

DISCUSSION PAPER

# Is the Green Economy Coming?

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**In just 100 months' time, if we are lucky, and based on a quite conservative estimate, we could reach a tipping point for the beginnings of runaway climate change.**

ANDREW SIMMS, HEAD OF POLICY, NEF



Rachel Jackson is head of social and environmental issues at ACCA and is a leading contributor to ACCA's responses to global developments in this area.

# IS THE GREEN ECONOMY COMING?

## INTRODUCTION

Climate change is scientific fact. The Intergovernmental Panel on Climate Change's fourth report, published in 2007, stated that most of the observed increase in global average temperatures since the mid-twentieth century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations. The Stern Report, published in 2006, refers to possible outcomes that 'are unknown to human experience' and that 'could be catastrophic' – as already exemplified by the Maldivian Vice-President who is searching for a new homeland for his people. Stern also emphasises the profound importance of what happens within the next 10 to 20 years. It is imperative, therefore, that collective and collaborative action is taken now.

To have any chance of reversing climate change, moving to a low carbon economy is key. A low carbon economy – one that relies very little on fossil fuels and energy sources with high greenhouse gas emissions – will improve the planet's success rate of tackling the climate predicament. It can be done. Masdar City in Abu Dhabi is under construction and will be the world's first zero-carbon, zero-waste city powered entirely by renewable energy sources. Britain has set the pace by setting a legal target of 80% reduction in carbon emissions by 2050 (1990 baseline). The move to a low carbon economy should be done as quickly as possible and with collaborative international effort unseen on a global scale before.

## GREEN-COLLAR JOBS

The United Nations has predicted an acceleration of green job creation in the years ahead, as well as the creation of a large number of jobs across many sectors. The typical green economy industries include renewables, energy efficiency in buildings, organic agriculture and sustainable transportation. In a green economy, environmental and social full-cost pricing of energy and materials would discourage unsustainable patterns of production and consumption. The type of employees required to fill such jobs within the green economy are often called 'green collar workers'.

The term 'green-collar jobs' has been defined in various ways, including the following one from the UN.

*'Green jobs are those in positions in agricultural, manufacturing, R&D, administrative, and service activities aimed at alleviating the myriad of environmental threats faced by humanity. Specifically, but not exclusively, this includes jobs that help protect and restore ecosystems and biodiversity, reduce energy, materials, and water consumption through high efficiency and avoidance strategies, de-carbonise the economy, and minimise or altogether avoid generation of all forms of waste and pollution.'*

The UK's Confederation of British Industry (CBI) has described green-collar jobs as those:

- needing specialist environmental skills (for example energy efficiency experts, carbon traders, technicians skilled in installing items such as solar panels)
- in science, technology, engineering and maths who are adapting their discipline to meet climate change objectives (for example, the nuclear industry, flood defence engineering, wind farms)
- who are 'greening' their existing jobs (for example, the facilities or logistics manager who operates within carbon budgets).

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**Sustainable energy has never been more important than it is today in maximising economic opportunities and ensuring security of our energy supply. "Green jobs" can be created through increased sustainable energy activity in areas such as energy efficiency and renewable technology**

ARLENE FOSTER, SCOTTISH ENERGY MINISTER

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## RENEWABLES: A SUCCESSFUL GREEN ECONOMY

A conservative figure given by the UN, in collaboration with the International Labour Organisation and International Trade Union Conference, has put the number of people presently employed in renewables worldwide at 2.3 million.

There has been a six-fold increase in investment in renewables from 1998 to 2007, growing from US\$10 billion to US\$66 billion. In 2003, renewables accounted for about one-sixth of world investment in power generation facilities and equipment. Some estimate that investment could quadruple to US\$210 billion in 2016.

In future years, predictions for worldwide employment show it soaring ten fold from currently 2.3 million to over 20 million people employed within renewables. This coincides with Stern's calculation, that a 'massive shift towards low-carbon technologies will be accompanied a shift in employment patterns' and that '25 million people will be working in these sectors by 2050'.

Germany is a low-carbon, green economy success story, already employing a quarter of a million people in the renewables sector alone with a turnover of 24 billion Euros. Predictions push the renewables workforce figure up to 710,000 by 2030.

## NATIONAL EXAMPLES

### Australia

Australia's national science agency, CSIRO, has explored the skills, innovation and workforce dimensions of the transition in Australia to a low carbon society. The key results have found that achieving rapid transition to sustainability would have no detrimental impact on national employment. Employment in sectors with high potential environmental impacts will grow strongly, with increases of more than 10% over ten years. This will add 230,000–340,000 new jobs in the transport, construction, agriculture, manufacturing and mining sectors.

### UK

The UK Business Minister set out a new low-carbon strategy for the UK manufacturing industry, outlining how it can survive the economic slowdown and become a key part of the UK's economy. One element of this is the creation of hundreds of thousands of green-collar jobs by investing in the manufacture and production of low carbon technology. The UK has an environmental goods and services sector which could almost double by 2015, spurring the creation of one million green collar jobs by 2030.

### US

The USA's House and Senate have recently approved Obama's economic stimulus package. A healthy US\$100 billion will be allocated to energy efficiency and renewables' programmes, including \$20 billion of tax breaks, \$30 billion for investing in smart grid technologies and \$10 billion to spend improving the energy efficiency of public sector buildings. A further \$16 billion has been pledged to be used on mass transit and high-speed rail link projects.

The American Solar Energy Society has predicted as much as a quarter of the US workforce could have a 'green job' by 2030. And Al Gore, former US Vice-President and now environmental activist, has challenged America to generate 100% carbon-free electricity within 10 years which he forecasts would encourage investment in the US economy, secure domestic energy supplies, and create millions of jobs around the country.

## ECONOMIC DOWNTURN

The global financial crisis and spreading economic downturn, the associated volatile markets and extensive job losses, the unprecedented collaborative UK£3 trillion finance sector bailout have all led to the question: what type of future does the green economy have?

For pessimists, the current economic downturn has substantially delayed green economy plans, with governments now pre-occupied with the recession and focusing on fiscal stimulus measures. The phenomenal financial bailout has prevented any large scale investment in climate change mitigation and the green energy sector. The economic downturn will lead to a decline in direct investments and reduce the rigour of future climate change legislation and environmental taxes to protect the competitiveness of industry in the dire financial climate.

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**Changing patterns of employment and investment due to efforts made to reduce climate change and its effects are already generating new jobs across various sectors and economies. Currently, renewable energy generates more jobs than employment in fossil fuels, and projected investments of US\$630 billion by 2030 would translate into at least 20 million additional jobs in the renewable energy sector.**

For optimists, the twin crunches of climate and finance has led to a unique and incredible opportunity to re-build the global markets with systems sympathetic to climate change, that value societal and environmental costs, and that are sustainable in the truest sense. The trillion dollar banking sector bailout is proof that governments can work together, quickly, to help resolve global catastrophes. The green labour market will thrive within the green economy, the future of the planet will improve, and equity among society will begin to become re-balanced.

### **A GREEN NEW DEAL**

One group of eminent optimists, the Green New Deal Group, has prepared a substantial and technically robust proposal to 'pull the world back from economic and environmental meltdown'. Their work has been inspired by Roosevelt's New Deal that was launched to halt the Great Depression of the 1930's. Structural changes to international financial and taxation systems, together with calls to invest in energy systems, are comprehensively proposed. Their agenda, which requires action at local, national, regional and global levels, includes calls for:

- executing a bold vision for, and investing in, a low-carbon energy system
- creating and training a 'carbon army' of workers
- ensuring more realistic fossil fuel prices that include the cost to the environment
- re-regulating the domestic financial system.

The UN and leading economists have recently launched a similar reform package – their Green Economy Initiative (GEI) – which aims to 'mobilise and re-focus the global economy towards investments in clean technologies and natural infrastructure to combat climate change and trigger an employment boom in the 21st century'. The project has identified changing patterns of employment and investment resulting from efforts to reduce climate change and its effects are already generating new jobs in many sectors and economies, and could create millions more in both developed and developing countries. The GEI has US\$4 billion funding from the EC.

### **BUILDING MOMENTUM**

The Stern Review found that, by 2050, investment in energy security and environmental clean-up technologies, a fundamental part of the fabric of a low-carbon economy, would be over US\$13 trillion. The proliferation of new industries and employment would be overwhelming. Despite the recession, a number of governments and corporations are acutely aware of the potential the green-collar economy can bring.

- In a bid to stimulate the Australian economy, its Prime Minister, Kevin Rudd, has called for a 'solar revolution' and has provided an A\$500 million fund to promote renewable energy.
- The new US President, Barack Obama, has made an encouraging start. He has recruited Nobel prize-winning physicist Steve Chu as the next energy secretary. Chu promoted research on biofuels, solar power and energy efficiency in his previous roles. The President has also appointed one of the world's leading climate change experts, John Holdren, as director of the White House Office of Science and Technology Policy.
- Wal-Mart Stores Inc. has established a partnership with many of its suppliers to facilitate the creation of green jobs in the United States. At an inaugural meeting of the Wal-Mart Green Jobs Council, participants identified their top catalysts for creating green jobs.
- The UK's House of Commons appointed 14 Members of Parliament to the new Energy and Climate Change Committee. They will be holding initial inquiries into the green economy and low-carbon technologies.

### **GREEN ON THE HORIZON?**

While politicians struggle to retain votes and work economies out of recession, it is crucial that they acknowledge the climate crisis as well. Acting early, as key policy documents, economic forecasts and project proposals are urging, will raise our chances of diverting catastrophe at a reduced financial and environmental cost, while building a strong green economy.

As Jonathan Lash, president of the World Resources Institute has starkly reminded us, 'Nature does not do bailouts'.

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**The green technological revolution needs to gather pace, as more and more of the world's jobs will, in future, be in environmental industries.**

HILARY BENN, UK SECRETARY OF STATE FOR THE DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS.

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## **ABOUT ACCA**

ACCA (the Association of Chartered Certified Accountants) is the global body for professional accountants. We aim to offer business-relevant, first-choice qualifications to people of application, ability and ambition around the world who seek a rewarding career in accountancy, finance and management.

We support our 122,000 members and 325,000 students throughout their careers, providing services through a network of 80 offices and centres. Our global infrastructure means that exams and support are delivered – and reputation and influence developed – at a local level, directly benefiting stakeholders wherever they are based, or plan to move to, in pursuit of new career opportunities. Our focus is on professional values, ethics, and governance, and we deliver value-added services through our global accountancy partnerships, working closely with multinational and small entities to promote global standards and support.

We use our expertise and experience to work with governments, donor agencies and professional bodies to develop the global accountancy profession and to advance the public interest.

Our reputation is grounded in over 100 years of providing world-class accounting and finance qualifications. We champion opportunity, diversity and integrity, and our long traditions are complemented by modern thinking, backed by a diverse, global membership. By promoting our global standards, and supporting our members wherever they work, we aim to meet the current and future needs of international business.

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