



SETTING UP A GREEN BANK

A SOLUTION TO INDIA'S CLEAN ENERGY FINANCE BARRIERS

India is at a critical juncture in scaling renewable energy to provide energy access to growing cities and vast rural communities. Financing is one of the principal barriers to the rapid expansion of India's clean energy market needed to meet the ambitious national target of 175 gigawatts (GW) of solar, wind, and other renewable energy by 2022, as well as the broader targets of the Paris Climate Agreement. Green banks, however, are innovative tools to overcome these financial barriers and help accelerate the growth of clean energy markets.

In May 2016, the Indian Renewable Energy Development Agency (IREDA) announced plans to explore becoming India's first green bank following a two year discussion amongst, Minister of State for Power, Coal, Mines, and New and Renewable Energy, Piyush Goyal, MNRE, IREDA, and key stakeholders. India's ambitious climate and renewable energy goals will require an estimated \$160 billion. A green

bank, as part of IREDA, could leverage limited public funds to attract greater private investment to grow India's clean energy market. For more information on the clean energy finance landscape in India, please refer to our full report *Greening India's Financial Market: Opportunities for a Green Bank in India*.

Governments around the world have taken different approaches to establish green banks. While each green bank has been set up in a unique context with differing obstacles and circumstances, certain steps are common to establishing either a new institution or transforming an existing institution to a green bank. This paper describes the process for establishing a green bank in four phases. Each phase will likely take one to two months with certain aspects having longer or shorter durations and some of the processes can overlap or occur in parallel with other processes.¹



NATURAL RESOURCES DEFENSE COUNCIL



GREEN BANK STEERING COMMITTEE

In most cases, a steering committee or advisory group is formed to guide key decisions in creating the green bank. Key members of the steering committee are government leaders, finance experts, clean energy stakeholders, and policy makers. The steering committee plays a larger role during the first two phases while the green bank is being created.

The role of the steering committee is to answer the important questions that lead up to the operation of the green bank. The questions can be broadly categorized into three main categories:

- **What financing and market development solutions will the green bank provide?** Green banks can play diverse roles depending on the local context and market gaps. Based on market analysis, the steering committee can guide the development of a comprehensive market strategy for the bank. This includes analyzing the market gaps, designing new products as well as deciding the best way to use capital.
- **What are the funding sources?** Establishing reliable sources of funding is an important part of setting up a green bank. The steering committee can help determine the sources for the green bank's initial capitalization. The committee can also address issues around the need for additional capitalizations once the green bank is in operation and also devise strategies to attract private investment.
- **What is the best institutional structure?** A green bank needs to have capable staff and leadership in order to be successful. The steering committee can help guide leadership and staffing decisions early on in the process of setting up the green bank. The leadership should have extensive experience in public sector dealings and finance.



PHASE 1: SCOPING AND EDUCATION

DESKTOP ANALYSIS OF FINANCING
LANDSCAPE, OUTREACH TO
STAKEHOLDERS, INITIAL STAFFING

The first phase involves the inception of a green bank. Once the government and key stakeholders support establishing a green bank, a key step, often, is to create an informal steering or advisory committee to guide the process of setting up a green bank. In the case of an existing institution seeking to become a green bank, an understanding of the type of clean energy projects that the institutions have historically invested in as well as the projects in which it plans to invest is needed. Research should be also done to identify the type of projects the institution seeks to invest in as a green bank and the broader market implications.

Outreach to all stakeholders involved in green financing is critical. Engaging government ministries and financial offices, private investors, consumer protections groups, renewable energy and energy efficiency trade associations as well as NGOs is essential. Having a public consultation period where industry professionals and stakeholders can submit comments can also open dialogue and facilitate the communication between government and private industries.

During this phase the steering committee should be determining the leadership and the staff of the green bank. This includes determining the first hires that could consist of the general counsel, the operations, and the finance lead. Since the leaders will be interacting with experts in many fields, they should have experience in the public sector as well as transaction experience.²



PHASE 2: ANALYSIS AND INVESTIGATION

MARKET ANALYSIS, CAPITALIZATION ANALYSIS, LEGAL AND STRUCTURAL ANALYSIS

The second phase focuses on comprehensive analyses to guide the structuring, scoping, and financing of the green bank. Experts and consultants can assess the current and future market, assess the feasibility of entering the market (or entering other parts of the market if already involved) and the broader market impacts.

The market analysis that occurs in Phase 2 is a more detailed investigation of the preliminary research that occurred in Phase 1. The analysis should address specific market barriers, financing gaps and product ideas to overcome these obstacles. Furthermore, there should be communication to private investors already involved in clean energy finance that the establishment of a green bank seeks to foster cooperation amongst all parties and not "crowd out" competition.

The capitalization analysis involves researching on funding the green bank. This includes determining the size of the initial capitalization based on market assessment and locating sources of funding. Some examples of funding sources are government capitalization or grants, emissions trading schemes, loans, and utility bill surcharges.

The legal and structural analysis will guide how the green bank will be created. Green banks can be created from an existing institution, a subsidiary of an existing institution,

or an entirely new entity. All three models have worked effectively, and often depend on local circumstances.

- **Green Bank from an Existing Institution.** One option is to transform an existing institution into a green bank. This is usually done if the existing institution already takes on some of the responsibilities, tasks, or goals of a green bank. While the startup capital and legislation required is usually less, there are other challenges. The personnel of the existing institution must have the skills and abilities to accomplish the different goals of a green bank and any preferences or influences that guided the previous institution might be reflected in the green bank as well. The Connecticut Green Bank and Australia's Clean Energy Finance Corporation are examples of green banks that were previously other institutions.
- **Green Bank as a Subsidiary.** Another option is to create a green bank as a subsidiary of an existing institution. This gives the green bank the sense of being a new entity but can also use shared infrastructure and resources parent organization. For example, the New York Green Bank was established as a division of NYSERDA in 2013. NYSERDA provides the NYGB with technical expertise as well as administrative and financial reporting support.³
- **Green Bank as a New Institution.** Creating an entirely new institution as a green bank may require more legislation and funds than transforming an existing institution into a green bank. The upside is that the green bank is an entirely new and independent entity which can be advantageous if the green bank is operating on commercial terms. The UK Green Bank is an example of a green bank as a new institution.

After examining the legal, market, and financial analyses, there should be extensive communication and conversation amongst stakeholders. During the consultation, stakeholders provide inputs on the characteristics and mission of the green bank will be the most beneficial considering the local context and barriers. Stakeholders also start developing products that they think would do well in the market during this phase. At this point, the steering committee usually develops a business plan to determine the best use of capital. This varies greatly and depends entirely on the context of the local market. A few examples are low-interest, long-term loans, green bonds, warehousing of small-scale distributed solar or energy efficiency investments, direct investment and lending, or loan guarantees or other risk-mitigation products.



PHASE 3: ESTABLISHMENT CAPITALIZATION, LEGALIZATION, CAPACITY BUILDING

The “Establishment” phase entails securing the green bank’s initial capital as well as developing a schedule for future re-capitalizations. Sources of funding depend on the local context but can include green bonds, government grants and

loans, carbon-tax, utility-bill surcharges and emissions trading allowances. For example, a viable source of funding might be India’s National Clean Energy Fund. The Connecticut Green Bank received its funding mainly from ratepayer funds and carbon emissions allowance proceeds.⁵

Legalization also occurs during this phase. As mentioned previously, the legal process depends on the structure of the green bank. In certain instances, very little to no legislation may be needed to legally establish the green bank.

Capacity building is essential to ensure that the green bank has the capabilities to operate efficiently and effectively. The operational capabilities of a green bank include account management, subsidy tracking, performance measurement, servicing, treasury and accounting, legal duties, marketing and communication, government policy and affairs, human resources, and information technology. While these are distinct capabilities, there will be substantial overlap in many of these roles- especially energy and finance.⁴



PHASE 4: OPERATIONS COMMENCEMENT OF OPERATIONS, ONGOING REPORTING OF OPERATIONS

Once the bank has been formed as a legal entity and capitalization is obtained, the green bank is ready to start operations. The green bank should set up financial accounts, document and keep track of its operational policies across all departments and finally the bank should test its management procedures and staff across all departments.

Finally, there should be a system in place for oversight, reporting and feedback on operations, and deciding which metrics measure success. Typically, green banks are overseen by a board of governors. Oversight by a board ensures that the decisions made by a green bank are less influenced and more resilient to political changes as well as helping the bank maintain a long-term vision.

Different green banks prioritize the importance of different metrics, however all green banks have the same ultimate goal: to capitalize and scale up the market for clean energy investments. Within this main goal, green banks use different metrics to meet some of their other mandates. Green banks that are mandated to turn a profit will likely focus on financial metrics. Some financial metrics include leverage ratios, rates of return on capital, and loss adjusted return on investment. There are many other non-financial metrics that are equally important to stakeholders and the public. Metrics such as tons of carbon dioxide avoided, number of jobs created, GHG emissions avoided, and energy saved or energy generated are important metrics that can convey the importance and success of the green bank’s investments.

EXAMPLES OF GREEN BANKS AROUND THE WORLD²⁴

 <p>IBank California Infrastructure and Economic Development Bank</p> <p>California Lending for Energy and Environmental Needs (CLEEN) Center (California, U.S.A.)</p>	 <p>CEFC CLEAN ENERGY FINANCE CORPORATION</p> <p>Clean Energy Finance Corporation (Australia)</p>	 <p>CONNECTICUT GREEN BANK</p> <p>Connecticut Green Bank (Connecticut, U.S.A.)</p>	 <p>GEMS</p> <p>Hawaii Green Infrastructure Authority (Hawaii, U.S.A.)</p>
 <p>Green Finance Organisation JAPAN</p> <p>Green Finance Organisation Japan (Japan)</p>	 <p>Green Tech Malaysia</p> <p>Green Tech Malaysia (Malaysia)</p>	 <p>Masdar A MUBADALA COMPANY</p> <p>Masdar (United Arab Emirates)</p>	 <p>MONTGOMERY COUNTY LAND BANK</p> <p>Montgomery County Green Bank (Maryland, U.S.A.)</p>
 <p>NEW JERSEY ENERGY RESILIENCE BANK <i>Building a solid foundation for the future</i></p> <p>New Jersey Energy Resilience Bank (New Jersey, U.S.A.)</p>	 <p>NYGREEN BANK</p> <p>New York Green Bank (New York, U.S.A.)</p>	 <p>RI INFRASTRUCTURE BANK</p> <p>Rhode Island Infrastructure Bank (Rhode Island, U.S.A.)</p>	 <p>Technology Fund (Switzerland)</p>
 <p>UK Green Investments</p> <p>UK Green Investment Bank (United Kingdom)</p>			

Source: Institutions listed in OECD, "Policy Perspectives: Green Investment Banks," p. 6 (2015), <http://www.oecd.org/greengrowth/green-investment-banks.htm>.

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- 5 Jessica Lynn Aldridge, *New York Green Bank: Overview and Example Partnerships*, New York Green Bank, June 3, 2014, www.cuny.edu/about/resources/sustainability/nyssolar/NYSolarSummit/Agenda/NYGreenBank_Jessica_Aldridge.pdf (accessed August 5, 2016).

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