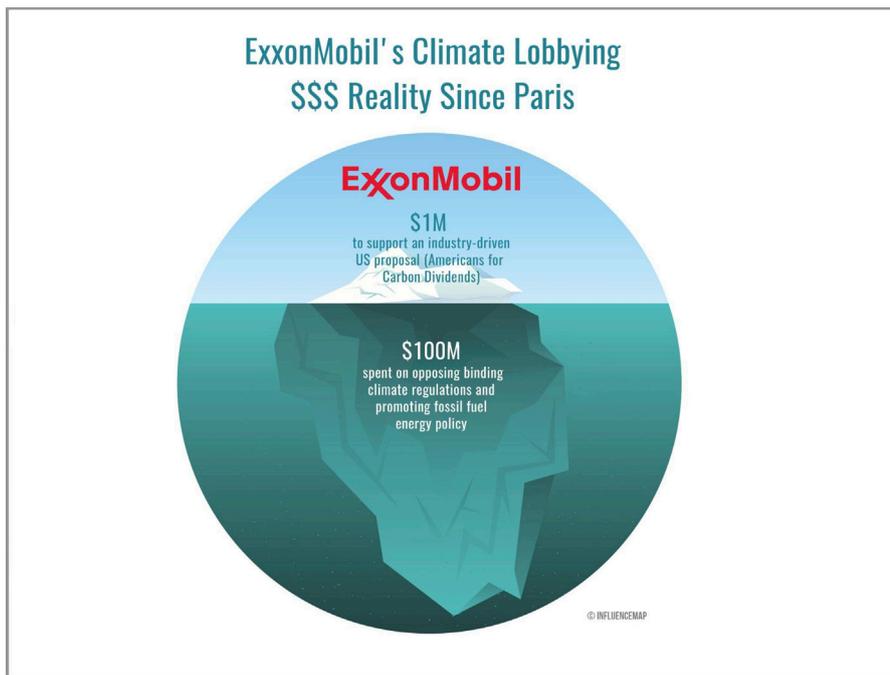


Fig. 3: Infographic from InfluenceMap showing how ExxonMobil's \$1M investment in supporting carbon dividends pales in comparison to the \$100M spent on anti-climate regulation policies.⁵²

We acknowledge that the relationship between universities and fossil fuel companies is not unique to Singapore. However, global norms are changing. Increasingly, universities are taking bolder steps to end their associations with fossil fuel companies, through

divestment and other means. As of August 2021, the approximate total value of all committed divestments by institutions is US\$14.58 trillion, with educational institutions being responsible for the second-largest share (around 15%).⁵³ Among the educational institutions that have begun their divestment process are leading universities such as Oxford University⁵⁴, the University of British Columbia⁵⁵, the University of California⁵⁶, and Harvard University⁵⁷. Closer to home, National Taiwan University finalised their divestment plan in collaboration with the Students' Council and completely divested from the industry in 2020.⁵⁸ This makes them the first university to trailblaze the divestment movement among Asian universities. We hope that Singaporean universities will not fall too far behind.

In this report, we detail the existing links that our universities have with fossil fuel companies in areas such as finance, management, academia, professional development, and the use of campus spaces. We believe that these connections support the fossil fuel industry's status quo and compromise the ability of our universities to research on and teach about the climate crisis impartially. Specifically, we focus on NUS, NTU, SMU, SUTD, SIM, SIT, and Yale-NUS. We began researching these links in 2019. While we do not have perfect information regarding all matters raised in this report, we have made every practical effort to ensure that we present the facts fairly. In August 2021, we reached out to the respective university boards to verify our facts, and have included in this report the information we received. Moving forward, we invite these universities to inform us of any new developments, and we commit to publishing these updates in a timely manner on our website and social media platforms, as part of our commitment to accountability and transparency.

As students of our universities, we publish this report with confidence that these academic institutions, which have endowed us with invaluable knowledge and critical thinking skills, will reassess their policies and consider our deep-seated concerns. We understand that changing policies takes time and effort, and that some circumstances may make it challenging to act. Nevertheless, as the generation who will bear the consequences of a shattered world if climate change continues along this alarming path, we feel the need to act for our own generation and for those to come.

We look forward to our universities standing together with us to transition away from their relationships with an industry status quo that continues to degrade our shared planet.

Instead, we urge universities to channel energy and resources into fostering meaningful relationships with just and sustainable industries of the future.

PART 1:

THE PROBLEM

WHO'S INVOLVED

Before we expand further on the goals and findings of our investigation, we provide here a more detailed definition of the main stakeholders in our report—universities and fossil fuel companies in Singapore—as well as an account of why we chose to focus on these actors.

UNIVERSITIES IN SINGAPORE

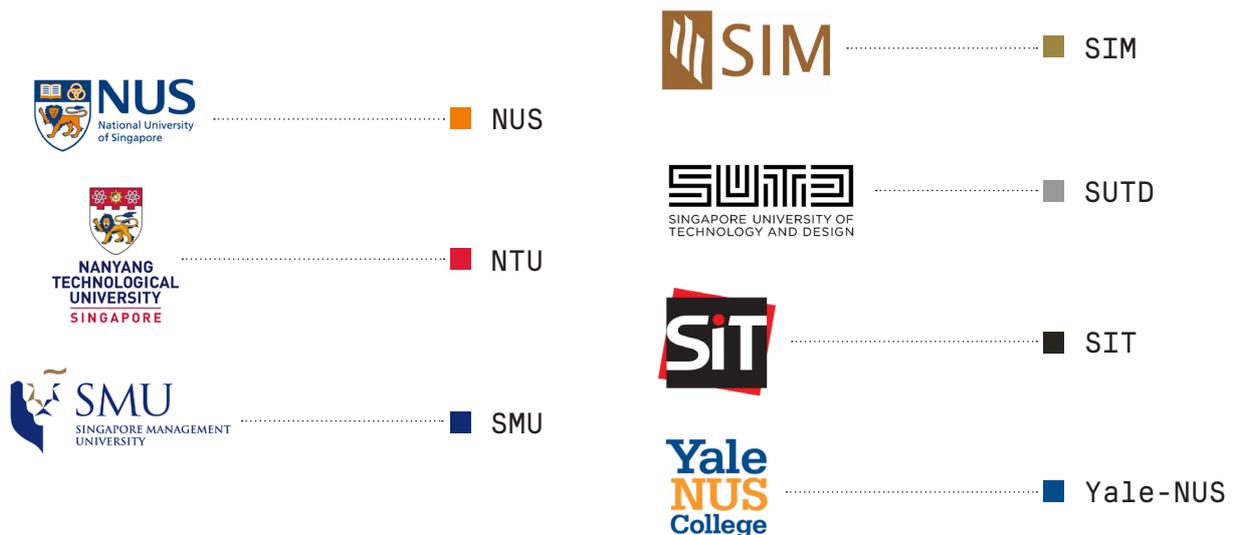


Fig. 4: The universities in Singapore that are discussed in this report.

Every public university in Singapore has a Board of Trustees. Board members are appointed by the Ministry of Education.⁵⁹ These board members tend to be prominent figures from the public sector, academia and private industry.⁶⁰ Responsibilities of the Board vary by institution, but common responsibilities include “long-term steward[ing]” of the university,⁶¹ advancing the university’s mission and reputation and conducting institutional fundraising.⁶² The board’s Chair is usually responsible for setting the board’s agenda, often in collaboration with the President, who is chosen by the board.⁶³ The board thus influences the university’s investments, partnerships, and overall direction. In our universities, several board members have existing or historical ties or affiliations to the fossil fuel industry.

All public universities in Singapore also have an endowment which is invested to generate returns for the university.⁶⁴ To our knowledge, NUS' and NTU's endowments have exposure⁶⁵ to fossil-fuel linked investments. Other universities have not disclosed their fossil fuel exposure. More details regarding university boards and endowments can be found in Part Two.

FOSSIL FUEL COMPANIES

We define fossil fuel companies as companies whose only or primary business is the exploration, extraction, refinement, processing and/or distribution of coal, oil, and gas.⁶⁶ Several prominent fossil fuel companies are referenced in our report, such as ExxonMobil, British Petroleum (BP), and Shell. The Carbon Underground 200 list is a good resource for identifying the most prominent fossil fuel companies in the world.⁶⁷ It is an annually updated list of the top 100 public coal companies and the top 100 public oil and gas companies globally, ranked by the potential carbon emissions content of their reported reserves. This list has been used by other universities in crafting their divestment plan.

We would like to highlight the key role that Keppel Corporation plays in the fossil fuel industry in Singapore. Keppel Corporation is a Singaporean conglomerate that has several subsidiary businesses.⁶⁸ The following points provide brief descriptors of Keppel's subsidiary businesses that are relevant to our report:

Keppel Offshore and Marine (O&M)	Keppel Offshore and Marine (O&M) is a worldwide leader in designing offshore rigs (drilling sites for fossil fuel exploration, extraction, and procession), construction and repair, ship repair and conversion, and specialised shipbuilding. ⁶⁹ Keppel O&M's profitability is directly enabled by the continued exploration and extraction of oil and gas reserves.
Keppel FELS	Keppel FELS is a part of Keppel O&M, and does design, construction and repair of mobile offshore oil rigs. ⁷⁰
Keppel Shipyard	Keppel Shipyard is a part of Keppel O&M, and does repair, conversion, and upgrading of a diverse range of vessels. ⁷¹
Keppel Singmarine	Keppel Singmarine is a part of Keppel O&M, and constructs vessels for the offshore frontier. ⁷²

Since the initial drafting of this report, Keppel Corporation has unveiled “Vision 2030”, a plan that includes the transition towards “cleaner fuels”, namely natural gas and renewables, as one of four focus areas.⁷³ In February 2021, Keppel O&M announced its decision to undergo a structural transformation that may eventually lead to its exit from the offshore rig building business.⁷⁴ A few months later, in June 2021, Keppel signed a Memorandum of Understanding (MOU) with Sembcorp Marine to discuss opportunities to “accelerate [the] pivot to the energy transition”, following a prolonged downturn of the oil and gas industry.⁷⁵ We find these developments to be very promising, as they seem to align well with Keppel’s “Vision 2030” plan. However, given the recency of these announcements, Keppel’s commitment to an energy transition is yet to be realised. Therefore, we believe it prudent to retain Keppel’s labelling as a fossil fuel company in this report. This rationale applies equally to the other fossil fuel companies mentioned in this report and their respective commitments. Nonetheless, we remain open to reconsidering our view of Keppel as a contributor to the climate crisis.

A HISTORY OF FOSSIL FUELS

The history of fossil fuel companies and climate change is well-documented.

Fossil fuel companies have been aware of climate change since the 1980s. A 1988 document by Shell scientists titled “The Greenhouse Effect” detailed Shell’s extensive knowledge of climate change since the 1980s.⁷⁶ The document remarks: “With the very long time scales involved, it would be tempting for society to wait until then before doing anything... The potential implications for the world are, however, so large that the policy options need to be considered much earlier. And the energy industry needs to consider how it should play its part.”⁷⁷ ExxonMobil was similarly aware of climate change since the 1980s. Exxon scientists had modelled the effects of rising carbon dioxide emissions on global warming, and the effect of global warming on the environment.

These companies acted—to resist change. In 1989, ExxonMobil, BP, and Shell formed the Global Climate Coalition (GCC) to cast doubt on climate science and lobby against reducing greenhouse gas emissions.⁷⁹ Notably, the GCC convinced then-US President George W. Bush to abandon the landmark Kyoto Protocol in 2001. The Kyoto Protocol aimed to establish a global programme to slow down greenhouse gas emissions amid evidence of rapid climate change.⁸⁰

Although some fossil fuel companies have ostensibly made recent commitments to transition away from fossil fuels, we believe that healthy scepticism is in order. Take the example of BP, which aims to remove or offset carbon emissions from its operations by 2050.⁸¹ Although this is a step in the right direction, doubts remain regarding the genuineness and impact of these commitments. First, BP has no concrete plans regarding decreasing fossil fuel production. This allows BP to potentially expand its petrochemical production under the veil of carbon offsets,⁸² which do not actually reduce the company's emissions. Second, BP's language describing a transition to low-carbon business is highly ambiguous. The announcement stated that "over time, BP also aims to increase the proportion of investment it makes into non-oil and gas business," but with no specifications on what proportion it intends to achieve by when.⁸³ Studies suggest that fossil fuel companies are shifting their messaging to climate-conscious, rather than denying climate change outright, in a bid to overcome social resistance and further delay socio-political climate action.⁸⁴

Despite their commitments, fossil fuel companies' actions continue to undermine the post-carbon transition. BP (among other fossil fuel companies) donated hundreds of thousands of dollars to the inauguration of Donald Trump⁸⁵ and influenced the White House to roll back environmental regulations.⁸⁶ A 2016 report found that



*** INVOICE ***

DATE: 2016

CUSTOMER: (1) SHELL
(2) EXXONMOBIL

OBJECTIVE: TO BLOCK
CLIMATE CHANGE
POLICY

TRANSACTION: ANNUALLY

ITEM	PRICE
ADVERTISING	XXXXX
REGULATORY ENGAGEMENT	XXXXX
INFLUENCE PUBLIC DISCORSE	XXXXX

TOTAL PRICE (USD):
(1) SHELL 27,000,000
(2) EXXONMOBIL 22,000,000

*** NO THANK YOU ***

Fig. 5: An infographic resembling an invoice of various financial statistics from a 2016 study that reveals the extent that these fossil fuel companies would do to delay political climate action.

Shell and ExxonMobil spent US\$27 million and US\$22 million respectively every year on advertising, regulatory engagement, and influencing public discourse to block climate policy.⁸⁷ In 2019, a follow-up report found that the five largest public fossil fuel companies have been spending a total of US\$200 million a year to delay, control, and block policies to tackle climate change.^{88, 89} More recently, an undercover investigation by Unearthed also revealed that ExxonMobil continues to lobby against climate action. Keith McCoy, an ExxonMobil senior lobbyist, admitted to the company's aggressive fight against climate science to weaken US President Joe Biden's flagship climate initiative.⁹⁰ Although much of the literature covers lobbying in and from the US, similar efforts are underway in countries like Canada⁹¹ and Australia.⁹² As such, sustainability experts and academics have referred to fossil fuel companies' ambiguous targets, with their associated pro-climate action brand campaigns and anti-climate action backroom lobbying, as tactics to delay the post-carbon transition.⁹³

Fossil fuel companies have also impacted communities and natural environments through their global operations.



In 1989, ExxonMobil spilled 11 million gallons of oil in Alaska. After years of legal battles, ExxonMobil eventually managed to reduce its fine from US\$5 billion to US\$500 million⁹⁴—a tenfold discount. Separately, ExxonMobil allegedly paid, housed, and supplied Indonesian security forces who committed various incidents of torture against civilians in Aceh (ExxonMobil and the Indonesian military deny these allegations).⁹⁵



Shell was allegedly complicit in the execution of the "Ogoni Nine"—nine activists protesting against environmental degradation and human rights abuses linked to Shell—in Nigeria in 1995 (Shell denies these allegations).^{96, 97}



BP pleaded guilty to 14 criminal charges linked to the Deepwater Horizon explosion in 2012,⁹⁸ which was allegedly caused by the company's mismanagement and oversight.⁹⁹ The explosion killed 11 workers, leaked 4.9 million barrels of oil into the Gulf of Mexico, and wrought massive harm upon the surrounding wildlife, becoming the single largest marine oil spill in human history.

In our opinion, it cannot be argued that merely because these incidents happened overseas, local operations should not be implicated. One cannot ignore the critical role that these companies' Singapore operations play in their global business. For instance, ExxonMobil's largest refinery in the world is in Singapore¹⁰⁰ and Shell's Singapore refinery is its largest wholly owned refinery globally.¹⁰¹ Further, it has been suggested that Shell's refinery in Singapore has been the most profitable worldwide.¹⁰³ Therefore, the impacts of fossil fuel companies overseas are inextricably linked with, and perhaps even made possible by, their operations in Singapore.

Fossil fuel companies have continued their status quo operations in Singapore despite the climate crisis. For example,

In 2019,

1. ExxonMobil committed to a multi-billion-dollar expansion of Singapore's manufacturing complex.
2. Prime Minister Lee Hsien Loong described climate change as one of the "gravest challenges facing mankind" during the National Day Rally.¹⁰⁴
3. That year was also the third warmest year on record for surface temperatures, the warmest year on record for ocean heat content, and the year when global sea levels and atmospheric greenhouse gas concentrations reached new record highs.¹⁰⁵

Beyond climate and environmental impacts, we are concerned about the impact of fossil fuel companies' management on the safety, health, and security of our workers. Worker deaths and injuries have been reported on Jurong Island due to toxic gas (in October 2020)¹⁰⁶ and burns from a chemical plant fire (in February 2020).¹⁰⁷ Although we assume that the Ministry of Manpower has investigated these incidents, we are unable to find a public report of the investigation results, or remedial measures mandated to hold employers accountable or mitigate risks to workers. The poor economic outlook for fossil fuel companies also threatens the job security of workers in these companies. In October 2020, ExxonMobil announced plans to lay off 14,000 members of its global workforce (15%) over the next two years as the COVID-19 pandemic batters oil demand and prices worldwide.¹⁰⁸ Since August 2020, over 400

Singapore-based ExxonMobil workers have anonymously voiced complaints about the mass layoffs and the company's practices in connection with these layoffs. The workers noted poor morale, opaque employment practices, long working hours in combination with lower-than-expected wages, and high precariousness in job security.¹⁰⁹ A Business Insider article published in October 2020 reveals that the Ministry of Manpower is probing ExxonMobil's labour practices after the organisation allegedly used performance-based employee reviews to justify job cuts.¹¹⁰

In conclusion, we believe that fossil fuel companies' behaviour has engendered the climate crisis today and harmed environments and people around the world. We believe that our scepticism of the fossil fuel industry is justified by their very actions which underlie, or undermine, their public relations messaging on sustainability. We recommend that our universities critically reassess their ties to various fossil fuel companies. From the evidence available to us, we opine that our universities should end their associations with this industry.

THE CLIMATE CRISIS: EXACERBATING EXISTING INEQUALITIES

The climate crisis is deeply unequal and unjust. According to an Oxfam International report published in January 2021, the richest 1% of the global population emitted twice as much carbon as the poorest 50% in the last 25 years.¹¹¹ Yet, it is the people who contributed the least to the crisis who are suffering the deadliest of its effects. Impacts of climate change tend to be felt disproportionately across the globe and are influenced by factors such as socio-economic class, gender, race, and nationality. Individuals with different layers of identity experience overlapping layers of privilege and unjust discrimination.¹¹² For instance, in food crises resulting from extreme climate events, everyone suffers, but poor and disadvantaged communities suffer more from the spike in food and water prices. These communities may also be displaced in their search for food.¹¹³

In Singapore, warming is now "twice as fast" as the world average, since urban zones heat up more easily.¹¹⁴ Those without access to air conditioning may face a higher risk of contracting heat-related illnesses with heatwaves becoming one of the fastest-growing climate health and wellbeing hazards around the world.¹¹⁵ Public health institutions also have spoken about the dangers of high temperatures mixing with other weather conditions to create situations that can be dangerous enough to cause heat-related deaths.¹¹⁶

This issue was raised in Parliament in February 2021, emphasising the urgency of the climate crisis and the importance of a green recovery plan that centres those who will be disproportionately impacted by impacts of climate change, including workers. For instance, estates “such as Woodlands, Serangoon, Geylang, Sengkang and Punggol can be particularly vulnerable to the sweltering effects of urban heat island”.¹¹⁸ Such developments could place low-income residents, elders, people with disabilities, and workers living and working in these regions at a much higher risk of heat-related illnesses.¹¹⁹ This is especially true for workers who experience long days of manual labour outdoors under direct heat. We are already seeing evidence of migrant workers and national servicemen suffering from heat exhaustion and heat stroke that have proven fatal.¹²⁰

Similar trends can also be observed with respect to inequalities across countries. Despite their significantly smaller contribution to climate change, lower-income countries are much more vulnerable to its consequences. The global inequalities of climate change are highlighted in a 2015 study in the journal *Nature*, which found that the poorest countries could lose 75% of their average income by 2100, compared to a non-warming climate.¹²¹ Furthermore, many of these low-income countries are located in tropical or arid areas, lie in hurricane, cyclone, and tsunami zones, or have low elevation and are located near large water bodies.¹²² Hence, they are more exposed to climate change hazards such as sea level rise, hurricanes, precipitation imbalance, flooding, and water scarcity. This forces lower-income countries, who have contributed the least to the climate crisis, to spend the most on adaptation measures to protect themselves from the crisis’ effects.¹²³

Meanwhile, the wealthiest countries have historically emitted the most carbon. The World Resources Institute revealed that, from 1850 to 2002, developed countries were responsible for 76% of cumulative carbon dioxide emissions.¹²⁴ As higher-income countries, they are also more capable of mitigating and recovering from the current and future damages of climate change even if they cannot escape them completely. For instance, Singapore’s S\$100 billion climate adaptation plan contains a plethora of options to combat and even absorb floods that would be impossible for low-income countries to afford.¹²⁵ Climate change is thus an issue of inequality and social justice on a global scale. Wealthier countries that achieved development through fossil fuels must recognise their historical responsibility to mitigate the climate crisis and support green development pathways, rather than continuing to support the fossil fuel industry.

PROBLEMATISING UNIVERSITY-CORPORATE TIES

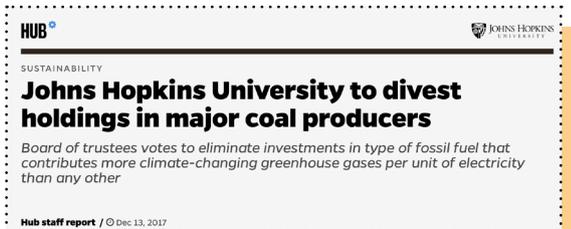
Fossil fuel companies have numerous associations with Singaporean universities, as detailed in Part Two. This may be a problem. In countries like Canada¹²⁶ and the UK,¹²⁷ such associations have partially compromised the academic integrity of universities by discreetly influencing academic and professional decisions.¹²⁸ Companies may exercise their influence in various ways, including asking researchers to sign non-disclosure agreements, manipulating research conditions to create specific outcomes, or recruiting students directly.¹²⁹ Such influences are often invisible to the public eye, but they may establish deeper relationships between universities and fossil fuel companies, which can have long-term implications.¹³⁰

Associating with universities gives positive brand coverage to fossil fuel companies, which downplays the environmental and social repercussions of their status quo activities. Besides branding, fossil fuel companies may benefit from the chilling effect of self-censorship, as explored by Tudiver: Self-censorship begins from nothing more than polite unwillingness to criticise one's benefactors, given the need to maintain long-term relationships with the funders.¹³¹ As time goes by, such self-censorship tends to be normalised, resulting in certain value judgements being passed without being challenged,¹³² threatening a university's academic integrity. This process, while mostly unconscious and implicit, can happen despite the best efforts of the beneficiary.

Further, Gray and Kendzia argue that social networks between prominent members of universities and the industry create a "legitimising basis for the elite cohesion between fossil fuel capital and university governance".¹³³ This suggests that the fossil fuel industry may leverage their connections with board members to expand their presence on campuses. Lastly, institutionalised programmes in the fossil fuel industry encourages students to take up roles within these companies. Universities could instead help students seek roles in sunrise industries which are less environmentally harmful, giving them a head start in contributing to a fossil-free future.

Our universities are key social institutions and thriving hubs of international academia. As key stakeholders in the post-carbon transition, both in Singapore and globally, they have committed to paving the way in sustainability. For instance, NUS states that they are committed to "protecting the environment and incorporating sustainability in all aspects of our campus life."¹³⁴ Similarly, SMU has expressed that sustainable living and managing climate change are one of their key priorities across their schools.¹³⁵ Accordingly, our universities

should critically reassess their associations with fossil fuel companies, withdrawing the blank cheque of social legitimacy that was previously granted to the industry. We opine that universities should plan, in the medium to long term, to discontinue their associations with these industries. These steps are critical to accelerating Singapore's green transition, and we believe that our universities can be meaningful pioneers in this regard.



Soas becomes first London university to divest from fossil fuels

Campaigners hail success as Soas follows in footsteps of Glasgow and Bedfordshire universities, and calls on other universities to follow suit



▲ Soas, University of London, has announced that it will divest from fossil fuels within the next three years, in order to show leadership in the fight against climate change. Photograph: Fossil Free Soas

Emma Howard

Email
Fri 24 Apr 2015 15:27 BST

EDUCATION / ENERGY / ENVIRONMENT / NEWS

Middlebury College to Divest \$55 Million From Fossil Fuel Companies

POSTED BY DEREK BROUWER ON TUE, JAN 29, 2019 AT 6:03 PM

Glasgow becomes first university in Europe to divest from fossil fuels

University court votes to divest £18m from fossil fuel industry in what campaigners call 'dramatic beachhead'

● Fossil fuel divestment: a brief history



▲ Glasgow University students hold a silent protest to raise awareness of the divestment from fossil fuels campaign. Photograph: Courtesy People & Planet

DIVESTMENT: THE FIRST STEP

John Hopkins University. University of Glasgow. SOAS University of London. Cambridge University. Oxford University. University of California. Stanford University. National Taiwan University.^{137,138}

These are just a few of the universities that have joined the global fossil fuel divestment movement by withdrawing their investment from fossil fuel-linked assets. Universities, as well as other financial and social institutions around the world, are committing to divestment on an unprecedented scale. As of August 2021, the approximate total value of all committed divestments by institutions is US\$14.58 trillion, with educational institutions being responsible for the second biggest share (around 15%).¹³⁹ In comparison, the 60 largest banks in the world have invested US\$3.9 trillion into fossil fuel investments over five years.¹⁴⁰ In this section, we will detail the recent successful divestments of two major university groups, that of Cambridge University and the University of California.

Fig. 6: Headlines of various universities around the world declaring divestment from fossil fuels.¹³⁶

The University of Cambridge ("Cambridge"), with over 23,000 students, is one of the top universities in the world for research and teaching.¹⁴¹ Cambridge has committed to divestment from all meaningful exposure to fossil fuels by 2030. In 2019, Clare Hall, one of the Constituent Colleges of Cambridge, claimed that it would "withdraw money invested in the university's £3.2Bn (US\$4.4Bn) central fund if [Cambridge] did not divest within five years."¹⁴² In recent years, the college has, through popular campaigns and academic research, faced mounting pressure from faculty and students to re-evaluate its investment portfolio. These include a "Zero Carbon" report by the Cambridge Zero Carbon Society¹⁴³ which detailed the university's ties to the fossil fuel industry, as well as a motion for divestment signed by 324 Cambridge academics.¹⁴⁴ These efforts were eventually successful. In line with its decision to divest, the college has also appointed Ellen Quigley, a Research Associate in Climate Risk and Sustainable Finance, to collaborate with the Chief Financial Officer to further research "responsible investment".¹⁴⁵ Cambridge University also committed itself to divestment based on explicitly environmental factors.

The University of California (UC), with over 285,000 students in 10 campuses, is one of the leading institutions of higher education in the U.S.¹⁴⁶ UC's Investments Committee decided in September 2019, regarding their "US\$70 billion pension fund and US\$13.4 billion endowment", that possessing fossil fuel assets was a "financial risk" which might inhibit UC's ability to "generat[e] strong returns" in the future.¹⁴⁷ By May 2020, it had committed to divestment.¹⁴⁸ While UC's decision was framed as a purely pragmatic one to cut losses, it nevertheless was a significant success for the divestment movement.

Around the world, universities are recognising that fossil fuel investments are no longer viable. Whether out of financial or environmental concerns, the growing trend towards divestment is clear. In the past two years, a wave of universities have committed to divestment, including Princeton University (June 2021),¹⁴⁹ Cornell University (May 2020),¹⁵⁰ University of Manchester (May 2020),¹⁵¹ Oxford University (April 2020),¹⁵² American University (April 2020),¹⁵³ and Harvard University (September 2021).¹⁵⁴ **Divestment seems like an increasingly inevitable outcome globally, including for Singaporean universities. It is a matter of taking a stand and acknowledging the urgency of climate action on any and all scales.**



PART 2:

OUR FINDINGS



FINANCE & MANAGEMENT

**Our universities are
not for sale.**

In this section, we will explore universities' financial and managerial links with the fossil fuel industry. Specifically, we will examine three domains: endowments, donations, and university board members.

ENDOWMENTS

NUS, NTU, SMU, SUTD, SIM, SIT

We believe that divesting our universities' endowments from the fossil fuel industry makes financial and moral sense. An endowment refers to the pool of money or other financial assets which has been donated to the university. The university then invests this principal amount, using the returns to re-invest and fund the university's expenditure.^{155, 156}

By investing in the fossil fuel industry, universities both financially support the industry and demonstrate confidence in the industry to deliver long-term returns. Financially, fossil fuel-linked investments are seen as increasingly risky, especially in this pandemic and the post-pandemic world.¹⁵⁷ To keep global warming under 2°C, much of the existing fossil fuels that companies are seeking to extract must remain in the ground and therefore will not contribute to their revenues.¹⁵⁸ This means that if governments follow through with concrete policies to limit global temperature rise, including those forcing fossil fuel companies to limit production,¹⁵⁹ fossil fuel investments inevitably fall in value. Furthermore, there is already evidence that returns on fossil-free endowment portfolios either equal or exceed those that include fossil fuels.¹⁶⁰ Therefore, moving away from fossil fuel-linked investments makes financial sense.

Furthermore, as described in Part One, fossil fuel companies have been and continue engaging in efforts undermining the post-carbon transition. Our universities, as forward-looking institutions which seek to shape the future, must critically reassess their investments in the fossil-fuel industry. We believe that universities should divest from (i.e., sell off their assets held in) the industry. This will send a clear social signal that continued fossil-fuel reliance is backward-looking, and companies that do so will be left behind, further incentivising companies to push towards a post-carbon transition.

- **NUS** NUS currently has at least S\$59 million of its endowment fund indirectly invested¹⁶¹ in fossil fuels. This number is a lower-bound estimate, as the NUS Investment Office shared in March 2019 that a "low single digit" percentage of the total endowment fund—which is about S\$5.9 billion, as of 2021¹⁶²—is indirectly invested in fossil fuels. For comparison, National Taiwan University, the only Asian university that has divested from fossil fuels, completed their divestment of NT\$432 million (S\$21 million) from six "high pollution" and "high carbon emission" companies in 2020.¹⁶³

¹⁶⁴ NUS' investment in fossil fuels is three times larger than that of National Taiwan University. The NUS Investment Office (IVO) has previously shared that NUS makes no direct investments in fossil fuel companies. In September 2021, the IVO also shared via email that NUS has recently enacted a sustainable investment policy incorporating environmental sustainability into investment decision-making, and intends to divest from "polluting assets". We commend the institution for this position, and we would like to see an official commitment to this effect.

- **NTU** An undisclosed percentage of endowment is currently indirectly invested in fossil fuel companies. The Investment Office has stated that there is "minimal exposure to the fossil fuel industry"¹⁶⁵, but has not disclosed the size of its exposure compared to their total endowment fund of S\$2.5 billion, as of 2021.¹⁶⁶
- **SMU,**
■ **SUTD,**
■ **SIM,**
■ **SIT** These universities have not disclosed their exposure fossil fuel-linked assets. We invite them to publicly disclose their endowments' exposure to fossil fuel assets or announce their divestment from these industries if they have already begun to do so.

BOARD MEMBERS

SUTD, NUS, SMU, NTU, SIM

We believe that the relevant stakeholders in university board appointments should critically reassess whether to appoint fossil fuel industry leaders to said boards. As briefly explored in Part One, university boards wield influence over important governing decisions such as investments, partnerships, and the overall direction of the university. We are of the opinion that having fossil fuel-industry leaders on university boards increases the likelihood of universities' involvement with the industry. Further, given that we are recommending universities move away from fossil fuel companies, we recognise that board members who have close professional ties to the industry may be confronted with conflicts of interest. Similar concerns have been raised regarding bank directors' affiliations to the fossil fuel industry, given banks' recent social obligation to pursue green finance.¹⁷⁴ Experiences in other universities, such as New York University, echo the concern that Board members' connections to the fossil fuel industry may limit their ability to evaluate universities' associations with this industry.¹⁷⁵

We also recognise that Board members may have ceased working for fossil fuel companies precisely to pursue more sustainable careers or align their careers with their personal values. We encourage such members to share about their decision or rationale with the university or public. Given that Board members have significant social standing and influence, such sharing will increase the importance which the public, students, and educators place on

sustainability and combating climate change. This can drive a positive social impact; for instance, by influencing graduates to enter the sustainability sector or consider their personal values more concretely in deciding on a career path.

- SUTD** One member of the Board was a senior leader in a fossil fuel company. He is the Chairman of SUTD's Board,¹⁷⁶ who joined Shell in 1979 and retired as Chairman of Shell Companies in Singapore in 2014 after 35 years of service in operational, commercial and strategy functions in a range of markets.
- SMU** One member of the Board was a senior leader in a fossil fuel company. He is the Managing Partner of TPG Capital Asia.¹⁷⁷ TPG Capital invested in energy and natural resource companies across the energy value chain. Their areas of focus included oil and gas exploration and production, oilfield services, midstream operations including resource transportation and storage, and downstream operations including refineries and marketing.¹⁷⁸ For the purpose of this report and these recommendations, it is important to note that, as of 2021, TPG Capital has reduced its investments in the fossil fuel sector such that less than 0.5% of the firm's assets under management are invested in the sector.¹⁷⁹
- NUS** One member of the Board was a senior leader in a fossil fuel company. He was the Chief Executive Officer and Executive Director of Keppel Corporation Limited since 1 Jan 2014.¹⁸⁰ He was appointed Chairman of Keppel Offshore and Marine on the same date.¹⁸¹ He is also the chairman of Keppel Infrastructure Holdings Pte Ltd which offers energy and environment infrastructure in markets in Singapore and abroad,¹⁸² providing "competitive energy solutions and services across the natural gas value chain."¹⁸³ His previous position was CEO-designate/CFO of Keppel Corporation Ltd where he served for two years.¹⁸⁴ He also holds directorship in several Keppel companies, including Keppel FELS Limited, Keppel Shipyard Limited and Keppel Singmarine Pte Ltd.¹⁸⁵ He has been with Keppel Group since 2002.¹⁸⁶
- NTU** Two members of the Board were senior leaders in fossil fuel companies. One member is the Chairman of NTU's Board, who joined Shell in 2003 and retired as Chairman of Shell Companies in Singapore in January 2019. She had previously chaired/sat on the Boards of Shell Joint Ventures in China, Korea, and Saudi Arabia.¹⁸⁷ Another member is the Asia Pacific CEO of Trafigura Group,¹⁸⁸ a commodities trading and logistic company offering mostly trading services for the fossil fuel industry.¹⁸⁹
- SIM** One member of the Board is currently a senior leader in a fossil fuel company. The chairman of the Board was the non-executive director of Shell (Global) since 1 September 2014.¹⁹⁰
- YALE-NUS** One member of the Board was a senior leader in a fossil fuel company. She was the Assistant Chief Executive Officer and then Deputy Chief Executive Officer of JTC Corporation.¹⁹¹ JTC Corporation manages Jurong Island, Singapore's petrochemical hub¹⁹² which houses the facilities of fossil fuel giants such as Shell, ExxonMobil, BP, and more.¹⁹³

DONATIONS

SMU

Our universities should also critically reassess their acceptance of donations from the fossil fuel industry. Donations refer to direct monetary donations or sponsors from the industry to the universities. While information is limited in the local context, we note that reports in other countries have demonstrated the influence exerted on universities that receive such donations. In Canada, donor funding has been found to affect academic freedom in a variety of ways, influencing tenure appointments (such as in the case of Nikole Hannah-Jones in the University of North Carolina) and pushing departments and institutions “in scholarly directions that they would otherwise not have pursued.”¹⁶⁷ A report released by Oxford University students argued that accepting donations from the fossil fuel industry “might create conflicts of interest for the collegiate University and/or the individual beneficiaries of the funding.”¹⁶⁸ Given the contentious nature of donor influence on universities around the world,¹⁶⁹ we believe that our universities should critically reassess their acceptance of donations from the fossil fuel industry.

- **SMU** By 2021, Emirates National Oil Company LCC donated over S\$1 million to SMU.¹⁷⁰ Swiss Singapore Overseas Enterprise, a bulk commodity trading company whose products include coal and petroleum,¹⁷¹ and Shell International Eastern Trading Company each donated over S\$500,000 to SMU. Three principal donors (donated S\$250K or more in accumulation by 2021) include: Koch Refining International Pte Ltd, a wholesale distributor of petroleum and associated products,¹⁷² Phillips 66 International Pte Ltd, which trades crude oil and petroleum products, and Trafigura Group, a commodities trading and logistic company offering mostly trading services for the fossil fuel industry.¹⁷³

FINANCE & MANAGEMENT**OUR ASKS****MOVING FORWARD**

We recommend that our universities take the following steps to critically address the fossil fuel industry's associations with universities' finance and management by 2030:

**IN THE SHORT TERM
(1-2 YEARS):**

▶ **Develop and publish a timeline for complete divestment from fossil fuels.**

There are many examples from which we can take reference when mapping a university's divestment process. For instance, Clare Hall College of Cambridge University seeks to divest their direct and indirect investments in three and five years respectively from 2019.¹⁹⁴ To determine which companies are considered fossil fuel companies, the college employed the Carbon Underground 200 list.¹⁹⁵

Another example is the University of California, which successfully divested over US\$1 billion to achieve a fossil-free investment portfolio in 2020.¹⁹⁶ Also in the US, Smith College announced its plan to divest in 2019. The college is directing its endowment management firm, Investure, "to exclude... all future investments with fossil-fuel specific managers," and immediately phase out "current investments with fossil-fuel specific managers", with regards to its US\$1.9 billion endowment.¹⁹⁷ This format may be relevant to universities in Singapore that employ fund managers.

Last but not least, National Taiwan University¹⁹⁸ could serve as another reference point, given that they are the first Asian university to have divested and may be able to yield insights specific to the Asian context.

We believe that universities should instead invest in initiatives and assets that have a clear net-zero or sustainable mandate. Examples include green bonds or green-pegged assets. These will remove the ambiguity of investing in assets where investors have little control over end-use. While it may be the case that universities are already doing so, we recommend that universities officialise these commitments.

▶ **Commit to ceasing new direct and indirect investments in fossil fuels.**

According to our engagements with NUS and NTU, both universities have not been making direct investments in fossil fuel companies. This may well be the case for other universities. We call on universities to officialise this commitment for future investments. Additionally, we ask our universities to commit to no new indirect

investments in fossil fuels. Universities should orient towards eventually fully divesting from the fossil fuel industry. We recommend making these two commitments as first steps towards this goal.

▶ **Sign on to the United Nations-supported Principles for Responsible Investment (UN PRI).¹⁹⁹**

The UN PRI refers to a set of principles that promote the incorporation of environmental, social, and corporate factors into investment decision-making. Signing onto the UN PRI will entail the organization to make regular reports on their progress towards these principles.

▶ **Restrict the appointment of individuals who currently hold or previously held senior leadership positions in a fossil fuel company to universities' Boards.**

To preclude the possibility of fossil fuel companies leveraging their networks with Board members to expand their presence on campuses, Board directors should not have professional links to the fossil fuel industry. We recognise that some universities' Board members are appointed by the Minister for Education, and we accordingly direct this recommendation primarily at the Minister. However, insofar as the current Board members and other administrators may informally advise on or propose new candidates for Board membership, we also direct this recommendation to persons acting such an advisory capacity.

**IN THE MEDIUM TERM
(3-5 YEARS):**

▶ **Divest from investments in fossil fuel companies that receive >10% of their revenue from coal and tar sands, and assets that seek to exploit coal and tar sands.**

Coal has often been heralded as the most environmentally damaging fossil fuel.²⁰⁰ Peak coal²⁰¹ is also on the horizon, demonstrating that it is a global trend to move away from coal.²⁰² Further, the extraction of oil from tar sands creates more greenhouse gas emissions than conventional fossil fuels;²⁰³ producing and processing tar sands leads to approximately 14% more greenhouse gas emissions than the average oil used in the United States.²⁰⁴ Therefore, divesting from companies and assets that generate substantial revenue from coal and tar sands is urgent and important.

IN THE LONG TERM (BY 2030):

▶ ***Fully divest all financial holdings from fossil fuel companies and fossil fuel-linked assets.***

ACADEMIA

To have academia so inextricably linked to the corporate world of the fossil fuel industry threatens the basis of intellectual freedom and critical thinking that universities are built on.

As previously discussed in the section “Problematising University-Corporate Ties”, the links between the fossil fuel industry and academia may impinge upon intellectual integrity and critical thinking within our universities. Through these links, academic research and talent may be used by the fossil fuel industry to support their status quo activities. For decades, oil companies like ExxonMobil and Shell have funded disinformation campaigns and academic research to debunk climate change and challenge fossil fuels’ role in it, despite being aware of the reality of the climate crisis.²⁰⁵ More recently, fossil fuel companies continue to fund anti-climate action lobbying and expand their status quo operations behind the scenes, while publicly representing themselves as climate action pioneers, which could further delay legislative action for the post-carbon transition.²⁰⁶ In this section, we will examine two domains: professorships and fellowships; and scholarships, bursaries, and student awards.

PROFESSORSHIPS & FELLOWSHIPS

NUS, SMU

We believe that our universities should reconsider accepting sponsorships for professorships and fellowships from the fossil fuel industry, as doing so inadvertently allows fossil fuel industry interests to become intertwined with those of academia. The involvement of these companies may influence the objectives of the research conducted under such fellowships to benefit the fossil fuel industry’s status quo activities (for example, increase the efficacy of extraction²⁰⁷) and accelerate climate destruction. Academics who have accepted fossil-fuel funding have also produced research that is skewed in favour of the industry.^{208, 209} For example, coal company TransAlta funded public health research at the University of Alberta.²¹⁰ The resulting study concluded that coal-fired plants did not harm nearby residents’ health, despite overwhelming evidence that such plants are in fact harmful. Separately, studies have shown how fossil fuel companies and industry associations have funded denials of climate change and fossil fuels’ negative environmental effects.²¹¹

Furthermore, academics funded by the fossil fuel industry may not be free to examine the motives and impacts of the fossil fuel industry. Ultimately, allowing fossil fuel companies

to associate themselves with professorships and fellowships in our universities potentially lends them legitimacy and downplays their role in the climate crisis.²¹²

- **NUS** Under the Department of Chemical and Biomolecular Engineering in the NUS Engineering Faculty, two visiting professors are sponsored by ExxonMobil.²¹³ The Low Tuck Kwong Distinguished Professorship is sponsored by the Founder and Chairman of PT Bayan Resources.²¹⁴ In addition, certain NUS research fellowships such as the ExxonMobil-NUS Research Fellowship are sponsored by ExxonMobil.²¹⁵
- **SMU** The Keppel Professorship in Financial Economics was established in October 2011 within the Sim Kee Boon Institute for Financial Economics (SKBI) at SMU, in recognition of Keppel's funding of SKBI.²¹⁶ The current Keppel Professor in Financial Economics, also serves as the Academic Director of SKBI.²¹⁷

SCHOLARSHIPS, BURSARIES & STUDENT AWARDS

SUTD, NUS, SMU, NTU, SIT

We also suggest that our universities reconsider accepting scholarships, bursaries, and student awards funded by fossil fuel companies. These awards entrench fossil fuel companies in the everyday lives of university students, naturalising their presence and obscuring the damage they cause. Scholarships can create a relationship of patronage between students, researchers, or academics and the fossil fuel industry, especially if they depend upon these scholarships. This may discourage them from criticising the industry or advocating for a post-carbon transition.

- **SUTD**
 - **Keppel Bursary Award.**²¹⁸ Granted to deserving students with demonstrated financial need at SUTD.
 - **Keppel Awards for Excellence.** SUTD received a donation of S\$2 million in support of Keppel Awards for Excellence and Keppel Bursary Awards.²¹⁹
- **NUS**
 - **BP Gold Medal Award** provided for by BP Singapore.²²⁰ Awarded to "the most outstanding student in the module 'Asian Business Environments' who has also excelled in the overall examination.²²¹ While it is unclear if BP purchased naming rights to the award, it is worth noting that naming rights have been purchased for advertisement purposes in other Singaporean spaces.²²²
 - **Shell Medal and Prize** and **Shell Best Dissertation Prize.** Awarded annually to a student of the Master of Science Environmental Management (MEM) programme.²²³
 - **ExxonMobil Medals** and **ExxonMobil Prizes.** Awarded to a variety of accomplishments by engineering students.²²⁴
 - **Shell Bursaries.** Granted to full-time students of the MSc (Environmental Management) programme who require financial support.²²⁵

- **SMU**
 - **BB Energy Scholarship.**²²⁶ Funded by BB Energy, an oil trading company.
 - **Glencore Scholarship.**²²⁷ Funded by Glencore, one of the largest natural resource companies in the world.²²⁸ It supplies a range of commodities, including energy products like thermal coal and crude oil and has stakes in many coal and oil extraction projects across the world.
 - **Dato' Kho Hui Meng scholarship and Dato' Kho Hui Meng Inspire scholarship.** Dato Kho Hui Meng is the President and CEO of Vitol Asia Pte Ltd, an oil trading company.^{229,230}
- **NTU**
 - **ExxonMobil Gold Medal.** Awarded to the student with the highest GPA for Bachelor of Engineering (Mechanical Engineering).²³¹
 - **Keppel Offshore and Marine Book Prize.** Awarded to a graduating student who has obtained the highest mark in MA4856 Naval Architecture & Marine Engineering for the degree of Bachelor of Engineering (Mechanical Engineering).
 - **Keppel Offshore & Marine Gold Medal cum Cash Award.** Awarded to a graduate who has obtained at least an Honours (Distinction) with the highest aggregate mark in 'MA4856 Naval Architecture & Marine Engineering' and any two prescribed electives from the Naval Architecture and Marine Engineering specialisation for the degree of Bachelor of Engineering (Mechanical Engineering).
 - **Shell Gold Medal.** Awarded to a student who has obtained at least an Honours (Distinction) with highest total aggregate marks in 'MA2079 Engineering Innovation & Design' and 'MA0101 Engineers and Society' for the degree of Bachelor of Engineering (Mechanical Engineering).
- **SIT**
 - **SP Group Book Prize in Electrical Systems.** Funded by SP Group (formerly known as Singapore Power)²³² and awarded to the student who achieves the highest score in Electrical Systems Engineering.
 - **Naterra Resources International Scholarship.** Funded by Naterra Resources International Pte Ltd, a coal mining company. This scholarship supports deserving students enrolled in the Bachelor of Engineering with Honours in Civil Engineering and Bachelor of Arts in Game Design degree programmes.²³³
 - **Geo Energy Bursary.** Funded by coal mining and trading company Geo Energy Group, the bursary supports financially disadvantaged and deserving undergraduates enrolled in full-time Information Communications Technology or Allied Health degree programmes.²³⁴
 - **Choo-Lim Scholarship.**²³⁵ Awarded to outstanding students to pursue undergraduate education at SUTD. Professor Choo was formerly CEO of Keppel Offshore & Marine and Keppel Corporation.²³⁶ He also sits on the board of Kris Energy, which agreed to develop a 3,000 sq km oilfield in Cambodia as late as 2017.²³⁷

ACADEMIA

OUR ASKS MOVING FORWARD

We recommend that our universities take the following steps to critically address the fossil fuel industry's associations with our universities' academic endeavours by 2030:

IN THE SHORT TERM (1-2 YEARS):

- ▶ **Regarding scholarships and prizes where the money is guaranteed in trusts, remove the name branding of fossil fuel companies.**

Academic awards with titles featuring the names of fossil fuel companies (e.g., ExxonMobil Gold Medal and Shell Bursaries) naturalise our universities' entanglement with fossil fuel companies' interests and motivations. We are of the opinion that associations with the fossil fuel companies undermine academic credibility and integrity.

This step is proposed as a short-term measure for scholarships and prizes where the money is guaranteed in trusts only; beneficiaries will continue to receive the benefit under these awards. Removing oil companies' names from these awards reduces their ability to associate themselves with NUS' excellent academic and social reputation, increasing pressure on them to transition from their harmful status quo activities. Anonymising scholarships can also remove potential silencing effects on beneficiaries.

- ▶ **Develop and publicly announce a plan to secure alternative modes of funding from companies which are committed to a post-carbon transition.**

We ask that our universities develop and publicly announce a plan to secure alternative modes of funding to replace existing funding from fossil fuel companies. The plan should contain clear targets and timelines, with a commitment to publishing regular reports to provide updates on their progress.

- ▶ **Implement climate crisis education for all students in our universities.**

The climate crisis is arguably the most significant challenge of the 21st century and threatens the survival of numerous human communities. It is therefore crucial that students, across disciplines, are well-informed on this topic. This is especially so given our government's aim to "transform Singapore into a glowing global city of sustainability" with "[everyone's] help"²³⁸ and Singapore's vulnerability to the climate crisis' consequences.

With the wealth of knowledge held by our universities' professors and academics²³⁹ who study the climate crisis, we propose that a module on the climate crisis be created and integrated into students' core curriculum. Ideal features of such a module include: the intersectionality of the climate crisis with other social issues, the systemic nature of the problem and potential solutions, the role of students and institutes of higher learning, and current and emerging solutions to the climate crisis, including technological developments and social-systemic changes in various fields. Of course, alternative solutions to a compulsory module may be worth considering given recent student demands for more flexible academic planning.²⁴⁰

Further or alternatively, we recommend that our universities engage with individual professors at the faculty level to incorporate climate change concepts and information into existing core course materials or modules for that faculty. This may allow students to draw links between their disciplines and the climate crisis, leading them to consider how to apply their skills and knowledge to climate solutions. Ultimately, it is practically and morally necessary for our universities to educate students about the upcoming challenges caused by the climate crisis.

IN THE MEDIUM TERM (3-5 YEARS):

- ▶ **Secure alternative funding from industries committed to a post-carbon transition to replace scholarships and prizes that are currently associated with the fossil fuel industry.**
- ▶ **Expand opportunities, resources and support for faculty, students, and staff to research, learn about, and take action on climate change, climate justice, and other activities that contribute towards the post-carbon transition.**

Several renowned universities have started climate hubs that focus on expanding such opportunities, resources, and support. For example, the University of California launched the UC Center for Climate Justice in April this year.²⁴¹ The Centre "seeks not only to address the root causes of climate change, but also the broad range of associated social, racial and environmental injustices." Tracy Osborne, UC's Presidential Chair, explained that such a hub is important because the climate justice solutions it researches address climate change's root causes and associated environmental and social issues. Additionally, the University of British Columbia has the Centre for Climate Justice, which recently hired notable climate activists and journalists, Naomi Klein and Avi Lewis, to join the Department of Geography as educators.²⁴² Singaporean universities should not fall behind but instead embrace the opportunity to lead research, development, and academic analysis in just climate solutions.

Singapore also hosts several such institutes and organisations. Examples include NUS Centre for Nature-based Climate Solutions, Singapore-ETH Centre, Wildlife Reserves Singapore, and PM Haze. We commend the work being conducted within these organisations to address crucial elements of the climate crisis. However, we believe that research groups and our universities can expand these initiatives to place more emphasis on systemic changes which address the root causes of climate change. Furthermore, such initiatives can be better-publicised to encourage more student contributions towards the post-carbon transition.

IN THE LONG TERM (BY 2030):

- ▶ *Discontinue all funding for scholarships and prizes associated with the fossil fuel industry.*
- ▶ *Discontinue research funding associated with the fossil fuel industry.*

PROFESSIONAL DEVELOPMENT

Universities can contribute to our transition to a sustainable future by not encouraging talent flow to the fossil fuels industry and diverting them towards more sustainable sunrise rather than sunset industries.

Universities partner with the fossil fuel industry to organise events and develop professional programmes for students, entrenching the industry's position as a career provider for students. These programmes may come in the form of industry-linked career events and partnerships. These programmes impress upon students the career viability of the fossil fuel industry.

However, the fossil fuel industry is a sunset industry, which may limit medium- to long-term career viability. For instance, key producers and traders predict the continuation of lower fossil fuel demand.²⁴³ Falling demand led Shell to announce that it will downsize its Pulau Bukom operations in Singapore by at least 50% and thereby cut 500 jobs in the next three years, among other reasons.²⁴⁴ Over time, therefore, the fossil fuel industry has a diminishing ability to provide graduates with financial and career stability. It is acknowledged that there exist job positions targeted at improving fossil fuel companies' energy efficiency and reducing carbon emissions, changes to which some companies have committed. However, we believe that it is prudent to be sceptical of such commitments, and whether they represent a transition away from fossil fuels, or an effort to increase the profitability of fossil fuels and maximise their use in the short term. Ultimately, in the long term, fossil fuels are incompatible with Singapore's commitment to "do (our) full part to tackle climate change".²⁴⁵

Universities should therefore take the lead in transitioning away from this industry, and work on programming greener, more viable alternatives for students' futures. We recommend that our universities critically reassess their current associations between professional development functions and the fossil fuel industry. We believe that these associations should be carefully phased out in consultation with relevant student organizations representing the most affected student groups, such as (but not limited to) chemical engineering students.

ON-CAMPUS CAREER EVENTS

SMU, NUS, NTU

Career portals and recruitment talks are a platform for the fossil fuel industry to encourage young talent to pursue a career in the industry. Fossil fuel companies are a recurring presence in the recruitment and career spaces of universities. It is acknowledged that universities' prerogative is not to prevent students from entering the industry. However, by collaborating with fossil fuel companies to host these events on university platforms, universities are conveying their endorsement and support of the industry. Renewable or sustainable careers are comparatively poorly-advertised.

Notable fossil-fuel industry events include:

- **SMU** In 2007, SMU's new International Trading Track (ITT), under the International Trading Institute (ITI), for undergraduate Finance majors was supported by prominent oil and gas companies like Total and Shell which continue to offer internships.²⁴⁶ The ITI@SMU Networking Night is organised annually for professionals in trading, alumni, and students to get together.²⁴⁷ The event is hosted by SMU's International Trading Institute (ITI@SMU), which seeks to cultivate talent for international trading. As fossil fuel companies like Shell, Emirates National Oil, and Total are key partners of the ITT programme, it is likely that they are invited to these networking events.²⁴⁸
- **NUS** In August 2019, NUS hosted the Women in Shell event, where female undergraduate students learnt about the career experiences of Shell's senior leaders and women in the Shell Graduate Programme.²⁴⁹ While gender disparity in the fossil fuel industry is acute, the empowering of women within a field that has disproportionately discriminated against women only perpetuates the conditions for, and does not interrogate, how gendered violence form the structures of fossil fuel extractivism.²⁵⁰ ²⁵¹ Shell regularly holds on-campus career talks for careers in Trading, Commercial and Technical roles, which have continued in virtual form during the pandemic.²⁵²
- **NTU** In the first semester of Academic Year 2019/20, BP held a recruitment talk and a personal branding workshop for NTU students. At the latter event, students learnt how to craft a personal brand that showcases their professional strengths.²⁵³ NTU's Career Fair 2020 included the oil and gas companies Borouge Pte Ltd, ExxonMobil, RWE Supply & Trading Asia-Pacific Pte Ltd, among others.²⁵⁴

INDUSTRY-LINKED PROFESSIONAL PROGRAMMES

SMU, NTU

Professional stints with fossil fuel companies motivate students to pursue a fossil-fuel-related career, given the path dependency of work experience with the industry. Such partnerships include:

PART 2: OUR FINDINGS

- **SMU** In 2007, the International Trading Institute at SMU introduced the International Trading Track (ITT), which is offered as a specialisation for undergraduate Finance majors at the Lee Kong Chian School of Business.²⁵⁵ The industry partners that support ITT's curriculum include prominent oil and gas companies like Total and Shell.²⁵⁶ Under the ITT programme, Finance majors learn about trading through classes and experiential learning opportunities such as overseas study missions, industry-related talks and networking events. The programme aims to equip their students with practical working experience through offering internship opportunities with commodities trading companies, especially the oil sector. The oil companies where ITT interns and graduates have worked include Emirates National Oil and Shell.

- **NTU** NTU's College of Engineering and Nanyang Business School collaborated with enterprise and industry partners from the international trading community to establish the Centre of Excellence International Training (CEIT). The Centre is run to operate its International Trading Programme (ITP), which offers a multidisciplinary education about major trading sectors, such as oil and gas, to students from the colleges of Business, Engineering and Maritime Studies. Students from these colleges are given the option to either enrol in the programme as a specialisation or minor. The programme's corporate partners are involved in advising the curriculum's design and providing students with internship opportunities. These include BP, Chevron, ExxonMobil, Shell, and Trafigura.²⁵⁷

PROFESSIONAL DEVELOPMENT**OUR ASKS
MOVING FORWARD**

We recommend that our universities take the following steps to critically address the fossil fuel industry's associations with our universities' professional development functions by 2030:

**IN THE SHORT TERM
(1-2 YEARS):**

- ▶ **Stop seeking new industry partnership programmes with fossil fuel companies which are related to the extraction, refinement, or use of fossil fuels.**

As a first step, we recommend ceasing the development of new industry partnership programmes with fossil fuel companies which are related to the extraction, refinement, or use of fossil fuels.

- ▶ **Seek to increase the advertisement of roles centred on alternative and sustainable industries to replace fossil fuel companies' advertisement of roles related to the extraction, refinement, or use of fossil fuels.**

In recruitment and career spaces, universities should actively seek to advertise roles in alternative, sustainable industries, which may ultimately provide more career stability for their graduates as compared to roles related to extraction, refinement, or other use of fossil fuels.

**IN THE MEDIUM TERM
(3-5 YEARS):**

- ▶ **Secure alternative partnerships with companies in sunrise industries that are committed to a post-carbon transition.**

In the medium-term, universities should work on promoting renewables and sustainability-linked vocations and seek partners that are committed to a post-carbon transition, in replacement of reticent fossil fuel companies.

Develop and publicise training, certification, and job transition pathways for employees of fossil fuel companies seeking to move to renewable or other sustainability-related sectors.

Our universities can play a key role in supporting the lifelong learning of fossil fuel industry employees by developing pathways for them to transition to renewable energy or other sustainable sectors. Such support is a central pillar of a just transition plan as detailed in the report *Achieving a Fossil-Free Recovery*.²⁵⁸ It emphasises the need for decision-makers to include key stakeholders (governments, employers, and workers) in the negotiation and planning process of such training programmes. Universities can leverage their resources and expertise to work closely with the government and labour groups in co-creating just transition opportunities for fossil fuel workers. Such initiatives could become sources of research and experiential opportunities for students and professors as well.

IN THE LONG TERM (BY 2030):

Cease prevailing industry partnership programmes with fossil fuel companies and the hosting of fossil fuel companies at on-campus career events.

With alternative partnerships having been sought to secure students' career development interest, we believe that universities are well-placed to, and should, cease industry partnerships with fossil fuel companies.



USE OF CAMPUS SPACES

University campuses must no longer be a place for fossil fuel companies to purchase social acceptance.

Fossil fuel companies are invited to be present in, endorse, and fund various initiatives across our universities. From recreational events to academic research centres, fossil fuel companies associate their names with a variety of university features. These companies can thus capitalise on universities' reputations to improve their own brand image among university or public stakeholders who attend these events and use these spaces. Such practices also normalise the ubiquitous presence of fossil fuel companies that are active contributors to the climate crisis.

Singapore's government has banned cigarette companies from sponsoring and publicising corporate social responsibility activities,²⁵⁹ clearly signalling that an industry whose core business is harmful should not be positively rebranded. Likewise, in our opinion, fossil fuel companies who have not credibly committed to a post-carbon transition should not be allowed to purchase positive branding and social acceptance from our universities. The withdrawal of such positive branding, and associated social legitimacy, may incentivise these companies to seriously reconsider their core operations.

ON-CAMPUS CAREER EVENTS

NUS, SUTD

- **NUS** ExxonMobil has been sponsoring the ExxonMobil Campus Concerts series in the National University of Singapore since 1986.²⁶⁰ The concerts are an opportunity for students to collaborate and put up music performances, but also a platform for ExxonMobil to promote itself to a wide university audience. This allows ExxonMobil to cultivate a positive image and downplay their environmentally and socially harmful activities.

ExxonMobil also sponsors programmes with the Lee Kong Chian Natural History Museum. In 2017,²⁶¹ 2018,²⁶² and 2019,²⁶³ the company sponsored a programme on endangered species and conservation where students learnt about endangered species and about the threats that affect their survival. Participants were then encouraged to create documentaries and posters to raise awareness about conservation. Such initiatives contradict the reality of ExxonMobil's massive share in an environmentally degrading industry.

- **SUTD** SUTD and ExxonMobil have collaboratively launched a mobile fabrication lab. ExxonMobil has also paired this with various other talks and events on campus.²⁶⁵ This enables the corporation to be involved with a centre for academic learning—ExxonMobil can promote the fossil fuel industry, encourage students to work with them, and at the same time, gain social acceptance through the centre.

USE OF CAMPUS SPACES

OUR ASKS

MOVING FORWARD

We have welcomed fossil fuel companies into everyday life on campus. They are allowed to sponsor and market themselves in any and every setting, from music concerts to science laboratories. In this way, we are normalising their presence and allowing them to clean up their bad reputation for being complicit in the climate crisis. University campuses must no longer be a place for fossil fuel companies to purchase social acceptance.

IN THE SHORT TERM (1-2 YEARS):

- ▶ Secure funding for campus events and spaces from companies committed to the post-carbon transition.
- ▶ Continue holding and promoting events which critically engage with the climate crisis on a systemic level.

IN THE MEDIUM TERM (3-5 YEARS):

- ▶ Discontinue existing sponsorship programmes with fossil fuel companies.

CONCLUSION

We are conscious that we are not directly involved in the relevant decision-making processes and discussions regarding fossil fuel companies' involvement in our universities and may not know the full picture. What we have covered in this report is only based on publicly available documentation and studies, which is admittedly limited. By comparison, reports from Canada and America unearthed the direct influence of fossil fuel-linked funding and management upon academic integrity and research output through freedom of information requests²⁶⁶ and whistleblower leaks of internal communications.²⁶⁷ Due to these inherent limitations, we welcome any additional information or feedback that can facilitate the transition towards more climate-conscious universities that are centred on equity and inclusivity.

That said, we would like to collectively ask that our respective institutions' Investment Offices, Presidential Offices, as well as the Ministry of Education, sincerely consider our recommendations. The targets and timelines proposed are negotiable, considering existing feasible solutions and with due attention given to the urgent threat of the climate crisis to our survival.

We acknowledge that this report comes at a sensitive time amidst a global pandemic. The ever-changing circumstances of our daily lives may make it seem that we must overcome this crisis before we return to other concerns.²⁶⁸ Yet, the COVID-19 pandemic illuminates the importance of establishing and reinforcing sustainable and resilient systems and of paying attention to broader environmental issues, as they are intrinsically intertwined with humanity's collective survival. Just as deforestation and the emergence of zoonotic diseases are inextricably linked, the climate crisis will also bring about widespread suffering if we do not begin to address it now. The virus also reveals the uneven impacts of global crises on different groups in society. Marginalised communities are disproportionately affected by the coronavirus and similar outcomes will result from climate disasters.

There are many stories of injustice emerging from this time—disabled people who rely on social care now face the painful choice between protecting themselves against the virus by isolating or seeing the people that help with their daily living;²⁶⁹ migrant domestic workers who have to live-in with their employers now have to deal with the risk of having no rest days and work without compensation.²⁷⁰ Likewise, it is the poor and marginalised that will bear the brunt of the climate crisis²⁷¹—the workers who do not have sufficient safety nets to depend

CONCLUSION

on when a disaster hits, the low-lying communities who will have nowhere to go.

In a similar vein, workers in fossil fuel companies will be the ones who will be most affected when society eventually transitions away from the fossil fuel industry. To borrow a saying from the labour movement, "Transition is assured, justice is not".²⁷² A move towards a green economy is not meaningful without a focus on workers' needs and rights. Workers most affected must have a voice and defined role in how the transition to clean energy will take place for the process to be just.²⁷³ Likewise, divestment from the fossil fuels industry must happen together with a just transition for its workers.

As students at our local universities, we present this report with the sincere hope that the academic institutions which have endowed us with the opportunity to be educated on critical issues will listen to our voices and consider the contents of this report. As institutions that are home to the wise and promising talents of both present and future generations, we believe that our universities and their governing bodies have the moral courage to reconsider partnerships with the key perpetrators of the climate crisis²⁷⁴ and trailblaze a more sustainable future.

This year's IPCC report on climate change makes it clear that our planet will exceed global warming of 1.5°C and 2°C this century unless we drastically cut our global greenhouse gas emissions in the next few decades.²⁷⁵ Even if countries were to fully achieve their current climate pledges, this would still be insufficient to reach net zero carbon emissions by 2050 and limit global warming to 1.5°C.²⁷⁶ The present state of our climate is not the product of yesterday's emissions, but rather the culmination of the actions of many generations before us. We must radically change the way we think and live to protect our future, or we will be remembered as simply another generation that did not try enough. To the leaders and decision-makers of our universities, this is your opportunity to create a great, positive change in the lives of many, both in the present and the future. We are depending on you.

For a better world,



**Students for a
Fossil Free Future**



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