

Carbon Reduction

Putting our energies into the environment

Climate change is one of the greatest challenges facing modern society. There is now overwhelming evidence and almost unanimous agreement that significant global warming is occurring and that much of that warming is due to human activity through the increased emission of greenhouse gases. The impact of even a small rise in global temperature are expected to be significant and potentially devastating in certain regions with increased flooding, heat waves, storms, drought and heavy rainfall and changes in the availability of drinking water, crop yields, disease, wildlife and ecosystems.

The world's growing population and the rapidly expanding global economy has led to increasing demands on traditional energy sources and the International Energy Agency estimates the world will need almost 60% more energy in 2030 than in 2002, potentially leading to further increases in harmful emissions. We depend on fossil fuels for the bedrock of modern life but the tank is running dry. Oil industry experts estimate that current reserves will only last for about 40 years and gas will not last indefinitely either.

How can the international community avoid an energy crisis within a generation without creating a simultaneous or subsequent environmental crisis? Manchester is addressing this key issue with UK and international partners, covering both supply (low carbon technologies) and demand (low carbon choices):

Low carbon technologies

New technologies are urgently needed to reduce carbon emissions from industrial, business and domestic activities, while also identifying and developing innovative ways of storing carbon safely for the long-term. Manchester's work in this vital area is multi-faceted:

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| Oct 2008 | The University launches the Bruntwood Initiative For Sustainable Cities (BISC) – a joint initiative between the University, Bruntwood Estates Ltd and the Oglesby Charitable Trust which seeks to provide Manchester, by the end of 2010, with a blueprint for an integrated climate change adaptation strategy, based on leading scientific research, extensive stakeholder engagement, and best practice examples of new programmes successfully piloted during a three-year period. |
| Sept 2008 | Ten scientists at the University, under the leadership of Dr Bruce Grieve, start working on an advanced device that will be able to send consumers emails or text alerts when their food is passing its sell-by date. |
| July 2008 | The University in collaboration with Westinghouse Electric Company announces the appointment of Professor Tim Abram as the new Chair in Nuclear Fuel Technology - a new position created at the University in association with its Dalton Nuclear Institute. Following this appointment, British Nuclear Fuels Ltd (BNFL) has given a £5 million gift to the University to further develop its world-class nuclear education and research. |
| February 2008 | Earth scientists discover that carbon dioxide has been naturally stored for more than a million years in several gas fields in the Colorado Plateau and Rocky Mountains of the United States. The team hope this study will pave the way for selection of similar safe sites for storage of CO ₂ captured in power plants in both the UK and abroad. |

Low carbon choices

The potentially transformative benefits of technological breakthroughs can only be harnessed if the decisions individuals make in their working and private lives lead to rapidly-increased uptake of low-carbon options.

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| August 2008 | One of the world's leading thinkers on energy, sustainable development and climate change – Professor Mohan Munasinghe (Vice Chair of the United Nations Intergovernmental Panel on Climate Change (IPCC)) is appointed Director General of the Sustainable Consumption Institute (SCI) at the University. The SCI was funded by a £25 million investment from Tesco supermarket. |
| March 2008 | University announces its radical plans to transform one of Manchester's busiest roads into a 'green corridor'. The proposals will see general traffic banned from a key half-mile stretch of Oxford Road to allow special central lanes for new 'eco buses'. |