

Overview

Discussion
from chief
scientists

Core
university
relationships

The research
programmes

Contacts



BP's Global University Research Programme

Review 2010

In this issue:





BP's Global University Research Programme

Review 2010

Overview



Welcome



Andrew Cockerill
Director,
University Relations,
BP

BP has a long track record of investment in research and technology, collaborating with scientists, academics, business partners and others to tackle energy challenges. In today's energy industry, where complex challenges abound, collaboration amongst partner organisations has become highly sophisticated.

An integral part of BP's technology strategy is the establishment of deep research relationships with premier universities around the world. Together, these form a co-ordinated research programme focused on tackling the world's long-term energy challenges.

This review sets out developments in BP's global university research programme in 2010. It highlights the initiatives that make up the programme and describes its position within the context of BP's research and technology strategy and ecosystem. It also provides updates on the work being done at the participating universities.

Highlights in 2010

2010 marked two significant milestones – the 10-year anniversaries of both the **Carbon Mitigation Initiative (CMI)** at Princeton University and the

BP Institute for Multiphase Flow (BPI) at the University of Cambridge. The success of the CMI has resulted in BP agreeing to support an additional five years of research. BP has also agreed to increase the BPI endowment fund to support an extra senior researcher and part-time administrator.

The Methane Conversion Cooperative (MC2) with the University of California, Berkeley and the California Institute of Technology, which investigates the conversion of natural gas into easily-transported fuels and chemicals, has been renewed under the title **XC²** to reflect that additional feedstocks, such as petroleum and biomass, will also be studied.

An agreement has been reached outlining the next phase of co-operation with **Tsinghua University** in China.



BP's Global University Research Programme

Review 2010

Overview



The new agreement will comprise contractually-agreed research workstreams with defined objectives and deliverables, underpinned by funding from BP Group Research and Technology. The agreement continues BP's relationship with Tsinghua in helping to develop and deploy clean energy technology for China and the world.

Several other initiatives have been re-evaluated and renewed. At the Harvard University Kennedy School of Government, the **Energy, Climate and Security Policy programme** has been expanded and renewed for a further three years. The **MIT Conversion programme**, examining the conversion of low-value carbon feedstocks to high-value products, has been revised to focus on biomass

feedstock in addition to coal. The BP Foundation has funded the new **McKenzie Chair in Earth Sciences** at the University of Cambridge to help ensure the continued excellence of research and teaching of quantitative Earth sciences in the department.

At the **Energy Biosciences Institute (EBI)** at Berkeley, the investment in foundational research platforms has started to generate innovations with direct commercial relevance. The first of these examples are being adopted by BP's Biofuels business into commercial practice, including a major discovery from the EBI's Neurospora platform. The EBI's capabilities developed for the study of microbially-enhanced oil and gas recovery were used to study the microbial biodegradation of the oil spill in the Gulf of Mexico.

During 2010, BP initiated the **Energy Sustainability Challenge (ESC)**, a multi-disciplinary research programme aimed at understanding how pressures on freshwater availability and increasing competition for land and mineral resources may influence energy production

technologies. The ESC is working with 12 world-leading universities on topics ranging from water management to energy ecosystem modelling. In September 2010, research projects got underway.

In October 2010, BP launched a **Gulf of Mexico outreach programme** for its core universities, comprising a presentation on the scientific and technical aspects of deepwater exploration and production and the Macondo incident. The talks were well received at UK and US universities and are continuing in 2011. BP also announced, in May, the launch of the **Gulf of Mexico Research Initiative**, following the Macondo incident. The company's commitment is to a 10-year \$500 million open research programme on the effects of the spill.

[Andrew Cockerill](#)
Director, university relations



BP's Global University Research Programme

Review 2010

Overview



The aims of the global universities programme



The BP global university research programme forms a central part of BP's approach to collaborative research and technology. Together with specific research projects with suppliers, and multi-year research efforts with other companies, its work with universities provides long-term, large-scale collaboration on issues of fundamental science in energy and related fields.

The programme has four principal themes:

- **Research:** conducting forefront research in areas relevant to current and future businesses. The goal is to gain access to world-leading technical expertise and thought leaders in energy matters.
- **Energy policy and economics:** providing academic input and challenge to BP's position and seeking to influence national governments, policy makers and business leaders.
- **Recruitment:** ensuring the visibility of BP career opportunities to high-quality science and engineering talent pools.
- **Continuing professional development:** providing training and development for BP staff.



BP's Global University Research Programme

Review 2010

Chief scientists' discussion





BP's Global University Research Programme

Review 2010

Chief scientists' discussion



Ellen Williams:
Chief Scientist



Vernon Gibson:
Chief Scientist



John Pierce:
Chief Bioscientist

BP's chief scientists recently met in London to discuss the company's university relationships, examining the benefits they bring to all those involved.

What benefits do university relationships bring to BP?

The benefits of working with world-leading universities are clear – the ability to gain access to the best scientific reasoning and ideas and apply these to existing and potential business challenges. The universities we have chosen to work with have expertise in many fields – such as geoscience, biological science, materials science, surface science, catalysis, climate change, corrosion, computation and modelling, analytical science, fluid flow and metallurgy – which underpin applied energy technology and engineering disciplines. These relationships are about people, and close teamwork between the university researchers and BP employees creates a 'bigger

brain' that can tackle the most challenging energy issues.

You mention that this research is often linked to BP's core business disciplines. Is that how the programme is designed to operate? Or is it also about blue sky research?

One of the strengths of the programme is its breadth. There is a solid foundation of work that is looking at familiar challenges facing the energy business – from topics such as clean coal conversion, to questions of multiphase flow. But there is also work examining ground-breaking and transformational questions that would affect the whole way in which we produce and deliver energy – such as work on biofuels, solar manufacturing capability, and energy sustainability.



BP's Global University Research Programme

Review 2010

Chief scientists' discussion



There is also a strong policy element to the research, which has helped us to shape the nature of the debate on critical issues such as climate change. The Carbon Mitigation Initiative at Princeton, for example, has shaped the way we think about carbon management through its concept of 'stabilisation wedges'. This kind of pioneering research and thinking brings BP valuable insights and reputational benefits, too.

An important aspect of the university research programme is relationship building. Given the rise of Asia and other growing markets, why are the majority of BP's core university relationships in the US and UK?

BP has a strong presence and legacy in the UK and US. These are the locations where we have major parts of our existing business and employees. We have long-established and fruitful relationships with universities in these countries, based on mutual trust. In the US, for example, our university relationships have proved valuable during

"These relationships are about people, and close team-work between the university researchers and BP employees"

the Gulf of Mexico incident response, providing advice and technical resources, as well as responding to media requests in an informed and balanced manner. The relationships have also provided a channel to rebuild our reputation within the science community. It is not only during good times that we see the value of these partnerships, but also when we need support.

What is BP's approach outside the US and the UK?

We have strong and evolving relationships in other parts of the world. In China, for example, our relationship with Tsinghua University is providing

unique access to China's policy makers and government. And in Russia, the new and growing relationship with SKOLKOVO presents an opportunity to continue to demonstrate BP's commitment to education in Russia. It also supports regional access. Other opportunities are arising. In South Africa, for example, BP is considering a programme to support science, technology, engineering and mathematics skills education at selected universities and high schools. There are many opportunities globally.

How much does BP recruit from the universities it works with?

It varies by university. Recruitment is high in some places and weaker in others. We have been working for a number of years to improve recruitment from BP's core universities. We have taken steps to sharpen our focus to make sure that the brightest students are aware of the opportunities that exist at BP. We want them to gain an insight into the way we work and the



BP's Global University Research Programme

Review 2010

Chief scientists' discussion



kind of organisation we are. This effort is beginning to bear fruit, as the number of recruits from our core universities is increasing. Forty-four percent of BP's new recruits in 2009-10 were drawn from these core universities, an increase on previous years.

There is clearly an important personal element involved in making these programmes successful. What exactly is that?

Success is not just about enhancing prospects for recruitment. It's about providing wider and stimulating opportunities for people within BP. They can gain insight into a research environment that broadens their professional experience. By bringing our employees into contact with specialists outside the business, they gain a fresh perspective on the practical challenges they face in their regular working life. This is valuable not only for the individuals, but also for the company as a whole.

Where next for the university research programme? What challenges lie ahead?

In many areas, we will do more of what we have already been doing. Across all the universities, we keep a keen eye on how to get the most out of each relationship in terms of research outcomes, policy interventions, training and development opportunities for BP staff, and recruitment. We know that we are better at this in some universities than in others. But now that BP has executive sponsors and relationship managers in place, and improved central co-ordination, it has the structure and personnel to bring greater consistency. BP has specific short-term goals to pursue, such as designing and implementing the next round of student scholarship funding, and working with the company's in-house legal and supply chain management experts to develop a more consistent and informed approach for future university agreements and intellectual

property rights. Beyond that, BP is looking at new opportunities, such as considering a core university partnership in India. It is a full agenda – and one that holds immense promise.

"One of the strengths of the programme is its breadth."



BP's Global University Research Programme

Review 2010

Core university relationships





BP's Global University Research Programme

Review 2010

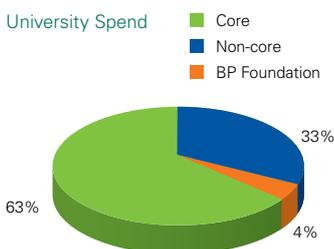
Core university relationships



Since 2009, BP has had 'strategic accounts' with 16 core universities. These partnerships are a vital part of its research and development ecosystem.



University Spend



About 63% of BP's annual expenditure with universities is concentrated in these core organisations. In addition, BP businesses fund work in approximately 300 other universities and provide research money to universities and colleges through the BP Foundation.



BP's Global University Research Programme

Review 2010

Core university relationships



Managing BP's university relationships

To promote effective relationships, executive sponsors oversee each core university partnership and provide direction.

Relationship managers tagged to each core university guide day-to-day interactions.

The relationship manager role is intentionally part-time (ranging from 10-50% of the person's time) to help incumbents remain connected and up-to-date at

both BP and the university. A coordinating network led by Group Research & Technology provides structure and consistency, shares information and provides an opportunity for peer coaching.

This structure is now fully implemented. It brings greater focus to activities and helps build alignment and connectivity with the businesses.

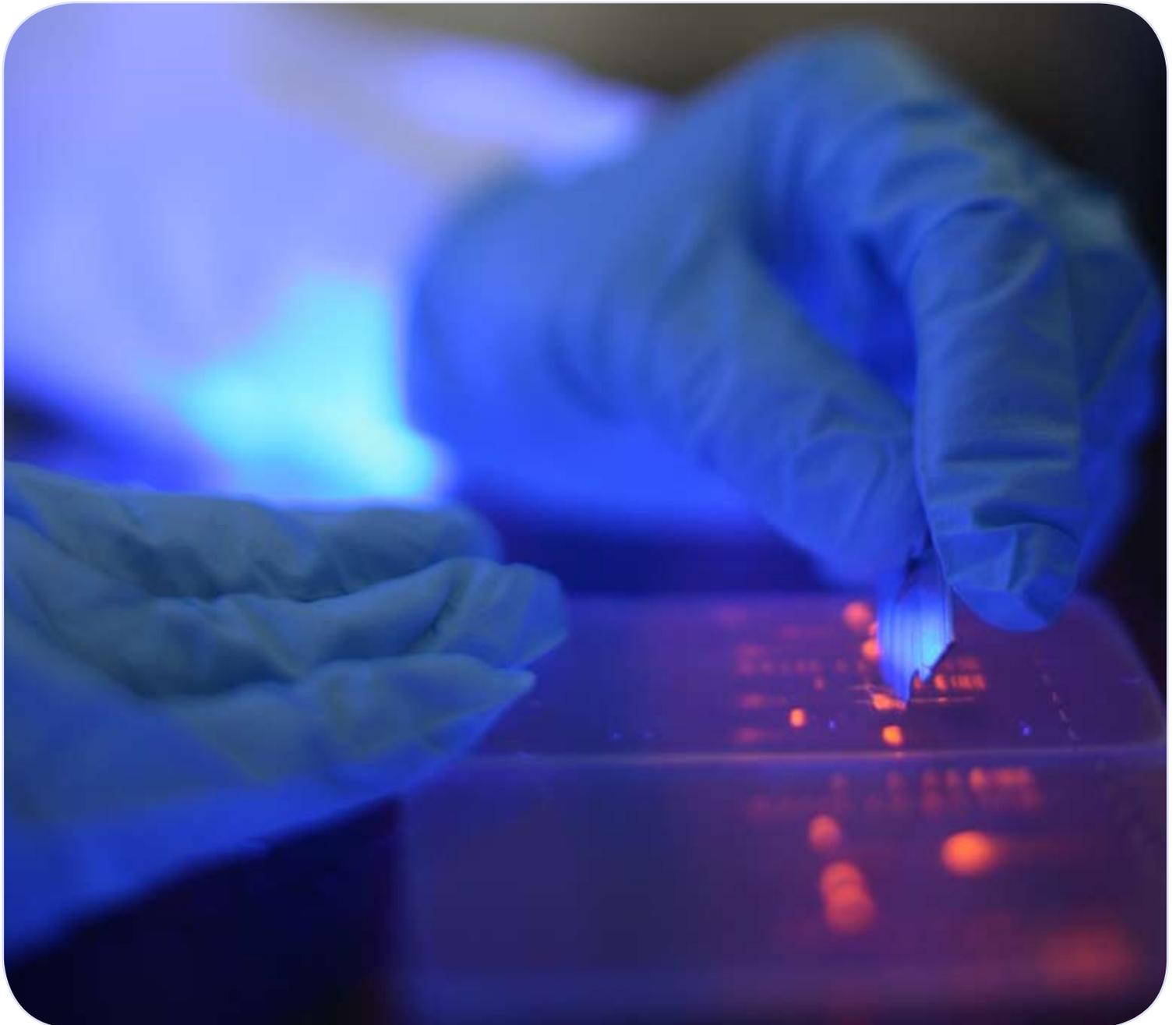
University	Executive Sponsor	Relationship Manager
University of California Berkeley	Charles Cameron	Paul Willems
Colorado School of Mines	Jay Thorseth	Jay Thorseth
Harvard University	Ian Smale	Gardiner Hill
University of Illinois	Bob Dudley / Corey Correnti	Sharon Rynders
MIT	Mark Bly	Andrew Cockerill
Princeton University	Dave Nagel	Gardiner Hill
Rice University	Maureen Johnson	Maureen Johnson
Stanford University	Steve Westwell / Lilian Fandriana	Andy Brayshaw
Texas A&M University	Terri Harlan	Jennifer Balmain
University of Texas at Austin	Dave Rainey	Dmitry Bazykin
University of Cambridge	David Eyton	Andy Leonard
Imperial College, London	Iain Conn / Ellis Armstrong	Peter Duff
University of Manchester	Brian Gilvary / Angela Strank	TBC
Oxford of University	Peter Mather	Dan Walker
Tsinghua University	Liming Chen	Anna-Marie Greenaway (Acting RM)
The Mosco School of Management Skolkovo	David Peattie	Lev Freinkman



BP's Global University Research Programme

Review 2010

The research programmes





BP's Global University Research Programme

Review 2010

The research programmes



These updates summarise the focus of research, policy and recruitment initiatives at BP's 16 core universities.

University of California, Berkeley: Bioscience, Catalysis



Research

BP has two major research programmes with Berkeley:

- The XC2 collaboration between BP, Berkeley and the California Institute of Technology conducts exploratory research into the conversion of natural gas, petroleum and biomass, bolstered by fundamental studies. This is a renewal of the successful MC2 (Methane Conversion Co-operative) programme, which ran from 2000-2010.
- The Energy Biosciences Institute (EBI), founded in 2007, is BP's biggest annual research investment, with \$500 million committed over a 10-year period. Research focuses on renewable transport fuels and other applications of biotechnology, including microbially-enhanced hydrocarbon recovery. The EBI research portfolio consists of 59 programmes and projects, involving approximately 300 professors, graduate students and post-doctorate students.

Twelve BP employees are currently located at the EBI, which enables valuable day-to-day interactions and learning opportunities for BP in new technology areas.

Policy

- A major goal of the EBI is to understand the potential environmental, economic and societal impacts of meeting a growing portion of the world's energy needs through advanced sustainable biofuels.

Recruitment

- In 2010, for the first time, BP initiated recruiting efforts at Berkeley, at the Colleges of Engineering and Chemistry/Chemical Engineering. This will close a key gap identified for this core university and enable BP to make more use of its presence on campus at the EBI.



BP's Global University Research Programme

Review 2010

The research programmes



Colorado School of Mines:

Petroleum engineering



Research

Various programmes are undertaken, including:

- Reservoir Characterisation Project;
- Centre for Wave Phenomenon;
- Gravity and Magnetics Research Consortium;
- Centre for Rock Abuse;
- Tight Gas – Modelling Rocky Mountainfields;
- Fracturing Acidising Stimulation Technology Consortium;
- Centre for Hydrate Research.

Recruitment

- This is a target recruitment university for BP in the US, in which there are already 15 undergraduate BP scholarships and eight graduate scholarships. The scholarships provide a good pipeline for recruitment.

Harvard University:

Energy policy



Policy

In October 2010, the Energy, Climate and Security Policy programme at the Kennedy School of Government was expanded and renewed for a further three years. This programme, which also includes collaboration with Tufts University, stimulates cutting-edge research on energy policy topics that are significant to BP and keeps the company informed of emerging policy and regulatory developments. The programme has five central themes:

- geopolitics of energy;
- transport and energy;
- carbon capture and storage;
- policies to support energy efficiency research demonstration and commercialisation;
- policies to implement China's carbon intensity target.



BP's Global University Research Programme

Review 2010

The research programmes



University of Illinois at Urbana-Champaign: Bioscience



Research

- UIUC is a partner organisation in the Energy Biosciences Institute (EBI).
- Two EBI proposals were accepted for inclusion in the work programme for BP's Energy Sustainability Challenge.
- BP's Exploration and Production (E&P) segment is exploring computer programming capabilities with the National Centre for Supercomputing Applications (NCSA), which is based at UIUC.
- The BP Alternative Energy venturing team is partnering with UIUC's Illinois VENTURES, LLC to incubate and invest in promising bioscience start-up companies.

Recruitment

- UIUC is a target university for BP recruitment.
- The BP Foundation funded a scholarship programme for \$250,000 per year to the end of 2010.



BP's Global University Research Programme

Review 2010

The research programmes



MIT:

Project operations,
corrosion, conversion



Research

- The Advanced Conversion programme (2007–2012): this multi-year research programme covers a range of engineering and modelling dimensions of coal and biomass conversion to fuels and power. It includes participation in the MIT Centre for Energy and Environmental Policy Research (CEEPR). More than a dozen publications and one patent application have been filed. The fundamental chemistry component of the research has shifted towards the study of biomass conversion. The Conversion programme has reinforced BP capability in this area and uncertainty modelling expertise is now being applied to refining optimisation.
- The MIT Energy Initiative (2008–2012): BP is a founder member and its involvement includes:
 - seed funding to support novel energy-related research and membership of the industrial liaison programme;
 - support for BP-MIT Energy Fellows. In August 2010, BP's support for the Energy Fellows and the seed fund programme was restructured, with eight new BP Energy Fellows announced and initial awards made under a new BP energy research seed fund;
 - access to a variety of world-leading thinkers on global energy challenges;
 - corrosion research for BP's Inherently Reliable Facilities technology programme, which addresses issues of corrosion, materials and inspection-related science and technology. In July 2010, BP signed agreements with MIT and the University of Manchester for corrosion and materials studies and initiated the first projects;
- The Energy Sustainability Challenge, with MIT leading studies on the energy-water nexus.

Policy

- Work on conversion and general energy technology modelling (2007-2012) provides access to the MIT CEEPR programme and the MIT Emissions Predictions and Policy Analysis model that validates BP's own economic and policy analysis.



BP's Global University Research Programme

Review 2010

The research programmes



MIT:

Project operations,
corrosion, conversion
continued

Education

- The Projects and Engineering Academy remains at the heart of BP's initiative to build world-class project management capability. BP is also supporting the MIT collaboration to deliver a project management development programme at the Moscow School of Management SKOLKOVO
- The Operations Academy delivers regular programmes to BP operations managers.
- A module of the new Group Leaders programme is delivered at MIT.

Recruitment

- MIT is a target university for BP recruitment in the US.
- BP sponsors the MIT Chemical Engineering Practice School, which has proven effective in providing solutions to current BP technical problems and a high-quality intern experience.

Princeton University:

Climate science,
carbon mitigation



Research

- A peer review of the Carbon Mitigation Initiative (CMI) by senior BP leaders concluded that the programme has been highly successful. The programme offers considerable reputational value and contributes to the company's awareness of science and technology developments.
- Following the ninth annual review meeting of the CMI (in February 2010), the programme was extended for a further five years in November 2010. The CMI includes the following elements:
 - carbon science – focusing on the global carbon cycle;
 - CO₂ capture – analysing systems for the capture of CO₂ at coal and biomass synfuels plants;
 - CO₂ storage – investigating the integrity of CO₂ storage;
 - integration and outreach – seeking new framings of the climate and carbon problem;
 - emerging areas of research.

Policy

Work provides science and technology input to energy policy debates.



BP's Global University Research Programme

Review 2010

The research programmes



Rice University: Advanced Energy Consortium



Research

- The Advanced Energy Consortium's Nano Science and Technology programme, initiated in 2007, includes 10 major E&P companies. Each agreed to contribute \$1 million per year for three years.
- In addition, BP makes a number of other small grants to individual studies or consortia. Some of this is funded via the Hayward Malone Scholarship programme.

Policy

- BP has some interaction with the James Baker III Institute for Public Policy, located on the university campus.

Recruitment

- Rice is a target recruitment university for BP in the US, where it is primarily seeking engineering and economics undergraduates, as well as computation & applied mathematics and geology graduate students to fill E&P engineering, geoscience, finance, and IST (Integrated Supply & Trading) roles.
- Fifteen BP scholarships are provided for students in the target disciplines above.

Stanford University: Energy policy



Research

- BP is a member of nine subsurface, joint industry research programmes, ranging from rock physics to gas injection research.
- An unconventional gas research and development contract is under consideration for a joint BP/Stanford research initiative (2010-2012).

Policy

- BP is a lead sponsor of PESD (Programme on Energy and Sustainable Development), which studies energy policy issues from socio-economic and political perspectives.
- BP participates in the Stanford-led Energy Modelling Forum (EMF).



BP's Global University Research Programme

Review 2010

The research programmes



Stanford University:

Energy policy

continued

Education

- Nearly 600 BP leaders participated in BP's Executive Education programme from 2002-04.

Texas A&M University:

Engineering, process safety



Research

- Research focus areas for 2011 include unconventional gas, heavy oil, and ultra-deepwater.
- BP's involvement with the Mary Kay O'Connor Process Safety Centre forms part of the company's journey to become an industry leader in process safety.
- BP is a member of the Global Petroleum Research Institute.

Education

- BP has links with the Texas Engineering Extension Service Brayton Training Field, providing training in emergency services.

Recruitment

- This is a target university for BP recruitment in the US.
- The university is consistently one of the largest sources of full-time and intern hires in the US.
- There are approximately 40 BP scholars each year, across engineering and business.



BP's Global University Research Programme

Review 2010

The research programmes



University of Texas at Austin:

Advanced Energy Consortium



Research

BP participates in several UT consortia, including:

- AEC (Advanced Energy Consortium);
- EDGER (geophysics of unconventional);
- RioMAR (sedimentology of wave/tidal deltas);
- BEG RCRL (carbonate sedimentology);
- Permian Basin project (carbonate diagenesis);
- GEOFLUIDS;
- BEG AGL (salt tectonics);
- UT Petrophysics Consortium;
- TACC (high-performance computing).

BP is represented on a number of advisory boards (including geosciences, engineering, petroleum and geophysics, and the business school).

- The Energy Sustainability Challenge: UT contributes to study on the energy-water nexus.

Recruitment

- UT is a core US recruiting school for BP, where it has an active hiring programme across disciplines (geoscience, business, and engineering), primarily for E&P and IST. The BP campus team organised, sponsored, or attended more than 50 campus events in 2010, reaching approximately 3,000 students. Competition for the top candidates with BP's peers and independents remains intense.
- There were 33 BP Fellows at UT in 2009-10, in geoscience, engineering and business fields.



BP's Global University Research Programme

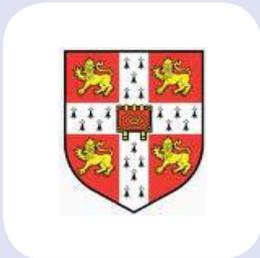
Review 2010

The research programmes



University of Cambridge:

Multiphase flow, Earth
sciences, energy policy



Research

- The BP Institute for Multiphase Flow (BPI) conducts research into multiphase flow, fluid modelling, surface and fluid chemistry. This is linked to several of BP's technology programmes, including Pushing Reservoir Limits, Beyond Sand Control, and Field of the Future, and to other parts of BP, such as Fuels & Lubricants Technology. In September, the BPI celebrated its 10th anniversary, publishing a booklet outlining the Institute's research highlights during its first decade.
- Earth sciences: research is conducted into basin margin evolution. In June 2010, BP Foundation funding of the new McKenzie Chair in Earth Sciences at Cambridge was finalised. The chair will ensure the continued excellent research and teaching of quantitative Earth sciences in the department.
- Engineering: a number of research projects are undertaken ranging from MEMS devices (micro-electro-mechanical systems), deepwater slide modelling, major projects' management of change processes, and engine performance.
- Chemistry: research examines fuel/lubricant mechanisms and performance.
- The Energy Sustainability Challenge: Cambridge is developing an analytical tool for integration of results.

Policy

- BP sponsors the Centre for India & Global Business at the Judge Business School, Cambridge. The centre focuses on technology innovation, emerging global economies, and the relationships between economic development, the knowledge economy and entrepreneurship. In June 2010, Dr Raghunath Mashelkar, one of India's foremost scientists, launched the BP Lecture Series at the Judge Business School, with a talk on the changing landscape of Indian science, technology and innovation. Over the next three years, as part of BP's partnership with the Centre for India & Global Business, the BP Lecture Series will see prominent intellectuals and influential individuals from India share their insights on India's growing role in the global economy.



BP's Global University Research Programme

Review 2010

The research programmes



University of Cambridge:

Multiphase flow, Earth
sciences, energy policy

continued

Education

- Half-day sessions on team leader mastery are held for all participants at BPI.
- BP people attend BPI technology workshops.
- There is selected BP attendance on UoC geology field courses and technology management training programmes from the Judge Business School and Institute for Manufacturing.

Recruitment

- BP has a strong recruitment track record at Cambridge, and it is the top recruitment university for the company in the UK.

Imperial College, London:

Earth sciences, process
systems, fuels and lubricants



Research

- In January 2010, a workshop was held with Imperial College to explore themes that could form the basis of a more strategic research relationship.
- Ongoing and new opportunities have been identified with BP's technology programmes, such as Refinery of the Future and Field of the Future.
- In the field of corrosion monitoring/non-destructive evaluation, joint applications for wireless monitoring have been developed.
- In Earth sciences, research includes integrated reservoir characterisation and modelling and seismic imaging and climate change/regional ocean modelling.
- BP Urban Energy Systems Project: this five-year programme (since 2005) seeks to understand how energy, people and materials flow through cities. BP funding was provided until 2010, though the project is continuing into 2011.
- Other research initiatives examine climate change modelling and impact assessment; membranes for desalination in production operations; and modelling of internal combustion engines, and turbines and the impact of fuel chemistry.



BP's Global University Research Programme

Review 2010

The research programmes



Imperial College, London:
Earth sciences, process
systems, fuels and lubricants
continued

Research – continued

- In June 2010, BP chief scientist Ellen Williams accepted a Visiting Chair in Physics at Imperial College and gave a well-received talk on nanotechnology.
- Work on organic solar cells was completed in 2010.

Policy

- Imperial College submitted four proposals for work under the BP Energy Sustainability Challenge. Work on the implications of technological innovation will be supported.
- BP funds the Rajiv Gandhi Centre for Innovation and entrepreneurship, which acts as a focal point for Indian and British collaborators in innovation.

Recruitment

- Imperial is consistently the first or second BP recruitment source in the UK, with more than 475 applications in 2009-10. An established recruitment team exists within the BP HR department.
- Imperial teams made up 40% of finalists and provided the winning team in the 2010 BP Ultimate Field Trip competition, a BP initiative to challenge undergraduates to devise the best low-carbon energy ideas. The winners earned internships with the company. The competition is a valuable profile and reputation-building initiative for BP at Imperial.
- A sponsorship programme for scholarships/bursaries (over a three-year period) is operating well.



BP's Global University Research Programme

Review 2010

The research programmes



University of Manchester:

Projects, corrosion



Research

- In July 2010, BP signed agreements with the University of Manchester and MIT for corrosion and materials studies and initiated the first projects. Work supports the E&P Inherently Reliable Facilities technology programme, with funding budgeted through to 2014.

Education

- The Projects College is focused on projects and engineering management, executed through programmes of reflective practice assignments in key topics associated with engineering management (EM) and project management (PM) disciplines.
- Each cohort incorporates two separate residential weeks. Up to three EM and three PM cohorts are initiated each year, with 30 delegates per segment.

Recruitment

- Various recruitment activities were carried out by the BP and Manchester members of the campus team during the course of the academic year. BP's visibility at the university has increased.
- Scholarships are spread over three to four years, and were started in 2009.



BP's Global University Research Programme

Review 2010

The research programmes



Oxford University: Economics, Enterprise and the environment



Research

- In June 2010, senior BP scientists met with faculty members at Oxford to explore potential areas of common interest across the Mathematical, Physical and Life Sciences Division, which may lead to greater strategic interaction.
- Following this meeting, engineers and technologists from the BP fuels technology centre in Pangbourne met academics from Oxford to discuss existing and future areas of collaboration.
- EPSRC (the UK Engineering and Physical Sciences Research Council) PhD CASE Awards are supported – one investigating ocean wave interaction with FPSOs for application to the Skarv project (funded by Skarv, for three-and-a-half years, from 2007) and one investigating ocean wave interaction with the Thunder Horse semi-submersible (three-and-a-half years from 2008).
- An EPSRC PhD CASE Award in chemistry is investigating the activation of small molecules by transition metals.
- The BP Professorship of Information Engineering is held within the Department of Engineering Science and provides leadership in research and teaching of information engineering.
- A mathematics workshop, held at Oxford in September 2010, focused on risk and decision making.

Policy

- BP supports the BP Chair in Economics and the Oxford Centre for the Analysis of Resource Rich Economies (OxCarre). In 2005, BP agreed to provide \$14 million funding over 10 years to establish this global centre of excellence, which is headed by the BP Professor of Economics (Professor Tony Venables).
- BP provides support for the Smith School of Enterprise and Environment (SSEE). Recent discussions have been held on how BP might further assist the SSEE.



BP's Global University Research Programme

Review 2010

The research programmes



Oxford University: Economics, Enterprise and the environment

continued

Policy – continued

- BP has a consultancy agreement with Professor Dieter Helm (Professor of Energy Policy and an associate of the SSEE).
- BP supports the Oxford Institute for Energy Studies (OIES), providing small financial contributions and speakers at events.

Recruitment

- The ratio of offers/applications is higher at Oxford than at all other UK recruiting universities, indicating that BP is attracting quality applicants and that there is some untapped potential, particularly within engineering.

The Moscow School of Management SKOLKOVO: Projects



Education

- The SKOLKOVO Institute for Energy Studies (SIES) focuses on modernisation of the Russian energy industry.
- The Executive Education course in project management is delivered jointly with the MIT Sloan School of Management and the BP Projects and Engineering Academy. Courses are offered to leading Russian oil and gas companies, as well as government and BP partner companies. BP also nominates employees to attend. This covers three modules over six months each year, for a maximum of three days. In September 2010, the first three modules in the programme were delivered to 35 senior managers nominated by Russian energy companies, the Russian government and BP.



BP's Global University Research Programme

Review 2010

The research programmes



Tsinghua University: Clean energy



Policy

- A new five-year agreement has been signed in 2011 to support the work of the Tsinghua BP Clean Energy Research and Education Centre (CEC). This marks a transition from the historical 'gift-exchange' funding position into a contract-based relationship, comprising agreed research workstreams with defined objectives and deliverables. BP will build on the strong foundations of co-operation established in the past five years by allocating a BP workstream lead to each research topic, forming a network of connections across Tsinghua.
- The Energy Sustainability Challenge: Tsinghua is investigating water use in the coal supply chain.

Policy

- BP has developed a partnership with Tsinghua for building capabilities to provide energy strategy analysis for China. BP has sponsored and assisted government projects for renewable energy strategy, China's biofuels roadmap, the Alternative Energy Strategy for China, the Energy Saving Strategy, China's Integrated Automotive Energy Roadmap and Clean Coal/CCS.
- The Tsinghua-Cambridge-MIT Low Carbon Energy Alliance has been formed for the purpose of university-university collaboration on low-carbon technologies and policy/modelling.



BP's Global University Research Programme

Review 2010

The research programmes



Tsinghua University: Clean energy continued

Policy – continued

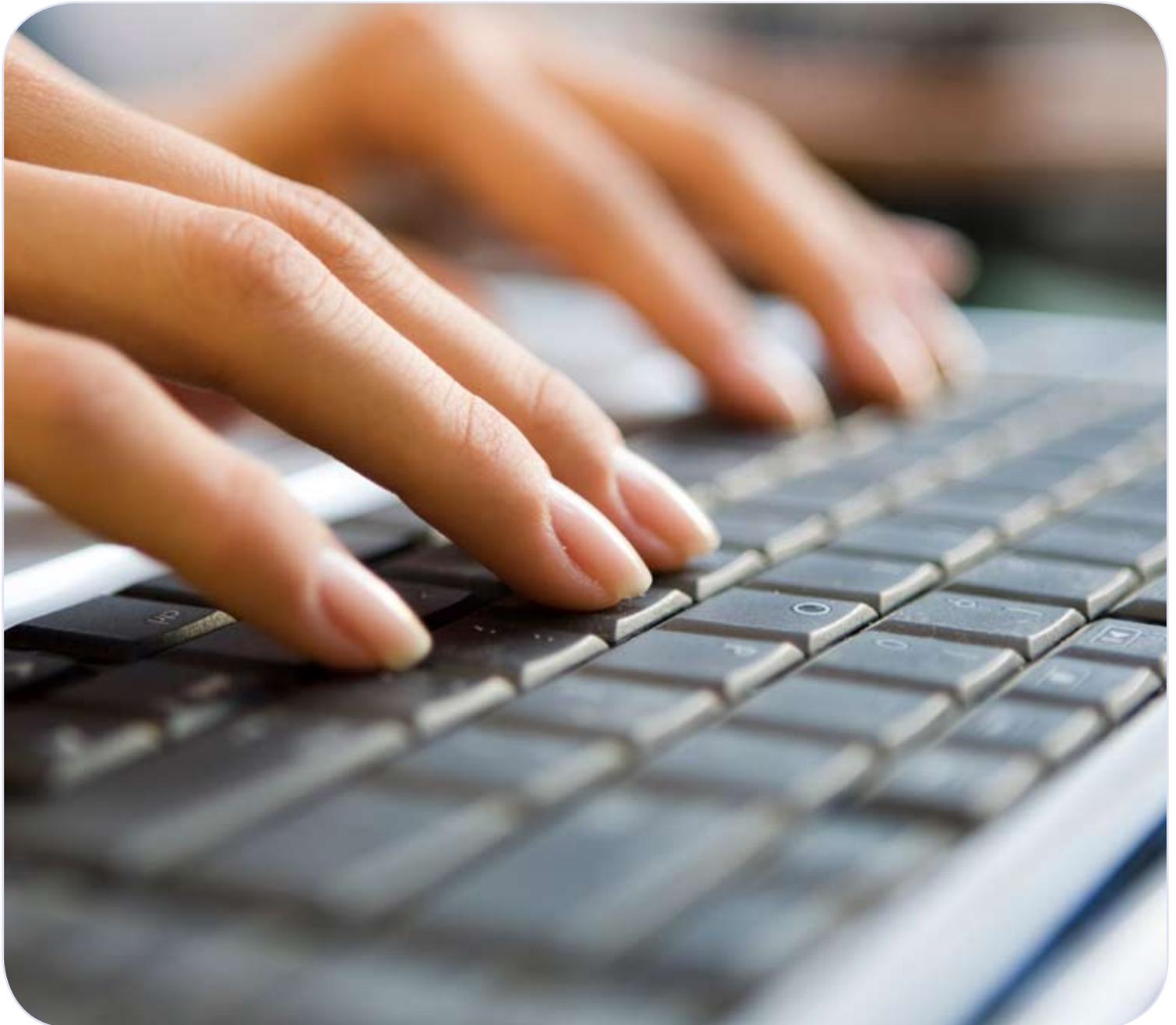
- Tsinghua 3E Institute/Low Carbon Laboratory: In the past, BP has funded the China Renewable Energy Roadmap (supporting China's Renewable Energy Law (2005) and the China Biofuels Roadmap project.
- The Tsinghua Cambridge MIT Low Carbon University Alliance has been formed for the purpose of university-university collaboration on low- carbon technologies and policy/modelling.



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Review 2010

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Review 2010

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