

**DESIGN GRANT CASE STUDY**  
**CLIMATE FINANCE FACILITY**

JUNE 2019

**EXECUTIVE SUMMARY**

The Development Bank of Southern Africa’s (DBSA) Climate Finance Facility (CFF) is a specialized lending facility designed to increase private investment in climate-related infrastructure projects in the Southern African Development Community (SADC) region, which faces significant climate mitigation and adaptation challenges. The CFF is the first time the “green bank” model has been applied to an emerging market. Green banks are public, quasi-public, or non-profit entities established specifically to facilitate private investment into low-carbon, climate-resilient infrastructure. This landmark facility offers significant proof-of-concept value to middle- and low-income countries seeking to scale up the private investment required to meet commitments laid out under the Paris Agreement.

The CFF will deploy capital to fill market gaps and crowd in private investment, targeting projects that are commercially viable but cannot attract market-rate capital from local commercial banks at scale without credit enhancement. The Facility will start by utilizing two main credit enhancement instruments: (i) long-term subordinated debt and (ii) tenor extension. The CFF will prioritize investment opportunities based on target country needs and priorities identified in Nationally Determined Contributions (NDCs) under the Paris Agreement and to meet the United Nations Sustainable Development Goals (SDG) goals. The CFF will primarily target South Africa as well as other Rand-based countries, including Namibia, Lesotho, and Eswatini. The CFF raised an initial \$110 million, with DBSA and the Green Climate Fund (GCF) as the two anchor funders.

The structuring and launch of the CFF offers insights for other practitioners developing or investing in green banks, including the importance of specialized partners when replicating existing models in new markets, leveraging local institutional infrastructure, early and continuous engagement with target co-investors, and approaches to ensure additionality of financing activities.

**SYNOPSIS**

*The Climate Finance Facility is the recipient of Convergence Design Funding*

<b>Host</b>	Development Bank of Southern Africa (DBSA)
<b>Mandate</b>	To incentivize private investment in low-carbon and climate-resilient infrastructure and catalyze greater overall climate-related investment in the four Rand-based economies in the Southern African region, including South Africa, Namibia, Lesotho, and Eswatini.
<b>Anchor funders</b>	Development Bank of Southern Africa (DBSA) and Green Climate Fund (GCF)
<b>Initial Size</b>	\$110M / 2 Billion Rand
<b>Capital structure</b>	<ul style="list-style-type: none"> <li>DBSA contributed \$55M 15 yr loan and GCF contributed \$55M 15 yr loan through DBSA as an accredited entity of the GCF</li> <li>DBSA and GCF each contributed \$0.6M grant for set-up costs</li> </ul>
<b>Fees</b>	No management fee charged by DBSA
<b>Operations</b>	Launched in February 2019; lifespan of 20 years with ~5-year implementation period
<b>Key design partners</b>	Coalition for Green Capital (CGC), GreenCape, ClimateWorks Foundation, Convergence
<b>Eligible projects</b>	Infrastructure projects and businesses that mitigate or adapt to climate change, including off-grid power, mini-grid solar, urban distributed solar farms, energy and water efficiency
<b>Countries</b>	South Africa, Namibia, Lesotho, Eswatini
<b>Investment size &amp; instruments</b>	Size: \$5M to \$10M Instruments: Long-term subordinated debt, credit enhancement including tenor extension (up to 15 yrs)
<b>Target leverage</b>	1:5 (one Rand from CFF mobilizes five Rand from private investors/banks), recognizing that leverage ratios will vary considerably from project to project
<b>Expected impact</b>	Avoidance of ~30 million tonnes of CO2 equivalent during lifetime of program, save ~23K jobs through water systems installation, 400K+ indirect beneficiaries

## INTRODUCTION

The Southern Africa region faces significant climate mitigation and adaptation challenges. These difficulties are compounded by socio-economic constraints that are directly related to the energy, transport, and water sectors. In the geographic area that the Development Bank of Southern Africa (DBSA) covers – including 14 Southern African countries – over 60% of people are without access to clean, regular, and sustainable water supply. Electricity generation in the region is still 90% fossil fuel-based and over 50% of people have no access to electricity. In addition, current energy policy, based on a “run-to-fail” program has led to widespread power shortages and load-shedding due to the deteriorating condition of the power generation infrastructure, and grid connected users face steep tariff hikes, which can be commercially devastating.

Nationally determined contributions (NDCs) are at the heart of the Paris Agreement. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. South Africa submitted NDCs in 2015. The total estimated costs for realizing South Africa’s NDCs is approximately \$400 billion, with an additional \$7 billion required in short-term investment for climate adaptation. Moreover, energy demand is forecast to double from roughly 44 GW to 80 GW by 2025 and best case scenarios based on current policy anticipate that only about 42% of the demand will be provided by renewables. Currently, 94% of South Africa’s electricity is generated from coal and over 30% of South African gasoline and diesel needs are supplied by liquefied coal.

The need to address significant power constraints while also taking meaningful strides towards Paris Agreement commitments, means many private actors are looking to reduce reliance on Eskom, South Africa’s public utility, and develop their own sources of electricity. Eskom is the largest member of the Southern Africa Power Pool (SAPP) and the majority of the SADC region is reliant on South Africa for power supply. While there are companies emerging in the region that are looking to develop climate mitigation and adaptation solutions, they are primarily start-ups with limited track records. Although the technologies (e.g., off-grid power, mini-grid solar, urban distributed solar farms, energy and water efficiency) may be proven in other markets, they are unfamiliar to local investors and commercial banks. Moreover, commercial banks often require equity investments as high as 50% before considering lending, which is not feasible for many private sector developers. This lack of available and affordable financing creates a barrier to more rapid implementation of climate-friendly projects in the region.

In March 2018, Convergence awarded a Design Funding grant to the Coalition for Green Capital (CGC) to support the DBSA with the design and launch of the Climate Finance Facility (CFF)

– the developing world’s first green bank. ClimateWorks Foundation provided co-funding alongside Convergence for market research related to the design of the facility. ClimateWorks is a non-governmental organization that works globally, collaborating with funders, regional and research partners, and other climate leaders to strengthen philanthropy’s response to climate change. The funding from Convergence and ClimateWorks was awarded during a critical juncture in the development of the CFF and was used to support the host organization, the DBSA, with key business planning, market assessments, institutional design, pipeline development, capital recruitment from the GCF and other sources, and other activities prior to launching.

The objective of the CFF is to address key market constraints and catalyze climate related investment in the Southern Africa region. The CFF will address market barriers faced by the private sector, particularly local commercial banks, with a focus on: 1) loan tenor, 2) interest rates, and 3) the perceived high risk of climate investments. The CFF will target projects that are commercially viable but cannot attract market-rate capital at scale without credit enhancement. In addition to South Africa, the CFF will serve other Rand-based countries in Southern Africa with an initial focus on Namibia, Lesotho, and Eswatini.

The DBSA and CGC formed a partnership based on their combined and complementary capacities. DBSA is one of the most reputable development finance institutions in Southern Africa. CGC offered a unique and proven capacity as a leading expert on green banks, having supported the successful formation of numerous green banks in the United States and serving as the co-Secretariat to the global Green Bank Network. The CFF started considering transactions in March 2019 after securing its initial capitalization target of \$110 million. It was anchored by a ground-breaking investment of \$55 million from the Green Climate Fund (GCF) and an equivalent \$55 million investment from the DBSA – positioning the CFF not only as Africa’s first private sector climate finance facility, but also the developing world’s first operational green bank. This landmark loan from the GCF also marked the first time the GCF has invested in a Green Bank. The DBSA and GCF each committed \$0.6M in grant funding for set-up costs.

## DESIGN AND FUNDRAISING

The inception of the CFF concept can be traced back to 2017, when team members from the DBSA and CGC met at the Sixth Annual Meeting of the San Giorgio Group convened by the Climate Policy Initiative in Venice, Italy. At that time, South Africa was developing its capacity to scale up climate finance in support of the Paris Agreement and the DBSA was considering an initiative to reposition the organization as a local leader in green finance. The DBSA and CGC began to explore the creation of a new climate facility on the ‘green bank model’

established in developed markets, but adapted for the specific requirements of the Southern Africa region.

Green banks are finance entities built to connect green and low-carbon projects with capital in target markets. They blend commercial, public, and philanthropic capital to deliver catalytic finance solutions to support the implementation of clean energy and low-carbon technologies that otherwise could not be built. Green banks possess local expertise on market conditions, the policy landscape, finance actors, and development partners, and leverage that expertise to support investment. Green banks are not depository institutions.

Initially developed in the United States, United Kingdom, and Australia, green banks have been tailored to various national and local contexts, including at the national level, state level, and city level. While green banks have varied in name, scope, and approach, they have shared a common goal: to mobilize greater investments in climate-related infrastructure.

The DBSA decided to house the CFF within the DBSA, rather than setting up a new standalone entity. This was based on the DBSA's strong interest and willingness to act as the host institution and local champion, combined with the ease of leveraging existing infrastructure. Two key questions drove the decision-making process for setting up the CFF:

- **How to ensure the green bank would add value – and not business as usual – if housed within an existing institution?** To ensure a value-added role for the CFF, it was created as a distinct, ring-fenced initiative within the DBSA, with a specific mandate to focus on catalyzing low-carbon investment by crowding in private capital. This bold initiative by the DBSA was undertaken as part of a broader repositioning towards green investment, climate finance, and blended finance.
- **What were the capital constraints and requirements of the main capital providers?** Based on the early identification of potential funding sources, it was important to structure the CFF with the requirement of capital providers in mind. For example, the GCF can only provide funding to “Accredited Entities”, so housing the CFF within the DBSA, a GCF Accredited Entity, rather than pursuing a standalone entity was ultimately more attractive. A constraint in this model, however, was the sometimes conflicting requirements of different funding sources. For example, while the GCF is required to issue funding to an officially Accredited Entity, other funding sources could only provide loans to non-public institutions. Choices had to be weighed in terms of capitalization and related structural options.

In October 2017, the DBSA's Board approved a commitment of up to 1 billion Rand as an anchor investment, which was intended to fast track the fundraising process by sending a positive signal to other potential funders. The DBSA also provided in-kind support to establish the CFF. This

contribution was a testament to the organization's commitment to “greening” its investment activities as well as pioneering a new approach. In addition to the DBSA's anchor investment, the successful launch of the CFF required concessional capital to be provided *pari passu* with other capital sources at a blended rate – in the form of low-cost debt – to provide affordable capital, subordinated debt, or tenor extensions at the project level.

Accordingly, the DBSA applied to the GCF for concessional capital (and a related small operational grant) for the CFF. Intensive outreach from project partners led the GCF to indicate that green banks were of great interest as a systemic strategy for leveraging private climate investment. The GCF application and decision process is complex and required a full-on effort by CGC's team alongside the DBSA, with market information provided by GreenCape and tremendous support from the GCF Secretariat. The CFF was on the agenda for approval at the July 2018 board meeting, but due to unresolvable issues on other matters, the CFF application was ultimately approved at the next board meeting in October 2018.

Ultimately, DBSA and CGC led a successful fundraising process that resulted in the crucial participation of the GCF. The following three elements were critical to the success of DBSA's application to GCF:

- **Project pipeline:** The CFF was designed with the project pipeline in mind and the viability of the pipeline was validated early on through direct engagement with key sources of deal flow such as local commercial banks in target markets.
- **Local market assessment / intelligence:** DBSA and CGC partnered with GreenCape, a local expert on the Southern African market, to support the CFF's market assessments and GCF application. Deep understanding of the target markets was clearly demonstrated in the funding proposal.
- **Governance structure:** DBSA and CGC prepared a comprehensive operational manual that detailed the CFF's governance structure and policies to eliminate any pre-conditions on the GCF loan to the CFF.

The DBSA and CGC also initiated discussions with commercial and quasi-commercial investors for co-investment into the facility. While several DFIs showed initial interest in participating, certain constraints – such as working with a public (vs a private non-governmental) institution and/or the need to provide subordinated debt – eventually made it clear that these institutions could not invest in the CFF. This experience illustrated the need to develop fund structures that align with the requirements of capital sources from the outset.

## STRUCTURE AND GOVERNANCE

### CAPITAL STRUCTURE

The CFF is anchored by two public institutions. DBSA provided low-cost debt (\$55 million) and grant funding (\$610,000) from its own balance sheet. The GCF matched this contribution. The GCF will directly deploy its funds through the DBSA (as an accredited entity of the GCF) and the CFF will manage and deploy the funds to finance climate friendly projects alongside local commercial banks. The grant funding is allocated to set-up costs for the CFF.

It is important to note that the CFF blends public and private capital at the project level. The CFF will invest local currency (Rand) into projects with the goal of leveraging its capital by an overall portfolio ratio of 1:5. That is, for every Rand that the CFF invests into an individual transaction, it will aim to catalyze approximately five Rand of private capital. The leverage ratio of 1:5 was based on experiences of green banks in developed markets.

Funder	Amount (USD)	Instrument	Tenor	Return
DBSA	\$55M	Debt	15 yrs	Varies according to credit risk on project basis
	\$0.61M	Grant	-	
GCF*	\$55M	Debt	15 yrs	Not disclosed by GCF
	\$0.61M	Grant	-	

\* Provided through DBSA as a GCF-accredited entity

Figure 1: CFF capital and grant contributions

### GOVERNANCE AND OPERATING MODEL

Within the DBSA, the CFF is housed under the Product Innovation Unit. The DBSA's Investment Committee and Board of Directors provide oversight to CFF operations and the CFF has specific investment criteria designed to support investment in low-carbon projects that crowd in private commercial investment. The CFF is intended to be a self-sustaining and distinct entity within the DBSA, and to generate sufficient revenue to pay back its funders and support its dedicated operating expenses. The CFF will draw on operating revenues from the following sources:

- Fees from the individual projects funded pari passu with the co-funders
- Interest earned on lending activity (returned to funders)
- Direct DBSA support for back office functions including legal, accounting, HR, contracts, IT, risk/compliance, communications and marketing

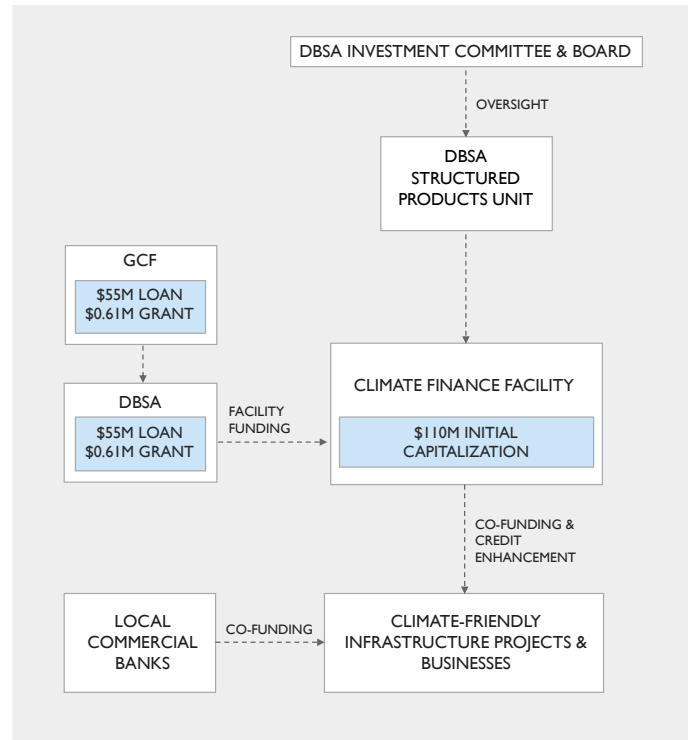


Figure 2: Overview of CFF structure

## OPERATIONS

### INVESTMENT INSTRUMENTS

The CFF will support projects alongside commercial banks that are potentially viable but cannot attract market-rate capital at scale without credit enhancement. The Facility can utilize two credit enhancement instruments: (i) subordinated debt and (ii) tenor extension.

The CFF's instruments were designed based on market outreach which identified the following factors as constraints on financing smaller scale distributed clean energy and clean water projects:

- **Loan tenor:** The driver for this barrier is largely regulatory constraints (i.e., Basel III) which impact commercial banks in all four targeted countries. Commercial banks cannot provide tenors greater than seven to eight years. The CFF will offer tenor extension of up to 15 years as it does not face similar regulatory constraints.
- **Perceived high investment risk of mitigation and adaptation projects:** The CFF will offer subordinated debt to crowd in private investors. The CFF will subordinate itself in the cashflow waterfall to the senior lenders (i.e., commercial banks), but rank pari passu with respect to project security.

## INVESTMENT CRITERIA

CFF has five investment criteria, which are outlined in the figure below.

Transactions contribute to:
1. Low-carbon infrastructure, climate-related goals
2. Market transformation
3. Technically and economically feasible but unable to secure commercial financing
4. Demonstrate leverage and the ability to crowd in commercial investment
5. Address climate adaptation related goals particularly where they require water

Figure 3: Investment criteria

## PROJECT PIPELINE

The CFF will target the Rand-based economies of South Africa, Namibia, Lesotho, and Eswatini. Initially, the CFF will focus on South Africa as the project pipeline is expected to be dominated by projects in the country during the initial implementation phase. The CFF will prioritize specific investment opportunities based on the country needs and sectorial priorities identified in the NDCs. The CFF will develop a robust project pipeline through a diverse range of channels, including: local commercial banks (main source), DBSA’s origination and project preparation group, DFIs and MDBs, and request for proposals. Once the model is proven out in South Africa, the CFF will expand into priority markets in Namibia, Lesotho, and Eswatini. Market outreach will be conducted on a regular basis in other countries to support further expansion of the CFF’s scope.

## EXPECTED IMPACT

The CFF will aim to contribute to eight Sustainable Development Goals (SDGs) including Goal 6 (Safe Water and Sanitation), Goal 7 (Affordable and Clean Energy), Goal 8 (Decent Work and Economic Growth), Goal 9 (Industry, Innovation, and Infrastructure), and Goal 13 (Climate Action). Specifically, by supporting climate mitigation measures, the CFF is expected to result in the avoidance of ~30 million tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) during its lifetime. Through water and waste management projects, the CFF has the potential to create over 100 jobs and save 22,600 jobs through the installation of water systems (avoiding dismissal due to water shortages). The expected number of indirect beneficiaries is over 400,000.

As an Accredited Entity of the GCF, the DBSA is responsible for ensuring compliance with the GCF Environmental and Social Safeguards (ESS). The DBSA has developed its own ESS that comply with GCF policies and standards as well as local South African national legislation. Climate change-related

mitigation and adaptation projects supported through the CFF will be explicitly designed to benefit local communities, with a focus on women and vulnerable groups.

Impact Area	Example Metrics
Mobilizing investment	<ul style="list-style-type: none"> <li>Mobilizing capital: Leverage ratio to crowd in private capital on project and facility basis</li> <li>Market transformation: Projects demonstrate market expansion in terms of scale and private sector participation</li> </ul>
Developing local markets	<ul style="list-style-type: none"> <li>Robust project pipeline: Size and diversity of project pipeline and proposals received from South Africa and Rand-based economies</li> <li>Expanding investment portfolio: Total investments to date</li> </ul>
Development impact	<ul style="list-style-type: none"> <li>Market growth</li> <li>Reduced CO<sub>2</sub> emissions</li> <li>Job creation and beneficiaries</li> <li>Male/female split in jobs created</li> <li>Business impact</li> </ul>
Sustainability	<ul style="list-style-type: none"> <li>Revenue towards self-sufficiency</li> </ul>

Figure 4: Key impact metrics

## KEY INSIGHTS

The CFF presents several useful insights for others looking to create or invest in green banks.

- Blended finance practitioners looking to replicate the green bank model or to deploy other existing models in developing country contexts should identify specialized partners to support the design, fundraising, and operations of new solutions. Green banks are highly specialized structures designed to catalyze large-scale private investment to a low-carbon economy. To design and launch the CFF effectively, DBSA partnered with CGC, an organization with a demonstrated track record with green banks in developed markets. CGC is a leading advocate, expert, and consultant on the topic of green banks. They have experience navigating what is often a highly political process with governments and other key partners.
- Credible, local champions are an important catalyst for driving blended finance solutions; housing the entity at an existing local institution can facilitate launch and offer access to resources and capacity. It is important to support and build the capacity of local organizations to originate and participate in blended finance transactions. Blended finance transactions require strong local input to avoid market distortion and maximize likelihood of sustainability. In the case of the CFF, the DBSA had strong institutional

capacity to design, fundraise, and implement the green bank. Moreover, the DBSA was resilient to setbacks, such as delayed funding approvals from anchor investors and the fallout of promising private investors during the fundraising process. Blended finance practitioners should prioritize the involvement of local institutions that have the capacity, or are willing to build the capacity, to support transaction design and implementation.

- **The GCF is a valuable source of concessional capital for blended finance solutions:** The GCF has a demonstrated track record of deploying catalytic capital with the goal of attracting private climate-related co-investment, including its anchor investment in the CFF. However, organizations seeking to engage the GCF should be aware of their funding requirements (e.g., funding recipients must be accredited) and also manage expectations accordingly (e.g., additional buffer time). Through the CFF application process, the DBSA and CGC learned important considerations that should be thoroughly addressed in prospective funding proposals to the GCF, including developing a viable pipeline, investing in credible market intelligence, and outlining a strong governance structure.
- **Early and continuous engagement with market participants and target co-investors is essential and should be directed at ascertaining the nature of the deal pipeline and market barriers.** This outreach is essential to ensure product-market fit, support investor buy-in, and inform the selection of the entity's own instruments and strategy. The DBSA and CGC engaged continually with multiple local commercial banks during the design process, which helped to (i) validate the proposed pipeline, (ii) inform the design of appropriate and relevant investment instruments, (iii) ensure sufficient buy-in and demand from the market for a vehicle like the CFF.
- **The green bank model has broad application in emerging markets.** The global system that has evolved for mobilizing and allocating low-carbon infrastructure finance into developing markets could be improved. To realize climate investment goals, new climate finance capacity is needed at the national (and subnational) level that can work with local capital markets, engage local commercial banks, and connect with local market intelligence. Nationally-based green banks are well positioned to provide this vital link and channel capital into country-led decarbonization. The CFF is already serving as an example of the green bank model and generating interest in other nations across Africa and beyond.

## SOURCES

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## ABOUT CONVERGENCE

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