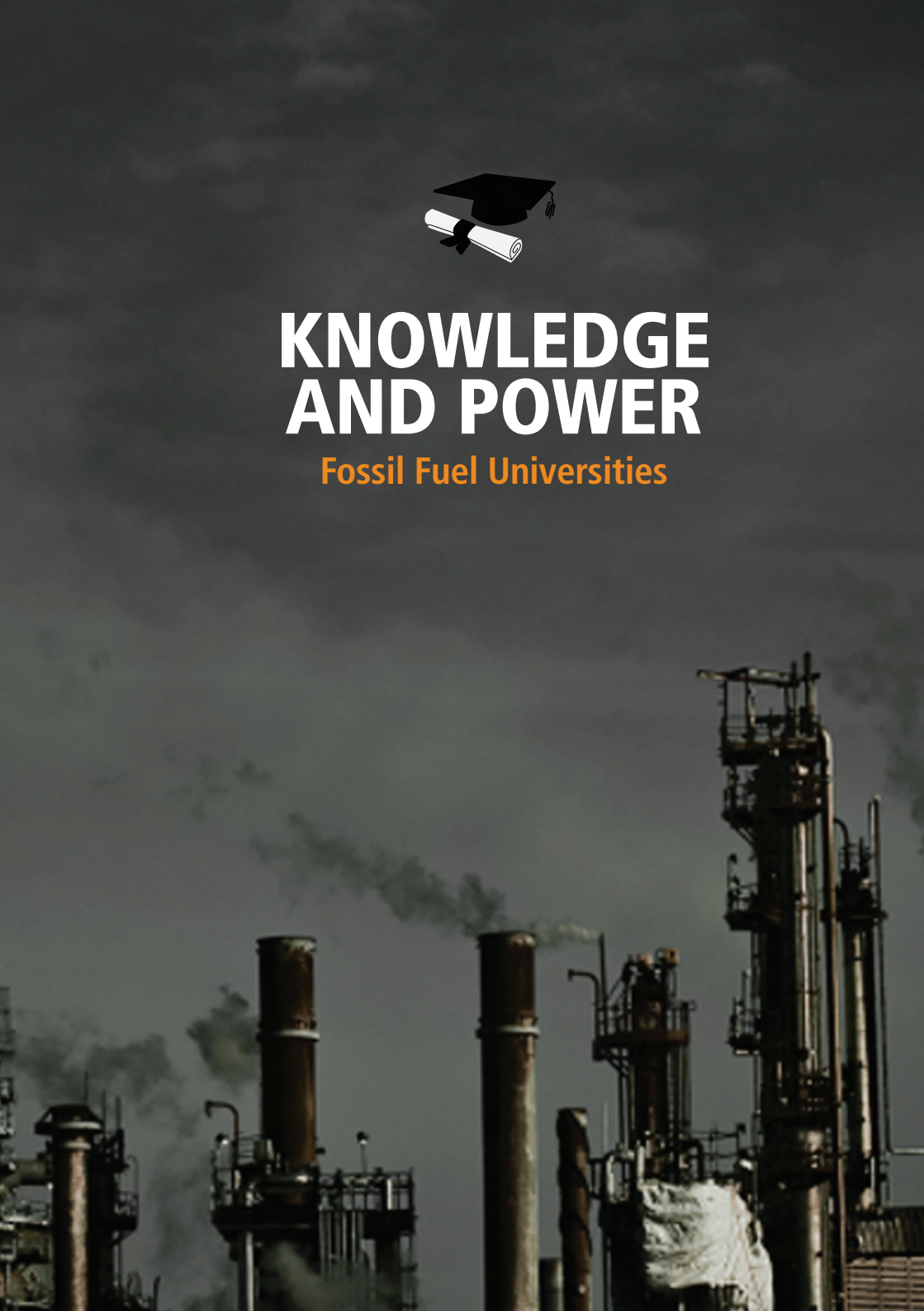

KNOWLEDGE AND POWER

Fossil Fuel Universities

CONTENTS

This report was written by Ric Lander (riclander.wordpress.com) on behalf of Platform, People & Planet and 350.org.

Platform is a London-based arts, human rights and environmental justice organisation. Based on core values of solidarity, creativity and democracy, Platform uses art, literature, activism and education to achieve long-term systemic change. We have been imagining a world beyond oil for more than 30 years, and are trying to make it a reality.

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People & Planet is the largest student network in Britain campaigning to end world poverty, defend human rights and protect the environment. We are a student-led movement that empowers young people with the skills, confidence and knowledge they need to make change happen, at home and globally. Our new climate change campaign, Fossil Free, aims to expose ties between UK universities and the fossil fuel industry and support students to sever them.

www.peopleandplanet.org
www.peopleandplanet.org/fossil-free
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Email: fossilfree@peopleandplanet.org if you'd like to sign up to our fortnightly emails.

350.org is building a global grassroots movement to solve the climate crisis. Our online campaigns, grassroots organizing, and mass public actions are led from the bottom up by thousands of volunteer organizers in over 188 countries.

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Universities "have the future in their bones".[1]

EXECUTIVE SUMMARY

Cutting-edge research creates our technological future, and education forms tomorrow's workforce. Right now, our future crucially hinges on our society's ability to go fossil-free, but UK universities are deeply entangled in the fossil fuel industry:

- UK Universities have a combined investment wealth of £62.2 billion. Conservative estimates suggest £1.9 billion of this sum is invested in the fossil fuel industry but our research suggests that a figure of £5.2 billion is more accurate: an investment in fossil fuels of £2,083 for every student in the UK.
- A small proportion of the wealth of university endowment funds is invested directly in the shares of oil & gas companies. A far greater proportion supports the industry by investments held in pensions unit trusts, and other financial products. *(See '1. Move The Money', p. 19)*
- Fossil fuel executives are revered by universities, invited to speak at prestigious events and given honorary degrees. Senior executives from BP and Shell have received 20 awards in the last decade alone, including infamous ex-BP chief executive Tony Hayward. Hayward, who was forced to resign after the Deepwater Horizon disaster, has been awarded honours from Aston University, the University of Birmingham, and Robert Gordon University.
- Universities offer their credibility for cash when they sign deals sponsoring staff positions, buildings, conferences and lectures with fossil fuel companies. These deals play a key role in shoring up the fossil fuel industry's public image. *(See '2. Stop The Greenwash', p. 32)*

- Students are trained in fossil fuels by industry-tailored degree courses and encouraged to work for oil, gas and coal firms at university-hosted career events.

- The UK government research councils have stopped directly funding most fossil fuel research. However, energy research spending has fallen over the past 20 years,[2] and the current Research Council annual energy research budget is 13 times smaller than the combined global research budgets of Exxon, BP and Shell.

- A number of higher education institutions conduct advanced research and development on fossil fuels with Shell, BP and Exxon funding £56.7 million. Although this represents a small proportion of the total research budgets of these companies, such programmes help unlock more carbon by discovering new sources of fossil fuels, and increasing the amount of fuel that can be extracted from existing sources. Sponsoring university research is commonly seen by companies as a cheap alternative to doing it in-house.[3] *(See 3. Clean up Research and Training, p. 36)*

- Universities host and train fossil fuel company staff and work on high-profile collaborative programmes, sharing intellectual property rights with companies and high-level managers, e.g. at the University of Cambridge where the Head of the Department of Engineering is a Director of BP.

To move beyond fossil fuels, we need to break the carbon links between universities and fossil fuel companies. The opportunities are there.

- Refusal to invest in harmful corporate practice has proved a powerful force for change, most famously in helping bring down the apartheid government in South Africa. However only 13 universities have an ethical investment policy which they have put into action and many policies are flawed and ineffectual.

- There is considerable evidence showing that low-carbon investments out-perform fossil fuel investments. Companies such as Shell and Cairn Energy's activities in the Arctic have been shown to create huge risks for investors, and much of the value of shares in oil and gas companies is based on plans to exploit reserves which, if extracted, will create an ecological and social catastrophe.

- Public campaigns and legislation have made it unacceptable for arts institutions and sporting events to be sponsored by tobacco firms. Lending cultural or academic credibility to fossil fuel companies should be similarly controversial.

- Recruitment drives are increasingly a struggle for oil companies as recent reports suggest that in the 21st century the fossil fuel industry is "struggling to recruit" young people.[4]

To create a higher education sector of truly fossil-free universities, this report is calling for universities to:

1. Immediately freeze any new investment in fossil fuel companies.

2. Divest from the fossil fuel industry and shift funds to lower risk, ethical investments within five years. Screen for and exclude the fossil fuel industry from their investment portfolios.

3. Call on their pension funds to exclude fossil fuel companies from their portfolios, and encourage employees to register their concerns with pension providers and switch to fossil-free pensions.

4. Stop accepting sponsorship from fossil fuel companies for events and research, or providing them with prestigious platforms from which to speak.

5. Stop handing out honorary degrees to fossil fuel industry CEOs.

6. Publish full details of financial and other ties to the fossil fuel industry.

7. Provide students with ethical careers advice and opportunities rather than encouraging them to work for the fossil fuel industry.

8. Stop training fossil fuel staff and drop courses designed to funnel students into oil, gas and coal.

9. Phase out fossil fuel research and refocus research towards climate solutions.[5]

"From Anglo American to Total, researchers at Imperial have worked with some of the largest names in the industry. Many of them even used to work for those same companies before moving into academic research. My advice to companies? Visit us! Come and see us and talk to us about your needs, we're in the best position to try to solve problems."

// Professor Gringarten, Chair of Petroleum Engineering at Imperial College London[6]

"The BP Institute epitomises the exceptionally strong bond between BP and Cambridge"

// David Eyton, Group Head of Research & Technology, BP[9]

"The power and influence of the oil and gas industry mean that their policies and activities have a major influence on the direction of energy-related R&D and the degree to which society is successful in tackling these problems."

// Scientists for Global Responsibility, 'Science and the Corporate Agenda', 2009[11]

"Knowledge is embodied in people, and they are the real key to the next level of productivity. No machine can innovate. No piece of technology can think about its own limitations and experiment with progress. No oil rig has ever walked into my office with a great new idea. That's why in the new connected knowledge economy, the first war of this century will be the war for human talent."

// Rodney Chase, former Deputy CEO of BP[7]

"BP's alliance with The University of Manchester… enables BP to access the University's world-class executive education, high-quality research facilities and its undergraduate talent pool."

// The University of Manchester website[8]

"The aim of the [BP Bursary] scheme is to increase the existing strong links between BP and the University of Oxford."

// University of Oxford website[10]

INTRODUCTION

THE PROBLEM WITH FOSSIL FUELS

The threat of climate change is globally recognized, and the extraction and consumption of fossil fuels is of central importance in how that threat is dealt with. Even the relatively conservative International Energy Agency admits that two thirds of the already discovered oil and gas must be left in the ground if we are to have a chance of avoiding catastrophic climate change.[13]

Yet carbon emissions world-wide continue to rise with 35% more CO2 being pumped into the atmosphere from the burning of fossil fuels compared with ten years ago.[14] Renewable energy has become cheaper and easier to use, but the UK government continues to subsidise oil and gas, threatening to lock us into another half century of dependence on fossil fuels with 30 proposed new gas power stations[15] and proposed new pipeline infrastructures. All the while climate change is causing more death, disease and disruption, and more communities and countries are pushed to the limit.

The UK is home to two of the world's fossil fuel giants: BP and Shell, but also home to research centres and institutions expert in developing new energy resources. These places can provide new energy solutions, rather than scraping the barrel of the old. Our universities are also well-placed to lead on championing social responsibility and sustainability: year-on-year the People & Planet Green League has shown that many universities are eager to improve their environmental performance.[16]

Now is the right time for them to get to the root of the problem. To keep reserves ever rising, fossil fuel companies are seeking out oil from deep oceans, threatening land with fracking and tar sands extraction, and drilling in the High Arctic *(see Box no. 1, p. 12)*. These dangerous and damaging "unconventional" fuels are spreading havoc in communities and pose great risks to human health and ecosystems from spills and disasters.

The fossil fuel industry is driving us towards a global climate crisis. The climate crisis cannot be meaningfully addressed while we are still increasing the amounts of fossil fuels being taken out of the ground. The imperative is to move beyond lowering the carbon emissions of our households and institutions, and start looking at how the extraction of the minerals which create this problem can be slowed to a halt.

UNIVERSITIES AND FOSSIL FUELS

As C.P. Snow famously asserted, "scientists have the future in their bones".[17] Cutting-edge university research embodies our technological and cultural future, and university education forms tomorrow's workforce. They therefore have a particular responsibility in shaping our future society's sustainability.

However, many universities are currently doing the very opposite. This report details how universities lend large amounts of money, valuable credibility, and their students and staff to oil, coal and gas companies. Investments are kept in fossil fuel company shares through pension and endowment funds. Universities accept lucrative sponsorship deals for buildings, staff and events, give senior fossil fuel executives awards and honours, train corporate staff, and design courses with them. Universities encourage students to work for fossil fuel companies, and conduct advanced research and development on their behalf, investigating new ways to drill for inaccessible fossil fuel resources.

Oil, gas and coal companies are more profitable with these relationships because they help them finance their work, recruit staff, drill for new, riskier resources, sell products, and build a 'social license to operate'. Universities, pushed by governments fixated on the commercialisation of higher education, enter into these relationships to enable them to offer new staff positions, fund courses and pay for equipment and buildings. Yet by doing this they are trading the gains for their accountability, and failing in their role in shaping a fossil-free future.

FOSSIL-FREE UNIVERSITIES?

Public institutions such as universities can take the responsible step and start untangling themselves from oil, coal and gas. Instead of financing the fossil fuel sector, universities can keep money in clean, less risky investments. Instead of greenwashing those industries that exacerbate climate change, universities can exemplify those who are leading the way in the transition to a low-carbon economy. Instead of training the industry and researching new ways to extract fossil fuels, they can work to research and train in technologies which will build a clean and healthy future.

People & Planet's new climate campaign, Fossil Free, forms the crucial student wing of a new coalition of organisations coming together in the UK to challenge the risky business of fossil fuels.[18] Fossil Free supports students all over the UK to call on their universities to sever ties with fossil fuel companies. Students are asking universities to move their money, stop the greenwash and to support a clean energy future for all.

In the process of putting their house in order, universities will be pioneering a new way for public institutions to become truly independent of the fossil fuel economy, trailblazing a path for wider society to follow.

Box no. 1

WHAT ARE UNCONVENTIONAL FOSSIL FUELS?

Unconventional fossil fuels are those that are extracted using resource intensive methods, which are only profitable when fuel prices are high. Similar terms include high carbon oil (oil with high carbon emissions from extraction) and marginal oil (oil with tight limits on its economic viability).

There is no agreed definition of unconventional fuels but various definitions usually include the following:

- Heavy oil including the tar sands in Canada and Venezuela
- Deep-sea drilling
- Drilling in the High Arctic or other extreme environments
- Shale gas and coal-bed methane extracted by fracking
- Underground coal gasification and coal-to-liquids

Although there are some companies which specialise in unconventional fossil fuels, most of the money behind their development and extraction comes from the conventional industry. Unconventional fuels are the new frontier of the fossil fuel industry.

More information about the biggest companies involved in unconventional fuels and their investors can be found in the appendices.

Box no. 2

UPDATING 'DEGREES OF CAPTURE': WHAT'S CHANGED IN TEN YEARS?

Ten years ago Platform, the New Economics Foundation and Corporate Watch, published 'Degrees of Capture', an investigation into how universities were supporting fossil fuels. What's changed in that time period?

In 2003 we said, "Within less than a century, scientists are predicting temperature rises of up to six degrees centigrade, sea-level rises of nearly a metre and climatic chaos."

- In the last ten years global oil extraction has increased by 12%[19] and carbon emissions from the consumption of all fossil fuels has increased by 35%.[20]

In 2003 we said, "the commercialisation of academia skews public debate by limiting the field of inquiry so that only study of subjects that have commercial application are fundable".

- Today this is even more profoundly true. The government's 'impact agenda' for research[21] seems to be taken to largely mean universities catering for the needs of industry. In justifying the Natural and Environmental Research Council's statement of "de-risking investment" in the polar regions as a strategic aim, Duncan Wingham, the NERC chief executive, said "all scientific institutes were now under pressure to ensure they were providing value to the UK economy."[22]

In 2003 we said, "although university funding only makes up 5% of their annual research and development, industry funding for oil and gas research is considerable with Shell spending £3.6 million a year in universities".

- Today this has increased exponentially, with just one example being the £5.9million partnership between Shell and Oxford's Earth Sciences department. A further £3.6m in funding to other universities was also identified.[23]

In 2003 we said, "the publicly funded Engineering and Physical Sciences Research Council (EPSRC) determines academic grants through a peer review college containing 12 oil or gas executives" and "lists over 70 projects under oil and gas research".

- Today the EPSRC is giving most of its energy research funding to renewable energies and energy efficiency projects.[24]

In 2003 we said, "personal connections with academics give companies a direct link to students" with 23 academic positions sponsored by fossil fuel industry and many universities led by former oil execs, including Imperial College, and Heriot-Watt, Dundee, Exeter and Hull Universities.

- Many former fossil-fuel industry staff still work in universities and have academic posts sponsored by fossil fuel companies. However none of the universities listed in Degrees of Capture are headed by executives from big oil anymore.

JARGON BUSTER

We've tried to avoid the more unusual phrases in this report, but this glossary may be useful when reading around and discussing these topics.

Biofuels –
Fuels produced from organic matter. Industrial biofuels made from mono-culture crops threaten livelihoods and environment in many parts of the world, so this report does not include this fuel under renewables.[25]

Carbon emissions –
Gases released commonly by human activity which contribute to global climate change. More properly called greenhouse gas emissions and measured in tonnes of CO2 equivalent.

Coal-bed methane (CBM) –
An unconventional source of natural gas trapped in coal seams. Fracking may be necessary to tap CBM resources. Also known as coal-seam gas.

Conventional fossil fuel –
A source of oil, gas and coal which can be extracted and refined using well-established methods.

Endowment fund –
Money held by universities, usually taken from donors, where the interest is used to fund the university's work. Endowments may be invested in stocks and shares as well as other financial products.

Equity –
The value of a business. Commonly used to refer to stock or share ownership of publicly owned companies.

Ethical investment policy –
A centrally agreed document held by an institution which sets out industries or types of investments to be avoided or emphasised in its investment portfolio for ethical reasons.

Fracking (hydraulic fracturing) –
An unconventional technique used for oil and gas extraction where high pressure water is used to create fissures in oil- or gas-bearing rock seams.

Freedom of Information Act –
UK and Scottish Parliament law regulating the rights to information held by state bodies, including Universities.

Green League –
People & Planet's Green League is the only comprehensive and independent league table of UK universities ranked by environmental and ethical performance. It is compiled annually by the UK's largest student campaigning network, People & Planet.

Heavy Oil –
Sources of oil with a high density that require resource intensive practices to extract and process it before they can be used. The tar sands are the largest currently exploited form of heavy oil.

Honorary degree –
Honours given by universities, usually at degree ceremonies, to recognise lifetime achievements.

Intellectual property –
Concepts, inventions and creative works which can be owned by a person or organisation.

Marginal oil –
Sources of oil whose economic viability is questionable. If costs increase or oil prices go down marginal oil becomes unprofitable.

Publicly-owned company –
A company whose shares are available to buy on the stock market. Universities can invest in these companies. Does not refer to state-owned companies.

Renewables –
Renewable sources of energy are those which cannot be depleted by use. Includes wind, wave, tidal, solar and others. Sometimes used to refer to biofuels and, erroneously, nuclear energy.

Research Council –
The UK Government Research Councils are the primary state funders of research in UK Universities.

Shale gas –
An unconventional source of natural gas trapped in shale rock. Fracking is commonly used to exploit shale gas.

Social licence to operate –
A phrase used in the extractives and PR industries to refer to the need of companies to have public support for their operations.

Stocks / shares –
Pieces of equity which organisations and individuals can buy and sell on the stock market.

Supermajor –
The largest publicly-owned oil and gas companies are referred to as 'supermajors', they are BP, Chevron, ExxonMobil, Shell and Total.

Tar sands –
An unconventional source of oil present as highly impure bitumen deposits which require resource-intensive processing to become useable. Currently exploited in Canada and Venezuela. Also known as oil sands.

Unconventional fossil fuel –
Oil, gas and coal extracted using resource- intensive methods which are only economical when prices are high.

Universities Superannuation Scheme (USS) –
Pension scheme jointly owned by UK universities with a current value of over £32bn.

Knowledge and Power: Fossil Fuel Universities

CASE STUDIES

The **University of Oxford** has a number of deep connections with the fossil fuel industry, many of them channelled through the Oxford Institute for Energy Studies, over 50% of whose grants come from oil and gas companies.[26] Of 250 papers published by the Institute only three are on renewables, perhaps not surprising since their stated aims and objectives are almost entirely about fossil fuel production.[27] The Institute hosts the annual "Oxford Energy Seminar" at St Catherine's College. Speakers at last year's event, tickets for which cost £5,500, included the Senior Vice President of Exxon, the CEO of Saudi Aramco, the Chairman of British Gas, the CEO of Total, the Operations Director of Schlumberger, the Executive Vice President and Chief Economists of BP, the Chairman of the Board of E.ON, a Director of Shell, and the former heads of BP, Saudi Aramco, Shell and Anglo American.[28]

In 2012 the University announced multi-million pound research deals working on biofuels with BP[29] and a £5.9 million deal with Shell to fund a new unconventional fuels-focused hydrocarbons laboratory.[30] The Smith School hosts an oil industry consultant,[31] BP sponsored professorships, "BP Professor of Information Engineering"[32] and "BP Professor of Economics"[33] and in 2012 the CEO of Shell was hosted by the University in an address on the global food and water crisis.[34]

Oxford promotes BP careers to its students, including the "BP Ultimate Field Trip Competition"[35] and has a number of bursaries and prizes sponsored by BP including funding for 10 science, technology, engineering and mathematics students[36]; 33 Master of Public Policy students;[37] 19 students in the recently wound-up "BP Bursary"; and the annual Department of Earth Sciences prize.[38] According to the University website these schemes are intended to "increase the existing strong links between BP and the University".[39]

The University of Oxford and its colleges have the largest endowment wealth of any UK higher education institution: in 2012 the university's endowments were worth £3.8 billion,[40] 41% of UK universities' total endowment wealth. Oxford does show some signs of taking responsible investment seriously: in 2013 it scored 2/3 on ethical investment in the Green League[41] and over the last five years has made steps to divest from arms manufacturing companies on ethical grounds, although only for directly owned shares.[42]

Heriot-Watt University, Edinburgh has eight main departments, one of which is the Institute for Petroleum Engineering, a major centre of oil and gas research. The Institute boasts that: "We tailor our teaching and research to the needs of the petroleum industry and place considerable importance on the maintenance of close links with the industry."[43] Controversial drilling company Cairn Energy has a "strategic alliance" with Heriot-Watt involving a number of projects including funding for a professorship[44] and a donation of £1.4 million for a new Postgraduate Centre.[45]

Most recently, in June 2013, Heriot-Watt announced a new research deal with Shell worth £3 million.[46]

Heriot-Watt offers a number of programmes in fossil fuels and boasts a large number of graduates working in the industry. For example, their campus in Dubai offers programmes such as "Petroleum Engineering MSc".[47] In recent years they have awarded the then-head of BP John Browne and Chairman of Cairn Energy Bill Gammell honorary degrees.

In 2012 BP announced it was opening a £64 million research centre at the **University of Manchester** to "help its search for oil in deeper and more challenging environments",[48] supporting 25 new academic posts, 100 post-graduate researchers and 80 post-doctoral fellows.[49] Manchester's website says "BP's alliance with The University of Manchester… enables BP to access the University's world-class executive education, high-quality research facilities and its undergraduate talent pool"[50] and it has trained 600 BP staff at Manchester's "BP Projects and Engineering College."[51]

Manchester also boasts close research relationships with EDF and Shell[52] and caters for BP staff who are enrolled in "specialized operational and technical management programmes" at the University.[53]

Shell and BP both sponsored Manchester's School of Earth, Atmospheric and Environmental Sciences postgraduate conference in 2012. Just £1000 from Shell and £500 from BP[54] ensured that every participant of the conference got a BP-branded goodybag with a Shell-branded screwdriver inside among other conference merchandise.

With an endowment value of £154 million[55] (the UK's 4th largest), Manchester does have an ethical investment policy, but according to the 2013 Green League it has not taken any divestment actions in line with this policy.[56]

The **University of Cambridge** has the highest research income of any university in the UK. In 2000 Cambridge received the then largest ever grant from an oil and gas company when BP gave a £23.1 million endowment to found the BP Institute.[57] The BP endowment funded a new building, a professorship, four permanent lectureships and support staff to carry out the work of researching improvements in oil pipeline flow.[58] The Institute also offers training and postgraduate courses for oil and gas industry personnel.[59] David Eyton, Group Head of Research & Technology at BP, said of the Institute "it epitomises the exceptionally strong bond between BP and Cambridge."[60]

The university also participates in BP's Energy Sustainability Challenge'[61] and BP sponsors a 200-year-old professorship, since 1992 re-named the "BP Professor of Organic Chemistry."[62] In 2012 Dame Ann Dowling, Head of Cambridge's Department of Engineering, was appointed a Non-Executive Director of BP.[63] In 2010 Gillian Evans, Professor of Theology at Cambridge, criticised the University's relationship with BP, saying:

> *"There may be reputational damage in store for the university. That would be bad enough in any case, even if the connection were merely financial, but it is surely much worse if BP is engrafted into the academic fabric of the institution."*[64]

The combined endowment wealth of Cambridge and its colleges is £3.2 billion, making it the UK's second

wealthiest, yet according to the 2013 Green League it has no approved ethical investment policy.[65]

As of 2013 **Imperial College London** has more research funding from fossil fuel companies than any other UK institution. It received £17.3 million from Shell and BP alone (see appendices). The work is led by the Centre for Petroleum Studies, formerly part of the Royal School of Mines, one of Imperial's four original constituent colleges.

A great number of research projects at Imperial are working to help the oil industry drill deeper and make greater profits. Among others, Total funded experimental physics research into how to get more oil out of reservoirs.[66] BP funded projects to remotely assess the condition of machinery in refineries.[67] Shell sponsored former oil man Professor Al Fraser as their "Shell Distinguished Lecturer" to give talks about his work on drilling for oil in the Arctic and prospecting in Angola,[68] as well as jointly funding, with Qatar Petroleum, a $70 million ten year cross-departmental project on the chemistry of carbon capture and storage.[69] Longer term strategic partnership agreements include various agreements with Shell: a general research partnership agreement,[70] a five year partnership to promote 'Clean Fossil Fuels' ,[71] and support for the Imperial 'Energy Futures Lab',[72] and BP's sponsorship of academic posts including the "BP Chair of Inorganic Chemistry."[73]

As well as research funding, Imperial receives a number of donations, sponsorships and consultancy deals with BP, Total, Shell, Schlumberger, StatOil, EDF, Anglo American,[74] Aramco, ConocoPhillips, Exxon, Texaco, British Gas and npower.[75]

Fossil fuel degrees offered at Imperial are numerous, including the "MSc Petroleum Geophysics."[76] Imperial hosts speaker events for oil executives including in March 2013 the new Chairman of Shell, Ed Daniels, at the "Energy Futures Lab Annual Lecture."[77] In the last year Imperial College's careers events have been attended by BP, Shell, Baker Hughes, EDF, Centrica, Schulmberger and Total.[78] Imperial has awarded honorary degrees to BP Director Professor Dame Ann Dowling[79] and former BP Head John Browne.

Its £79.1 million endowment fund is the UK's 10th largest[80] and £4,356,285 of this is directly invested in oil, coal and gas, 9.1% of the value of all their directly owned shares.[81] Further funds are likely to be invested in fossil fuels through their large ownership of externally managed financial products. Imperial has no active ethical investment policy.[82]

Imperial has solidified its relationship with the fossil fuel industry still further by inviting oil executives onto university committees. BP's Chief Executive of Refining and Marketing, Iain Conn, is a member of the Council of Imperial College[83] and Chairman of the Imperial College Business School's Advisory Board.[84] In a notable example of privatising research outputs, in 2000 Imperial signed a deal with BP giving any division of BP Worldwide access to Imperial's research.[85]

Imperial presents itself publicly as a fossil fuel university. Professor Gringarten, Chair of Petroleum Engineering at Imperial put it this way: "From Anglo American to Total, researchers at Imperial have worked with some of the largest names in the industry. Many of them even used to work for those same companies before moving into academic research. **My advice to companies? Visit us! Come and see us and talk to us about your needs, we're in the best position to try to solve problems."**[86]

1. MOVE THE MONEY

Universities are some of the wealthiest and most prestigious public institutions in the UK. Some are many hundreds of years old with a directory of wealthy benefactors, valuable collections and extraordinary buildings. They also have a significant amount of money. These richer institutions may not be typical in higher education, but all universities have money invested for the long term and all universities must take some measure of responsibility for the way they invest this money.

HOW MUCH MONEY DO UNIVERSITIES HAVE?

Higher education institutions have a large amount of money held in various forms, invested in endowment funds, pension funds, directly-owned stocks and shares, and in bank accounts.

By far the most significant of these forms of wealth are university endowment and pension funds. Endowment funds represent the long-term savings of universities, and pension funds are the money put aside to support staff in their retirement.

By adding together the known endowment wealth of universities with an estimate of total pension investments this report can reveal an estimate of the total investment wealth of universities is comfortably over £62 billion.

As well as these large sums in long-term funds, universities hold money in bank accounts for everyday use, and own company shares directly. All these forms of wealth will be considered in this section.

Endowment funds

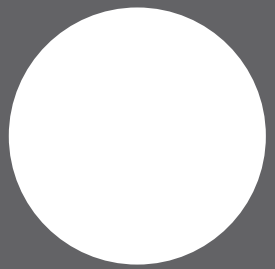
Endowment funds are universities' long-term savings. They are commonly raised by fundraising from individual donors, often from wealthy alumni, and spent on any number of purposes from bursaries to building work. Some universities brand their endowment fundraising efforts as campaigns (e.g. "the Edinburgh Campaign") and put huge resources into getting funds from their graduates. Those with the largest funds have extensive bureaucracies to manage them, although many universities outsource some or all of

HOW DO UNIVERSITY INVESTMENTS COMPARE?

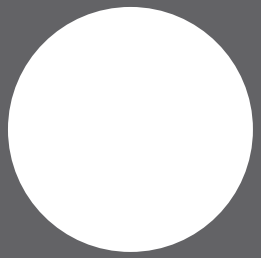
£62.2 bn
Estimated investment wealth of UK universities

£37.7 bn
Value of NHS pension scheme, the UK's biggest[87]

£37.5 bn
Original RBS and Lloyds banking bailout, 2008[88]



£34 bn
Cost of replacement of Trident nuclear weapon system[89]



£32.4 bn
Value of universities Superannuation Scheme, third largest pension fund in the UK[90]

£9.3 bn
Cost of London 2012 Olympics[91]

£9 bn
Total value of UK universities' endowment funds

£7.2 bn
UK Government aid budget[92]

£4.9 bn
Annual bill for Job Seekers' Allowance[93]

£2.3 bn
Total debt "owed" to UK by Global South[94]

If universities have money on such a large scale, it's reasonable to suggest their investment choices contribute significantly to how different sectors obtain finance.

TOP 10 LARGEST UK UNIVERSITY ENDOWMENT FUNDS

this work to external fund managers. Totalling up the value of funds at all 169[95] universities and higher education institutions we found that the combined value of UK universities' endowment funds was £9.27 billion.[96]

This money was by no means equally shared among universities. At the top end of the scale the University of Oxford and its colleges had £3.8 billion.[97] At the other end of the scale 17 institutions had no endowment funds whatsoever. The median fund's value was £1.8 million.

Pension funds

Pension funds are separate legal entities from universities. Their managers and trustees have a legal duty to act in the best interest of their members, i.e. employees, but universities as employers can make recommendations and will inform their employees on aspects of pension funds, including their responsible investment policy or lack of it.

There is no single source that can provide the total value of UK universities pension schemes. However a cursory look shows they are highly valuable.

The largest centralised fund, the Universities Superannuation Scheme (USS), was worth £32.4 bn in 2011,[98] making it the third largest pension fund in the UK.

The USS is used by higher paid staff. Universities commonly have their own pension schemes for lower paid staff, as well as using local government and teachers' schemes.

Using an estimate for the total number of staff at UK universities and an average of the per-person pension saving for a member of staff at a UK university[99] we estimate the total value of UK universities' pension schemes to be at least £44.8 billion. This figure is likely to be an underestimate due to the conservative figure we have used for the total number of staff.

Deficits in University pension schemes since the financial crisis in 2009 have caused several schemes to close to new members and change their benefits schemes. New or altered schemes have moved away from being based on employees' final salary towards career average salary systems and changes have been the cause of protest from educational unions.[100]

Other funds held by universities

Universities keep a small proportion of their funds in bank accounts for short-term purposes such as paying staff wages and purchasing goods. Although the total funds are likely to be insignificant compared to endowments, universities are important customers for commercial banks.

Some universities also invest small amounts in spin-off companies such as commercial arms that sell research outputs, or research parks, consultancy and catering service companies, or start-up companies set up by graduate entrepreneurs. These investments usually represent a way for universities to externalise certain activities from direct university management. On the scale of funds discussed in this report such funds are not significant and universities usually sell their shares if the business becomes self-sufficient.

HOW MUCH DO UNIVERSITIES INVEST IN FOSSIL FUELS?

Given their considerable wealth, we know surprisingly little about how universities spend and invest their money. This information is not held by any central database and very few institutions make any specific information about their investments publicly available.

There is enough information available to glimpse the scale of higher education investment in fossil fuels and this report can reveal an estimate of the total.

A list of companies invested in was obtained for six of the large endowment funds: the University of Edinburgh[101] (3rd largest), Universities of Glasgow[102] (6th), University of Reading[103] (10th), Imperial College London[104] (9th), University College London[105] (11th), and the University of St. Andrews[106] (20st). All six funds were invested in fossil fuels: the smallest number of separate fossil fuel companies being five (University of Reading) and the largest 12 (University of Glasgow). Four of the universities own shares in BP and all six were invested in Shell.

The Smith School, Oxford[107] suggest an investment of 2-4% in fossil fuels would be typical for a general investment portfolio. However, Freedom of Information responses from the University of Reading, University of Edinburgh, Imperial College London and University College London show a much higher average exposure to fossil fuels of 8.36% in their endowments.

These proportions allow us to estimate the university endowment investment in fossil fuels, which is the money held by universities usually from donors. We can also apply the same proportions to our estimate of total university investment wealth, including endowments and pension funds:

Endowment investments in fossil fuels

> ***Lower estimate:*** *£278 million (based on 3% exposure, Smith School)*
>
> ***Higher estimate:*** *£775 million (based on 8.36% exposure, Reading, Edinburgh, Imperial, UCL average)*
>
> *(Total endowment wealth £9.27 bn[108])*

Estimated total university investment wealth in fossil fuels

> ***Lower estimate:*** *£1.87 bn (based on 3% exposure, Smith School)*
>
> ***Higher estimate:*** *£5.20 bn (based on 8.36% Fossil-fuel investment based on exposure Reading, Edinburgh, Imperial, UCL average)*
>
> *(Total university investment wealth £62.2 bn)*

Additional information from the University of Surrey,[109] the University of Edinburgh,[110] University College London, Imperial College London[111] and the University of Reading[112] describes £69.7 million of university investments in specific oil, coal and gas companies.

These figures suggest an investment in fossil fuels of between £748 and £2,083 for every student in the UK.[113]

Indirect investments in fossil fuels

Many universities, in common with other public institutions, invest their funds in managed schemes rather than by direct share ownership. For example, Imperial College London[114] and the Universities of Reading[115] and Edinburgh[116] invest some funds in externally managed financial products, and Kings College London,[117] London School of Economics and the University of Birmingham[118] invest all their funds in this way. Some fund managers include Legal & General, Newton, Schroder, and Baillie Gifford. Universities who wish to reduce risk and simplify their accounting are likely to find these types of arrangements attractive as they offer some security of return and reduce the amount of knowledge and day-to-day management required to invest large sums of money. However, money invested in this way is less transparent as investors rarely have any knowledge of where the money in such funds is spent – indeed it may be further invested in other financial products before eventually reaching, for example, an oil company.

In 2012 People & Planet carried out a survey of universities' banking arrangements and found that almost all universities used the biggest UK banks because they felt they were more tailored to business banking. A proportion of money held in university bank accounts, will be used to provide finance for the fossil fuel sector by those banks.[119]

In total these indirect investments may be of sizeable value when compared with known direct fossil fuel investments from universities. More transparency is required to better understand how this money is spent.

DIVESTMENT AND ETHICAL INVESTMENT

'Socially responsible' or 'ethical' investment is the adoption of policies and practices to invest in environmentally and socially beneficial companies and projects and/or withdraw (or '**divest**') funds from socially harmful investments. 'Ethical' investment is more strongly associated with divestment or screening for unethical businesses, though largely the terms are interchangeable.

Pro-active or positive investment can help kick start socially and environmentally beneficial industries such as renewable energy generation by increasing their access to cash. Promoting such industries in this way also highlights their positive nature making them more attractive to other responsible investors. In time it can promote them widely, reducing their costs, driving custom and encouraging favourable government regulation.

On the other hand, divestment directly deprives industries of finance, increasing running costs and ultimately making it more difficult for them to operate. This 'blacklisting' of companies, such as those invested in fossil fuels from university investments, promotes the idea that their actions are unacceptable and not socially 'normal'. Marginalising companies challenges their reputation and makes it more difficult for them to sell products to consumers, make deals with government and partners, and access funds. It undermines their vital 'social licence to operate'.

Government and industry have historically been comfortable in investing some funds positively in sustainable industries, but have not yet made the step to deprive unsustainable industries of funding. Nonetheless such measures have been used successfully by public bodies as a response to a number of issues in the past.

Box no. 3

APARTHEID DIVESTMENT CAMPAIGN, C.1969-1989

There is no greater testament to the basic dignity of ordinary people everywhere than the divestment movement of the 1980s.

- Desmond Tutu[126]

The apartheid divestment campaign of the late 20th century is a great example of what can be achieved by using financial flows to make radical political changes. A campaign that began with a small group of students eventually became a broad coalition that took on, and changed, some of the largest financial institutions in the UK, and was credited as an important factor that supported the efforts of South African activists in bringing down the apartheid regime.

In 1969 student protesters took direct action against touring 'White-only' South African cricket and rugby sides and took the issue to the National Union of Students, who launched a campaign in 1970 against the largest UK bank in South Africa: Barclays. Gathering support from churches, trade unions and councils, a coalition "End Loans To Southern Africa (ELTSA)" was formed. As part of a wide movement against apartheid the coalition gathered steam with considerable numbers of people leaving Barclays. High-profile public figures joined the campaign setting up a "Shadow Barclays Board of Directors". At the same time, the crimes of the apartheid government often appeared on TV news.

In 1985 Barclays sold its shares in its South African wing and the campaign moved on to other investors such as Standard Chartered and Hill Samuel, achieving further success. Ultimately South Africa's lack of access to funds contributed to multiple financial crises in the final years of the regime, and its downfall.

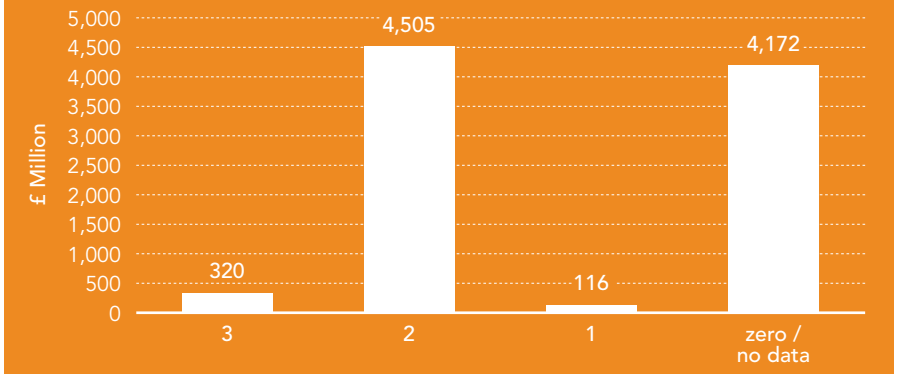
Nerys John, writing in Journal 'African Affairs', said that South Africa's financial instability following divestment by UK banks was the single biggest factor in forcing the end of the apartheid.[127]

In 1991 a British Parliamentary Committee recognized that financial sanctions were an 'important lever for change' in South Africa.[128]

Graph no. 1

Endowment Funds of UK Universities in 2012

Grouped by Green League 2013 Ethical Investment Score



Green League Ethical Investment score (from 2013) out of a total of 3 points.

What has been achieved before?

Divestment as a campaigning tactic has been used in many high-profile progressive campaigns over the last 30 years.

- The apartheid divestment campaign of the 1980s - a broad coalition of churches, universities and councils - is credited as a major factor in the collapse of the apartheid Government in South Africa *(see Box no. 3, p. 26)*[120].
- People & Planet successfully campaigned for the Universities Superannuation Scheme (USS) to adopt an ethical investment policy in the late 1990s[121], though USS's new policy does not provide for screening out dangerous industries.
- At the height of the 2007 protests in Burma, a campaign secured a number of university divestments from oil company Total, one of the few companies operating in the country.[122]
- A number of People & Planet groups have been running independent ethical investment campaigns since the early 2000s focusing on a variety of issues from the arms trade, mining and fossil fuels.[123] Some groups have worked with Campaign Against the Arms Trade who have long advocated divestment as a campaign tactic.
- Many universities, particularly those who carry out large amounts of medical research, have withdrawn funds from tobacco companies.[124]
- Six universities and colleges have already pledged divestment as part of 350.org's "Go Fossil-Free" divestment campaign in the United States.[125]

University ethical and responsible investment policies

Under pressure from campaign groups such as People & Planet and Campaign Against the Arms Trade, 73 universities have adopted some sort of policy concerning responsible investment (Green League 2013). These policies state they are intended to ensure the university acts responsibly by only investing in companies which fit with their socially responsible aims as a charity. Some also list specific exclusions, such as arms and tobacco, and have some detail on how the policy should be brought into effect.

According to the People & Planet Green League 2013, 8 universities achieved full marks for ethical investment (EI). They were rewarded for having a publicly available EI policy, engaging with stakeholders and reporting against the policy annually, and taking concrete action based on the policy. A further 48 universities gained 2 points out of 3, 25 were given only 1 point, whilst 62 achieved no score. The Green League's ranking shows that the better policies cover only a very small proportion of endowment investments *(see Graph 1)*.

The Green League's evaluation gives a clear view of the number of institutions taking basic steps toward responsible investment. Building on the Green League's methodology this report analysed the wording of investment policies of 20 universities who scored highly for ethical investment in the 2013 Green League. The results were concerning:

- Most university pension schemes are structured as legally separate and so not covered by university investment policies. Pension trusts could adopt their own responsible investment policies, but none could be found that screen (i.e. include or exclude) companies on environmental or social grounds.
- All but one of the policies would be best described as reactive. Rather than having a policy which set out a plan to positively invest their funds they were based on a requirement for University finance staff, fund managers, or in a few cases, students to raise concerns about specific investments which were a problem.
- Only two institutions had taken proactive measures to switch to ethically managed funds and one had done so without actually having an ethical investment policy.
- 13 policies said the policy should be reviewed regularly, but only seven listed specific timescales.
- The majority of the policies set out no clear line of responsibility for enacting the policy nor did they list specific actions to be taken.
- Only a few policies specifically set out the types of investment that the policies covered and only one of the policies referenced pension funds.

Very few policies covered all areas well, but stronger clauses could be found in some, including the following:

- Clear process for the implementation of their policy and actions to be taken (Oxford Brookes University and University of Glasgow).
- Entering a clause into contracts with fund managers that they will use ethical screening programmes (Edinburgh Napier University).
- Requiring fund managers to supply copies of voting records in relation to concerns over "lack of attention to social, ethical or environmental matters." (University of Glasgow).
- Specific statement of process for students to raise concerns or provision for Student Union representatives to sit on special committee (University of Glasgow, University of York).
- Three policies stipulated that the policy must be published online and two stated that a list of investments should be published online (although no such lists could be found).
- Disclosing lines of responsibility for both staff and committees who will report on and oversee the policy (Sheffield Hallam University).

Although a powerful force for change, the potential positive influence of universities' investments is untapped. This report shows that universities could be doing more to invest responsibly, withdrawing their funds from companies which cause social ills and supporting companies which promote sustainability and social justice. Current funds invested in fossil fuels could be re-purposed and positive actions enshrined in effective policy to ensure the sustainability of universities' actions for years to come.

ACTION TO INVEST RESPONSIBLY

Public institutions should be expected to use their power and wealth responsibly. The importance of the global fight against climate change means that universities should not be giving financial support to companies extracting the very resources which are creating the carbon emissions that are threatening people's lives and ecosystems.

To ensure universities invest responsibly this report calls for them to:

1. **Screen for and exclude the fossil fuel industry from their investment portfolio.**
2. **Immediately freeze any new investment in fossil fuel companies.**
3. **Divest from the fossil fuel industry and shift funds to lower risk, ethical investments within five years.**
4. **Call on their pension funds to exclude fossil fuel companies from their portfolios, and encourage employees to register their concerns with pension providers and switch to fossil-free pensions.**

There is work to be done at every university. Our analysis shows that very few, if any, socially responsible investment policies are water-tight and most do not cover all their investments.

For those with existing policy, better policy clauses, such as those listed above, can be used as a template to amend current policy to make it clear and effective. As well as demanding withdrawal from fossil fuel investments, we should also push for our institutions to go further by adding clauses to proactively invest in sustainable investments.

For the 70 educational institutions with no investment policies there is a fresh opportunity to implement effective and radical policy from the start.

Action on managed funds

Given the number of university funds invested in externally-managed financial products *(see 'Indirect investments in fossil fuels', p. 24)* universities can, on the one hand, switch to specific, scrutinised ethical funds. This requires careful research: many "green" or "ethical" funds still invest in fossil fuels[129] and transparency in the financial sector is very poor. On the other hand, universities can be encouraged to challenge their existing fund managers to de-carbonise. Past precedent shows universities have fallen short when ethical concerns have required them to challenge external fund managers: in 2010 the University of Oxford decided to apply its brief investment policy only to direct share-holdings[130] and Middlebury College, Vermont, USA, stalled on taking action when it was informed it would need agreement with all the other investors in its pooled fund.[131]

With the 'Move Your Money' campaign gathering momentum and offering local authorities guidance on switching to positive alternatives to high-street banks,[132] it is time to also encourage universities to switch bank accounts.

Action on pensions

University pensions present both new challenges and opportunities. Almost no university pension funds use ethical investment policies to screen damaging industries. Often kept at arm's length from university decision makers, these funds can be difficult to influence. Many pension funds are still in turmoil since the financial crisis, with a number of funds closed completely in the last few years.

Yet pension funds represent a major proportion of investment by universities, with the Universities Superannuation Scheme (USS) alone worth three and a half times more than all the university endowment funds combined. This wealth is also spread much more equally across institutions. New funds are being set up and opportunities may arise to ensure new funds invest more sustainably. Universities and pension fund members can call on existing funds to include the financial risks of climate change, as well as their members' concerns over fossil fuels, into their definitions of 'members' benefit', and screen for fossil fuel companies.

Action on banking

Since the proportion of university funds invested in fossil fuels may be quite significant to the university's finances, universities are likely to be cautious about making quick decisions about divestment. Fortunately there is significant evidence showing that sustainable funds give the same or higher returns on investments compared with fossil fuels.

The S&P US Carbon Efficient Index has been outperforming the S&P 500 Index and, according to a study by consultants Mercer, 86% of the 36 academic studies considering the issue showed a neutral or positive link between environmental, social and governance factors and investment performance.[133]

Much of the value of fossil fuel investments flows from estimates of the worth of yet unused reserves. But since these resources cannot be used without creating catastrophic economic and human costs, such resources may, by necessity, become "stranded" assets.[134] Considering the shift from 'easily accessible' to risky unconventional oil, reserves statistics are further undermined as indicators of value.[135] Even current extraction comes with great risks: a 2012 report showed the high risks to shareholders posed by Arctic drilling programmes, currently the focus of many oil companies invested in by universities such as Shell and Cairn Energy.[136]

Avoiding these risks and choosing to invest in safer, sustainable options should align well with public institutions' traditional preference for more secure, long-term investments, over high-risk short-term ones.

Now is the right time for responsible investment

There is considerable evidence of support for this campaign. While campaign groups have already formed on some campuses, the main academic trade union, UCU, has pledged formal support for fossil fuel divestment[137] and wide-ranging groups have supported 350.org's divestment campaign in the United States, where six universities and colleges have already pledged divestment.[138] Campaigners can draw considerable support working internationally with partners such as 350.org and others working on the established, long-running global campaign for ethical investment, with its successes on Darfur, tobacco companies, and South Africa.

Divestment campaigning is timely because it can draw strength from projects seeking to reconsider our financial system following the financial crisis, with a number of groups campaigning on banking reform, monetary reform and ethical investment more broadly. The long-running campaign calling for the nationalised RBS to stop financing fossil fuels is still moving forward with the National Union of Students recently joining calls to stop banking with RBS/Natwest. University divestment is a complementary campaign tactic to all of these efforts.

Universities need to be encouraged to take both the positive, responsible step of removing their funds from fossil fuels as well as being pro-active about supporting sustainable industries. Divestment is a vital step to freeing universities from one part of their fossil fuel addiction. And universities and their pension fund members should demand that their pension funds do the same. Ultimately carbon emissions will only be reduced when companies stop pulling fossil fuels out of the ground.

2. STOP THE GREENWASH

Fossil fuel companies rely on universities to help maintain their social licence to operate. Money is offered in exchange for credibility: a course is sponsored here and an honorary degree awarded there, and a picture is painted of an industry which is charitable, thoughtful and prestigious, all the things which help them recruit graduates and continue to make their business profitable. Universities take some income from this process, and in return they greenwash the fossil fuel industry.

Universities give credibility to fossil fuel companies in a number of ways: honouring their senior staff with awards, inviting them to speak, and accepting branded funding for courses, scholarships and prizes.

This section illustrates the many ways in which universities help to greenwash fossil fuel companies. Funding of research also serves this function, and is discussed in the next section *(see p. 36).*

TOXIC SPONSORSHIPS

As part of their efforts to show their contribution to society, fossil fuel companies sponsor a wide variety of public facing courses, grants, talks and conferences. These arrangements give the company advertising space on programmes, banners and hoardings; opportunities to meet and greet staff, students and managers; and a way to claim they are making a positive contribution to society.

Trade journal 'Lloyds List Energy Day' says for oil companies to gain student recruits they must "make integrated university visits" and "supply brand-building advertising at universities".[139]

Put simply, sponsorship is vital in helping the fossil fuel industry look good.

Some of the most high profile sponsorships are public events such as conferences and lecture series. In early 2013 at Imperial College London, former oil man Professor Al Fraser was appointed the "Shell Distinguished Lecturer" to give talks about his work on drilling for oil in the Arctic and prospecting in Angola.[140] A number of academic posts are sponsored by fossil fuel companies, for example the "BP Professor of Organic Chemistry" at Cambridge[141] (a 200-year-old professorship rebranded with "BP" since 1992), the "BP Chair of Inorganic Chemistry" at Imperial College London,[142] and the "BP Professor of Information Engineering"[143] and "BP Professor of Economics"[144] at the University of Oxford *(see more in next chapter, p.36).*

Universities often award prizes to students who excel and these can be funded or sponsored by fossil fuel companies, such as at the Department of Earth Sciences at the University of Oxford "BP Prize" for overall performance.[145]

Bursaries and student grants are commonly sponsored by corporations and the University of Oxford has a number of such arrangements including funding for 10 science, technology, engineering and mathematics students;[146] 33 Master of Public Policy students;[147] and a further 19 students in the recently wound-up "BP Bursary". The University of Oxford said these schemes are intended to "increase the existing strong links between BP and the University".[148] The Royal Society also offers scholarships for students who want to work with industry, and sponsors include BP.[149]

Some universities receive funding to support specific courses and projects. The University of Glasgow's short-course on 'Advanced Sequence Stratigraphy' is funded by high-risk oil company Cairn Energy best known for its failed Arctic drilling operation off the coast of Greenland. Although only giving £6,000 a year,[150] it is enough for Cairn to mention the gift on their annual review as an example of their "positive social impact".

PLATFORMS FOR OIL EXECUTIVES

Universities invite executives of industry to speak to students, staff and the general public on platforms at prestigious speaking events and hold them up as "distinguished leaders." Ostensibly these are to give attendees valuable insights into the major challenges of the day. However, their habit of inviting the current bosses of fossil fuel firms means talks are more frequently a thinly veiled advertisement for their company and their industry. Recent examples include:

- In 2011 the University of Warwick hosted the then Chairman of Shell to "discuss the future of Shell and energy production" for their "Distinguished Lecture" series.[151]
- The new Chairman of Shell, Ed Daniels, has since spoken at Imperial College London for the "Energy Futures Lab Annual Lecture", detailing Shell's official energy forecasts.[152]
- The University of Oxford hosted the CEO of Shell on a panel discussing how to address the global food and water crisis in 2012.[153]
- Oxford also hosts the annual "Oxford Energy Seminar" at St Catherine's College, Oxford. Speakers at last year's event, tickets for which cost £5,500, included the Senior Vice President of Exxon, the CEO of Saudi Aramco, the Chairman of British Gas, the CEO of Total, the Operations Director of Schlumberger, the Executive Vice President and Chief Economists of BP, the Chairman of the Board of E.ON, a Director of Shell, and the former heads of BP, Saudi Aramco, Shell and Anglo American.[154]

Knowledge and Power: Fossil Fuel Universities

HONOURS FOR BIG INDUSTRY

Awarding honorary degrees is a very public way in which universities give credibility to fossil fuel companies. Examples are not hard to come by with senior executives from BP and Shell receiving 20 awards in the last decade alone.

Universities have seen fit to honour even the most controversial figures including ex-BP CEO Tony Hayward, forced to resign after the Deepwater Horizon spill, who received honours from Aston University, the University of Birmingham and Robert Gordon University, while the Chairman and founder of highly controversial Arctic drilling oil company Cairn Energy has received honours from Heriot-Watt and Robert Gordon Universities *(see appendices)*.

Honours such as these are usually bestowed at undergraduate and post-graduate degree ceremonies where they are guest speakers.

If universities truly believe in the value of using honours to inspire their students to better society, they need to find better examples than the wealthy corporate elites from massively polluting industries.

COME CLEAN AND STOP THE GREENWASH

This report shows the many ways in which universities help to greenwash fossil fuel companies, lending them credibility in exchange for cash. We need universities to be giving their credibility to those striving for sustainability.

This report demands that universities:

1. **Stop accepting sponsorship from fossil fuel companies or providing them with prestigious platforms to speak from.**

2. **Stop giving out honorary degrees to fossil fuel industry CEOs.**

3. **Publish full details of financial and other ties to the fossil fuel industry.**

Universities have many constraints and rejecting funding is not necessarily an easy thing to ask for. It should be noted that the amount of money they receive in exchange for their credibility is often very small: is it fair that this toxic industry should be able to buy its "social licence" for such tiny proportion of its wealth?

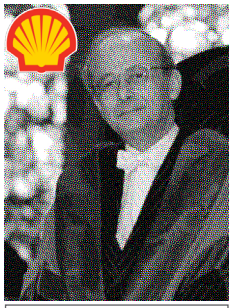
Furthermore the high esteem that fossil fuel executives are afforded by universities is not of the kind given to other controversial industries, such as the arms and tobacco industries. The extent to which their activities are seen as socially acceptable is both fuelled by university support and used as an excuse for the current status quo. In a world where climate change is responsible for large numbers of deaths, fossil fuel companies cannot continue to be treated as just another industry.

To show their commitment universities should take an initial step of publishing their links to big industry including sponsorship deals, but also the deeper ways in which they have entangled their staff and students in the fossil fuel industry.

Tony Hayward
Disgraced ex-BP CEO quit after Deepwater Horizon disaster.

Honours to date from:

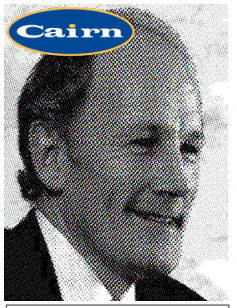
University of Birmingham
Aston University
Robert Gordon University Aberdeen



John Kerr
Former deputy Chairman of Royal Dutch Shell

Honours to date from:

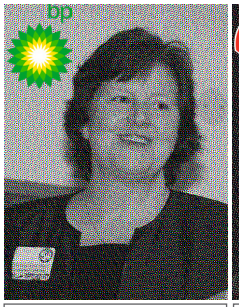
University of St. Andrews
University of Glasgow
Aston University



Bill Gammell
Chairman of Arctic drilling oil company Cairn Energy

Honours to date from:

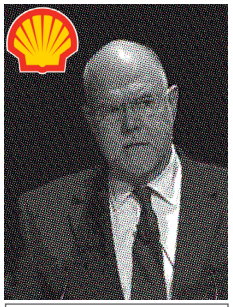
Heriot Watt University
Robert Gordon University Aberdeen



Anne Dowling
Non-Exec Director of BP

Honours to date from:

Imperial College London



Malcolm Brinded
Former Exec Director of Shell.

Honours to date from:

Robert Gordon University Aberdeen

John Browne
Former CEO of BP, now Chairman of Cuadrilla (fracking)

Honours to date from:

Dundee
Heriot Watt University
Sheffield Hallam University
Queen's University Belfast
Cranfield University
University of Warwick
Aston University
Imperial College London
Robert Gordon University Aberdeen
University of Surrey
University of Hull
University of Buckingham

3. CLEAN UP RESEARCH AND TRAINING

Students in Manchester disrupted the RBS stall at their Careers Fair in 2008.

Our educational institutions have become still more deeply entangled in the fossil fuel industry in a number of concerning ways. They train company staff, design courses for and with fossil fuel companies, encourage their students to work for them, and, perhaps most significantly, are delivering research which will unlock new fossil fuels. As well as giving them money and credibility, universities are pushing their people and skills towards fossil fuels.

RECRUITING THE NEXT GENERATION

UK universities are recruiting and training grounds for future engineers, geologists, marketing experts, designers, and managers. The fossil fuel industry are competing against more socially responsible employers and going to great lengths to attract bright young potentials to their graduate schemes.

Fossil fuel companies and their financiers ingratiate themselves to potential employees through their research connections, shared staff, and sponsored events, as discussed elsewhere in this document. But they are also invited onto university campuses specifically for the purpose of recruiting students to their companies.

The University of Manchester says:

> *"BP's alliance with The University of Manchester… enables BP to access the University's world-class executive education, high-quality research facilities and its undergraduate talent pool."* [155]

A comprehensive survey of such activities is beyond the scope of this report, but enough is known to see that these practices are widespread. For example careers fairs at Imperial College London have over the last year been attended by BP, Shell, Baker Hughes, EDF, Centrica, Schulmberger and Total[156] and the University of Warwick hosted Petronas oil company.[157]

Educational institutions also promote a number of schemes to their students such as the "BP Ultimate Field Trip Competition", promoted by the University of Oxford:[158] the Shell Step Initiative, advertised at the University of Warwick;[159] BP, ConocoPhillips and Chevron's STEM project[160] and the "ExxonMobil Engineering Challenge" which offers an all-expenses paid weekend of "Water sports, Raft Building, Abseiling and site visits" to potential recruits.[161]

Although fossil fuel recruitment in education is widespread, much of the activity is focused at universities with the largest industry-focused research departments. In 1998 of the 795 graduates who took up careers in oil and gas 46% came from just four institutions: Robert Gordon University, University of Aberdeen, Imperial College London and Heriot-Watt University.[162]

The importance of these recruitment channels to the fossil fuel industry is underlined by recent reports that in the 21st century the fossil fuel industry is finding it hard to attract new staff. The average age of staff working in fossil fuels has increased in recent years and it has been reported that the industry is "struggling to recruit" young people.[163]

On top of the perceived unattractiveness of fossil fuels as a career, dwindling reserves, the push for new unconventional sources of fuel, new pro-safety and environmental regulations and increasingly difficult political landscapes mean fossil fuel companies will be even more desperate to entice the brightest into their fold.

As Rodney Chase (Non-Executive Chairman of Genel Energy plc and former Deputy CEO of BP) points out:

> *"Knowledge is embodied in people, and they are the real key to the next level of productivity. No machine can innovate. No piece of technology can think about its own limitations and experiment with progress. No oil rig has ever walked into my office with a great new idea. That's why in the new connected knowledge economy, the first war of this century will be the war for human talent."* [164]

RESEARCHING THE FOSSIL FUEL FRONTIER

A number of UK universities have built deep connections with the fossil fuel industry in the form of long-term research collaborations. By proving themselves vital to industry, some of the UK's most prestigious universities have secured considerable income and research status. Despite wide changes in legislation and public practice aimed at driving sustainable innovation, a small core of universities still work on breaking new frontiers for oil, coal and gas. As a science PhD studentship costs considerably less than a full-time research member of staff, universities offer a cheap way of conducting riskier, more speculative research. With public funding for energy research low and dwindling, and government increasingly encouraging educational institutions to provide research to industry, universities are driven towards fossil fuels.

Who funds and influences energy research?

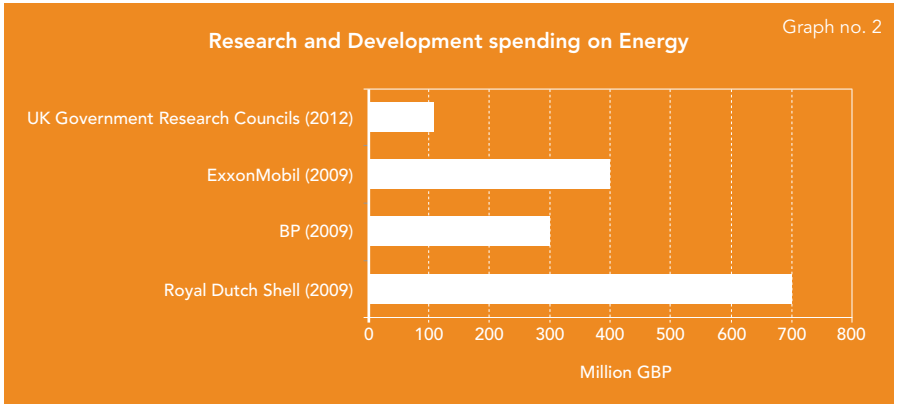
The vast majority of energy research in the UK is funded by fossil fuel companies and takes place outside of universities.

The UK government funds energy research through the research councils: the Engineering and Physical Sciences Research Council and the Natural Environment Research Council. This funding has declined dramatically over the last 25 years and is now dwarfed by that of the biggest fossil fuel companies.[165]

In 2009 Shell, BP and ExxonMobil spent £1,400 million on research and development: 13 times the energy research budget of the UK Research Councils.

In 2003, the "Degrees of Capture" report estimated that 95% of this money was spent in-house on highly secretive and tightly results-focused

Graph no. 2



work[166] and this is likely to still be the case. But fossil fuel companies continue to spend a proportion of their research budget in universities because:

- Research in universities is cheaper and companies can take advantage of their range of expertise and resources.
- Universities are better suited to more experimental, long-term and collaborative research.
- Funding universities implies that fossil fuel companies are important parts of society, giving them credibility and supporting their "social licence to operate".
- Working in universities gives fossil fuel companies access to students who can become future recruits.

How is energy research funding spent?

Over the last decade the UK government research councils have stopped directly funding all fossil fuel research except for carbon-capture and storage, shifting their focus towards renewable energy and energy efficiency technologies. 75% of their £106 million energy funding in 2012 was spent explicitly on renewables research with the rest spent on carbon capture and storage and general energy research. The UK Energy Research Centre, jointly funded by the Research Councils, also directs most of its funding towards renewables and general energy research. This change marks a considerable positive step for supporting a sustainable future.

However, current energy research spending by the Research Councils is far smaller than 20 years ago.[167] As we have seen the combined research budgets of the biggest fossil fuel companies is much greater: £1.4 billion in 2009. Information about exactly how fossil fuel companies spend their internal research budgets is not publicly available. However, it is reasonable to expect, as suggested by Scientists for Global Responsibility,[168] that fossil fuel companies would fund research in a way consistent with their capital spending. If so the vast majority of this money would be spent on oil, gas and coal research and development.

Fossil fuel research is vital to the industry at a time where it is increasingly reliant on unconventional and marginal sources of fuel. Oilfields such as the Athabasca Tar Sands and new oil fields under the Arctic Ocean are currently very expensive and difficult to extract. Research and development is necessary for fossil fuel corporations to exploit such reserves.

Industry research is focused on five main purposes, assisting fossil fuel companies to:

1. Find new fields as cheaply as possible, by minimising on-site work through more predictive geology and modelling.
2. Extract from risky or small fields, since "easy to access" fossil fuels are being exploited already.
3. Extract more hydrocarbons from existing reservoirs, using new recovery techniques and improved instrumentation technology.
4. Reduce costs of extraction, through new techniques and seismic mapping.
5. Meet tighter safety and environmental regulations and improve image.

Although most of this research takes place in-house, research into solving all of these problems is still being carried out in UK universities.

Projects take place in a variety of departments. In a survey by Platform, nef and Corporate Watch (2003) it was found that "over a third of the projects were carried out in geology departments, another third in various engineering-type disciplines (including materials and marine science), about 20% in specialist minerals, energy or petroleum departments, and 7% in chemistry-related subjects".

Based on data from the Engineering and Physical Sciences Research Council (EPSRC) the three biggest oil companies operating in the UK (Shell, BP and Exxon) funded £56.7 million of research in our universities *(see appendices)*. There are active projects at 19 diverse universities covering a range of topics, but many are explicitly fossil fuel focused, and the university which received the lion's share of this funding, Imperial College London, specialises in fossil fuel research.

Examples of research partnerships

BP and Shell are the largest corporate funders of fossil fuel research and have high-profile deals with some of the UK's most prestigious universities.

In the last 15 years BP has worked closely with a number of universities. In 2000 BP gave a £23.1 million endowment to found the 'BP Institute' at Cambridge. Largely focused on improving oil pipeline flow, the grant was at the time the largest ever sum handed over from an oil and gas company to a British university.[169] In 2012 when Dame Ann Dowling, Head of Cambridge's Department of Engineering, was appointed a Non-Executive Director of BP.[170] At Imperial College, London, BP funds various projects including one which can assess the condition of machinery in refineries remotely[171] and in 2000 Imperial signed a deal with BP giving any division of BP Worldwide access to Imperial's research.[172]

In 2012 BP announced new multi-million pound research deals working on biofuels with the University of Oxford[173] and opening the £64 million "BP Centre for Advanced Materials" based at the University of Manchester to "help its search for oil in deeper and more challenging environments."[174]

Shell has announced a number of major new research deals with UK universities in recent months. In August 2013 it announced a £3 million grant to develop oil and gas extraction with Heriot-Watt University[175] and in May the University of Oxford announced a £5.9 million deal with Shell to fund a new hyrdocarbons laboratory.[176]

The University of Newcastle has ongoing research funded by Shell working to improve fossil fuel extraction[177] and at Imperial College London, Shell sponsored work about drilling in the Arctic and Angola[178] as well as jointly funding, with Qatar Petroleum, a $70 million 10-year cross-departmental project on carbon capture.[179]

A number of academic positions are sponsored by fossil fuel companies, for example the BP Professor of Organic Chemistry at Cambridge.[180] the "BP Chair of Inorganic Chemistry" at Imperial College London;[181] and the "BP Professor of Information Engineering" and "BP Professor of Economics"[182] at the University of Oxford.[183]

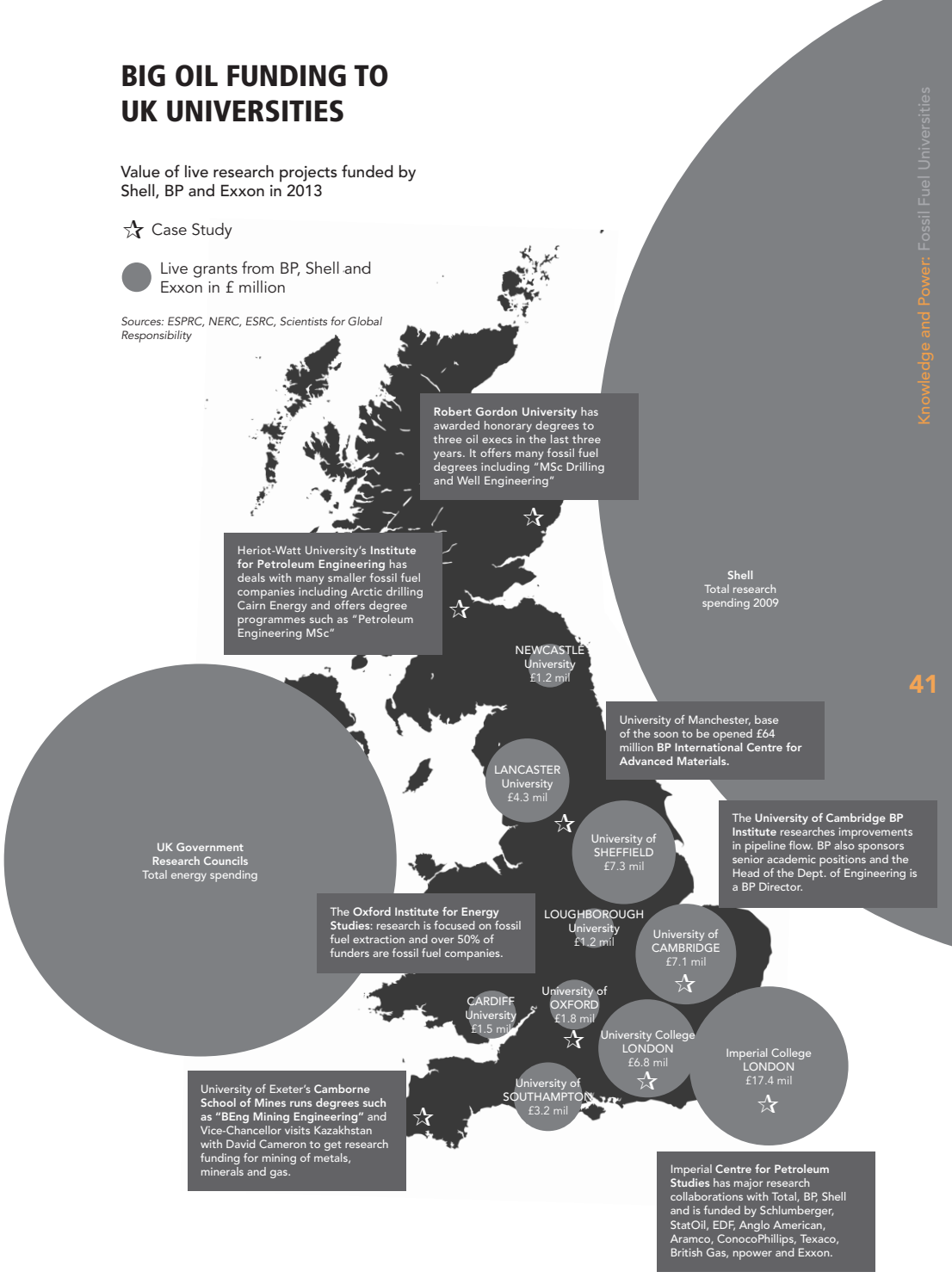
BIG OIL FUNDING TO UK UNIVERSITIES

Value of live research projects funded by Shell, BP and Exxon in 2013

☆ Case Study

● Live grants from BP, Shell and Exxon in £ million

Sources: ESPRC, NERC, ESRC, Scientists for Global Responsibility



As well as the BP Institute at Cambridge a handful of universities have dedicated fossil fuel research centres which swallow up a high proportion of "energy" research funding. Some of these are marked on the map on p.41 and include the Oxford Institute for Energy Studies, over 50% of whose grants come from oil and gas companies[184] and which focuses almost entirely on fossil fuel production;[185] the Centre for Petroleum Studies at Imperial College London with income of £17.3 million from Shell and BP alone; Heriot-Watt University's Institute for Petroleum Engineering whose sponsors include Arctic-drillers Cairn Energy who funded a new Postgraduate Centre and a professorship;[186] and the University of Exeter's Camborne School of Mines, on whose behalf the Vice-Chancellor visited Kazakhstan in 2013.[187]

Fossil fuel funding in context

For simplicity this report, including the data shown in the graph on p. 38, focus on current funding from Exxon, BP and Shell. A number of universities have research deals with other oil, gas and coal companies, and as has been shown, some of the biggest deals have only been announced in recent months. Some more examples of these partnerships can be found in the case studies on p.16.

Although the total funding detailed here is high, they pale in comparison to the research and development budgets of the companies that gave them. Grants registered on the EPSRC data-base cover only 0.6% of the big three's research spending *(see appendices)* and in 2003 the Degrees of Capture report estimated that only 5% of oil and gas company research and development budgets were spent in universities.[188]

Despite their relative financial insignificance to the companies that fund them, as this section has shown, the companies derive considerable value-for-money from these partnerships with even small amounts of funds tied to other agreements.

Shifting the focus

It is a positive step that government funding for energy is mostly fossil-free, but it doesn't represent anywhere near a significant enough proportion of energy research funding to support the wide-scale changes we need to build a sustainably-powered society.

The last 15 years have seen a consistent stream of government policy designed to encourage universities to provide more services to industry and to become more like the private sector themselves. Indicative of this was when government management of universities was subsumed into the Department for Business, Innovation and Skills in 2009.

Even if the government's 'impact agenda' for research is supposed to be about more than simply catering for the needs of business,[189] it seems largely to be taken to mean exactly that. In justifying the Natural and Environmental Research Council's statement of "de-risking investment" in the polar regions as a strategic aim, "Duncan Wingham, the NERC chief executive, said all scientific institutes were now under pressure to ensure they were providing value to the UK economy."[190]

Dwindling public funding for energy research coupled with government drives for universities to pursue commercialisation push universities towards fossil fuels as dependable sources of income.

As the UK is home to two of the world's largest fossil fuel companies, BP and Shell, UK universities are easy prey for fossil fuel companies looking for departments to take over.

> *"The power and influence of the oil and gas industry mean that their policies and activities have a major influence on the direction of energy-related R&D and the degree to which society is successful in tackling these problems."*[191]
>
> – Scientists for Global Responsibility, 'Science and the Corporate Agenda', 2009

Where they have succeeded, fossil fuel companies have built deep connections with universities. The income universities gain comes at the cost of their integrity and independence. By helping industry reduce extraction costs or exploit riskier reserves they are helping unlock the sources of oil, coal and gas which can drive dangerous climate change for decades to come. Research which supports further extraction of fossil fuels is no longer in the public interest, so universities shouldn't be doing it.

There is an urgent need for cutting-edge research to refocus from private short-term gain to long-term sustainable solutions. Reform of the research councils is not enough. Renewable energy needs more research funding, while research on how to extract more fossil fuels should be stopped. This would be greatly facilitated by government giving universities the space to pursue longer-term open research and removing incentives to commercialise research for short-term gain.

EDUCATION FOR THE FOSSIL FUEL INDUSTRY

A select group of universities have become further integrated into the fossil fuel industry by involving oil, gas and coal companies in their courses. This takes two forms: firstly, some institutions directly train industry staff in areas such as management and engineering; secondly, some universities invite fossil fuel companies to advise and even direct the content of their courses. The University of Manchester offers BP staff "access the University's world-class executive education"[192] with 600 staff trained in Manchester's "BP Projects and Engineering College."[193] Imperial College London runs various courses throughout the year for "delegates from industry" at their School of Professional Development,[194] and the University of Cambridge's dedicated "BP Institute" offers training and postgraduate courses for oil and gas industry personnel.[195]

Where course curricula are tailored to meet the needs of industry, the universities involved are often very proud of the extent to which their programmes are set by industry priorities. Whole degree programmes are designed to meet the needs of the fossil fuel industry and courses are offered at many different institutions:

- "MSc Petroleum Refining Systems Engineering" and related courses at the University of Surrey.[196]
- "MSc Integrated Petroleum Geoscience" and related courses at the University of Aberdeen.[197]
- "MSc Petroleum Geophysics" and related courses at Imperial College London.[198]
- At their Dubai campus and in Edinburgh Heriot-Watt University offer fossil fuel programmes such as "Petroleum Engineering MSc."[199]
- "BEng Mining Engineering" and similar fossil fuel courses at the University of Exeter.[200]
- "MSc Drilling and Well Engineering" and many other courses at Robert Gordon University.[201]

These arrangements make it easier for students and industry staff to access state-subsidised training at prestigious institutions, ensuring the fossil fuel industry is better trained to exploit more sources of coal, oil and gas in years to come.

WHO WORKS FOR WHO?

Some educational institutions are so involved in training, research and providing services to the fossil fuel industry that they have seen fit to host industry staff and even give senior academic positions to ex-industry and current fossil fuel company staff.

The appointment of ex-industry staff is commonplace in engineering departments. These personal connections give companies a direct link to students and research staff.

Some universities host staff and projects of fossil fuel companies on their campuses. For example, the University of Oxford hosts a private oil consultant in the Smith School.[202] The largest instance is the Energy Technology Institute which is housed at Loughborough University and majority-controlled by private sector funders, including BP, EDF, E.ON, and Shell.[203]

Many specific professorships are sponsored by fossil fuel companies, such as those detailed in "Research Collaborations" *(see p.40)*.

There are also startling examples of influential academic appointments held by current fossil fuel executives at the UK's most prestigious universities. Since 2012 Dame Professor Ann Dowling, Head of Cambridge's Department of Engineering, has been serving as a Non-Executive Director of BP Group,[204] and BP's Chief Executive of Refining and Marketing, Iain Conn, is a member of the Council of Imperial College[205] and Chairman of the Imperial College Business School's Advisory Board.[206] Staff sponsorships and appointments allow fossil fuel companies to influence and make decisions about the way work is carried out within universities, and even determine the direction of entire faculties. These appointments can be used by industry to direct public institutions to focus on corporate profit at the expense of public good.

INTELLECTUAL PROPERTY AND THE USA: A FORETASTE OF THINGS TO COME?

The nature of intellectual property agreements in university-corporate funding relationships is of central importance. If universities maintain their right to knowledge generated within their departments, they can make some claim that this knowledge can be put to public use. However, when they start to give these rights away, such research can no longer truly be said to be public. This has started to happen at Imperial College London, which signed a deal with BP allowing the company access to Imperial research *(see "Research Collaborations", p.40)*.

In the USA, universities giving fossil fuel companies oversight and governance responsibilities is much more common. The Centre for American Progress[207] and the Center for Science in the Public Interest (CSPI)[208] show that oil companies are routinely invited to sit on governing boards, offered intellectual property, given power to decide which areas to research, and allowed to veto and delay publication of research. The CSPI concluded that "as universities become more commercialized, there is less space to perform research that is critical of industry or challenges the conventional wisdom" and suggest that "there is an inherent conflict between the interests of universities and the interests of corporations" since "corporations obviously are interested in making proprietary, that is… having as their personal property, whatever intellectual capital is generated from their sponsorship, but academic freedom – indeed, the life of the mind – depends on the free flow of information."

There are few examples of UK universities giving oil, coal and gas companies direct control of academic agendas. But if government drives for university commercialisation continue unopposed, UK institutions may be tempted to follow in the footsteps of their US counterparts. They would be highly likely to build on, and depend upon their working relationships with fossil fuel companies and so give away knowledge for industry profits rather than public good.

UNTANGLING FOSSIL FUELS FROM OUR UNIVERSITIES

A number of universities are deeply entangled in the fossil fuel industry, carrying out research that unlocks riskier fossil fuels, hosting and training their staff, and encouraging a new generation to run the industry. As well as giving them money and credibility, universities are giving away some of their best people to the fossil fuel sector.

We need to re-purpose fossil-fuelled universities to focus their staff and students on creating a sustainable future by:

1. Providing students with ethical careers advice and opportunities rather than encouraging them to work for fossil fuels.

2. Stopping training fossil fuel staff and dropping courses designed to funnel students into oil, gas and coal extraction.

3. Phase out fossil fuel research and refocus research towards climate solutions.

Universities have become embroiled in the business of fossil fuels in a number of key ways and challenging these relationships requires sustained action. It is difficult to challenge systems on which people's education and livelihoods may depend. For this reason action is needed from government as well as individual universities: there needs to be more funding for renewables and energy efficiency research. Universities also need to be given the freedom to pursue broad socially beneficial aims rather than encouraged to seek narrow short-term income deals with the private sector.

There is also much universities can do by themselves. It is up to them to ensure their governance structures have integrity and decisions are not made by individuals compromised by their ties with the fossil fuel sector. Students should have increased opportunities to take part in university governance so they can scrutinise appointments. Universities can also take a lead, giving students better options for courses and career choices. Finally it is vital that universities retain their right to keep their discoveries for the benefit of the general public and not to give away their intellectual property to industry.

As the case studies in this report show, each university's situation is unique and presents different opportunities for student campaigns. People & Planet's Fossil Free campaign aims to support students to work out what is appropriate for their university and to start an appropriate and targeted campaign.[209]

Government and higher education institutions need to recognise the damage caused by their entanglement with the fossil fuel industry, making steps to progress sustainability at local and national levels, in order to build an education system fit for the future.

Knowledge and Power: Fossil Fuel Universities

APPENDICES

1. A full list of all UK university endowments is available at:
http://peopleandplanet.org/fossil-free/resources

2. Full results of the People & Planet Green League 2013 ranking of UK universities (including ethical investment scores) is available at: http://peopleandplanet.org/greenleague

3. Further detailed information and source material for this report can be found in Online Appendices at: http://peopleandplanet.org/fossil-free/report-extras

These include the following:
a. Detailed lists of fossil fuel companies
b. Estimate of total value of UK universities pensions
c. Examples of fossil fuel staff in receipt of university honours
d. List of funding for energy research, comparisons
e. Examples of current Shell, BP and Exxon research funding to UK universities

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