The Oxford Economics Low Carbon Economy Programme

An Introduction

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1 The Oxford Economics Low Carbon Economy Programme

The Oxford Economics Low Carbon Economy Programme aims to help public and private sector organisations understand the impacts, challenges and opportunities of the transition to a low carbon economy.

The programme combines Oxford Economics’ suite of econometric models with the knowledge and expertise of its economists, researchers and consultants to provide you with a quantitative and evidence-based platform for policy and business planning around the low carbon economy.

Over the past decade, Oxford Economics has invested heavily in models and research concerned with the economics of energy and climate change. We have worked closely on the low carbon economy policy agenda with clients including the International Association for Energy Economics (IAEE), the UK Committee on Climate Change (CCC), the European Commission (EC) and the US Department of Energy (DOE), and a range of local authorities, specialist economic development agencies and major private sector companies.

Some of Oxford Economics’ recent projects on environmental sustainability issues include:

- A review of the UK government’s approach to energy modelling in the context of how it may be used to support the Committee on Climate Change;
- The white paper “Sustainability 2015: Preparing for New Market Realities”, prepared for Deloitte Touche Tohmatsu, identifying key regulatory, consumer and investor trends for global business to monitor;
- A web-based analytical tool showing the state-by-state economic and environmental benefits of investments in nuclear energy, prepared for the American Council of Global Nuclear Competitiveness;
- Econometric modeling of long-term scenarios for energy markets around the world, for Shell;
- A project for the Carbon Trust looking at the economic impact of a range of different policy instruments designed to reduce carbon emissions in the UK and Europe;
- Economic modeling and scenario analysis for a number of thought leadership studies conducted by the McKinsey Global Institute;
- A study for the UK Department for Business to determine the economic and competitiveness impacts of achieving the target of 20% of the EU’s energy consumption being derived from renewable sources;
- A report for the Great Barrier Reef Foundation looking to place an economic value on the damaging effects of coral bleaching on the Reef, and on the benefits of preserving it for future generations;
• A review for the Core Cities Group, undertaken alongside the Work Foundation, on enabling sustainable economic growth at the regional and local level.

We are also helping our clients to realise the potential of new low carbon industries – for example by exploring the feasibility of renewable energy projects or carbon capture and storage networks.

The Oxford Economics Low Carbon Economy Programme is founded on the belief that the agenda presents places and businesses with a major opportunity to recover from the global recession and to lay the basis for future economic growth – sustainable growth which will generate both economic and environmental dividends long into the future.
2 Tackling the Low Carbon Policy Challenge

In simple terms, a low carbon economy is one in which the use of carbon has been constrained. The Oxford Economics Low Carbon Economy Programme defines a successful low carbon economy as:

- “An economy which prospers with minimal use of carbon, having successfully adapted to the challenges of a changing climate and taken full advantage of the economic opportunities generated by the transition to a low carbon society”

This Oxford Economics definition would be broadly recognised across the international political and policy spectrum.

Interest in the concept and reality of a low carbon economy has grown quickly alongside the acceptance that given the scale of the costs involved in not acting quickly to tackle climate change, creating a low carbon economy is an economic imperative as well as an environmental imperative. The recession has moved the debate yet further: creating a low carbon economy is now viewed – by policymakers across the globe – as a major opportunity to reverse the global economic slowdown and lay the basis for future economic growth.

In the context of unprecedented public sector deficits in several of the world’s major developed economies, there is also now a focus on finding the most cost-effective policy interventions to stimulate private sector investment in low carbon technologies.

The real question for policymakers is how can a coherent, strategic approach to a low carbon economy be developed? How quickly can and should this be delivered? Who is responsible?

A low carbon economy will have a range of attributes which will need to be developed using a range of policy instruments, as set out in the Oxford Economics Low Carbon Economy Programme:
In summary, a low carbon economy will have the following range of attributes:

- **Low carbon businesses** – businesses who have adapted their energy consumption (through efficiency measures and renewable technologies) to enhance their competitiveness and/or who are actively engaged in the design, manufacture, distribution, installation and maintenance of low carbon goods and services, supported by the public sector.

- **Low carbon infrastructure** – an efficient, low carbon energy infrastructure which takes advantage of smart technologies and renewable sources; an efficient, low carbon transport infrastructure; and a planning system which enables the delivery of both.

- **Low carbon technologies** – an economy which takes advantage of the latest low carbon technologies and which – through collaboration between higher education institutes, local businesses, inward investors and the public sector – is actively involved in the development and commercialisation of these technologies.

- **Low carbon communities** – local communities in which public buildings/estates (schools, hospitals, industrial estates) and homes are energy efficient and powered by renewable sources; in which the public sector uses its significant purchasing power to stimulate the demand for low carbon goods and services; and in which local communities and social enterprises are empowered to develop their own renewable energy schemes.

- **Low carbon skills** – local people with the skills required by businesses to ensure that the economic benefits of the low carbon economy are ‘locked in’ to local areas, supported by an education and training infrastructure which is integrated into the area’s low carbon economy.

In order to develop a low carbon economy which demonstrates these attributes, there are five broad instruments available to the public sector:

- **Regulation** – creating the regulatory conditions for a low carbon economy, and the regulatory and legal frameworks in which low carbon markets can operate fairly and effectively: this includes carbon prices and trading, industry regulations and building regulations.

- **Planning** – creating the planning conditions for a low carbon economy through local development frameworks, spatial planning policies and development control.

- **Leadership / Co-ordination** – leading the low carbon economy agenda, delivering visible actions (including flagship, pilot and demonstration projects) and providing information and support to businesses and households; co-ordinating activity – particularly R&D, business support and skills/training – to ensure that policies, programmes, investment and funding are joined-up through public-private partnerships.

- **Procurement** – using the potential of the public sector’s significant purchasing power, particularly its capital budgets, to stimulate demand in the area for low carbon goods and services and to help create a critical mass of low carbon economic activity.
• **Funding** – targeting existing funding streams at low carbon economy priorities; ensuring that households and businesses take advantage of grants and loans available from the public sector; and taking a joined-up, pan-area approach to securing additional project finance.

There are a number of practical challenges:

Firstly, the five policy instruments are owned by organisations at a range of spatial and departmental/agency levels – for instance, whereas most organisations have control of their own procurement strategies, other instruments such as land-use planning and development control are undertaken at a range of spatial levels. Similarly, regulation is often in the hands of central government or international organisations; leadership and co-ordination needs to be undertaken through partnership working; and additional funds need to be secured from a range of different sources.

Secondly, the low carbon economy agenda is manifestly cross-cutting. The development of a low carbon economy in a particular area – and the delivery of its environmental, social and economic benefits – will require departments, states and regions to work together. Economic development and climate change partnerships may be the mechanisms through which the low carbon economy agenda is delivered, but the agenda will need to be fully aligned with broader aspirations for the area’s economic development.

There is real opportunity to co-ordinate activity in order to leverage the funding that is currently available – much of it in the form of capital investment – and ensure that this critical mass of funding and activity actually generates:

- **Environmental and social benefits**: significant reductions in carbon emissions and significant reductions in the number of fuel-poor households; and

- **Economic benefits**: opportunities for businesses (in the design, manufacture, distribution, installation and maintenance of renewable technologies and energy efficiency measures); employment opportunities for residents in medium-to-high skilled occupations/sectors; economic and research opportunities for Higher Education Institutes (HEIs); and local economic development by freeing-up household disposable income to be spent locally.

But if economic benefits are to be unlocked, a number of wider interventions are required, including: support (technical and financial) for businesses and social enterprises; R&D by HEIs and businesses into energy efficiency and renewable energy technologies; skills and training for local people in relevant occupations and sectors; flagship (demonstration and pilot) projects; smart and co-ordinated investment in infrastructure; and financial support for householders (grant funding and loans).

These interventions need to be strategically co-ordinated and delivered, which means:

- **Focusing on specific spatial areas**, in order to create a critical mass of activity; and

- **Taking a strategic approach to available funding**, to ensure as much funding as possible is secured and that it is channelled into interventions/areas where it will have greatest impact.

The Oxford Economics Low Carbon Economy Programme has been designed to help public and private sector organisations understand how to achieve this.
3 How We Can Help

Oxford Economics works with clients across the public and private sectors, across the globe. We can help your organisation address the challenges posed by the transition to a low carbon economy, whether stimulated by the demands of legislative compliance, the opportunities of low carbon market development or simply the desire to demonstrate good corporate citizenship.

Our staff are:

- **Market-leading economic/econometric impact modellers**, whose work forms the basis of decision-making tools used by government and business;
- **Respected, senior public policy advisors** (e.g. advisors to HM Treasury, the London 2012 legacy taskforce and the independent think-tank Forum for the Future);
- **Experienced economic, business and management consultants**, well versed in services such as evaluation, appraisal, strategy development and commercial feasibility assessment.

What type of organisation are you?

For **local/municipal authorities and economic development partnerships**, we can:

- Help you understand what the low carbon economy is, and what it means for your area given its mix of industries, skills and research institutions;
- Undertake a ‘Low Carbon Strategic Review’ of your area to identify its standout assets – in terms of low carbon businesses, technologies, research, skills and infrastructure;
- Produce a rigorous ‘Low Carbon Action Plan’ to link to your local economic development strategy or planning framework – whose are the key roles and responsibilities, how can you avoid duplication across local and national agendas, and how can local partners work together to deliver a prosperous low carbon economy?
- Produce an effective, targeted strategy for attracting inward investment in low carbon technologies, including specific lead generation work with key companies.

“We are very pleased – Oxford Economics have picked up all the key issues we wanted raised and offered good recommendations. They have communicated some very important and crucial messages.”

Climate Change Officer, large UK county council, on Oxford Economics’ low carbon economy strategy for the area, 2009
For **private developers**, we can:

- Deliver robust socio-economic assessments on development proposals (e.g. to feed into formal planning applications, as we have done for major housing and infrastructure projects);
- Advise on ‘greening’ new development plans and maximising their sustainable, local economic impacts over the long term.

For **government departments and public-funded agencies**, we can:

- Model the macro-level or sectoral economic and competitiveness impacts of responding to incoming legislation – whether global, national or local;
- Provide market-leading energy demand and supply modelling and scenarios, to help identify the most appropriate national energy mix for the future;
- Quantify the economic returns on supported investments to date and model alternative future spending options, to provide a robust basis for allocating funds in the context of growing pressure on budgets;
- Deliver robust, fully quantified evaluations of your supported activities, to demonstrate economic impacts and learn lessons on ‘what works’ most effectively in delivery.

For **universities and research institutes**, we can:

- Develop practical business engagement strategies – how do you target the right clients, optimise internal organisational processes and present a ‘joined-up face’ to business? And how do you secure available funding and maximise long-term economic impacts?
- Work up robust and convincing funding bids (our staff have secured funding for leading university research and business engagement centres, for example from the European Regional Development Fund);
- Evaluate and review your current activities to learn lessons for the future and demonstrate their added value to key funding bodies and stakeholders.

For **large organisations** in both private and public sectors, we can:

- Help you understand the implications of incoming legislation that will affect your operations, such as the UK Government’s CRC Energy Efficiency Scheme, the compulsory ‘cap and trade’ emissions initiative which launched in April 2010;
- Build a carbon consumption model of your organisation, helping you pinpoint ways of reducing your carbon footprint without damaging the positive economic impacts you generate;
- Provide feasibility assessment, market positioning and entry strategies for new ‘eco’ products and services;
• Benchmark the local economic impacts of your organisation, and advise how it can maximise its role in supporting local jobs, upskilling local residents, stimulating local green technology markets and acting as a good ‘corporate citizen’.

The above are by no means ‘off-the-shelf’ products and services, and the list is far from exhaustive. All of our work is tailored to the specific requirements of our clients, drawing on the most appropriate blend of our staff’s diverse skills and experience.
4 Contact Us

Ask us about the Oxford Economics Low Carbon Economy Programme and its potential to help your organisation adapt to the challenges and exploit the opportunities of the low carbon transition.

For all queries, please contact:

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