

*A Bank for
the Future* →
Maximising
public
investment
in a low-
carbon
economy

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written by
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additional research by
Howard Reed

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James Leaton is a sustainability consultant with 10 years experience in the energy and finance sectors. James previously worked in responsible investment research; as a senior policy advisor for WWF; and as a consultant at PricewaterhouseCoopers. Whilst at PwC he helped commercial banks develop investment policies on environmental and social issues, and designed a programme engaging business in the international development agenda. James currently works on the nexus of energy and finance, focusing on how systems need to change to shift investment from hydrocarbons to green transport and energy.

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Howard Reed, the director of Landman Economics, is a specialist in microsimulation models of the tax system and other economic phenomena. For several years in the early 2000s Howard was primarily responsible for the Institute for Fiscal Studies's TAXBEN microsimulation model of the UK tax-benefit system. More recently, at the Institute for Public Policy Research, Howard's work included several pieces of bespoke economic modelling for several ippr projects including: empirical analysis of the economic impacts of migration for the report *Paying Their Way*, published in 2005; and simulation modelling of population and fertility trends for the report *Freedom's Orphans*, published in 2006.

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Introduction

Never let a serious crisis go to waste. What I mean by that is it's an opportunity to do things you couldn't do before.”

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Those were the words of White House chief of staff Rahm Emanuel, in response to the credit crunch.

The bail out of high street banks in the UK, including the Royal Bank of Scotland (RBS) and Lloyds Banking Group, was certainly the product of a crisis. But the meltdown of the financial system does offer opportunities to change the banking sector for the better.

This has not been greatly in evidence so far, despite the leverage the government has over RBS and the other state-controlled banks. RBS has continued to operate in ways that can be seen as detrimental to taxpayers and the environment. It still pays large bonuses to favoured employees, it still finances companies engaged in extracting tar sands and other forms of fossil fuels, and it acted as a financial backer to US food conglomerate Kraft in its takeover bid for Cadbury, despite the fact that the bid resulted in UK job losses.

With a more activist, imaginative approach, RBS could become a very different type of bank. One of the key challenges facing the UK today is the transition to a low carbon economy, and for that we need the support of the banks. The idea of a Green Investment Bank (GIB) has the backing of the Chancellor, George Osborne, but its success depends on whether it is seen by the private sector as a credible institution.

Involving the state-controlled banks would be a powerful signal by the government of a serious intent to advance both the green agenda and responsible banking, and this is one of the suggestions made by the Green Investment Bank Commission.

Politicians have expressed the hope that the new green economy will help restore growth and create jobs in

depressed regions of the country. All businesses, whatever sector they are in, and wherever they are located, would benefit from secure, reliable and clean sources of energy. State-controlled banks could be recruited to the GIB cause in a variety of ways, including equity holdings or channelling revenue from the tax on bankers' bonuses into the new green bank. RBS in particular has extensive expertise in the small and medium business sector and in renewables - expertise that could be harnessed to great effect.

With all the inevitable recriminations over casino banking and outsize bonuses, it is easy to forget that banks can be a powerful force for good, lending money to individuals to improve their lives and to businesses that will help the economy grow. But that will only happen if the banks serve the needs of society, not the other way around.

This thought-provoking report is essential reading for anyone interested in sustainability, for the environment, and for the banking system.

*Ruth Sunderland is the
Business and Media editor
of The Observer.*

Executive
Summary
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The recent financial crisis cost the UK £129 billion in annual GDP and increased the structural deficit by £93 billion. The initial budget cuts announced by the coalition government demonstrate the pain this is causing to public services. The UK can't afford another meltdown, yet short term, high risk, carbon intensive investments are still business as usual for the banks. The government must reform RBS into a Green Investment Bank and provide a low carbon policy framework to create a sustainable economy.

The coalition government has an opportunity to redefine the role of banks in society, rather than allow the sector to return to the short-termist approach which contributed to the financial crisis. With the government shareholding in RBS, this bank needs to be setting an example of how banks should be operating in the future, acting as a catalyst to mobilise other banks. With pressure on to improve public sector efficiency, there is an opportunity to rationalise the government's various financial support mechanisms under a new GIB.

The new Office for Budget Responsibility has recalculated the deficit for 2010-11 at £114 billion. The government spent a total of £117 billion recapitalising the banks. With severe pressure to reduce the deficit and cut expenditure, it is even more imperative that taxpayers realise value from this investment. The £2 billion annual banking levy, partially offset by reductions in corporation tax, will not stimulate the changes in behaviour required.

It is estimated at least £200 billion needs to be invested in UK energy infrastructure over the next 10-15 years. The environmental goods and services sector is predicted

to create around 50,000 jobs per year if the GIB Bank can deliver the potential growth in the low carbon economy. In particular there are opportunities in the proposed expansion of offshore wind power, supporting clean-tech industries in the north-east, electric vehicle infrastructure, high speed rail, and underwriting energy efficiency 'green deal' contracts.

The GIB will need to have a clear mandate and strong governance to deliver on the green agenda. This should be linked to the incentives, targets and remuneration of those working for the bank. Long term investment horizons attached to products and services which meet the needs of the renewables industry are essential to it being a success. There are emerging examples of these kinds of green bonds and venture capital funds, which demonstrate that private capital can be attracted to leverage the government guarantees. This also means the GIB will require limited state capital at a time when it is in short supply.

If adequately resourced and managed, the new GIB can provide a number of crucial functions to kick-start low-carbon growth. These include enabling risk-sharing; providing a benchmark standard for green investments; supporting research and development; attracting global expertise; leveraging additional capital; and offering a focal point for UK government policy coherency on green financing.

By creating a GIB with sufficient scale and momentum, the UK will benefit from improved energy security, stabilised energy costs, the creation of green jobs, greater efficiency, and improved international competitiveness. A GIB can make a huge impact on shifting financial flows by providing guarantees and insurance which do not increase the budget deficit. Getting the GIB right would be the tipping point for creating the infrastructure needed to deliver the projects needed in the UK to reduce our carbon emissions.

The
New
Banking
Context
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Financial Crisis

There has been a major spotlight on the banking sector over the last couple of years after what were thought to be “invincible” banks failed. There has been extensive analysis of the causes of the financial crisis, with a complex range of factors cited including US sub-prime mortgages, regulatory failure, excessive consumer debt levels, short-term funding markets, and international trade imbalances. Looking forward, there is likely to be more focus on ensuring responsible lending, and also on whether the incentives for banking employees are appropriately structured. Key financial regulators such as the Securities & Exchange Commission, and the Bank of England / Financial Services Authority are considering measures to regulate banks further. The new UK coalition government also has an opportunity to assert its authority on the financial sector and provide the control mechanisms that are needed.

The problems at Northern Rock, Bear Sterns, Lehman Brothers, RBS and HBOS indicate the need for a change from the focus on profit at the expense of vulnerable customers and small businesses. The financial sector has a big job on its hands to demonstrate its value to society in order to justify state support. At present there is a risk that the big investment banks are just returning to business as usual, i.e. short-termism. With the government shareholding in RBS, this bank needs to be setting an example of how banks of future should be operating, and acting as a catalyst to mobilise other banks.

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Recapitalisation

Both the British and American governments decided to intervene and rescue banks at crisis point. This has raised new questions about the contribution to society banks should be expected to make in order to justify this special protection. If taxpayers are expected to cover some of the risk associated with market speculation, then they should surely receive some reward, in terms of desired services and financial support to improve the country.

A number of international leaders and commentators have outlined the level of the significance of the bail out for the financial system.

The massive support extended to the banking sector around the world... has created possibly the biggest moral hazard in history."

Mervyn King
Bank of England
Edinburgh
20 October 2009

If the climate was a bank, [the West] would have saved it by now."

Hugo Chavez,
Venezuelan President,
Copenhagen,
December 2009

Growth has to be dethroned if the planet is to survive surging population growth and global warming"

Adair Turner,
FSA,
March 2008

My administration is the only thing between you and the pitchforks."

Barack Obama,
US President,
April 2009

The largest public recapitalisation of a UK bank occurred at the Royal Bank of Scotland. RBS is one of the largest financial institutions in the world and its high exposure to the financial crisis puts it in a position where the government took the decision to prevent it going under. The UK government became the majority shareholder of The Royal Bank of Scotland Group in November 2008 taking a 58% stake in the company. They increased their holding to 70.3% of the ordinary shares in April 2009 through the conversion of preference shares. In November 2009, the government subscribed to non-voting B shares to provide further capital for RBS, raising its financial stake to 84.4%.

The £45 billion RBS shareholding sits with UK Financial Investments (UKFI), a division of the Treasury set up specifically for this purpose.ⁱ At the time of investment it was indicated that UKFI would seek to divest from the banks at an appropriate time in the future. It is assumed that this would be at a point which would at least pay back the taxpayer's investment, however there is no guarantee how soon this may be. The new government may be taking a more long-term view however, which Vince Cable MP, the new Secretary of State for Business, Innovation and Skills expressed just prior to the May 2010 election:

“These banks should remain effectively under public control for something in the order of a decade.”ⁱⁱ

This approach provides the new government with the opportunity to direct RBS as a force for good, rather than use the excuse of potential divestment to avoid responsibility as the previous government did.

The new Office for Budget Responsibility has recalculated the deficit for 2010-11 at £114 billion.ⁱⁱⁱ The

government spent a total of £117 billion recapitalising the banks.^{iv} With the coalition government under severe pressure to reduce the deficit and cut expenditure, it is even more imperative that they demonstrate some value from this investment.

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Coalition government banking sector reform

The new coalition government has plans to review the regulation of the financial sector and in particular the option to split retail and investment banking in large institutions such as RBS. Vince Cable MP has made clear his view over the last year that power should be devolved and dispersed, rather than concentrated in big banks.

“And for the banks: fundamental change. We will break them up and break them down... A Liberal Democrat Government will immediately set new net lending targets for both Lloyds and RBS for 2010-11, to ensure that amount of money available to British businesses increases in the next 12 months.”^v

The detailed programme indicates fundamental changes to regulating the banking sector.

Coalition programme
for government^{vi}
Banking

In recent years, we have seen a massive financial meltdown due to over-lending, over-borrowing and poor regulation. The Government believes that the current system of financial regulation is fundamentally flawed and needs to be replaced with a framework that promotes responsible and sustainable banking, where regulators have greater powers to curb unsustainable lending practices and we take action to promote more competition in the banking sector. In addition, we recognise that much more needs to be done to protect taxpayers from financial malpractice and to help the public manage their own debts.

→We will reform the banking system to avoid a repeat of the financial crisis, to promote a competitive economy, to sustain the recovery and to protect and sustain jobs.

→We will introduce a banking levy and seek a detailed agreement on implementation.

→We will bring forward detailed proposals for robust action to tackle unacceptable bonuses in the financial services sector; in developing these proposals, we will ensure they are effective in reducing risk.

→We want the banking system to serve business, not the other way round.

→We will bring forward detailed proposals to foster diversity in financial services, promote mutuals and create a more competitive banking industry.

→We will develop effective proposals to ensure the flow of credit to viable SMEs. This will include consideration of both a major loan guarantee scheme and the use of net lending targets for the nationalised banks.

→We will take steps to reduce systemic risk in the banking system and will establish an independent commission to investigate the complex issue of separating retail and investment banking in a sustainable way; while recognising that this will take time to get right, the commission will be given an initial time frame of one year to report.

→We will reform the regulatory system to avoid a repeat of the financial crisis.

→We will bring forward proposals to give the Bank of England control of macro-prudential regulation and oversight of micro-prudential regulation.

→We rule out joining or preparing to join the European Single Currency for the duration of this agreement.

→We will work with the Bank of England to investigate how the process of including housing costs in the CPI measure of inflation can be accelerated.

→We will create Britain's first free national financial advice service, which will be funded in full from a new social responsibility levy on the financial services sector.

→We take white collar crime as seriously as other crime, so we will create a single agency to take on the work of tackling serious economic crime that is currently done by, among others, the Serious Fraud Office, Financial Services Authority and Office of Fair Trading.

The new government is therefore promoting mutuals, setting lending targets for banks, and establishing a committee to review separating the retail and investment banking divisions of large banks.^{vii} This agenda, combined with the establishment of a GIB, provides significant opportunities to develop a market framework that could help the financial sector play a far more active role in supporting viable entities to contribute to a low carbon economy, and in so doing, rediscover a socially useful purpose.

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The need to decarbonise

The Stern Review on the Economics of Climate Change in 2006 for HM Treasury outlined the case for early action on climate change:^{viii}

The benefits of strong, early action considerably outweigh the costs.

→Unabated climate change could cost the world at least 5% of GDP each year; if more dramatic predictions come to pass, the cost could be more than 20% of GDP.

→The cost of reducing emissions could be limited to around 1% of global GDP;

→Each tonne of CO₂ we emit causes damages worth at least \$85, but emissions can be cut at a cost of less than \$25 a tonne.

→Shifting the world onto a low-carbon path could eventually benefit the economy by \$2.5 trillion a year.

→By 2050, markets for low-carbon technologies could be worth at least \$500 billion.

Given subsequent events, perhaps even more poignant is Stern's observation that "climate change is a result of the greatest market failure that the world has seen."^{ix} The financial crisis also serves as a warning that relying on unfettered markets to solve climate change is a very high risk strategy, and the framework established by governments needs to significantly improve.

The UK has recognised the need to tackle climate change by reducing emissions. The Climate Change Act has set out the overall targets for reducing greenhouse gas emissions, with current targets agreed at 34% by 2020 and 80% by 2050. Carbon budgets have been outlined in order to create a pathway towards achieving the greenhouse gas target for 2020. This will clearly require a fundamental shift in energy sources, and therefore significant finance will be required in order to deliver the transformation. The UK has also committed to achieving 15% renewable energy by 2020, as part of the EU's 20% target, which the new UK government will push to be increased to 30%, supporting the EU's Climate Commissioner's proposal.^x The majority of this change is expected to occur initially in the power sector.

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Low carbon industrial strategy

The UK economy has been lagging behind both European counterparts and newly industrialising countries in terms of developing a new low carbon sector. Vestas, the wind turbine manufacturer, closed its plant on the Isle of Wight in August 2009 due to the lack of support and demand in the UK. The final months of the Labour government in 2010 saw a resurgence for wind power, with a huge third licensing round for offshore wind announced, aiming to construct up to 40GW of wind power by 2020, to meet an estimated quarter of electricity demand. The then Prime Minister Gordon Brown commented:

“The offshore wind industry is at the heart of the UK economy’s shift to low carbon and could be worth £75 billion and support up to 70,000 jobs by 2020.”^{xii}

This type of industry is therefore not only key to future British jobs and exports, but can provide greater energy security for consumers, by reducing reliance on imported gas and coal and their price fluctuations.

The North East region is also keen to tap into green growth, serving the offshore renewable industry by regenerating its ports, as well as welcoming Nissan’s announcement that its new electric car would be built in Sunderland from 2013.^{xiii} The expansion of electric car infrastructure is a key strand of a low carbon future which needs investment.

The new government has indicated its preference for high speed rail to meet domestic transport needs, rather than expanding airport capacity. New infrastructure will be required to support these services and the finance must ensure that a viable pricing model is available to encourage use.

Energy efficiency is also a key part of the solution to reducing energy demand and emissions. The new government has proposed a 'Pay As You Save' scheme, which would provide every household with up to a £6,500 loan to improve energy efficiency, which would be paid back through savings on energy bills. This scheme will also need to be underwritten during the payback period.

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The scale of the challenge

Recent estimates of the level of finance required over the next decade to deliver energy infrastructure have indicated around £200 billion will be needed.

→ OFGEM - £200 billion by 2025 ^{xiv}

→ Ernst & Young / Centrica - £234 billion by 2025 ^{xv}

→ Policy Exchange - £264 billion by 2020 ^{xvi}

In the UK this situation is partly determined by a number of traditional large-scale energy assets, (coal and nuclear power stations), coming to the end of their expected lifetime, providing the opportunity to shift the future generation portfolio. However the situation is mirrored around the world, driven by factors such as energy demand, energy prices, energy security concerns and climate change targets.

*Establishing
a Green
Investment
Bank*
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The origins of the idea

Following work by various policy institutions, including E3G, Green Alliance, and the New Economics Foundation, the idea of a Green Investment Bank (GIB) was backed by the Conservatives initially, and then announced in the final budget speech before the 2010 election by the outgoing Labour government. The Liberal Democrats also supported the idea. The mainstream political spectrum has therefore been in general agreement about the benefits of creating some kind of state-backed green financial institution. There have been further endorsements of the concept from the Aldersgate Group, the British Venture Capital Association, Lord Browne, and Lord Turner, to name just a selection.

Details of the actual size, mandate, structure and management of a UK GIB have not yet been developed. However, when announcing the creation of the GIB, Alistair Darling said that it would be provided with initial equity of £2 billion. According to the estimates above, this would have to be leveraged at least by a factor of 100 over a decade in order to meet the national requirements. As is recognised by the political parties, the private sector has a role to play in providing significant amounts of finance to clean energy; however the GIB must have sufficient funds to draw in enough capital to deliver the infrastructure required. This can be achieved either through directing revenue streams to the GIB, or by raising capital through debt products such as green bonds.

The GIB can also play a role by providing guarantees and insurance which do not impact the fiscal balance, as payment will only be made in the event of default or a

claim. However these mechanisms can make the difference by reducing the risk for the private sector and therefore lowering the cost of capital. Such guarantees and insurance have historically been provided to the UK arms export and nuclear industries to cover political risk and waste management risk respectively.

The Conservatives' Green Investment Bank Commission was established in February 2010, chaired by Bob Wigley (chairman of Yell plc and formerly of Merrill Lynch). The Commission published its report considering options for setting up a GIB in June 2010, highlighting the urgent need to establish green finance mechanisms, and the importance of getting sufficient leverage of private sector finance.^{xvii} UK Infrastructure - a division of the Treasury - is currently considering the options presented by the report.

*Pre-election policies of the
three main parties:*

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Conservatives
Shadow Chancellor
George Osbourne
24 November 2009

“I can today announce that we are consulting on the creation of a Green Investment Bank, which will invest in the next generation of green British businesses. Instead of the current system of multiple sources of government funding for green investment projects, we will look to roll up these funds into a single bank that can leverage private sector investment and fund new green start-ups.”

“This wave of low carbon innovation we want to unleash requires investment, so we will create Britain’s first Green Investment Bank – which will draw together money currently divided across existing government initiatives, leveraging private sector capital to finance new green technology start-ups.”

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Liberal Democrats
(Liberal Democrat policies for the environment)

To help the transition to a green economy over the longer-term, we will set up a United Kingdom Infrastructure Bank (UKIB) with government funding to seed funding to attract in private finance – essential for delivering the much-needed expansion of Britain’s transport and energy infrastructure when public finances are tight. We will investigate other ways of raising seed capital such as auctioning airport landing slots. Our UK Infrastructure Bank will invest in public transport like High Speed Rail.

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Labour
Chancellor
Alistair Darling
Budget Speech, 24 March 2010

“To deliver this ambition – vital for future jobs and the health of our planet – I am setting up a new Green Investment Bank. It will control £2bn worth of equity. Half will come from the asset sales, including the Channel Tunnel rail link, with the rest matched by private investment. This equity will unlock billions more of finance from the private sector. The fund will focus first on investing in green transport and sustainable energy, in particular offshore wind power, where Britain is already the world-leader.”

Following this announcement, Infrastructure UK – a team set up in HM Treasury in December 2009 – were charged with publishing a consultation on the Green Investment Bank in the Summer of 2010.

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Coalition Government
Agreement
12 May 2010

The parties agree to implement a full programme of measures to fulfil our joint ambitions for a low carbon and eco-friendly economy, including:
→ The creation of a Green Investment Bank.

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The need for a clear mandate

History shows us that without a clear mandate to initiate a transition to a low carbon economy, public involvement in financial institutions have limited interest or incentive to address this issue.

The longest standing example of this is perhaps the UK Export Credit Guarantee Department (ECGD), which for years has chosen to interpret its mandate to merely respond to the demands of existing fossil-fuel based energy companies, rather than drive development of a new clean-tech UK industrial base.^{xviii} The coalition government has accepted the need to change this situation which could complement the work of a GIB by supporting exports of UK-based renewables manufacturers. The detailed coalition government programme states:

“We will ensure that UK Trade and Investment and the Export Credits Guarantee Department become champions for British companies that develop and export innovative green technologies around the world, instead of supporting investment in dirty fossil-fuel energy production.”^{xix}

Another area where the previous government failed to seize an opportunity to direct taxpayer money into low carbon financing is in relation to public shareholdings in the recapitalised banks, most notably RBS. While the government was willing to intervene on certain public interest issues, such as executive pay and mortgage lending, it failed to accept the need to apply this approach when it came to addressing climate change. Despite the amount of money

invested in RBS being more than the government spends annually on education or defence, taxpayers are not gaining anything like maximum value from how this shareholding is being managed, nor do they have an adequate accountability mechanism.

The proposed GIB must therefore be clearly aimed at financing renewables and energy efficiency, in order to deliver the rapid emission cuts the UK has committed to. We believe it will be important for the GIB to have clear accountability and strong active management to deliver the investment required. It would therefore be preferable for a single government department to have responsibility for the success of the GIB, and to report against both investment targets and carbon emissions reductions and renewable targets. These climate change related targets should also be a major part of any incentive package for those employed by, contracted to or partnering with the GIB.

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Investment horizon

The GIB will need to apply a longer investment horizon than the short-termism that drives much of the behaviour within the City. There are already approaches emerging which exemplify this.

Venture capitalists typically own companies for at least 5 years, giving them a strong interest in the viability of a company over several years. It is also vital for them to demonstrate a healthy future for their companies in order to realise an exit strategy. For example Vantage Venture Capital focuses on groups of clean-tech companies that complement each other.^{xx} It has holdings in electric vehicle manufacturers, battery manufacturers, infrastructure providers and zero

carbon power generators that together form a value chain for the roll-out of electric cars.

In a departure from its fossil fuel activities, the World Bank has issued a series of green bonds (totalling \$1.5 billion), in partnership with commercial banks such as SEB (Sweden) and Daiwa Securities (Japan), which have attracted investment from a range of US and Scandinavian Pension Funds.^{xxi} All projects meet low carbon criteria developed by the World Bank and consist of a range of climate change mitigation and adaptation activities from around the world.

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Funding sources

The Labour government's proposal was that half of the initial £2 billion in equity is to be provided by the sale of state assets, such as the channel tunnel rail link, with the other half coming from the private sector. There are a range of other revenue streams which could be earmarked to provide ready capital for lending. These include:

→ The Committee on Climate Change has indicated that it expects revenues from the auctioning of EU Emissions Trading Scheme permits to raise £40 billion by 2020, (estimate only). The government's platform for banking reform also indicates new a banking levy and social responsibility levy for the sector which could be used to ensure a ready flow of capital into the GIB.

→ The UK government has averaged £9 billion per annum in oil and gas revenues over the last 5 years ^{xxiii} (Norway used its petroleum revenues to establish an investment

fund in 1990 which now stands at US\$ 838 billion).^{xxiii} The government could also learn from its Scandinavian counterparts and establish a sovereign fund that seeks to finance a sustainable future for the country, rather than continuing the policy of exploiting finite resources such as coal and oil, with no investment plan for a viable low carbon economy beyond this.

→ The GIB could also go to the markets to raise capital, using mechanisms such as green bonds or venture capital funds. This would be a way of bringing in private capital to augment the funds provided by the government purse.

The GIB should not be reliant on a significant state funding stream, especially in the context of the huge budget deficit facing the UK. However it must be accepted that some investment is needed in order to deliver the green growth that is needed to drive the UK out of recession. It is more important however that the GIB is in a position to provide enough certainty for investors and shares enough risk to leverage funding from the private sector.

*Creating
synergy*
the role of
RBS in the
Green
Investment
Bank
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Functions of the GIB

If adequately resourced and managed, the new Green Investment Bank can provide a number of crucial functions to kick-start low-carbon growth. These include enabling risk-sharing, providing a benchmark standard for green investments, supporting research and development, attracting global expertise, leveraging additional capital and offering a focal point for UK government policy coherency on green financing.

The different funding needs of initially capital-intensive renewable projects which have low operating costs need to be met by the products offered by a GIB. Risks faced by the renewable sector need to be addressed so that it is more attractive to investors. For example, guarantees covering regulatory risk or insurance for offshore wind construction risk could remove current barriers for investors. The bank will therefore need to be managed by people with expertise in these target sectors, as well as in finance.

The “green” standards need to be at the core of all investments promoted by the GIB. This should be defined so that it drives investment to the leading edge of low carbon energy. The GIB needs to ensure it is only financing projects or technologies that will reduce the carbon intensity of energy production. The GIB needs to be driving the development of zero-carbon energy in order for the UK to achieve its goal of cutting greenhouse gas emissions by 80% by 2050.

A significant level of investment in research and development and new infrastructure is needed in order to advance the renewable industry even further and make it the global norm, rather than a novelty. Whatever the industry, it has always been necessary to invest in development

to deliver fundamental change. The limited sums invested by the oil majors in renewables compared to the amounts ploughed back into deepwater technology (e.g. Gulf of Mexico), and unconventional oil exploitation (e.g. Canadian tar sands) have restricted the growth of renewables. The negative externalities of this focus for local communities and the global environment are now clear for all to see. The GIB needs to support innovators and small businesses that are developing the energy technologies of the future.

The GIB will need renewables expertise, in order to understand the markets it is trying to promote, and how to overcome the barriers currently faced by the sector. Other regulatory environments have historically been more favourable than the UK, although following the offshore wind regime developments, the UK became joint 6th most attractive regulatory climate for renewable according to Ernst & Young's analysis in February 2010.^{xxiv} International experience of raising finance and structuring deals will be required to get UK projects moving.

The GIB could provide a range of different types of financial services to the green sector over time. These could include:

- Risk guarantees and insurance pools
- Securitization funds
- Bond issuance
- Venture capital
- Research loans

It is also interesting to note that the new government is keen to promote green retail products such as green Individual Savings Accounts (ISAs), which will provide

greater tax benefits. These retail products will also need a green economy to invest in, which links to the role of the GIB. There is also scope for working with institutional investors, including the government pension funds, and fund managers, who apply responsible investment criteria to produce a range of investment products.

If the GIB is set up with an initial £2 billion in equity it is clear it will need to leverage private capital many times that amount each year in order to deliver the clean energy infrastructure required by the UK. Since the credit crunch, the primary challenge to the banking sector has been to start lending again, in order to facilitate the flow of capital. The GIB has an opportunity to use the credit rating of the government to securitize debt and guarantee loans. Critically, these forms of support will not increase the national debt, as the GIB would not be providing the actual finance. The GIB can also play a crucial brokering role between the renewable energy industry and private financial institutions, to help overcome any existing barriers to finance. As well as working with private finance, the GIB will also be expected to identify international sources of funding, from the European Union for example.

The GIB needs to part of an overall policy framework of tax incentives, market mechanisms and regulations which drive green investment. The UK has been hedging its bets for too long, not providing certainty over the direction our energy future should take. This has resulted in a perpetuation of the status quo – a dependence on fossil fuels. A GIB will only be successful if there are no more mixed messages, and a clear path is agreed, with all government departments and interests aligned.

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RBS existing capacity and situation

RBS is ideally placed to deliver GIB's required functions, with its existing experience in financing renewables. In particular, RBS has been active in the offshore wind sector, which Infrastructure UK indicates as a likely first priority for finance. The third round of offshore wind licensing in January 2010, and the expansion of the previous two rounds, provide the potential to bring 40GW onstream by 2020.^{xxv} Head of Corporate Responsibility at RBS, Andrew Cave's response to criticism over tar-sands links stated that since 1998, RBS has financed over 8.8GW of wind generation globally.^{xxvi} It would seem more efficient to tap into this existing structure, rather than risk the business going elsewhere.

RBS is also a participant in a scheme launched in 2009 supported by HM Treasury and the Department of Energy and Climate Change which could enable around £1.4 billion of onshore wind projects to move to construction over the next 3 years.^{xxvii} The European Investment Bank (EIB) will provide up to £700 million of the new finance, with the remainder matched by RBS, Lloyds Banking Group and BNP Paribas Fortis. The loans will be available to eligible onshore wind projects with a total project cost of between £20 million and £100million. This demonstrates RBS's ability to work with both multilateral and commercial partners.

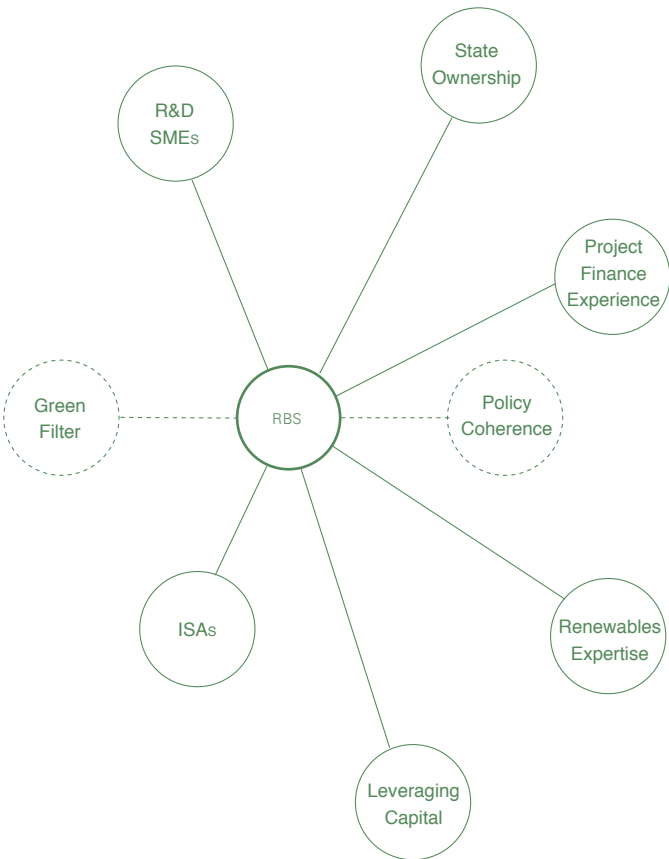
RBS has an established position in the UK Small & Medium Enterprise market, currently serving around a quarter of UK firms of this size. This provides a strong customer base in which to promote research and innovation.

RBS is under pressure from a range of sources to be split up and value realised. The EU Competition Commission is concerned about the excessive size of the group and wants the insurance companies Directline and Churchill sold off, as well as the retail operations reduced.^{xxviii} Unions are already concerned about the impact on jobs of this break-up, with the new board having already cut 16,000 jobs from the UK workforce, since recapitalisation. The government should be requiring RBS to implement a green recovery strategy to replace the lost jobs.

There are also a number of proponents of separating retail and investment banking divisions at major banks, including Vince Cable MP. This stems from the belief that individual customers who have their savings, loans, mortgages, etc with high street banks should not be exposed to the risks of investment banking. The consumer organisation Which? recently convened the Future of Banking Commission, which received powerful evidence that the separation of banking activities would both protect consumers and eliminate conflicts of interest.^{xxix}

The shareholding in RBS has so far been explained on the basis that it is a short-term arrangement, which will be divested at a time when the taxpayer will see a reasonable return. If the new government is to establish a policy framework which supports the objectives of the GIB, then it would appear that RBS should be closely aligned to this strategy if it is to make the most of opportunities in the energy sector. In order to protect its shareholding and demonstrate its commitment to a low carbon future, the new Government should therefore utilise RBS as a way of delivering the GIB.

The following diagram indicates the fit between RBS and the GIB requirements – the dotted areas are the current gaps, which can be addressed by the new coalition government:



International examples of green investment banking

Nordic Investment Bank

The Nordic Investment Bank (NIB) is the regional financial institution of the Nordic and Baltic countries, which finances projects which strengthen competitiveness and enhance the environment. The NIB lends around EUR 2 billion each year, and has financed a range of renewable energy projects, energy efficiency programmes, emissions reduction projects and infrastructure adaptation measures. The NIB estimates that its investments resulted in CO₂ emissions being reduced by over 1 million tonnes in 2008. Recent loans include:

→ A loan from NIB amounting to EUR 12 million to the Mortgage Society of Finland to support energy-efficiency projects in private households and housing companies.

→ NIB and the Finnish company Rajakiiri Oy have agreed on a loan totalling EUR 19 million for the construction of a new wind power park in Tornio in northern Finland. The new wind power park will increase the overall capacity of Finnish wind power by one-fifth.

→ NIB provided a 5-year-maturity loan totalling EUR 30 million to Vestas Wind Systems for financing an R&D programme aimed at developing a new type of 3 MW wind turbine for low and medium wind regimes during the period of 2008-2011.

US Green Fiscal Stimulus

The US Recovery and Reinvestment Act 2009 outlined a cross-departmental \$787 billion programme which included \$38.3 billion of energy investments. The investments included smart grid development, improving the energy efficiency of the domestic housing stock, grants for improving the energy efficiency of federal, state and local government buildings, grant funding for advanced battery systems for electric vehicles and loan guarantees for wind and solar projects. Implementation of the Recovery Act is monitored, and to date the US government reports it has created over 680,000 jobs.

KfW (Germany)

KfW Bankengruppe is charged by the German federation with supporting sustainable improvement in economic, social, ecological living and business conditions, among others in the areas of small and medium-sized enterprise, entrepreneurship, environmental protection, housing, infrastructure, education finance, project and export finance, and development cooperation. KfW has a number of divisions offering different services to both domestic and international markets, including:

In 2009, KfW committed a total of EUR 16.5 billion for investments in climate and environmental protection in Germany, including EUR 8.9 billion for improving the energy efficiency of both new and existing housing.

KfW is a core sponsor of the 2020 Euro Fund for Energy, Climate Change and Infrastructure (the Marguerite

Fund) – an equity fund for new infrastructure projects in the areas of transport, energy and renewables. In addition to the EUR 1.5 billion fund, the group have also established a EUR 5 billion debt financing initiative, so that these projects could in principle also be supported with debt capital at the level of the individual projects.

*How the
UK would
benefit from
systemic
change in
the financial
sector*
→

→

The lack of effective oversight which allowed high risk products such as derivatives to proliferate were major contributing factors to the financial crisis. It has been widely acknowledged that this situation should not be allowed to happen again, and the UK government is planning to review the regulatory system as well as continue discussions with the other major financial centres around the world. With the government shareholding in RBS, there is an opportunity to use this bank to set an example to its peers.

If the regulatory framework is not set up to deliver more responsible financial products, then the GIB will not flourish, which will send the wrong signal to other banks. Those banks which the government has an interest in need to be aligned with a low carbon banking agenda, otherwise taxpayers' interest in them will be at risk. If the government is serious about meeting its greenhouse gas targets then it needs to entrain financial institutions to deliver the required infrastructure. Failure to construct this future will leave our economy at risk of a further crisis which it cannot afford after the impact of the recent situation.

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The cost of the financial crisis to the UK

There are three main ways in which the financial crisis has impacted the UK economy:

- The cost of bailing out insolvent UK banks;
- The loss of productive capacity in the UK economy arising from the economic crisis;
- The impact on the public finances through lower productivity capacity leading to lower tax receipts and higher public expenditure.

Unless the financial sector changes the way it does business, the UK risks being exposed to further meltdowns in the future, with a weakened economy even less able to deal with the subsequent stress.

The Treasury's total net cash outlay for purchases of shares in banks and lending to the banking sector, including Northern Rock, amounted to around £117 billion by 2010. The Treasury's additional potential exposure to banking losses (through insurance of bank assets and Bank of England lending) totals over £1 trillion. However, these losses would only be realised in the worst case scenario of total banking system failure. Therefore the overall expected losses to the taxpayer from these operations are much smaller. The Treasury estimated in April 2009 that there may be a one-off loss to the taxpayer of between £20 and £50 billion.

The March 2010 Budget (the last under the outgoing Labour government) assumed that by 2015 (as far into the future as the Treasury publishes projections) the reduction in output was 6.5% of Gross Domestic Product (GDP).

The June 2010 Pre-Budget forecast from the newly created Office of Budget Responsibility has produced revised estimates which suggest a greater reduction in output – 8.75%. This means that, on the most recent government estimates, the financial crisis permanently reduced UK output by almost 9 percent per year. The latest ONS projections suggest that in the current tax year, GDP will be valued at £1.476 trillion. 8.75% percent of this figure equals around £129 billion in lost GDP.

In the 2007-08 tax year (before the main financial crisis blew up in autumn 2008) HM Treasury calculated the structural deficit to be 2.5% of GDP. The recent forecasts from the OBR estimate that the structural deficit increased to 8.8% of GDP in the year 2009-10.^{xxx} The correct measure of the effect that the financial crisis has had on the structural deficit can be arrived at by subtracting the 2007-08 deficit (pre-crisis) from the 2009-10 deficit (post-crisis). This gives a figure of $(8.8 - 2.5) = 6.3$ percent of GDP. This suggests that the financial crisis had an overall impact on the public finances equal to around £93 billion.

The estimates presented here, although substantial, should be viewed very much as lower bounds on the cost of carrying on with ‘business as usual’. It has become clear that complex risk transfer products only provide short-term profits for the few, at huge cost to the overall economy. Similarly the externalities of fossil fuels, in terms of both local pollution and global climate change, bring negative consequences for our societies which are not acceptable.

The transformation of RBS into a Green Investment Bank should be one element of a restructuring of the banking sector which will make future systemic financial crises much less likely.

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The benefits of financial sector reform to the UK In terms of the range of positive impacts on the UK (and global) economy, an effective GIB at the heart of a more sustainable financial system should bring the following benefits:

Improving energy security

Electricity costs are currently subject to variations in the market prices of hydrocarbons. In Europe, gas prices continue to be tied to oil prices, leaving UK consumers at the mercy of political risk in the Middle East for oil prices, as well as tensions in the former Soviet Union for gas prices. The GIB needs to ease initial costs of paying for the new infrastructure to deliver long-term energy security for the UK, so it can become an energy exporter.

Stabilising energy costs

Scaling up renewables will reduce the financial costs of the energy supplied in the long term. The simplicity and cleanliness of using these renewable resources means there are no hidden costs to the taxpayer. The nuclear industry has been subsidised for many years by the taxpayer in terms of waste management costs, guaranteeing related liabilities and the bail-out of what became British Energy, the UK's nuclear energy company. Both business and domestic energy users would benefit in the long term from an increased proportion of the UK energy supply not being reliant on imported fossil fuels.

Creating green jobs

The Department for Business, Enterprise and Regulatory Reform commissioned an industry analysis of the Low Carbon and Environmental Goods and Services (LCEGS) sector in 2009.^{xxxii} This study by Innovas indicated that the LCEGS market was £106.5 billion in the UK in 2007/8, making it the sixth largest in the world, and constituting 3.5% of the global market. Employment levels were 881,300 in 2007/8. Growth was predicted at 5-6% per year despite the recession, delivering a 45% increase in the size of the sector over 8 years, with renewable energy especially strong. The environmental goods and services sector is therefore predicted to create around 50,000 jobs per year if the Green Investment Bank can deliver the potential growth in the low carbon economy.

International competitiveness

The UK is currently losing out on low carbon opportunities due to being viewed until recently as an unfavourable place for renewable investment. This has improved following the third round of offshore wind licensing and the introduction of a significant feed-in tariff in early 2010. However the market share of green technologies achieved by Germany and France, normalised to their GDP, are around 50% higher than the UK's share, and the UK's environmental industry currently exports £10 billion a year, compared with £50 billion of annual exports by the German green industry.^{xxxiii}

Government efficiency

The government needs to create a single efficient GIB to replace its dispersed existing functions in RBS, the Export Credit Guarantee Department, Energy Savings Trust, and Carbon Trust. The context of the huge budget deficit and the need to reduce costs suggest that the government will be keen to rationalise its green finance interests.

**Opportunity: UK to become the
'new Saudi Arabia of wind'!**

North Sea oil and gas production is already declining with fields maturing. Wind power could create a new British energy industry in coastal regions, potentially exporting energy to the rest of Europe if fully utilised.^{xxxiii} The research was published by the Offshore Valuation Group, a coalition of business and government, and concluded that using less than a third of the total available offshore resource could:

- generate the electricity equivalent of 1 billion barrels of oil annually, matching North Sea oil and gas production;
- create 145,000 new jobs and provide the Treasury with £28 billion in tax receipts;
- enable Britain to become a net exporter of electricity by 2050;
- reduce carbon emissions relative to 1990 levels by 30%.

Conclusion



The formation of a Green Investment Bank provides a unique opportunity for the government to kick start a green economy and fill a major gap which has to date restricted the development of renewable, energy efficiency and improved infrastructure the UK needs to meet its climate change targets.

Catalysing this investment is essential to creating a strong area of growth which will leave the UK in a much better position coming out of the global recession. This will not only create around 50,000 jobs each year domestically, but will generate export opportunities. A GIB can make a huge impact on shifting financial flows by providing guarantees and insurance which do not increase the budget deficit.

The coalition government has promised to be “the greenest government ever.” While admirable, these words need to be backed by specific proposals for how projects can be delivered in the UK to convert this commitment into actual changes in the power, transport and energy efficiency infrastructure of the country.

The financial crisis cost the UK economy hundreds of billions of pounds of billions in terms of reduced economic output, lost tax income, and the direct bail-out of the banks. Any repeat crisis is predicted to hit the economy even harder. A strong GIB is a critical element in establishing a more sustainable economy which is less susceptible to creating further fiscal pain.

With the budget deficit hanging over the government, there is a need to act quickly to utilise the government’s existing resources – including RBS – to deliver a step change in the UK’s energy portfolio. This coalesces with the government’s banking reform agenda, which indicates the desire for fundamental reform of giant banks such as RBS that as yet are still not making the contribution to society warranted by the £117 billion taxpayer support received to date.

- i | http://www.ukfi.co.uk/releases/115_2%20FW%20Update%20Jan%202010_10_AW_LR.pdf
- ii | <http://www.businessweek.com/news/2010-04-27/cable-wants-lloyds-rbs-to-stay-under-u-k-control-for-decade.html>
- iii | http://budgetresponsibility.independent.gov.uk/d/pre_budget_forecast_140610.pdf
- iv | <http://www.nao.org.uk/idoc.ashx?docId=e19e64bd-0f13-4f9f-a412-592cbf6ef00f&version=-1>
- v | http://www.libdems.org.uk/latest_news_detail.aspx?title=Nick_Clegg_and_Vince_Cable_set_out_radical_banking_reforms&pPK=5f5545e6-89d8-4f3b-a8f7-2e83638a0e68
- vi | http://www.direct.gov.uk/prod_consum_dg/groups/dg_digitalassets/@dg/@en/documents/digitalasset/dg_187876.pdf
- vii | Information about 'mutuals' available at <http://www.mutuo.co.uk/category/facts-about-mutuals/>
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- xi | <http://www.telegraph.co.uk/earth/energy/windpower/5988852/Isle-of-Wight-occupation-of-Vestas-wind-turbine-factory-ends.html>
- xii | <http://www.thecrownestate.co.uk/newscontent/92-r3-developers.htm>
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- xv | http://www.centrica.co.uk/files/results/interim09/Interim09_EY_securing_energy_future_feb09.pdf
- xvi | http://www.policyexchange.org.uk/images/publications/pdfs/Delivering_a_21st_Century_Infrastructure_for_Britain_-_Sep_09.pdf
- xvii | <http://www.climatechangepital.com/media/108890/unlocking%20investment%20to%20deliver%20britain's%20low%20carbon%20future%20-%20green%20investment%20bank%20commission%20report%20-%20final%20-%20june%202010.pdf>
- xviii | <http://www.timesonline.co.uk/tol/news/environment/article3666273.ece>
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- xx | http://www.vpvp.com/portfolio_cleantech

xxi | <http://treasury.worldbank.org/cmd/htm/WorldBankGreenBonds.html>

xxii | http://www.hmrc.gov.uk/stats/corporate_tax/table11_11.pdf

xxiii | <http://www.regjeringen.no/upload/FIN/Statens%20pensjonsfond/PF-summary-aug08.pdf>

xxiv | <http://www.ukinvest.gov.uk/United-Kingdom/105844/es-ES.html>

xxv | http://www.thecrownestate.co.uk/offshore_wind_energy

xxvi | <http://www.guardian.co.uk/commentisfree/2010/mar/11/rbs-tar-sands-renewable-investment>

xxvii | http://www.hm-treasury.gov.uk/press_102_09.htm

xxviii | <http://www.telegraph.co.uk/finance/newsbysector/epic/rbs/7706640/RBS-blames-EU-for-new-wave-of-UK-job-cuts.html>

xxix | <http://www.nao.org.uk/idoc.ashx?docId=e19e64bd-0f13-4f9f-a412-592cbf6ef00f&version=-1>

xxx | The structural deficit is forecast to fall in future years, reaching 2.8% by 2014-15; because of planned tax rises and spending cuts which will reduce the deficit, rather than due to any underlying improvement in the UK's economic outlook.

xxxi | <http://www.berr.gov.uk/files/file50253.pdf>

xxxii | <http://www.bobwigley.co.uk/wp-content/uploads/2010/02/Green-Investment-Bank-growth-week.pdf>

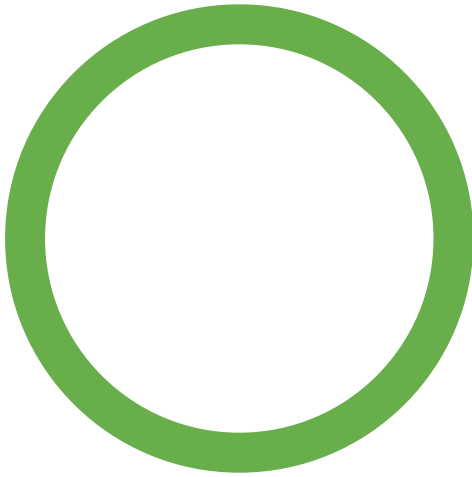
xxxiii | <http://www.bwea.com/media/news/articles/pr20100520.html>

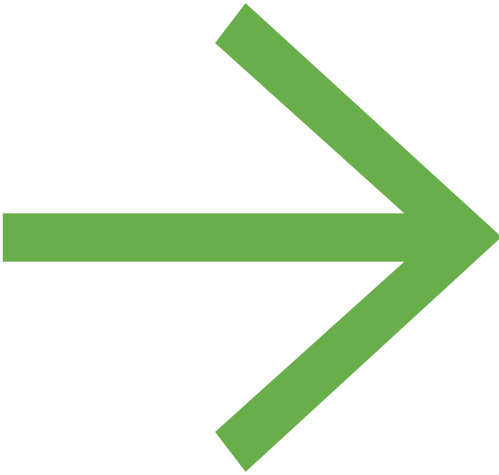
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Design

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This report was commissioned by Platform and WDM. Contact: info@platformlondon.org







The recent financial crisis cost the UK £129 billion in annual GDP and increased the structural deficit by £93 billion. The initial budget cuts announced by the coalition government demonstrate the pain this is causing to public services. The UK can't afford another meltdown, yet short term, high risk, carbon intensive investments are still business as usual for the banks. The government must reform RBS into a Green Investment Bank (GIB) and provide a low carbon policy framework to create a sustainable economy.