

Chapter 5.

Setting up and capitalising a green investment bank

This chapter provides “nuts and bolts” information regarding the process of setting up a green investment bank. It introduces the political processes that may be pursued to establish a green investment bank and discusses sources of capitalisation and continued funding. The importance of appropriate leadership, staffing and oversight is discussed as well as the variety of reporting and evaluation metrics used by green investment banks.

Key takeaways

- Green investment banks can be established using a variety of government processes including executive action, regulation and legislation, depending on the country context and the intended legal and administrative structure of the organisation.
- Some green investment banks are independent of government or quasi-independent, while others may exist as independent units or funds operating within government.
- Numerous financial sources, such as government appropriations, utility bill charges or carbon tax revenues, can be used to capitalise a green investment bank. Reallocated resources from existing programmes can also be a source of funds.
- Given the demanding mandates green investment banks face, leadership and staff need deal-making expertise and strong communication skills to engage effectively with potential investors, auditors, other government agencies and the public.
- Accountability, independence, public transparency and oversight are essential for green investment banks. They are typically overseen by independent governing boards and report their performance against a variety of metrics, such as private capital mobilisation, job creation and greenhouse gas emission reductions.

Creating a green investment bank

Building momentum and a case for a green investment bank

To build a case for creating a green investment bank (GIB), local and national leaders typically call for the establishment of a GIB and for a feasibility study to be undertaken. Annex 5.A1 provides additional details regarding the processes under which GIBs were designed and created in Australia, New York (United States) and the United Kingdom. Common activities used by prospective GIBs in the early stage of the design and formation process include the following:

- Engaging external consultants and dedicated resources: External consultants have frequently been engaged to assist in the process of sizing the market, identifying barriers and conducting quantitative analysis of the impact of prospective GIB interventions. For example, the UK Department for Business, Innovation & Skills commissioned Vivid Economics, McKinsey and Deloitte to prepare a report on the rationale and costs and benefits of the proposed GIB (Vivid Economics and McKinsey & Co, 2011). The report also explored the GIB's value for money and analysed the economic equity and efficiency of a GIB versus alternative policy options in key sectors, such as increasing feed-in tariffs or landfill taxes. NY Green Bank hired Booz & Company for a detailed qualitative and quantitative analysis of the market, prospective interventions and impact (Booz & Company, 2013). In Australia, an Expert Review Panel was tasked with preparing a detailed study of the prospective institution (Australian Government, 2012).
- Studying local and international experiences: GIBs carefully study peer organisations and fellow GIBs. For example, NY Green Bank studied existing GIBs and GIB-like institutions, including the UK Green Investment Bank, Germany's KfW and numerous US state-based programmes. In Australia, the

Expert Review team tasked with evaluating the GIB drew on international experiences including the UK Green Investment Bank, KfW, the Brazilian Economic and Social Development Bank (BNDES), the China Development Bank and loan programmes offered by the US Department of Energy.

- Using public comment periods: Public comment periods are common during the GIB formation process and submitted comments are often available online for consultation. For example, in Australia, the Expert Panel consulted widely with industry and stakeholders and received 170 submissions and 200 emails regarding the Clean Energy Finance Corporation's (CEFC's) potential scope, how it could work with other government and market organisations, and how to identify and overcome key market gaps for low-emissions technologies (CEFC, 2011).

Legal pathway to green investment bank creation

In each case, GIBs have been created through a government process granting the organisation certain legal authorisations and access to capital sources. In most cases, GIBs have been created through a legislative process, with bills passed through representative bodies that defined the scope, financing tools and capital sources for the banks. Some GIBs, like NY Green Bank, were created through a combination of administrative action by the executive branch of government and a regulatory process (New York Public Service Commission, 2013). The exact path for the establishment of a GIB will depend on the legal structure of the new institution, whether the bank will be part of or take over an existing institution, the desired financing capabilities and the necessary method for tapping capital sources. If the government identifies an existing public entity that already has the authorisation to perform GIB financing activities and a viable capital source, legislation or regulatory action may not be needed. However, in most cases GIBs represent a new approach to government financing or draw upon new capital sources, and consequently require legal or regulatory action to be created.

Opposition to establishing a green investment bank

The creation of a GIB may be subject to opposition from both political actors and citizens. Opponents of creating a GIB may include existing government and non-profit entities that offer programmes to support renewable energy adoption. Typically these entities offer grants and subsidies using public funding and may view GIBs as duplicative or as competitors. Opposition can be particularly strong if a GIB aims to repurpose grant funding for its initial capital as groups may support the idea of a green bank but oppose the diversion of funds from existing programmes (ECRI, 2014; Proft, 2015).

To reduce opposition to the creation of GIBs, GIB proponents have actively sought to engage existing renewable energy entities and their supporters in the process of launching a GIB. For instance, NY Green Bank was capitalised with repurposed ratepayer funds that were previously directed to state grant programmes co-ordinated through its parent organisation, NYSERDA. To gain buy-in from the community of supporters for those programmes, NY Green Bank sought public comments during the regulatory process to create the institution (New York State, 2013). Those comments were incorporated into the order creating the bank, which ensured that the bank would aim to utilise public capital at least as effectively as the existing programmes. As noted above, Australia's CEFC also consulted widely with industry and stakeholders and received 170 comment submissions (CEFC, 2011).

Table 5.1. Summary of mechanisms for green investment bank creation

Entity	Creation mechanism	Legal structure
California CLEEN Center (California, United States)	Board of Director decision	Centre within existing public infrastructure bank
Clean Energy Finance Corporation (CEFC) (Australia)	Legislation	Independent entity – a body corporate and Commonwealth authority
Connecticut Green Bank (Connecticut, United States)	Legislation	Quasi-public independent entity created from an existing entity
Green Energy Market Securitization (GEMS) (Hawaii Green Infrastructure Authority) (Hawaii, United States)	Legislation (establishment) and regulatory (funding)	Public entity, housed within a state economic development entity
Green Fund (Japan)	Executive action	Entity within national environmental ministry
Malaysian Green Technology Corporation (GreenTech Malaysia) (Malaysia)	Executive action	Non-profit entity operated by national energy ministry
Masdar (United Arab Emirates)	Executive action	Subsidiary of national economic development company
Montgomery County Green Bank (Maryland, United States)	Legislation	<i>To be determined</i>
New Jersey Energy Resilience Bank (ERB) (New Jersey, United States)	Executive action	Public entity, created and staffed jointly by state energy and commerce offices
NY Green Bank (New York, United States)	Executive action (establishment) and regulatory (funding)	Public entity, subsidiary of state government energy office
Rhode Island Infrastructure Bank (RIIB) (Rhode Island, United States)	Legislation	Quasi-public entity formed by rebranding and expanding existing water finance agency
Technology Fund (Switzerland)	Legislation	Political instrument of national government, public/private steering committee
UK Green Investment Bank (United Kingdom)	Executive action (establishment as a public limited company (plc) and legislation (providing parliamentary control and creating bespoke funding power)	Independent entity wholly owned by government

Private lenders and banks may also initially oppose the creation of a GIB out of concern that the public financing will displace or “crowd out” private lending activity. Prospective GIBs may seek to address these concerns during the consultation process, including by noting that they are mandated to demonstrate that their involvement in a transaction mobilised investment that would not have otherwise occurred. They may also point to cases in which existing GIBs have stepped back from their lending activity when private lenders moved into a new market sector.

Using the term “green bank” or “green investment bank” itself may create opposition from stakeholders who are opposed to government spending to address climate change. In some jurisdictions, even the term “bank” may draw opposition from those opposed to public finance. In the US state of Vermont, for instance, many years of contentious debate over an unrelated “state bank” has led GIB advocates to avoid using the term “green bank” in development efforts (personal communication with Jeffrey Schub, Coalition for Green Capital, 17 January 2016).

Political opposition to existing GIBs can also emerge. Australia’s CEFC provides an example of how political support for the existence or focus of a GIB can shift. Australia’s former Prime Minister Tony Abbott sought to abolish the CEFC, introducing legislation to that effect that was twice defeated in the parliament (CEFC, 2015a; Liberal Party of Australia, 2013). In December 2015, after the change in Prime Minister, the CEFC

received a new investment mandate indicating that the “CEFC must include a focus on supporting emerging and innovative renewable technologies and energy efficiency, such as large-scale solar, storage associated with large and small-scale solar, offshore wind technologies, and energy efficiency technologies for cities and the built environment” (CEFC, 2015a). The CEFC highlighted that the mandate is not retrospective and will not impact existing investments, and that to manage risks it would need to balance investments with higher inherent risk (e.g. new and emerging technologies) alongside those with lower inherent risk (e.g. investments in more mature technologies) (CEFC, 2015a). This experience highlights the tension between GIBs’ interest in remaining independent and able to implement long-term strategies, and governments’ interest in deciding on how best to use public funds in light of political priorities.

Administrative set-up and positioning

The administrative structure of a GIB is determined when the institution is created in law. A GIB’s governance structures, oversight and internal processes depend on whether it is part of government, a private non-profit or a quasi-public institution. A GIB that is separated, at least partially, from government may be better suited to maintain its mission through changing political landscapes. However, it can be difficult to pass a new law that allocates significant public funding to a new and independent entity.

Some governments may find it useful to establish a GIB as a wholly new entity. Independent status provides flexibility, facilitates a focus on targeted objectives, attracts skilled specialists, creates necessary room for innovation and enables authorities to hold the GIB accountable for results. Independence may be secured by issuing a charter for an independent institution, designating a GIB as a non-profit organisation or establishing a subsidiary of an existing institution. Options for structuring a GIB are further discussed below.

The status of a GIB as fully independent or part of an existing administrative structure will affect start-up and operating costs. When studying the feasibility of creating the UK Green Investment Bank, McKinsey estimated start-up costs of GBP 11 million (Vivid Economics and McKinsey & Co, 2011). In its annual reporting, Australia’s CEFC is required to disclose detailed operating costs and benchmark these expenses with comparable entities such as the UK Green Investment Bank (CEFC, 2014).

Creating a green investment bank as a wholly new entity

Efforts to establish an entirely new institution may face political resistance if such efforts are viewed as expanding bureaucracy or creating duplicative government services. However, launching a new institution can usefully allow a GIB to establish its own procedures and norms and hire its own staff. For instance, building a focus on LCR investment and preservation of public capital can be easier to achieve in a new institution. In addition, creating a new institution that is independent and free from government interference may be seen as crucial for GIBs that operate on commercial terms. When studying the possibility of creating the UK Green Investment Bank, the Green Investment Bank Commission recognised that rationalising government low-carbon institutions and funds would be helpful in the long-term, but that merging existing programmes would not provide the “game-changing” institution that was needed (UK House of Commons, 2011a). One disadvantage to creating a new entity is that the start-up costs and time investment may be significant.

Converting an existing programme or fund into a green investment bank

A number of GIBs emerged through consolidation of existing renewable energy or green investment programmes. For example, the Connecticut Green Bank was established as a new administrative entity by transferring the net assets and funding sources of the Connecticut Clean Energy Fund. Australia’s CEFC incorporated an existing national energy efficiency fund into its structure. Converting an existing entity into a GIB may pose challenges that require new leadership and staff. A government office, for instance, that previously operated a grant programme must willingly accept a change in mission and approach to be successful. An existing government entity may not have existing staff with the financial expertise a GIB requires.

Creating a new GIB as a subsidiary within an existing entity can offer a middle road that provides the benefits of a “blank slate” but also allows the GIB to reduce start-up costs by using the parent entity’s accounting and human resources functions. Another option is to create a joint subsidiary. The New Jersey Energy Resilience Bank (ERB), created in July 2014, is jointly administered by the Board of Public Utilities of New Jersey and the state’s economic development agency (ERB, 2014). This structure allows the ERB to benefit from the energy-sector knowledge of the utility board and the financing experience of the economic development agency, while still maintaining some operational independence.

Capitalisation and financial sustainability of green investment banks

The first step in capitalising a GIB is to determine the capitalisation amount. For some GIBs this amount was determined based on assessments of market size and funding gaps. Estimates for the amount of investment required and the level of capitalisation needed for the proposed UK Green Investment Bank ranged from GBP 2-7 billion (UK House of Commons, 2011a). For NY Green Bank, analysis by Booz & Company (2013) confirmed that a USD 1 billion capitalisation was consistent with its identified total market size of USD 85 million. For other GIBs and GIB-like entities, the initial capitalisation has been more of a function of available funds (e.g. Swiss Technology Fund, Montgomery County Green Bank).

In most cases, funding for a GIB constitutes a capitalisation, or an infusion of investment capital, that the GIB can use for lending and other return-generating activities. For GIBs that are self-sustaining or profitable, operating expenses may be covered, at least after the initial investment phase, by the returns earned through financing activity. During the start-up period, however, operating losses may be expected and additional funding could be allocated for this purpose. For example, in the regulatory order capitalising NY Green Bank, the Public Service Commission allotted USD 13.2 million for internal and contracted administrative services during the start-up phase (New York Public Service Commission, 2013).

Once a GIB is capitalised, it can act as a revolving loan fund. Like deposits in a commercial bank, the money will be used to make productive loans for which repayment rates assure that the lending bank either makes a profit or breaks even. If the GIB makes equity investments, it can choose whether to hold or try to exit its investments once they have matured. In large-scale infrastructure investments, however, recycling of capital may only be possible over a long time period given the time needed for construction and payback.

Two common sources of GIB capitalisation are funds drawn over time by regulators from the electricity sector, or alternatively, an appropriation of a fixed sum of government funds. However, many other sources of funding have been used or proposed as sources of GIB capitalisation. The appropriateness of a given funding source and the set of possible options will vary significantly based on the local context and political and regulatory environment. Using capital markets to provide capitalisation or subsequent recapitalisations holds significant promise for future GIBs, but to date this approach has only been used by the Hawaiian Green Energy Market Securitization (GEMS) programme. The following sections discuss the diverse sources of initial capitalisation and additional funding for GIBs.

Capitalisation sources

- Government capitalisation: Australia’s CEFC receives transfers from the Treasury. Masdar Capital was capitalised directly by the Abu Dhabi government through Mubadala Development Company, a sovereign wealth fund.
- Government grants and programmes: In the United States and other countries with a sub-national structure, state GIBs may be funded by federal grants. For example, New Jersey’s Energy Resilience Bank draws upon initial funding from the US Department of Housing and Urban Development, delivered to the state as part of the recovery plan after Hurricane Sandy (Friedrich, 2014).¹
- Emissions trading schemes: NY Green Bank sourced over USD 50 million from emissions allowance auction proceeds under the Regional Greenhouse Gas Initiative (RGGI) (New York Public Service Commission, 2013). The RGGI also contributes USD 5-10 million annually for the Connecticut Green Bank (Connecticut Green Bank, 2014).
- Utility bill surcharges: The state of New York imposes a system benefits charge on all utility customers. NY Green Bank used a portion of these funds to fund its initial capitalisation. Connecticut levies a USD 0.001 per kWh surcharge on electric ratepayer bills that provides about USD 30 million annually for the Connecticut Green Bank (Connecticut Green Bank, 2014).
- Loans: Most GIBs do not have the ability to borrow. However, the Connecticut Green Bank makes frequent use of majority or wholly-owned special purpose entities which can borrow and to date has raised USD 55 million in non-recourse financing using this technique. The cash flows from residential and commercial-scale loans, leases and power purchase agreements for solar PV are pledged to support these financings (CEFIA, 2013).
- Renewable portfolio standards (RPS) or energy efficiency resource standards (EERS): RPS or renewable electricity standards (RES) are policies that require electricity supply companies to produce a designated percentage of electricity from renewable sources. EERS set targets for energy efficiency savings that utilities must meet and often accompany RPS or are designed to complement renewable energy policies. Non-compliance with these different types of standards can trigger penalties, or “alternative compliance payments”, which generate government revenues. NY Green Bank used revenue from RPS and EERS to fund its initial capitalisation (New York Public Service Commission, 2013).

- **Bond issuance:** The funding source with perhaps the greatest potential is bond issuance, which to date has only been used by Hawaii’s GEMS programme to issue USD 150 million in bonds to fully fund its initial capitalisation. Hawaii’s bond will be repaid using funds from an existing consumer surcharge on electrical bills (Hawaii Clean Energy Financing Initiative, 2013). Based on traditional “rate reduction bonds” that have typically been used by utilities to finance stranded assets or disaster recovery projects, the AAA-rated GEMS bond issued in 2014 was able to access low-cost capital that is off balance sheet and therefore does not impact the state’s budget. GEMS “green bonds” won an award (the 2014 International Financing Review North America Structured Finance Issue Award) for innovative use of the rate reduction bond structure to finance renewable energy infrastructure. The market for “green bonds” – bonds used to fund projects that have environmental or climate benefits – is growing rapidly, with an estimated USD 48 billion in issuance in 2015 (OECD, 2016 forthcoming).

The UK Green Investment Bank has expressed interest in issuing bonds as a source for continued fundraising. However, under the terms of its establishment it is not permitted to borrow (including by issuing bonds) until 2015-16 and only when the percentage of government debt to GDP begins to fall (UK House of Commons, 2011b). Although the Connecticut Green Bank has not issued bonds to date, it has the authority to issue USD 50 million in bonds backed by a “special capital reserve fund” which effectively guarantees that the state of Connecticut will pay out bond returns and repay bond principle if the Connecticut Green Bank cannot do so.

Central banks also have the potential to provide GIB funding through their purchase of GIB-issued green bonds. Some central banks have already shown interest in international green bond issuances similar to those that could be made by GIBs. For example, the Brazilian and German central banks invested in the International Finance Corporation’s USD 1 billion green bond issuance in 2013 (World Bank, 2014). The governor of the Bank of England has proposed “green quantitative easing” in which the bank would purchase bonds from entities that support low-carbon and climate-resilient (LCR) investment such as the UK Green Investment Bank (Clark and Giles, 2014).

- **Carbon tax revenue:** The Japanese Ministry of the Environment allocated a portion of carbon tax revenue to fund the creation of its Green Fund (Kaibu, 2013). For the case of the Swiss Technology Fund, a maximum of CHF 25 million per year from CO₂ levy revenue for process and heating fuel is allocated to the fund from 2013 until 2020.

Other potential sources of capitalisation which have not been used to date include the sale of an equity stake and the raising of private capital into GIB managed funds. For example, in June 2015 the UK government proposed the sale of an equity stake into the UK Green Investment Bank to provide additional funds (Box 5.1).

Stable and predictable funding provides private investors with greater certainty

The timing and certainty of capitalisation will have a significant impact on the perceived staying power of a GIB. In the institution’s initial years, the level of funding depends significantly on the size of the initial capitalisation and the timing of future re-capitalisations. Some entities receive a large initial capitalisation; for example, Australia’s CEFC had AUD 2 billion available in initial capitalisation. Other GIBs start

off with more conservative initial capitalisations which require future funding rounds to grow to desired levels. For example, while NY Green Bank expected to have USD 1 billion eventually available for financing, the initial capitalisation in December 2013 accounted for around a fifth of this amount (Klopott, 2013). NY Green Bank’s full USD 1 billion capitalisation was finalised in an order issued by the Public Service Commission on 21 January 2016 (New York Public Service Commission, 2016).

Box 5.1. UK Green Investment Bank may sell an equity stake for further capitalisation

The announcement in June 2015 that the UK Department for Business, Innovation & Skills would sell a majority equity stake in the UK Green Investment Bank generated significant debate. E3G, the think tank that originally developed the idea of the green investment bank, believes that selling a majority stake will damage investor confidence in the institution and in the government’s commitment to developing a low-carbon economy (E3G, 2015). Opponents to the privatisation of the UK Green Investment Bank have raised concerns that its unique dual purpose of achieving profit and green outcomes could be replaced with a primary duty to maximise profits, which could weaken its ability to leverage private investment into more risky low-carbon and climate-resilient infrastructure projects. The government has defended its decision and maintains that regardless of ownership changes, the Green Investment Bank will likely remain both green and profitable, as its green specialisation is probably what will attract investors. It notes that taking on private investors will free the bank from borrowing limitations and compliance with EU state aid regulations, allowing it to access more capital and deploy it across a wider range of green projects (UK Department for Business, Innovation & Skills, 2015a; 2015b).

Amid growing concerns over the preservation of the UK Green Investment Bank’s green identity, the UK House of Commons released a report recommending that the bank’s privatisation not go ahead unless the bank’s green credentials are upheld and stating that the current proposed protections are not “robust enough” (UK House of Commons, 2015).

Sources: E3G (2015), “Green Investment Bank privatisation threatens to undermine UK economic recovery”, press release, 24 June, E3G, <http://e3g.org/news/media-room/green-investment-bank-privatisation-threatens-uk-economic-recovery>; UK Department for Business, Innovation & Skills (2015a), “The future of the Green Investment Bank”, speech by The Rt Hon Sajid Javid MP, 25 June, www.gov.uk/government/speeches/the-future-of-the-green-investment-bank; UK Department for Business, Innovation & Skills (2015b), “Future of UK Green Investment Bank PLC: Policy statement, November”, BIS/15/630, Crown copyright, London, www.gov.uk/government/uploads/system/uploads/attachment_data/file/477493/BIS-15-630-future-of-the-uk-green-investment-bank.pdf; UK House of Commons (2015), “The future of the Green Investment Bank”, UK House of Commons Environmental Audit Committee, Second Report of Session 2015-16, 19 December, The Stationary Office Limited, London, www.publications.parliament.uk/pa/cm201516/cmselect/cmenvaud/536/536.pdf.

Legislation creating a GIB can also define whether or not funding can be revoked or withheld. If a GIB depends on annual budget negotiations through national or sub-national political structures, it could be vulnerable to budget cuts. Australia’s CEFC’s founding legislation provided for AUD 2 billion in capitalisation per year for five years. In 2014, political opponents sought to defund or shut down the CEFC, but were unable to fully pass the legislation required to impede or halt the CEFC’s activity (CEFC, 2013). The Connecticut Green Bank faced a budget challenge in 2013 as the state legislature proposed a significant reallocation of GIB funds (USD 25 million) to the state’s general fund (State of Connecticut, 2013). While the bank was able to avoid this fund diversion by offsetting funds transferred with USD 25 million of additional allowance revenues

from the RGGI auction proceeds, this example shows the potential risks of funding GIBs through yearly budgets instead of a longer term funding period.

Leadership and staffing

The mission and orientation of GIBs are distinct from those of most existing government agencies. The commercial focus of a GIB requires leadership and staff that reflect its mandate to catalyse new investment and to simultaneously preserve or increase public capital.

Leadership

As GIB leaders interact with experts in the energy market, the financial sector and government, they need to have the ability to navigate the public sector as well as transaction experience. A GIB leader must understand where and how the GIB fits within a broader policy context, including existing renewable energy subsidies or incentives, and needs to anticipate how it could collaborate, or potentially conflict with, existing policies and agencies. With respect to transaction experience, a GIB needs to offer executive salaries and performance incentives that are competitive with the private sector in order to attract well-qualified experts. This can attract criticism; for example, lobby groups and the media have drawn attention to the pay and bonuses for senior UK Green Investment Bank management (Bain, 2015).

Staffing a green investment bank

Due to their focus on mobilising private investment, GIBs need to collaborate, partner and co-invest with a range of private sector actors. GIBs must also be comfortable marketing their role to potential partners. A GIB designed to operate as a wholesale lender which primarily serves large financing institutions will need staff with significant investment experience, while an institution that takes a retail lending approach will require sufficient administrative staff to manage applications for loan or leasing programmes. Technical energy experts and marketing staff may also be required depending on the GIB's strategy and investments. Alternatively, a GIB can take a "lean" staffing approach and rely heavily on contractors or external partners. The Hawaii Green Infrastructure Authority, created in 2014 to manage the GEMS programme, has a team of five which administers the programme with help from private market partners who already have experience and relevant infrastructure in place.

Oversight, reporting and measuring success

Corporate governance and oversight

GIBs are typically overseen by independent governing boards. GIB boards of directors can help insulate GIBs from direct interference from politicians. If a GIB executive is selected by and reports to a board rather than a government official or entity, the institution can be in a better position to weather political changes and operate with a long-term operational view. Board members may be part of or independent of the government. In addition to governance boards, a GIB may also have an advisory board, like that of the Japanese Green Fund, which is more academic in nature.

Reporting and performance metrics

GIBs measure their performance using a range of metrics which generally focus on investment and economic results or climate-related outcomes. Common metrics include total public capital invested, private capital invested in GIB projects, private-to-public leverage ratio, return on capital, energy generated or saved, greenhouse gas (GHG) emission reductions and job creation.

By offering clear performance metrics, GIBs can demonstrate their value and cost-effectiveness. A GIB's performance metrics are typically determined during its creation, either through legislation or regulation. For example, Australia's CEFC is required by law to produce an annual report that includes a set of specific metrics and financial statements (CEFC, 2012), while NY Green Bank's self-created metrics were approved by the state regulatory agency when NY Green Bank was established (NY Green Bank, 2014a). In 2015, the UK Green Investment Bank published a *Green Investment Handbook*, which provides guidance on how it measures green performance, manages risk, conducts due diligence and engages consultants (UK Green Investment Bank, 2015a). To provide transparency for its performance calculations, the UK Green Investment Bank published its "green impact reporting criteria" (UK Green Investment Bank, 2014a). Similarly, the Connecticut Green Bank worked with the state's economic development agency to build a tool to determine the number of jobs created per dollar of investment.

Green banks that focus on profitability or financial sustainability must report detailed financial metrics, as in the examples below²:

- In 2013, the Connecticut Green Bank reported that its investments resulted in 27 MW of new renewable generation capacity, avoided 250 000 tonnes of CO₂ lifetime emissions and achieved a 10:1 leverage ratio (i.e. ratio of private investment per USD of public investment) (Connecticut Green Bank, 2013). In 2014, the bank reported a 3:1 leverage ratio (Connecticut Green Bank, 2015).
- The UK Green Investment Bank reported GBP 668 million of new capital commitments in 2014, equating to a 3:1 ratio of private investment per GBP of public investment. The UK Green Investment Bank's investments will generate an estimated 8% rate of return, support 3 500 jobs and reduce GHG emissions by an amount equivalent to taking 1.6 million cars off the road (UK Green Investment Bank, 2014b). In 2015, the UK Green Investment Bank reported a 3:1 leverage ratio for its investments since its inception (UK Green Investment Bank, 2015b).
- Once constructed and in operation, the projects in which Australia's CEFC is investing are estimated to achieve annual emissions abatement of 4.2 million tonnes CO₂-equivalent (tCO₂e), with a net financial return to the CEFC (inclusive of government borrowing costs and operating costs) of approximately AUD 10 million (i.e. emission reductions are achieved at a "cost" of negative AUD 2.40 per tonne³) (CEFC, 2014; 2015b). Australia's CEFC is also given specific key performance indicators and associated targets. In 2014, the CEFC achieved a 4.15% return (net of operating costs) on an expected deployed capital of AUD 931 million, exceeding its portfolio benchmark return of 3.14% (CEFC, 2014). As of October 2015, the portfolio of investments in 2015 was projected to generate an annual yield of 6.1% once fully deployed (CEFC, 2015a).⁴ As of December 2015, the CEFC's portfolio benchmark return had increased to "at least

the five-year Australian Government bond rate +4 to +5 per cent per annum” (Australian Government, 2015). The CEFC’s Board maintains that this target will require the CEFC to “identify and contract out-of-market returns” (CEFC, 2015c) and awaits a review of this policy by the Finance and Environment Ministries in 2016.

Collaboration with other green investment banks

Informal collaboration among GIBs provides the opportunity to share information and lessons learnt. For example, the UK Green Investment Bank hosted a Green Bank Congress in 2013 to bring together institutions and NY Green Bank similarly supported a Green Bank Summit in 2014. The Green Bank Congress now appears to be an annual event, with hosting responsibilities rotating among GIBs. GIBs have also collaborated through staff exchanges. Staff from Australia’s CEFC have undertaken temporary assignments at the UK Green Investment Bank, and vice versa, to increase information exchange and share best practices.

Collaboration can also come in the form of formal partnerships. For example, the UK Green Investment Bank and the Green Finance Organisation, which operates the Japanese Green Fund, have entered into a Memorandum of Understanding (MoU) to support information sharing. Masdar and the UK Green Investment Bank also signed an MoU to jointly invest in renewable energy projects in the United Kingdom (Masdar, 2013).

To formalise and expand these collaborations, at the 21st Conference of the Parties to the United Nations Framework Convention on Climate (COP21) in Paris, the UK Green Investment Bank, the Connecticut Green Bank, NY Green Bank, the Green Fund (Japan), the Malaysian Green Technology Corporation and the Clean Energy Finance Corporation (Australia) announced the establishment of a “Green Bank Network”. The network “will increase the global impact of green banks by enabling them to collaborate more effectively, share and leverage individual bank experiences, publicize achievements and grow the ranks of green banks worldwide” (UK Green Investment Bank, 2015c). The Natural Resources Defense Council (NRDC) and the Coalition for Green Capital (CGC), two non-governmental organisations with experience in developing green banks, were selected to spearhead the creation of the network and ClimateWorks Foundation provided seed funding (UK Green Investment Bank, 2015c).

Green investment banks as temporary or permanent institutions

As discussed in Chapter 2, GIBs’ mandate to avoid “crowding out” private investment requires them to shift into new technologies with less attractive risk-return profiles when their interventions are no longer needed to encourage investment. GIBs can make this shift as part of normal business and fulfilling their mission. For example, NY Green Bank’s mission to “transform financing markets” gives it broad authority to invest across a range of developed and emerging target technologies in response to the needs of the market (NY Green Bank, 2014b). However, opinions likely will vary regarding when a GIB should exit a particular market and which deals constitute proof that a GIB’s interventions are no longer needed.

Indeed, concerns about public entities “crowding out” private investment are not unique to GIBs, nor are concerns about public entities failing to prove they are mobilising “additional” investment (i.e. investment that would not have occurred without the public entity’s involvement). Based on a literature review, the UK Aid Network concluded that

relatively little evidence exists for the “financial additionality” of projects using official development assistance to attract private investments. In addition, different entities use distinct methodologies to measure additionality and additionality assessments often lack sufficient detail (UKAN, 2015). A study prepared for the European Parliament’s Committee on Development also concluded that existing evidence of the financial additionality of private investment leveraged by public finance was weak (European Parliament, 2014). For example, the study noted that “a systematic review of additionality looking at several MDBs and DFIs, including 17 institutions based in Europe, found that 55% of the projects would have gone ahead without the public finance”.

A related issue is whether GIBs are conceived to be permanent rather than temporary institutions that address investment barriers for all targeted sectors and in so doing, eventually ensure their own obsolescence and termination. Technology cost reductions, market evolution and successful efforts by GIBs to catalyse new investment by the private sector will mean that GIB interventions for any particular sector and technology cannot be indefinite. For example, investments in some onshore wind projects may raise additionality issues, depending upon the particular market. However, many technologies that are not yet commercial will likely be needed to meet climate policy objectives. Most GIBs also include several non-commercial technologies in their list of target sectors. In principle, GIBs can shift to different technologies over time and will not run out of investment barriers to address in the near term. This would suggest that GIBs will not be short-lived institutions.

Other factors may limit the life span of GIBs, however. As noted in Chapter 1, GIBs are just one element of the domestic policy framework needed to support the low-carbon transition. Other elements of the framework include fossil fuel subsidy reform; putting a price on carbon; providing well-designed, well-timed, well-targeted and time-limited incentives for renewable energy investment; and setting clear, long-term policy goals. Jurisdictions which make progress in implementing these elements may conclude that creating a new GIB is not warranted or that maintaining an existing GIB is no longer justified. On the other hand, some investment barriers may not be fully addressed by the above-mentioned policies and may require focused interventions by entities like GIBs.

Another challenge to the continuity of some GIBs could be the tension between mandates for profitability and for avoiding “crowding out” private investment. GIBs with mandates to be profitable have a unique challenge: to simultaneously provide sufficient interventions to spur investment in less commercial technologies, achieve targets for financial performance (e.g. through profit-yielding loan repayments they receive) and continue to demonstrate additionality. At some point, for additionality reasons, GIBs with these mandates may be required to focus on technologies for which they may struggle to generate a sufficient return. As GIBs develop a longer track record and more experience in leveraging investment in different technologies, future research could assess the effectiveness of GIBs to date in terms of cost-effectively mobilising private investment, avoiding crowding out private investment, carefully gauging investment risks, effectively targeting and addressing key investment barriers, and successfully demonstrating the viability of LCR infrastructure investment.

Notes

1. The state of New Jersey received USD 1.46 billion in federal funds as part of a Hurricane Sandy recovery package. The state allocated USD 200 million for the creation of the New Jersey Energy Resilience Bank based on an amendment to the second funding allocation (State of New Jersey, 2014).
2. All results are self-reported by GIBs.
3. The CEFC does not claim that the emissions benefit occurs exclusive of other Australian government policy such as the Renewable Energy Target.
4. In 2015, the CEFC had a mid-year change in both its statutory benchmark rate and the method of calculation (see CEFC, 2015c for more information).

References

- Australian Government (2015), “Clean Energy Finance Corporation investment mandate direction 2015 (No.2)”, Commonwealth of Australia, www.comlaw.gov.au/Details/F2015L02114.
- Australian Government (2012), *Clean Energy Finance Corporation Expert Review: Report to Government*, March, Commonwealth of Australia, www.cefcexpertreview.gov.au/content/report/downloads/CEFC_report.pdf.
- Bain, S. (2015), “Highly-paid chief brings energy to the first green bank”, *The Herald Scotland*, 29 August, www.heraldscotland.com/business/13634321.Highly_paid_chief_brings_energy_to_the_first_green_bank.
- Booz & Company (2013), “New York State Green Bank: Business plan development: Final report”, Booz & Company, 3 September, www.naseo.org/Data/Sites/1/documents/committees/financing/notes/2013-11-13-Green-Bank-Final-Report.pdf.
- CEFC (2015a), “Annual report 2014-2015,” Clean Energy Finance Corporation, Sydney, Australia, <http://annualreport2015.cleanenergyfinancecorp.com.au>.
- CEFC (2015b), “CEFC has helped accelerate \$3.5b in total investment towards a competitive clean energy economy”, press release, 15 July, Clean Energy Finance Corporation, Sydney, Australia, [www.cleanenergyfinancecorp.com.au/media/releases-and-announcements/files/cefc-has-helped-accelerate-\\$35b-in-total-investment-towards-a-competitive-clean-energy-economy.aspx](http://www.cleanenergyfinancecorp.com.au/media/releases-and-announcements/files/cefc-has-helped-accelerate-$35b-in-total-investment-towards-a-competitive-clean-energy-economy.aspx).
- CEFC (2015c), “Letter from Jillian Broadbent AO to The Hon Greg Hunt MP Minister for the Environment and Senator the Hon Matthias Cormann Minister for Finance”, 1 December, www.cleanenergyfinancecorp.com.au/media/158232/cefc_response_to_investment_mandate_dec_2015.pdf.

- CEFC (2014), “Annual report 2013-2014,” Clean Energy Finance Corporation, Sydney, Australia, www.cleanenergyfinancecorp.com.au/reports/annual-reports/files/annual-report-2013-14/performance/cefcs-budgeted-outcome-and-key-performance-indicators.aspx.
- CEFC (2013), “Submission by the Clean Energy Finance Corporation to the Environment and Communications Reference Committee Inquiry into the government’s direct action plan”, 12 December, www.cleanenergyfinancecorp.com.au/media/76195/cefc-submission-to-the-environment-and-communications-references-committee-inquiry-into-the-direct-action-plan.pdf.
- CEFC (2012), “Clean Energy Finance Corporation Bill 2012”, House of Representatives, Parliament of the Commonwealth of Australia, Section 74, Commonwealth of Australia, www.comlaw.gov.au/Details/C2012B00083/Html/Text#_Toc325113802.
- CEFC (2011), *Clean Energy Finance Corporation Expert Review: Request for Submissions*, Commonwealth of Australia, www.cefcexpertreview.gov.au/content/consultation/subrequest/CEFCRequest_for_Submissions.pdf.
- CEFIA (2013), “CT Solar Lease 2 Program due diligence package,” <http://resources.ctgreenbank.com/BoardMembers/CGBBoardMeetings/CEFIABoardMeetingMaterials02-15-2013/tabid/702/Default.aspx>.
- Clark, P. and C. Giles (2014), “Mark Carney boosts green investment hopes”, *Financial Times*, 18 March, www.ft.com/cms/s/0/812f3388-aeaf-11e3-8e41-00144feab7de.html#axzz3WR8DISRq.
- Connecticut Green Bank (2015), “Innovating, educating and activating to accelerate clean energy: 2014 annual report”, Connecticut Green Bank, Stamford, Connecticut, www.ctgreenbank.com/wp-content/uploads/2015/12/AnnualReport_FINAL_5.4.15-SinglePages.pdf.
- Connecticut Green Bank (2014), “Comprehensive annual financial report: Fiscal year ended June 30, 2014”, Department of Finance and Administration, Rocky Hill, Connecticut, www.ctgreenbank.com/wp-content/uploads/2015/12/CGB-finalized-financials.pdf.
- Connecticut Green Bank (2013), “Connecticut’s Green Bank, energizing clean energy finance: 2013 annual report”, Connecticut Green Bank, Stamford, Connecticut.
- E3G (2015), “Green Investment Bank privatisation threatens to undermine UK economic recovery”, press release, 24 June, E3G, <http://e3g.org/news/media-room/green-investment-bank-privatisation-threatens-uk-economic-recovery>.
- ECRI (2014), “ECRI statement on a possible ‘green bank’”, Environmental Council of Rhode Island, www.ecori.org/s/ECRIGreenBank.pdf.
- ERB (2014), “New Jersey Energy Resilience Bank Grant and Loan Financing Program Guide”, New Jersey Energy Resilience Bank, www.state.nj.us/bpu/pdf/erb/FINAL%20DRAFT%20-%20ERB%20Program%20Guide%208%2020%2014.pdf.
- European Parliament (2014), *Financing for Development Post-2015: Improving the Contribution of Private Finance*, the European Parliament’s Directorate-General for External Policies, April, European Union, [www.europarl.europa.eu/RegData/etudes/etudes/join/2014/433848/EXPO-DEVE_ET%282014\)433848_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/433848/EXPO-DEVE_ET%282014)433848_EN.pdf).

- Friedrich, K. (2014), “Clean energy and climate resilience join forces”, Clean Energy Finance Forum, 7 March, http://cleanenergyfinanceforum.com/2014/03/07/clean-energy-and-climate-resilience-join-forces/?utm_source=Clean+Energy+Finance+Forum+3%2F12%2F2014+-+Issue+%2349&utm_campaign=3%2F12%2F2014&utm_medium=email.
- Hawaii Clean Energy Initiative (2013), “State loans urged to help residents install solar gear”, 19 February, www.hawaii-cleanenergyinitiative.org/state-loans-urged-to-help-residents-install-solar-gear (accessed 30 March 2014).
- Kaibu, A. (2013), “Green fund launched to accelerate low-carbon investments”, *Japan Environment Quarterly*, Vol. 2, www.env.go.jp/en/focus/jeq/issue/vol02/topics.html#c7.
- Klopott, F. (2013), “Cuomo starts \$1 billion New York Green Bank for energy lending”, Bloomberg, 10 September, www.bloomberg.com/news/2013-09-10/cuomo-starts-1-billion-new-york-green-bank-for-energy-lending.html.
- Liberal Party of Australia (2013), “Letters the Hon Tony Abbott MHR Leader of the Opposition to Dr Ian Watt AO Secretary Department of Prime Minister & Cabinet and to Ms Jilian Broadbent AO Chair Clean Energy Finance Corporation”, 5 August, <http://static.liberal.org.au.s3.amazonaws.com/13-08-05%20Signed%20Carbon%20Tax%20Letters%20-%20TA.pdf>.
- Masdar (2013), “Masdar and the UK Green Investment Bank form new project investment alliance”, press release, Masdar Institute, 1 May, <http://masdar.ae/research/detail/masdar-and-uk-green-investment-bank-form-new-project-investment-alliance>.
- New York Public Service Commission (2016), “Order authorizing the clean energy fund framework”, 21 January, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={C766B4CA-D6F7-4A14-8869-5FFE4412BEA3}>.
- New York Public Service Commission (2013), “Petition of the New York State Energy Research and Development Authority to provide initial capitalization for the New York Green Bank”, Case 13-M, State of New York Public Service Commission, 9 September, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7BC3FE36DC-5044-4021-8818-6538AAB549B8%7D>.
- New York State (2013), “Governor Cuomo launches New York Green Bank initiative to transform the state’s clean energy economy”, press release, New York State, 10 September, [www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/17D6A0944B66384C85257BE20063731E/\\$File/Gov%209-10-13.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/17D6A0944B66384C85257BE20063731E/$File/Gov%209-10-13.pdf?OpenElement).
- NY Green Bank (2014a), *Metrics, Reporting & Evaluation Plan*, New York Green Bank, New York Public Service Commission Case 13-M-0412, 19 June, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B6F5D6757-CACA-4A57-B1F2-0DCA5F4C5946%7D>.
- NY Green Bank (2014b), *Business Plan*, Case 13-M-0412, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B3BCF6C87-33FB-49FA-B264-8669055DD6E5%7D>.
- OECD (2016 forthcoming), *Mobilising the Debt Capital Markets for a Low-Carbon Transition*, OECD Publishing, Paris, forthcoming.

- Proft, K. (2015), “Gov. Raimondo’s green bank idea draws some concern”, *eco RI news*, 30 January, www.ecori.org/government/2015/1/30/gov-raimondos-green-bank-idea-draws-some-concern.
- State of Connecticut (2013), House Bill No. 6704, Public Act No. 13-184, Hartford, Connecticut, www.cga.ct.gov/2013/act/pa/2013PA-00184-R00HB-06704-PA.htm.
- State of New Jersey (2014), “Christie administration rolls out plan for second round of federal Sandy recovery funds”, press release, State of New Jersey, 3 February, <http://nj.gov/governor/news/news/552014/approved/20140203a.html>.
- UKAN (2015), “Leveraging aid: A literature review on the additionality of using ODA to leverage private investment”, report prepared by the UK Aid Network, www.ukan.org.uk/wordpress/wp-content/uploads/2015/03/UKAN-Leveraging-Aid-Literature-Review-03.15.pdf.
- UK Department for Business, Innovation & Skills (2015a), “The future of the Green Investment Bank”, speech by The Rt Hon Sajid Javid MP, 25 June, www.gov.uk/government/speeches/the-future-of-the-green-investment-bank.
- UK Department for Business, Innovation & Skills (2015b), “Future of UK Green Investment Bank Plc: Policy statement, November”, BIS/15/630, Crown copyright, London, www.gov.uk/government/uploads/system/uploads/attachment_data/file/477493/BIS-15-630-future-of-the-uk-green-investment-bank.pdf.
- UK Green Investment Bank (2015a), *Green Investment Handbook*, United Kingdom Green Investment Bank, Edinburgh, www.greeninvestmentbank.com/green-impact/green-investment-handbook.
- UK Green Investment Bank (2015b), *Annual Report 2014-15*, UK Green Investment Bank Plc, Edinburgh, www.greeninvestmentbank.com/about-us/2015-annual-review.
- UK Green Investment Bank (2015c), “First global Green Bank Network will speed shift to clean energy”, News, 9 December, www.greeninvestmentbank.com/news-and-insight/2015/first-global-green-bank-network-will-speed-shift-to-clean-energy.
- UK Green Investment Bank (2014a), “Green impact reporting criteria”, Green Investment Bank, Edinburgh, June, www.greeninvestmentbank.com/media/25370/green-impact-reporting-criteria_final.pdf.
- UK Green Investment Bank (2014b), *Annual Report 2014*, UK Green Investment Bank, Edinburgh, www.greeninvestmentbank.com/media/25360/ar14-web-version-v2-final.pdf.
- UK House of Commons (2015), “The future of the Green Investment Bank”, UK House of Commons Environmental Audit Committee, Second Report of Session 2015-16, 19 December, The Stationary Office Limited, London, www.publications.parliament.uk/pa/cm201516/cmselect/cmenvaud/536/536.pdf.
- UK House of Commons (2011a), “The Green Investment Bank”, Second Report of Session 2010-11, Volume I: Report, together with formal minutes, oral and written evidence, 11 March, House of Commons, The Stationary Office, London, www.publications.parliament.uk/pa/cm201011/cmselect/cmenvaud/505/505.pdf.
- UK House of Commons (2011b), *Budget 2011*, Return to an order of the House of Commons by the Chancellor of the Exchequer when opening the Budget, HC 836, The

Stationary Office, London, www.gov.uk/government/uploads/system/uploads/attachment_data/file/247483/0836.pdf.

Vivid Economics and McKinsey & Co (2011), “The economics of the Green Investment Bank: Costs and benefits, rationale and value for money”, report prepared for the Department for Business, Innovation & Skills, October, www.gov.uk/government/uploads/system/uploads/attachment_data/file/31741/12-554-economics-of-the-green-investment-bank.pdf.

World Bank (2014), “Growing the green bond market to finance a cleaner, resilient world”, News, World Bank, 4 March, www.worldbank.org/en/news/feature/2014/03/04/growing-green-bonds-market-climate-resilience.

Annex 5.A1.

History of formation of green investment banks

This annex provides background information and history on the formation of selected green investment banks (GIBs).

Clean Energy Finance Corporation, Australia

In July 2011, the Australian Prime Minister, Deputy Prime Minister, Treasurer and Minister for Climate Change and Energy Efficiency announced the government’s renewable energy plan. The Clean Energy Finance Corporation (CEFC) was part of the government’s “Securing a Clean Energy Future” package, a comprehensive plan for carbon pricing, reducing pollution in the land sector and promoting innovation in renewable energy (Australian Government, 2011a).

In October 2011, the government appointed a team of experts to advise on the design of the CEFC and provide recommendations regarding implementation, investment mandates, risk management and governance (Australian Government, 2011b). The expert panel consulted widely with industry and stakeholders and delivered a report to the Australian government in March 2012. The Expert Review also set out a detailed timeline of key tasks to undertake leading up the implementation of the CEFC (Australian Government, 2012a). In July 2012, the Clean Energy Finance Corporation Act 2012 set out the terms for the CEFC’s establishment and operation (Australian Government, 2012b). The CEFC has a two-pronged funding approach: operational funding is received through parliamentary appropriations while investment funding is set aside in a dedicated Treasury fund, with funds made available when investments are identified. The CEFC’s first full-year investments totalled AUD 931 million (CEFC, 2014).

NY Green Bank, United States

Around 80% of the USD 1.4 billion per year spent by New York state entities to promote renewable energy and energy efficiency was in the form of one-time subsidies or grants as of 2013 (New York Public Service Commission, 2013a). Proponents of a GIB envisioned it as a tool to transition away from an unsustainable subsidy-based model to a private market approach that would use limited public capital. In the January 2013 State of the State Address, the Governor of New York called for the establishment of a USD 1 billion New York Green Bank to mobilise private capital to finance the transition to a more cost-effective, resilient and renewable energy system (State of New York, 2013).

The New York State Energy Research and Development Authority (NYSERDA) retained the consulting firm Booz & Company to undertake a market assessment of existing barriers to renewable energy finance, identify financial products to respond to the market and provide recommendations on the organisational structure of the future NY Green Bank. Booz & Company conducted nearly 90 interviews with financial institutions, renewable energy providers, energy service companies, utilities and end users. Based on the identified financing barriers, specific NY Green Bank offerings were proposed to address these specific market gaps. A detailed market sizing by technology identified a total market size of approximately USD 85 billion for renewable energy

projects in New York (Booz & Company, 2013). Quantitative modelling also provided information on the expected return on investment and amount of private capital that can be mobilised based on different product offerings. Booz & Company (2013) proposed a timeline for development with key activities, milestones and performance indicators for the establishment and implementation phases.

Supported by this data and analysis, NYSERDA requested in September 2013 the reallocation of USD 165 million in uncommitted funds from energy efficiency and renewable energy portfolio standards and systems benefits charges to fund the initial capitalisation of NY Green Bank (New York Public Service Commission, 2013a). In the autumn of 2013, NYSERDA also engaged stakeholders such as businesses, financial institutions, environmental actors and public sector institutions, among others, in an open public commenting period. The collected comments are available publicly online (New York Department of Public Service, n.d.).

In December 2013, the New York Public Service Commission granted NYSERDA's request and provided NY Green Bank with USD 165.6 million to begin operations (New York Public Service Commission, 2013b). NY Green Bank officially opened for business in February 2014 and has since prepared a detailed request for proposal to the market, submitted an organisational plan (NY Green Bank, 2014a), developed a strategic business plan (NY Green Bank, 2014b), and created specific and detailed performance metrics (NY Green Bank, 2014c). The metrics were subject to a public review and input process. Following several additional open public comment periods, NY Green Bank's full capitalisation of USD 1 billion was finalised in an order issued from the Public Service Commission on 21 January 2016 authorising the creation of a 10-year USD 5 billion clean energy fund (New York Public Service Commission, 2016). In addition to providing the USD 782 million missing for NY Green Bank's targeted capitalisation of USD 1 billion, the fund supports research and innovation, market development and an existing programme (NY-Sun) to support the development of the solar PV market in the state of New York (New York State, 2016).

UK Green Investment Bank

In 2009, Climate Change Capital and E3G published a series of papers which examined how the UK government could mobilise private investment for the low-carbon transition. One of the recommendations was the establishment of a Green Infrastructure Bank (Holmes and Mabey, 2009). Various other organisations including Friends of the Earth, Policy Exchange and the Aldersgate Group also discussed the proposal and published related papers. In February 2010, a working group, the Green Investment Bank Commission, was created. After a vigorous grassroots campaign and the publication of more papers advocating for the establishment of a GIB, in July 2010 the commission published its own report, "Unlocking investment to deliver Britain's low carbon future", recommending that a GIB be established (Green Investment Bank Commission, 2010).

In August 2010, the UK government set up a formal Green Investment Bank Working Group. A month later, Ernst & Young produced a detailed report on the size of the green investment bank and recommended that GBP 4-6 billion would be needed over four years (Ernst & Young, 2010). In October 2010, GBP 1 billion was allocated under the UK Comprehensive Spending Review. In March 2011, an additional GBP 2 billion was allocated bringing the UK Green Investment Bank's initial capitalisation to GBP 3 billion (Holmes, 2013). In May 2012, the creation of the GIB was included in the Enterprise and Regulatory Reform Bill, which was published in June 2012. A few months later, the

government published its “Update on Green Investment Bank”, which outlined the UK Green Investment Bank’s mission, business model and strategic priorities.

From 2011 to the announcement of the UK Green Investment Bank’s CEO and Board in September 2012, the UK Green Investment Bank operated with limited staff as a shadow institution called UK Green Investments. During this time, it made indirect investments totaling GBP 180 million. In July 2012, Lord Smith of Kelvin was appointed as the Green Investment Bank’s Chairman; in September 2012, Shaun Kingsbury was appointed as CEO. The Enterprise and Regulatory Reform Act, which formalised the establishment of the UK Green Investment Bank, entered into force in April 2013.

References

- Australian Government (2012a), *Clean Energy Finance Corporation Expert Review: Report to Government*, March, Commonwealth of Australia, www.cefcexpertreview.gov.au/content/report/downloads/CEFC_report.pdf.
- Australian Government (2012b), “Clean Energy Finance Corporation Bill 2012, A bill for an act to establish the Clean Energy Finance Corporation, and for related purposes”, No. 104, Commonwealth of Australia, www.comlaw.gov.au/Details/C2012B00083.
- Australian Government (2011a), “Securing a clean energy future for Australia”, joint media release with Prime Minister and Minister for Climate Change and Energy Efficiency, Canberra, <http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=pressreleases/2011/085.htm&pageID=003&min=wms&Year=&DocType=0>.
- Australian Government (2011b), “Experts to advise on Clean Energy Finance Corporation”, joint media release with Prime Minister and Minister for Climate Change and Energy Efficiency, Canberra, 12 October, <http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=pressreleases/2011/121.htm&pageID=003&min=wms&Year=&DocType=>.
- Booz & Company (2013), “New York State Green Bank: Business plan development: Final report”, Booz & Company, 3 September, www.naseo.org/Data/Sites/1/documents/committees/financing/notes/2013-11-13-Green-Bank-Final-Report.pdf.
- CEFC (2014), “Annual report 2013-2014”, Clean Energy Finance Corporation, Sydney, Australia, www.cleanenergyfinancecorp.com.au/reports/annual-reports/files/annual-report-2013-14.aspx.
- Ernst & Young (2010), “Capitalising the green investment bank: Key issues and next steps”, Ernst & Young LLP, London, <http://e3g.org/docs/capitalisingthegreeninvestmentbank.pdf>.
- Green Investment Bank Commission (2010), “Unlocking investment to deliver Britain’s low carbon future”, Green Investment Bank Commission, London, www.e3g.org/docs/Unlocking_investment_to_deliver_Britains_low_carbon_future_-_Green_Investment_Bank_Commission_Report_June_2010.pdf.

- Holmes, I. (2013), “Green Investment Bank: The history”, E3G, 25 April, www.e3g.org/library/green-investment-bnak-the-history.
- Holmes, I. and N. Mabey (2009), “Accelerating green infrastructure financing: Outline proposals for UK green bonds and infrastructure”, Briefing Note, March, Climate Change Capital and E3G, www.e3g.org/docs/Accelerating_Green_Infrastructure_Financing.pdf.
- New York Department of Public Service (n.d.), “Petition of New York State Energy Research and Development Authority to provide initial capitalization for the New York Green Bank”, Matter Number 13-01875, New York State Energy Research and Development Authority, <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=13-m-0412&submit=Search+by+Case+Number>.
- New York Public Service Commission (2016), “Order authorizing the clean energy fund framework”, 21 January, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={C766B4CA-D6F7-4A14-8869-5FFE4412BEA3}>.
- New York Public Service Commission (2013a), “Petition of the New York State Energy Research and Development Authority to provide initial capitalization for the New York Green Bank”, Case 13-M, State of New York Public Service Commission, 9 September, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7BC3FE36DC-5044-4021-8818-6538AAB549B8%7D>.
- New York Public Service Commission (2013b), “Order Establishing New York Green Bank and providing initial capitalization”, Public Service Commission, Case 13-M-0412, Petition of New York State Energy Research and Development Authority to provide initial capitalization for the New York Green Bank, Albany, New York, 19 December, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7BBD3AAFB0-FAA2-4DA6-B56B-0FF22EE34EDF%7D>.
- New York State (2016), “Cuomo launches \$5 billion Clean Energy Fund to grow New York’s clean energy economy”, New Release, 21 January, www.governor.ny.gov/news/governor-cuomo-launches-5-billion-clean-energy-fund-grow-new-york-s-clean-energy-economy.
- NY Green Bank (2014a), “NY Green Bank organization plan”, Filing for the Public Service Commission, Case 13-M-0412, 18 February, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B643D622C-6E1F-4BD1-A489-DD146F26E8A4%7D>.
- NY Green Bank (2014b), Business Plan, Case 13-M-0412, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B3BCF6C87-33FB-49FA-B264-8669055DD6E5%7D>.
- NY Green Bank (2014c), “Metrics, reporting & evaluation plan, New York Green Bank”, New York Public Service Commission Case 13-M-0412, 19 June, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B6F5D6757-CACA-4A57-B1F2-0DCA5F4C5946%7D>.
- State of New York (2013), “Governor Cuomo launches New York Green Bank initiative to transform the state’s clean energy economy”, press release, New York State, 10 September, [www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/17D6A0944B66384C85257BE20063731E/\\$File/Gov%209-10-13.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/17D6A0944B66384C85257BE20063731E/$File/Gov%209-10-13.pdf?OpenElement).



From:

Green Investment Banks

Scaling up Private Investment in Low-carbon, Climate-resilient Infrastructure

Access the complete publication at:

<https://doi.org/10.1787/9789264245129-en>

Please cite this chapter as:

OECD (2016), "Setting up and capitalising a green investment bank", in *Green Investment Banks: Scaling up Private Investment in Low-carbon, Climate-resilient Infrastructure*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264245129-9-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.