

Establishing a Green Investment Bank for the UK

Briefing and FAQs

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This briefing provides an outline proposal for a new financial institution to be created by the UK Government. We propose a Green Investment Bank to underpin a serious mobilisation of private capital investment that will be required in order to deliver a low carbon economy in the UK. What is described below is not a complete, detailed proposal, but a snapshot of a growing number of debates, conversation and reports that have flagged the need for an institution of this sort. The aim of this briefing is to stimulate further debate, refinement, criticism and innovation around these ideas. Any comments will be very gratefully received and incorporated into our future work, and hopefully that of others.

What is the Green Investment Bank?

A national Green Investment Bank would be a publicly owned bank to hold and disburse capital on a commercial basis, but exclusively to companies and projects designed to accelerate the transition towards a low carbon economy. Some of the roles it could fulfil would include:

- Helping to structure, in partnership with the private sector, the financing of major projects to deliver the energy, transport and other infrastructure investment necessary to enable the delivery of the Low Carbon Transition Plan;
- Providing some initial capital or guarantees, as part of multi-bank project financing for major renewable energy, if it is clear that the private capital markets are unwilling to take on the whole risk;
- Working closely with both Government policy makers and the investment community to come up with innovative ways to finance the major investment in energy efficiency, renewables, grid improvements and public transport links that will be required to deliver the Low Carbon Transition; and

- Providing loans, equity or venture capital to companies seeking to bring a proven and demonstrated low carbon technology, project or service to full commercialisation.

The Bank could be capitalised from a variety of routes including:

- using a small portion of the share that tax payers currently hold in UK banks;
- transferring the management of the public capital investments in existing and future public private partnership covering low carbon infrastructure;
- the raising of capital on international markets through bond issuances; and
- through a small proportion of revenues from auctions of carbon permits and/or taxes on fossil fuels

Why do we need a Green Investment Bank?

What is the scale of the investment required for the Low Carbon Transition?

Both the Government and the opposition have set out very ambitious long term plans to transform the UK to a low carbon economy. Neither party has identified the scale of investment that will be required, but there are estimates being made by independent experts that illustrate the scale that is needed. Dieter Helm, in a Policy Exchange report, has argued that the UK needs around £500bn worth of infrastructure investment in the next ten years.¹ Although not all of Helm's infrastructure was directly related to low carbon, it also excluded some areas, such as a smart grid. Ernst & Young estimate that £162bn of clean energy investment is needed by 2025 to meet the UK's existing energy goals.² Ofgem has recently estimated that the amount of total energy investment required by 2020 will be £200bn, again the majority of which is clean energy.³ Whichever numbers you look at, this is a huge step up from current levels of investment into clean energy. However because these technologies carry significantly greater short term risks to the private investor than existing high carbon energy, the Government has to look at all ways possible to reduce the costs of those risks to attract private investment.

This need to reduce the risk for private sector investors existed before Autumn 2008, but has been exacerbated by the credit crunch. Research from Chatham House has shown that in the current economic climate, there has been a succession of major renewable projects that have found it difficult to raise finance. There are also fears that mainstream banks will be slow to get back involved with the renewables industry after the downturn. This will not only reduce capital availability, but crucially the expertise to enable a rapid expansion of lending in the next few years, which is required for example for the financing of round three offshore wind projects.⁴

¹ Delivering a 21st Century Infrastructure for Britain. Dieter Helm, James Wardlaw & Ben Caldicott. Policy Exchange. June 2009

² Securing the UK's Energy Future: Meeting the finance challenge. Ernst & Young (2009)

³ Project Discovery: energy market scenarios. Ofgem. October 2009

⁴ Impact of the Financial Crisis on Renewable Energy Financing. Chatham House. April 2009.

The critical role of infrastructure

The expansion of low carbon energy technologies will be entirely dependent on a great deal of new energy infrastructure to be put in place over next decade or two, from smart grid, to offshore transmission and CO₂ pipelines. Infrastructure projects of all kinds are finding it difficult to raise capital on the markets in the current economic climate.⁵ Bank lending will remain low for some time to come. Institutional investors, such as pension funds, are not traditionally heavily engaged in infrastructure projects. It is difficult to see how the rapid transformation of energy infrastructure could be delivered without a major role for Government leadership, in terms of policy but also finance.

Won't this capital become available from private sector if Government sets the right policy framework?

The vast majority of the capital required will still come from the private sector even if the Green Investment Bank (GIB) exists. One advantage of a GIB would be to give the market greater confidence in the long-term future of low carbon investments. If the policy framework could be kept stable for a long time then investors would begin to reduce the price they attach to the uncertainty of policy change. However, with the upcoming election and history of instability in the policy framework, this price of perceived risk is not likely to come down in the near term, without more government intervention. In addition, the impact of the recession on the carbon price in the EU ETS has further undermined market confidence in future high carbon prices. The Low Carbon Transition requires major investments to start much sooner, so other policy mechanisms need to be found to reduce the risks of low carbon to the private sector.

The establishment of, and even a solid commitment towards, a public bank investing taxpayers money for a return, would provide some extra short term certainty for the markets, thus encouraging more private capital. Ultimately the ability of the institution to find different ways of underwriting the policy risk would make low carbon investments more attractive. There is an opportunity to create a virtuous circle of public and private investment, but the Government has to make the first move.

Why don't we just draw on capital from the European Investment Bank?

The Government announced in the Budget in April 2009 that there would be £4bn of capital available from the European Investment Bank (EIB), for lending to low carbon projects. This has been a welcome step, but £4bn worth of loans, over an as yet unknown time period, will not lever in the hundreds of billions required. The bids to release that funding are still being assessed by the EIB and there is no guarantee that similar, or larger, sums will be available in following years.

If the UK had its own public investment bank, as many other European countries do, then not only would it be easier to set the criteria for how that capital should be deployed, but it would give a greater certainty to industry that capital would be available when they needed it.

⁵ Delivering a 21st Century Infrastructure for Britain. Dieter Helm, James Wardlaw & Ben Caldicott. Policy Exchange. June 2009

Would it crowd out private sector capital?

No. The objectives of the bank would have to be explicitly written so that the criteria for investment meant a certain proportion of private capital would have to be levered in order for the investment to be made.⁶ Across all projects we would hope to achieve a leverage of 1:10, which is the ratio proposed by John Podesta of the Center for American Progress, for a similar Green Bank in the United States.⁷ But the leverage achievable will vary across investments with different characteristics.

There is well documented evidence from the London School of Economics team working with Lord Stern, to show that market failures exist in the financing side of the low carbon market. Projects that require high levels of up front capital, but rely on future policies, will be treated with caution by private investment banks, the traditional financial intermediaries for capital projects, as they do not have sufficient market information to make a judgement of the risk. To some extent these private banks are acting rationally to real market risks, but there is also an element of perceived risk, which the government can take further action to address. There is a strong case for the public sector to play the role of that intermediary as it has a much better understanding of the risk.⁸

In addition, we already know that private capital has withdrawn investment from some low carbon projects during the credit crunch. Putting strategic capital into the low carbon market could rebuild trust amongst lending institutions, and help prevent low carbon project finance from being priced with a very high risk premium by private sector banks. New technologies and business models always carry a higher price for risk than established ones, and low carbon investments face other risks too, such as their capital intensive nature (compared to a gas fired power station, for example) and the risk of policy mechanisms not delivering. All of these factors show that there is room for some public capital investment and that, structured correctly, this should attract more private money, not displace existing money.

What would a Green Investment Bank do?

What types of low carbon project should it support?

The bank should have an overall principle to provide finance only where market barriers prevent the private capital market from doing so, otherwise it would simply be displacing private investment, or 'crowding out'. It follows, therefore, that there should not be prescriptive restrictions on the sort of low carbon project that it seeks to support. There is clearly a role in providing long term financing for major infrastructure projects, but in the aftermath of the credit crunch there could also be potential for being a partner in multi bank financing of large scale renewables projects, carbon capture and storage or grid improvements.⁹ You can also see how it could

⁶ Accelerating Green Infrastructure Financing: outline proposals for UK green bonds and infrastructure bank. Ingrid Holmes and Nick Mabey. Climate Change Capital and E3G. March 2009.

⁷ The Green Bank: financing the transition to the low carbon economy requires targeted financing to encourage private sector participation. John Podesta & Karen Kornbluh. Center for American Progress. May 2009.

⁸ Meeting the Climate Challenge Using Public Funds to Leverage Private Investment in Developing Countries. Mattia Romani et al. Grantham Institute, London School of Economics. September 2009

⁹ For example see Policy Road Map for the Smart Grid. Simon Skillings. Green Alliance/E3G. Forthcoming.

structure the finance for major roll out programmes for retrofitting energy efficiency in the building stock or decentralised renewables.¹⁰ We also know that there are market failures in financing new companies to bring a piloted technology to market and commercial scale, the so called 'valley of death'. Whether the GIB should engage directly with such SMEs and start ups, or retail finance for these businesses through existing high street banks, would have a major impact on its structure and size.

How would it disburse capital?

There are a number of ways that the GIB could disburse capital, as with private investment banks, obviously depending on the size and structure of the client. Major projects such as high speed rail, or a CO2 transportation network, could be established as public private partnerships, as many infrastructure projects are already. This is the model recommended by Policy Exchange, based on existing infrastructure agencies of the Treasury and organisations like Infrastructure Australia. Some PPP projects could be financed to an asset backed green bond, others might just come from the general pool of capital.

It is arguable that major utilities are large enough to raise their own private capital and may not need to draw on a GIB, particularly if the assets can count against the Regulatory Asset base as proposed by Policy Exchange.¹¹ On the other hand, there may be specific investments that accelerate a low carbon transition, which could be brought forward by the involvement of a GIB. Development of the smart grid, or expansion of the offshore transmission system might fall into this category. A roll out of many small investments, such as energy efficiency in buildings, could be aggregated into a major capital investment through a franchised energy service company, utility or even local authority.

Some new or expanding firms may seek commercial loans and others may require equity investments. The Carbon Trust and elements of the Environmental Transformation Fund, and Regional Venture Capital Funds already provide small sums of equity finance to private companies to establish innovative clean technologies and bring them to a commercial scale. The Government's recently announced National Investment Corporation also intends to invest public money in this way. Lessons should be learnt about the delivery of such funds, which have arguably been spread too thinly. Merging and expanding this approach through the GIB could be a central feature of a wider industrial strategy to use public equity investment to lever in greater amounts from private funds. To carry out this sort of lending, the bank should either have a retail arm that can interact directly with SMEs, or it would have to distribute capital through existing banks. Credit Agricole lends directly to farmers and has local branches. Others European development banks are more centralised and disperse capital through commercial retail banks. Establishing an equity portfolio would equally require a particular set of expertise and structure to the bank.

All of these routes should be available to the GIB, but it would be the staff of the bank, under the oversight of a publicly appointed board, that would be responsible for the investment decisions. Indeed, other innovative forms of finance may also be

¹⁰ Delivering Energy Efficiency to the Residential Sector: the case for an accelerated national energy efficiency scheme. Ingrid Holmes & Nick Mabey. Climate Change Capital and E3G. April 2009

¹¹ Delivering a 21st Century Infrastructure for Britain. Dieter Helm, James Wardlaw & Ben Caldicott. Policy Exchange. June 2009

recommended from the bank itself, as this is another aim of the bank to stimulate innovation in financing of the low carbon transition.

How much capital should the Green Investment Bank hold?

There is no simple answer to this question, and further work will obviously be needed to establish firm numbers. The starting point, however, has to be the amounts of total investment that will be needed, which range from £160bn to £500bn. The aim should be to have about 10% of this, in order to lever in the rest, but the 1:10 leverage is ambitious, so a lower ratio may be required at the beginning of the process. The bank will also need a proportion of government equity, in order to raise debt. Not all of this equity would need to be put in at the beginning, and some of it could be in the form of guarantees or called equity. Ultimately the equity stake could be in the order of £3-5bn, much of which would be in the form of guarantees rather than subscribed equity, and built up over a period of time. This should enable the GIB to then raise debt capital through issuing green bonds, say £20-25bn.

The structure and independence of the bank would determine whether this debt would count on the public sector balance sheet. Further work needs to be done on this issue.

Does a Green Investment Bank have to put in public money to carry out the job of reducing private sector risk?

The role of the GIB would not just be about investing public capital, although we believe this is vital to its success. The creation of the institution would also enable government to harness some of the expertise and skills of the UK financial services sector for the public good. With the right staff, the bank would be able to act as a bridge between policy makers and the investment community to structure both the policy framework and financing architecture in a way to minimise private sector risk and maximise the effectiveness of private capital for reducing carbon emissions.

The options that could be explored include different forms of government guarantees, establishing long term purchase contracts to allow corporate debt raising, and reducing transaction costs within government led programmes to aggregate small emissions reductions, like energy efficiency. The bank could work with industry to package projects so as to reduce investment risks, and it could provide local authorities or other organisations with advisory services to issue green bonds. Britain, and the City of London in particular, has the skills to carry out this work in abundance. But very little of this expertise lies within the public sector. A Green Investment Bank could change this, and play an important role in enhancing the financial credibility of low carbon policy in the market.

How would it be accountable to the taxpayer?

There would be a Board, appointed by government, reporting initially to Ministers, but in a transparent way. The National Audit Office would be able to scrutinise the performance of the Bank with the Chair and Chief Executive appearing before the Public Accounts Committee annually.

The Board would have to have credibility and independence, to ensure market confidence and for appropriate supervision of taxpayer assets. It would also have to be clear that no political interference on investment decisions was possible, whilst at the

same time ensuring the investments were made in the pursuit of the public policy goal of low carbon transition. The sitting Chair of the Committee on Climate Change should be on the board, and other members could include Head of the Debt Management Office, or a senior Treasury official who oversees the DMO. There may be a case for economic regulators such as Ofgem and the Office of the Rail Regulator to be involved. Other appointments to the Board should be made in accordance with the normal public recruiting procedures with criteria for ensuring appropriate expertise and commitment.

How would its employees be incentivised?

Working within the GIB must not be seen as a 'second class' job in the financial sector, so a remuneration and reward structure should be devised that creates incentives for success, both in terms of getting a good long term return for the taxpayer, but also for maximising the reduction of greenhouse gas emissions, in a sustainable way. The bank should investigate setting up a 'carbon bonus' system for its employees, to reinforce the overarching objective of the institution to reduce carbon emissions, as well as ensuring that investment decisions are made for the long term.

How would you set the Green investment Bank up in practice?

Some argue that it would take many years to establish such a radically new institution in the UK, but much of that would depend on political will, and if primary legislation were required then of course detailed work needs to go in which cannot be achieved overnight. However, some models are already being put forward which could be significant stepping stones towards a Green Investment Bank.

Policy Exchange have recommended that existing agencies of the Treasury which manage the public funds in infrastructure projects, such as Partnerships UK and the Treasury Infrastructure Finance Unit (TIFU), could be merged to create an infrastructure bank.¹² Climate Change Capital recommended establishing a wholly new institution with the capital created from a major green bond issuance.¹³ Others have called for RBS to be changed completely to become the Royal Bank of Sustainability.¹⁴ Whilst this paper does not recommend any one option at this stage, the need for a GIB to play a transformative role means we do favour a new institution with a new role, rather than a mere restructuring of what government does already.

Another route could be to use the existing UK Financial Investments shareholdings in the major banks to look at and transform some of their investment portfolio, and use a proportion of this capital to form the nucleus of the Green Investment Bank. It is the government's policy to dispose of all the shares, currently held by UKFI, when the time is right. But it will be some time before all of these shares are sold back. Some of these banks already have major investments in the energy industry, some of it in renewables, but the majority in coal, oil and gas. Indeed there is a high profile court case being taken forward by Platform, People & Planet and WDM to challenge the use of taxpayers money invested in these sectors. The Government, through the UKFI shareholdings, could take a more active role as an asset owner (as it is already urging private pensions

¹² Delivering a 21st Century Infrastructure for Britain. Dieter Helm, James Wardlaw & Ben Caldicott. Policy Exchange. June 2009

¹³ Accelerating Green Infrastructure Financing: outline proposals for UK green bonds and infrastructure bank. Ingrid Holmes and Nick Mabey. Climate Change Capital and E3G. March 2009.

¹⁴ The Royal Bank of Sustainability. Nick Silver. Platform, WDM and People & Planet. Forthcoming October 2009

funds to do) and encourage RBS and other banks to refocus their portfolio towards increasing low carbon investments. The Government could then offer to buy out other shareholder's stakes in the low carbon funds so that they remain in public hands when the rest of the bank shares are sold.

A less interventionist approach would be to secure an agreement from all major banks to temporarily assign some of their staff to a Green Investment Bank, backed by some government equity. This would quickly establish the expertise of the institution, and enable the structuring of finance to get off the ground quickly. Further capital could then be raised with green bonds, linked to the portfolio of projects funded through the bank.

How would it be capitalised initially and then become self-financing?

There are a number of ways in which the capital could be raised, some of which would depend on the timing of disposal of bank assets owned by UKFI. An initial issue of green bonds from the Debt Management Office could be an early contribution, and once the new institution is established more could be issued to expand it. The allocation of some early government equity would support the bond issuance. Some proceeds from the sale of banking assets could be put aside for the capitalisation of a new institution, or even the acquisition of a separated low carbon fund.

Or, as described above, a proportion of the assets already owned by the state in RBS, and possibly other banks, could be retained and transferred to a new institution. Once established, return on investments would be retained for reinvestment. Government could even levy a proportion of tax revenues from fossil fuel industries to put into the capital fund for low carbon transition. The fuel duty, climate change levy, oil revenue taxes or air passenger duty could all be used in this way. There is also a strong argument for using a proportion of the receipts from future EU ETS permit auctions to go to the bank. Modelling from the Green Fiscal Commission has shown that using around 10% of the revenues from carbon or energy taxes to stimulate low carbon technologies makes the instruments more environmentally effective.¹⁵

What steps need to be taken to set up the Green Investment Bank?

There are a number of elements that can be put together to establish the Green Investment Bank. Below we separate them out into discrete tasks. You would not necessarily want to take all of these steps, and it is not a sequential list, but we believe the following are potential key ingredients to the establishment of a Green Investment Bank.

Extend remit of TIFU

Immediately expand the existing TIFU in the Treasury to address the infrastructure requirements of delivering the Low Carbon Transition White Paper. It can then explore setting up new public private partnerships in this sector using government guarantee, adjusting the rules for the Regulatory Asset Base for energy utilities or using asset backed climate bonds to raise extra finance.

¹⁵ From Crisis to Recovery. Green Alliance June 2009.

Independent green lending institution

A voluntary deal with major commercial banks could enable the temporary secondment of financial expertise to the expanded Treasury Agency. With the addition of a Board and some government equity, this could then be established as an independent arms length green lending institution, raising finance with green bonds, without the full regulatory requirements of a bank.

UKFI becoming an active asset owner

UKFI applies the principles of responsible investment and uses its majority shareholding position in RBS, and other banks, to establish a low carbon finance fund, and gradually reorient the bank's energy portfolio away from fossil fuels and towards the low carbon economy.

Pass legislation to establish a Green Investment Bank

Establishing the GIB in statute with fixed objectives and creating a formal bank structure, complying with all the requirements of banking regulation and codes of practice that a private bank would.

Create a Low Carbon Investment Fund with 100% UKFI equity

As the fossil fuel lending is withdrawn from state owned banks and the low carbon fund grows, the Government takes full equity ownership of the low carbon investment funds. This would either require a negotiated restructuring of the banks, or government buying out other shareholders for 100% ownership of one part of the business. This can then be transferred to the Green Investment Bank.

Options for further capitalisation once GIB is established

Further capitalisation could follow through more issuing of green bonds, allocating a proportion of environmental tax or permit auction revenues, or even from the sale of other banking assets as shares in RBS, Lloyds and other institutions recover.

Dispersing growth capital

Whilst the initial projects are likely to be infrastructure based, if the bank is to have a role in providing finance for low carbon businesses to grow, and if private capital is not forthcoming, then it will be necessary to consider whether the bank should establish a retail presence in order to lend directly to companies. This could be a few offices in each region, for example, or it may not be required if such lending could be dispersed through existing high street banks, thus building up a low carbon expertise in the mainstream banking sector.

Who supports the idea of an Infrastructure Bank?

The idea of a public investment bank to support and facilitate the financing of an overhaul of the UK's infrastructure, particularly to deliver a low carbon economy, is one that has growing support.

Lord Browne, former chair of BP, has argued that state controlled banks should be directed to lend to green infrastructure projects.¹⁶ Lord Turner has also expressed

¹⁶ Lord Brown of Madingly, Menaus Lecture March 2009.
http://www.raeng.org.uk/news/releases/pdf/President_Cardiff_University.pdf

support for the government using its shareholdings of banks to encourage greater investment in the low carbon economy.¹⁷ Lord Stern has argued for using green bonds to finance international low carbon investment, with development banks being the correct intermediary for such capital raising and dispersal.

The Engineering Employer's Federation and major trade union, Unite, have called for a Bank of Industry. The Institute for Civil Engineers are recommending for a National Infrastructure Bank, as have the centre-right think tank Policy Exchange. There is also interest from across the political spectrum.

Green Alliance is working closely with a number of organisations to continue the development of this idea.¹⁸ This is a fast moving and exciting agenda for change. We welcome any comments, positive or negative you have on the idea, as the next stage is to develop further detail and test the concept with a much wider group through public debate and scrutiny.

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About the author

Chris Hewett is an Associate at Green Alliance and leads the sustainable economy work. Chris joined Green Alliance in February 2009 from the Environment Agency, where he has been Head of Climate Change. He edited recent Green Alliance publication, *From Crisis to Recovery*, and previously headed the sustainability programme for the Institute of Public Policy Research (IPPR), where he worked on environmental taxation, emissions trading and energy policy.

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About Green Alliance

Green Alliance is an independent charity working to make environmental solutions a priority in British politics. We work with representatives from the three main political parties, government, business and the NGO sector to encourage new ideas, facilitate dialogue and develop constructive solutions to environmental challenges.

¹⁷ At the Prosperity debate, held by Green Alliance in June 2009. <http://www.green-alliance.org.uk/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=4266>

¹⁸ Including E3G, Climate Change Capital, Climate Bonds Initiative, European Climate Foundation.