

# Analysis, Summary, and Additional Justifications for the Use of Grant Resources in CTF in FY23

Thursday, May 18, 2023

#### **PROPOSED DECISION**

The CTF Trust Fund Committee, having reviewed the document titled *Analysis, Summary, and Additional Justifications for the Use of Grant Resources in CTF in FY23,* decided to allow the two public sector projects from ADB and WB with scheduled Board dates (approx. USD 18.25 million in grant resources) to proceed for the Committee's review and approval in FY23.

The CTF Trust Fund Committee also decided to mantain the pause in grant approvals <u>established</u> at the CTF Trust und Committee Meeting on February 1, 2023, until CCMM bond issuance or the Committee approves a strategy for grant use moving forward.

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# 1 Grant Use in CTF for FY23

- 1. Use of grants has always been an important but limited aspect of programming in the Clean Technology Fund (CTF). Through its first decade, grant use has been focused mostly on technical assistance in relatively small volumes. Through the end of FY22, 91 projects requested USD 175.7 million in grants overall (an average of USD 12.6 million per year or USD 1.87 million per project overall). For private sector operations, the average grant request has been USD 1.5 million, with USD 5.2 million being the largest request in that time period.
- 2. FY23 significantly differs from historical patterns of grant use in CTF, as there has been a large increase in the volume of grant funding requested for projects. Including operations already approved by the Trust Fund Committee (TFC) and those expected to be brought for approval before June 30, there will be requests for USD 129.6 million in grant funding to support eleven projects for this fiscal year.
- 3. Higher requests for grant resources compared to historical experience has important implications for the future use of CTF resources, both in terms of the type of financial instruments CTF can deploy and projects in emerging sectors that CTF can support. It also comes at a time where CTF is expanding its programming suite through the Accelerating Coal Transition (ACT) program and will look to possibly invest in additional thematic areas with resources mobilized by the CIF Capital Market Mechanism (CCMM). While FY23 is currently an outlier, it may signal an increased demand for grants to support both public and private sector operations.
- 4. These issues were discussed in the CTF Semi-Annual Report that was delivered at the February 2023 TFC meeting. The TFC, acknowledging both the proposal from CIF AU for a pause on grant approvals and the concerns expressed by the MDBs, requested the MDBs to review the pipeline of projects requesting grants through the end of FY23 and provide further information and justification for grant use in those projects they prioritize by March 1, 2023. It also directed CIF AU to conduct further analysis on the implications of approving all FY23 grant requests for CTF by March 1, 2023, and to work with the MDBs to develop a strategic approach for the use of grants in future years to be considered at the June 2023 TFC meeting. This document responds only to the requests to be completed by the March 1 deadline. Documents outlining the agreed-upon strategic approach to grants will be completed at a later date.

# **2** Grants in CIF Financial Terms and Conditions (Pricing Policy)

5.

The pricing of CIF's financial products is established by the CIF Financial Terms and Conditions<sup>1</sup>, or the Pricing Policy, which was adopted by the Joint TFC in November 2020. It defines general principles to govern the use of concessional resources as:

- Economic rationale for using blended concessional finance
- Crowding-in and minimum concessionality
- Commericial Sustainability
- Reinforcing Markets
- Promoting High Standards

These principles aim to achieve a number of goals, including to address instituitional or market failures, minimize the risk of disrupting or unduly distorting markets, not crowd out private finance, and achieve long-term financial sustainability in different sectors.

6. The sparing use of grants is addressed throughout the Pricing Policy. Non-reimbursable technical and investment grants are identified as financing modalities for CIF programs and their use in public sector projects should be determined by country-based criteria. Specifically, Low Income Countries are eligible to receive grants as part of their product mix if they are classified as at high risk or medium risk of debt distress according to the Joint World Bank-IMF Debt Sustainability Framework. For Low Income Countries with low risk of debt distress and Middle Income Countries, grants are considered on an exceptional basis. Section 9 of the Pricing Policy states:

Exceptions to this Policy are not normally considered. However, under extraordinary country, project or program circumstances, exceptions to the terms and conditions outlined in this Policy may be submitted to the TFC for their consideration and approval, subject to justification and documentation of rationale supporting the exception to the Policy and subject to the terms of the CTF and/or SCF Contribution Agreements/Arrangements and applicable Standard Provisions.

Additionally, according to the Pricing Policy, the concessionality applied to private sector projects is to be determined by MDBs on "a case-by-case basis implementing the common guidelines of the Enhanced Blended Concessional Finance Principles for Private Sector Investment Operations agreed by the heads of MDBs and European Development Finance

<sup>&</sup>lt;sup>1</sup> See Climate Investment Funds Financial Terms and Conditions <u>here</u> for detailed descriptions of the principles and other details.

Institutions in October 2017, within their own processes and operational contexts." All private sector grants are considered exceptions under the Pricing Policy.

7. Of the eight projects still to be approved in FY23, only two public sector projects conform to the Pricing Policy. Additionally, more than half of the total amount of grant requests (USD 73 million out of USD 129.6 million) are private sector grant requests, which should be requested only on an exceptional basis. This underscores the exceptional nature of FY23 grant requests.

# **3** Important Considerations for Continued Grant Use

8. Beyond the Pricing Policy, the TFC should consider how the volume of grants requested in FY23 will affect the CCMM and ACT program moving forward. Availability of grant resources is not a concern right now because the vast majority of CTF programming is concessional loans and the concessionality criteria (i.e., outgoing financing cannot be more concessional than incoming funding) is met. For purposes of this discussion, the remaining funding availability in the CTF main fund is concessional enough to support grants at this time. These conditions would no longer apply with the approval of CCMM.

# 3.1 CCMM

- 9. As discussed in the January 2023 CTF Semi-Annual Report, the volume of resources used for any financial product that is not expected to generate reflows will be considered operating losses on the CCMM balance sheet. Outgoing grants reduce the capital base of CCMM, which consists of grant or capital contributions held in the CTF Trust Fund, the moment they are disbursed. This capital base is one of the key aspects for CCMM to achieve a AA credit rating because it will allow CCMM to borrow at lower costs and access a larger group of investors in the capital markets. The IBRD Finance and Risk Committee made its decision to provide trustee and treasury management services for CCMM in part on the assumption that CCMM would achieve an AA rating. Initial indications from other MDBs show that the rating will be important for their ability to institute the enhanced liqudity policy as well.
- 10. The main factor that credit rating agencies usually consider when rating an entity like CCMM is the financial profile of the issuer, which includes 1) capital adequacy; 2) liquidity and funding availability, and 3) business profile, including policy importance and governance and management expertise. Grant use affects the first two aspects. First, as discussed above, outgoing grants are counted as operating losses and reduce the capital adequacy of CCMM. Specifically, those losses affect the risk-adjusted capital (RAC) ratio, which is a measure of how well CCMM's balance sheets can handle shocks. Higher levels of capital result in higher

ratios. The base case modeling of CCMM (described in paragraph 15) shows it to have a strong RAC ratio of 40 percent, a level that can absorb some operating losses in early years and still maintain a AA rating. More losses, however, deplete the capital base and reduce the ratio. Large outflows or higher than projected grant usage in the early years of CCMM will lower the RAC ratio and bring it closer the threshold for a AA rating, which is likely to be in the high 20<sup>th</sup> percentile.

11. Second, grant usage affects CCMM's liquidity and funding over time. Liquidity is reduced by outgoing grants as they reduce available cash on hand. High grant use also results in less funding in the form of loan reflows over time because grants are non-reimbursable. These two dynamics can put additional downward pressure on CCMM's credit rating. As a financial mechanism constructed to provide concessional resources to emerging market and developing countries, CCMM should be expected to see losses over the course of its operations, as is shown in the base case modeling scenario. Those losses, however, should be limited to preserve CCMM's ability to achieve a AA rating.

### 3.2 ACT Program

- 12. The ACT Investment Program seeks to tackle critical challenges associated with coal phase down through support for three dedicated pillars of *governance, people,* and *infrastructure.* While the *governance* pillar provides support for strengthening the enabling environment, such as policy and institutional frameworks to enable a country to pursue its coal transition pathways, the *people and communities* pillar focuses on ensuring the just transition of people and communities who stand to be affected most by the transition of existing coal assets. Under this pillar, the program supports both reskilling and retraining activities to prepare people for jobs of the future, but also makes a provision for providing capex investments that would diversify local economies and create alternative income generation opportunities for coal communities.
- 13. Lastly, the *infrastructure* pillar focuses on retirement, decomissionsing, and repurposing of existing coal assets. According to the ACT design document, it is expected that 5 per cent, 25 per cent and 70 per cent of the total funding will be used respectively for activities under the governance, people and communities and infrastructure pillars only consistent with the mandate for the program as originally envisioned.

- 14. The CTF TFC initially selected four countries (India, Indonesia, the Philippines, and South Africa) to be supported through the program. At the most recent meeting in February, two new countries (Dominican Republic and North Macedonia) were added to bring the total number of countries to be supported through the program to six.
- 15. As of December 31, 2022, the total funding envelope under the program was approximately USD 2.25 billion, with contributions from the governments of Canada, Denmark, Germany, the United Kingdom, and the United States. A number of activities to be supported by the program, particularly under the *Governance* and *People and Communities* pillars, are expected to be non-revenue generating at levels equivalent to 30 per cent of total indicative allocation (see para 12). For the purpose of this analysis, we have assumed that a maximum of USD 225 million (10 percent of ACT resources at the writing of the paper) may be used as grants for such purposes and will be taken from the CTF Trust Fund. Also, given the nature of these activities, it is assumed that most of these grant funds will be front-loaded in the first three to five years (2023-27), before the loans are deployed to support the investment projects that typically take longer time to develop.

# **4** Potential Financial Impact of Elevated Grant Use

- 16. The CCMM model base case assumes that three percent of all funds raised in the capital markets (estimated to be USD 15 million out of USD 500 to 750 million per year, or USD 300 million over 20 years) would be deployed as grants or high-risk financial products. These assumptions informed the CIF AU recommendations to the TFC in the CTF Semi-Annual Report and form the baseline under which the analysis is being conducted.
- 17. In response to the TFC's request for additional analysis, CIF AU in collaboration with the IBRD Chief Risk Office ran a number of scenarios through the CCMM financial model to assess the impact of grant financing options using the same assumptions of the base case financial analysis undertaken in the CCMM Technical Proposal and duplicated in Annex 1. The current analysis considered two main approaches and multiple scenarios under each approach that assume a commitment authority of USD 500 million per year is maintained in all cases. The approaches and scenarios considered were:
  - a) Approach 1: Creating a grant pool that is separate from the balance sheet of CCMM. This option was discussed as a possible solution during the TFC meeting, as it would allow grant approvals to proceed without having an impact on the CCMM capital base. The trade-off with this approach is that the initial separation of the grant pool counts as a one-time withdrawal of capital for CCMM as it is trying to obtain a final credit rating. See Table 1.

- i) <u>Scenario 1</u> considered a USD 300 million grant pool, which is equal to the level of grants assumed disbursed over 20 years at USD 15 million per year in the CCMM base case scenario; and
- ii) <u>Scenario 2</u> considered creating a USD 500 million grant pool, which is equal to the level of grants assumed disbursed over 20 years at USD 25 million per year in line with the proposal from CIF AU in the CTF SAR. This grant pool would cover all grant requests in FY23, USD 225 million in future ACT grant requests, and leave around USD 145 million for additional grants requests in CTF over the 20-year period modeling period.
- b) Approach 2: Keeping the grant pool on CCMM's balance sheet and frontloading significant disbursements of grants over five years to support expected programming demands from FY23 projects and ACT Investment Plans<sup>2</sup>. See Table 2.
  - Scenario 3 considered creating a USD 300 million grant pool reserve on CCMM's balance sheet, which would cover a subset of FY23 grant requests and the full amount of expected ACT grant requests over five years, but leave no additional resources for grants requests in CTF over the 20-year modeling period.
  - ii) Scenario 4 considered creating a USD 500 million grant pool reserve on CCMM's balance sheet, which would cover current and expected FY23 grant requests, the full amount of expected ACT grant requests over five years, and leave around USD 145 million for additional grants requests in CTF over the 20-year modeling period. This scenario is mostly directly comparable to Scenario 2 where USD 500 million is separated from CCMM's balance sheet;
  - iii) Scenario 5 considered creating a USD 355 million grant pool that would support all USD 129.6 million of the grant requests (both those that are in line with and exceptions to the Pricing Policy) that have been made in FY23, and assumes that USD 225 million in ACT grants would be approved and disbursed in the first five years. This option is one that best captures the state of current and future grant requests in CTF.

## 4.1 Results

18. As discussed above, the two modelling outputs that are most relevant to estimating the rating that CCMM would receive are the Minimum RAC Ratio and Impact on CCMM

<sup>&</sup>lt;sup>2</sup> This approach initially included a scenario with a grant pool of USD 300 million, but the results were similar enough to Scenario 1 that we determined

Capital/Equity, the latter of which represents losses over time. Overall, higher levels of grant use in the early years of CCMM result in lower minimum RAC ratios and higher losses over the 20 year modelling period due to the reduction in the CCMM capital base. This also results in CCMM needing to issue bonds earlier and more frequently in the modelling period.

### Grant Pool Separated from CCMM Balance Sheet

19. The results show that creating a grant pool of CTF resources taken off CCMM's balance sheet would result in a significant impact on the equity of CCMM compared to keeping the grant pool as a reserve on CCMM's balance sheet. Taking equity away from CCMM to create a grant pool would force CCMM to raise greater levels of funding through bond issuances earlier than in the base case scenario while also resulting in greater operating losses, which would exacerbate the negative carry in CCMM. Table 1 also shows that both scenarios result in significant losses over time, in part because the model counts grants separated from CCMM as losses.

	Base Case	Grant P	ool Size
	3% or \$15	USD 300 m	USD 500 m
	million/year*		
Minimum RAC Ratio (2023-2042)	40%	36%	31%
Year of first bond issuance*	2025	2023	2023
Bond issuance in 5 years (USD Billions)	1.2	1.7	2.1
(2023-2027)			
Bond issuance in 10 years (USD Billions)	3.8	5.0	6.0
(2023-2032)			
Maximum Debt to Equity Ratio (2023 –	93%	113%	139%
2042)			
Minimum Liquid Assets to Gross Debt Ratio	42%	40%	38%
(2023 – 2042)			
Projected Operating Income/(Loss) (USD	(332)	(254)	(448)
Millions) (2023 – 2042)			
Impact on CCMM Capital/Equity (USD	(332)	(554)	(948)
Millions) (2023 – 2042)			

#### Table 1: Results of Model Runs with Grant Pool Separated from CCMM

#### Grant Pool Created on CCMM Balance Sheet

20. The modeling for Approach 2 considered scenarios with and without the base case assumption described in paragraph 15 above. The analysis revealed that keeping grants on

the CCMM balance sheet and disbursing it over five years results in fewer losses over time and slightly smaller reduction in the RAC ratio than creating a separate grant reserve. In addition, the modeling shows that disbursing lower levels in grants in the first five years while maintaining disbursements assumed under the base case results leaves CCMM in relatively better financial outcomes when compared to high levels of grant disbursement in early years.

	Base Case	Grants disbursed from CCMM in 5 years					
	3% or \$15						
	million/year*	USD 300 m	USD 500 m	Base Case + USD			
				355m in grants			
Minimum RAC Ratio (2023-2042)	40%	37%	32%	32%			
Year of first bond issuance*	2025	2023	2023	2023			
Bond issuance in 5 years (USD	1.2	1.4	1.9	1.5			
Billions) (2023-2027)							
Bond issuance in 10 years (USD	3.8	4.6	5.4	5.0			
Billions) (2023-2032)							
Maximum Debt to Equity Ratio	93%	109%	132%	129%			
(2023 – 2042)							
Minimum Liquid Assets to Gross	42%	41%	41%	40%			
Debt Ratio (2023 – 2042)							
Projected Operating	(332)	(512)	(895)	(975)			
Income/(Loss) (USD Millions)							
(2023 – 2042)							
Impact on CCMM Capital/Equity	(332)	(512)	(895)	(975)			
(USD Millions) (2023 – 2042)							

Table 2: Results of Model	Runs Grant Pool Created	on CCMM's Balance Sheet
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21. The analysis shows that the most financially efficient approach to grant resources is to leave them on CCMM's balance sheet, but that high levels of grant disbursements lead to high levels of losses over time. There are also other considerations that transcend the quantitative results of the model, such as the view of rating agencies and investors on the impact of the overall asset and liability management strategy of increasing grants in a market facing vehicle that does not have a formalized replenishment model. In view of these nonquantitative considerations, it may be prudent to maintain the base case as it is outlined in the CCMM proposal to enable the Treasury Manager and CIF AU to facilitate the process for obtaining the required rating and efficiently tapping the market with the first issuance. Major changes to the model assumptions at this stage would need to be clearly explained to credit rating agencies.

# **5** Proposal for TFC Consideration

22. CIF AU and the MDB Committee held extensive discussions throughout the spring to elaborate on the challenges identified above and develop a constructive way forward for FY23. While there was much common ground, consensus on a single recommendation was never reached. CIF AU consulted with the CTF co-chairs to finalize the following proposal for the TFC's consideration:

Allow the two public sector projects from ADB and WB with scheduled Board dates (approx. USD 18.25 million) to proceed with TFC review and approval. Keep the approval pause for all other projects requesting grants until CCMM bond issuance or CIF AU and the MDB Committee propose and the TFC approves a reasonable strategy for grant use moving forward.

23. Maintaining the pause on grants until CCMM has achieved a credit rating and made an initial bond issuance, there are important reputational risks associated with such an approach that are outlined in the previous paragraph and discussed in the project justifications in Section 8 below. After CCMM has achieved its credit rating and established an issuance record with its first bond issuance, an increase in grant outflows combined with possible new grant contributions in the future beyond the base case could be less likely to impact it, subject to further careful consideration and review by credit rating agencies.CIF AU and the MDB Committee continue to collaborate to develop a strategy for grant use in CTF for FY24 that will advance projects in line with the Pricing Policy and support the targeted rating for CCMM, as requested in the February 2023 CTF TFC co-chairs summary. That strategy will be presented at the June TFC meeting.

# 6 CTF FY23 Projects with Grant Resource Requests (USD)

Project Title	Public / Private	Country	Program	MDB	MPIS	Grant Amount	Non-Grant Amount	Fin Product Type	Funding Request	Status
GESP: Battery Energy Storage Systems (BESS) to Increase the Reliability of Energy Systems in Brazil	Public	Brazil	DPSP IV- GESP	IDB	300,000	6,000,000	10,000,000	Convertible and contingent recovery grants, Grant, Harder Terms Loan (Historic)	16,300,000	Project approved
DPSP Futures Window: Green Hydrogen Financing Facility	Private	Egypt	DPSP - FW	EBRD	1,800,000	29,100,000	-	Grant	30,900,000	Project approved
GESP: Indonesia Sustainable Least-Cost Electrification (ISLE- 1) Program	Public	Indonesia	DPSP IV- GESP	IBRD	-	19,000,000	15,000,000	Grant, Loan (Historic)	34,000,000	Project approved
GESP: AfDB Energy Storage Program	Public/ Private	Multinational	DPSP IV- GESP	AfDB	750,000	10,000,000	20,000,000	Grant, Loan	30,750,000	Concept note and project not yet submitted
GESP: Accelerating Sustainable System Development Using Renewable Energy (ASSURE)	Public	Maldives	DPSP IV- GESP	ADB	250,000	5,000,000	10,000,000	Grant, Sr. Loan	15,250,000	Submitted for TFC approval in December 2022
GESP: EBRD Energy Storage Program	Private	Regional	DPSP IV- GESP	EBRD	1,212,000	11,646,000	29,625,000	Grant, Senior or Subordinated Instrument	42,483,000	Submitted for TFC approval in December 2022
GESP: Program for Transformative Mobility and Battery Storage	Public	India	DPSP IV- GESP	IBRD	300,000	13,000,000	-	Grant	13,300,000	Project not yet submitted
GESP: Program to Support Economic Recovery in Mexico	Public/ Private	Mexico	DPSP IV- GESP	IDB	TBD	3,600,000	5,400,000	Grant, Loan	9,000,000	Concept note endorsed in October. Project not yet submitted
DPSP Futures Window: Climate Innovation Regional Program	Private	Regional	DPSP-FW	IDB	1,000,000	3,000,000	25,000,000	Grant, Senior and Subordinated Debt, Equity, Guarantees	29,000,000	Concept note endorsed in November. Project submitted in March 2023
DPSP Futures Window: Green Hydrogen Pilot Program	Private	Global	DPSP-FW	IFC	700,000	21,300,000	-	Grant / Viability Gap Financing	22,000,000	Project submitted in September 2022. Updated

										document submitted in January 2023
GESP: IFC Energy Storage Program	Private	Global	DPSP IV- GESP	IFC	750,000	8,000,000	32,610,000	Grant, Loan	41,360,000	Revised concept note and project submitted to CIF AU.
				TOTAL	7,062,000	129,646,000	147,635,000		284,343,000	

# 7 Additional Justifications for the Use of Grant Resources

24. In response to the discussion on the use of grants in FY23 included in the CTF Semi-Annual Report (SAR) at its February 1, 2023 meeting, the CTF Trust Fund Committee (TFC) requested the MDBs to undertake the following tasks by March 1:

a. to review the projects including grant requests in the pipeline to be submitted by the end of FY23; and b. to provide further detailed information and justification on the projects that MDBs would like to prioritize.

- 25. Section 7 responds to This section responds to the second task by providing an overview of the projects in CTF's FY23 pipeline that are requesting grant resources as of 28 February 2023, along with detailed justifications submitted by the requesting MDBs for the use of the grant funding.
- 7.1 AfDB

#### 7.1.1 GESP: AfDB Energy Storage Program

- 1. This program aims to deploy grants for eligible sovereign energy storage subprojects in CIFpilot countries, alongside loans for non-sovereign sub-projects, with the objective of better integrating intermittent renewable energy into power grids. To date, investments are being explored in a few potential sovereign projects in Kenya, Ethiopia, and Ghana that include energy storage components. These are all public-led projects for which the counterparts would be the Governments. The use of grants is justified in these countries, given that Ethiopia and Ghana are heavily indebted poor countries (HIPCs) and the Risk of Debt Distress as determined by the Joint IMF/World Bank Debt Sustainability Framework is high in all three countries.
- 2. Overall, the program aims to introduce battery storage solutions to better balance demand and supply in the power systems to reduce intermittent capacity in the grid, especially during off-peak hours. Where required, AfDB will work with the host country to support the development of the regulatory and contractual framework to address the needs of encouraging producers to use power plants' storage systems so that they are better prepared to meet energy demand from the markets.

## 7.2 ADB

#### 7.2.1 GESP: Accelerating Sustainable System Development Using Renewable Energy

- 3. The project has a high level of readiness and is scheduled to go to the ADB Board by mid-March 2023. It is essential to have CTF/GESP co-financing, including the requested grant component, confirmed before ADB Board submission.
- 4. The project is the most complex and largest renewable energy project in the Maldives facilitating private sector investments. The investments are covering 20 dispersed outer

islands with solar photovoltaic investments of about 20MWp covering floating solar, land mounted and rooftop installations. These installations at widely dispersed at 45 different sites due to the scarcity of the space for Solar PV installations in these small outer islands. The capital intense investments to facilitate private sector such as battery energy storage, grid upgrades, energy management system and the Scada system are mainly supported through grants from ADB, Japan Fund for the Joint Crediting Mechanism (JFJCM) and ADB's Climate Change Fund (CCF) as the project interventions cover outer islands where most poor and vulnerable people live. Hence it is important to keep the tariff at a reasonable level.

- 5. ADB has been prioritizing mobilization of grants to Maldives due to its high debt distress. The total grant mobilized for this project is USD 52 million (86%) and ADB concessional Loan (COL) USD 8.5 million (14%). This is excluding the proposed CTF loan of USD 10 million and USD 5 million grant, private sector investments of USD 23 million and government counterpart support. Asia-Pacific Climate Finance Fund (ACliFF) grant is also used to support a tariff buydown of about 7% by providing performance incentives for the private sector and also to provide payment security mechanism for the IPPs (private sector) to facilitate private sector competition. This will also improve the financial sustainability of the utility (FENAKA) for attracting private investments in the future. The project showcases significantly high leverage ratio of (1:5.67).
- 6. In order to achieve high impact and successful execution of the project, CTF loan of USD 10m and the grant of USD 5m requested under CTF GESP window is extremely critical. Without the requested level of CTF funding as co-financing the project cannot go forward.

## 7.3 EBRD

	7.3.1	<b>GESP</b> :	EBRD	Energy	Storage	Program
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Project Proposal Submitted:	EBRD Energy Storage Program
20 December 2022	
Grant	USD 11.646 million
Concessional loan (which can be in a form	USD 29.625 million
of either senior or sub-ordinated	
instruments) <sup>3</sup>	
Regional proposal including 11 countries	Egypt, Jordan, Morocco, Tunisia, Turkey, Ukraine,
	Kazakhstan, Armenia, Mongolia, Kyrgyz Republic, Tajikistan

7. The indicated grant amount is requested given the technologies promoted under the programme are still in their novelty and in some cases non-existent in the Programme countries. As such, the cost of technologies is much higher thus not yet commercial and would not be possible to be implemented by the Bank's clients without the use of grants.

<sup>&</sup>lt;sup>3</sup> Given this is a programme providing support to multiple projects and a flexible pipeline is under development it is not possible to specify in detail the exact instruments with allocations associated to them. The EBRD does not anticipate convertible or equity instruments under this programme.

- 8. The requested amount is justified given the fact that the USD 10 million in grant funding covers for a total of 11 countries representing USD 1 million per country. EBRD has engaged with a number of developers for projects where the projects are under way on the basis that this grant financing is available. If funding is not approved, this goes as reputational risk in front of clients and markets, which could cause damage for ongoing and future business.
- 9. In the SEMED region negotiations are ongoing on potential investments the bank would be unable to progress without a clear understanding if the instruments could be used and made available to support these investments. The proposal also contains countries such as Kyrgyzstan and Tadzhikistan, which are lower-middle income countries, which are subject to IMF concessionality requirements due to the associated risks related to the high-level indebtedness in the country. Similarly, for private sector entities it is unlikely that a project using storage related technologies would be prohibitive without using only concessional loans due to the associated high cost for the technologies.
- 10. For each project, the Bank will undertake a feasibility study, which will provide necessary information to determine the level of concessionality needed for the projects and grants are intended to be used only in cases where the affordability constraints are justified. Overall, without CTF funding the Programme would not be able to go forward.
- 11. Please find below some further information on a project in Kazakhstan to illustrate as an example where grants are needed to make our projects viable in the region. This project is scheduled to go to internal approval at concept note stage shortly and is planned to be signed by the end of this year.

#### 12. Project example: Strengthening of the South energy zone in Kazakhstan

Borrower: Kazakhstan Electricity Grid Operating Company (KEGOC)

**Goal**: Strengthen existing lines and build new, including the storage component in the southern energy zone of Kazakhstan. Thereby the aim is to: (i) Increase reliability (security of supply) and (ii) Enable connection of new renewable energy capacity and required balancing capacity to the energy deficit system of the South Kazakhstan regions. At this point of time Kazakhstan energy system is 70% coal dominated which cannot balance intermittency of the renewable energy sources. Depreciation level of the grid is approx. 66%, which also triggers electricity losses in the system and an outdated SCADA system does not allow to change regimes of the grid operation swiftly. This project would also help to (iii) Strengthen regional connection with energy systems of Uzbekistan and Kyrgyz Republic and expected to help to prevent blackouts as one, which happened on Jan 25, 2022, and left Uzbekistan, Kyrgyz Republic and the South of Kazakhstan without power.

**On February 16, 2023, an MOU was signed between EBRD and Samruk Kazyna** (owner of KEGOC) to cooperate on the strengthening of the grid in Kazakhstan (include this project among others).

Project cost: initial estimation ~EUR 400 million.

#### Relevance of grant funding for the project:

- a. Grant funding helps to deal with the affordability. These are major investments in modernization and building new grids. Strengthening of the South project EBRD is working on now is approx. EUR 400mm, which has a major impact on the tariff.
- b. Grant funding has a major demonstration effect with relatively small amounts (e.g., EUR 10 mm) the project would e.g., support development of the battery storage solution to show advantages of the system which could be then replicated within the country and, in an ideal case, in the region. It might also be used for training purposes and used by the education centers to train students.
- c. EBRD has the best experience in the region supporting grid projects. E.g., in Kazakhstan KEGOC is a client of the bank for more than 20 years. EBRD has the knowledge on the technical side and will be doing all technical and environmental due diligence before committing any funding.
- d. For major Economies in Transition Countries (ETC) grant funding is also an IMF requirement (e.g., in Kyrgyz Republic, where EBRD is discussing with the Ministry of Energy a project opportunity related to the modernization of the grid).
- e. Grant funding for the grid companies would help to make an extra mile in terms of implementation of newest solutions meeting smart grid requirements. It is achieved via digitalization of the grid and adding flexibility to the energy system. Flexibility of the system is a bottleneck and one of the major roadblocks to integrate new sizable renewable energy capacity (due to intermittency) and digital/smart solutions help to reduce response time of the grid.
- f. Grant funding is needed to install storage solutions to the grid for the use by the transmission system operator. It again helps to mitigate intermittency issue and enables faster and sizable integration of renewables.

# 7.4 IBRD

## 7.4.1 GESP: Program for Transformative Mobility and Battery Storage

- 13. As per the CIF Pricing, while grants are not typically offered to MICs, "under extraordinary country, project or program circumstances, exceptions to the terms and conditions may be submitted to the TFC for their consideration and approval, subject to justification and documentation of rationale supporting the exception".
- 14. Under the proposed TMBS program, the IBRD as well as Canada-World Bank Clean Energy and Forests Climate Facility Trust Fund are being utilized to reduce the financing costs for Battery Energy Storage Systems (BESS) in India to stimulate this nascent industry. CIF funds are being utilized to address institutional and market failures in India related to the BESS market and build the enabling environment. CIF funds will also help crowd-in private sector investments by helping pipeline building as well as appraisal capabilities at the State Bank of India (SBI) (the implementing agency) and other financial institutions. The project will not be viable without CIF funds.
- 15. Based on available funding and earlier guidance from TFC members as well as the CIF AU, World Bank has continued to explore the different combinations of products that could affect transformational change in a sector in a country. In that context, concessional loans and

grants options were offered to the Government of India (GOI) to address critical barriers in the BESS through extensive technical assistance and capacity building activities at the National and State level.

- 16. CIF grant funds will be utilized for technical assistance and institutional strengthening activities. As the program has a national scope, state focused policy/regulatory TA as well as market development activities will be undertaken in 4-5 states over the duration of the program of 5years. CIF funds will also help set-up/strengthen institutional structures to support origination, appraisal, and supervision of BESS investment proposals.
- 17. This model follows the highly successful Grid connected Rooftop solar PV (GRPV) project implemented by the SBI with support from IBRD, CTF and GEF. The Technical assistance program (Suprabha) USD 13 million, has played an instrumental role in creating an enabling ecosystem across the country for accelerating the growth of GRPV across 17 states. The key highlights of the support include (i) Suprabha collaborated with the central regulator to develop the Draft Model Regulation for Grid Interactive Distributed Renewable Energy Sources. (ii) It played a major role in upgrading the skill sets of key stakeholders. It has trained over 1,260 DISCOM officials, bankers, trainers, developers, and entrepreneurs, (iii) Suprabha also supported the development of United Web Portals (UWP) for digitizing the GRPV application process in 17 states. The UWP provides transparency to consumers on the entire process and ensures a hassle-free experience for a consumer to install a GRPV system.
- 18. The BESS project origination and implementation is more complex and will require more intensive TA. It is a nascent market and development of the market is crucial for integration of Renewable energy (RE) to the grid. The support to the enabling environment is imperative for the uptake of BESS and thus RE.
- 19. Funding request: The project made an original request of USD 15 million. Based on strategic considerations of the CIF as well as TFC and CIF AU guidance, <u>World Bank has re-considered the original request reducing it to USD 13 million.</u> Finally, GOI, the same sovereign client as for the TMBS program, is cancelling USD 28 million CTF resources on another project (Innovation in Solar Power and Hybrid Technologies Project) including USD 13 million investment Grant and USD 15 million in loan resources thereby helping alleviate the current situation. As such this request has a very small impact from the India CTF perspective.
- 20. **Urgency:** The TMBS program has completed the internal decision meeting chaired by the South Asia Regional Vice President (RVP) and is scheduled for Board presentation on May 11, 2023. The board date has already been moved from April 13, 2023, in view of the TFC guidance and any further delays would strain the relationship with the client.
- 21. **Details on Technical Assistance:** The CIF funds will support targeted TA to remove barriers to large-scale adoption of battery storage by supporting the development of an ecosystem. They will support the adoption and integration of a renewable energy to avoid significant ramp-up of coal in the short and medium terms and therefore help reduce the lock-in of millions of tons of GHG emissions over the long term.
  - **Strengthening capacity.** The TA will support the FI on setting up internal credit procedures and providing training to staff for assessing the financing proposal for battery

storage with an expected outcome of improving institutional capacity and mainstreaming battery storage lending at the FI. Similarly, the TA will be provided to other banks, electricity distribution companies (discoms), transmission utilities, load dispatch center, and so on with an expected outcome of improving the knowledge about battery storage operation for these stakeholders.

- Creating enabling policy and regulatory environment. The TA will first analyze the
  remunerable value proposition and the associated market size especially in stationary
  battery storage applications, for instance, behind the meter for diesel abate distribution
  companies to co-locate the battery storage with charging infrastructure for better grid
  management with or without rooftop solar, congestion management in the T&D grid, and
  co-locating with the RE generators, among others. The TA activities will extend support
  to the central and state regulators with an expected outcome to develop an ancillary
  service market for monetizing value propositions of battery storage under different uses.
- Support creation of a circular economy. The TA component will include studies in which solutions for battery waste management will be evaluated including exploring reusing end-of-life EV batteries for less-demanding applications and recovering critical metals and reutilizing them. It is critical to recover metals at the end of life for the country's supply security and putting those back into the circular economy. It would also include creating awareness and improving public perception of second-life products. The funds will be used for the development of environmental standards to ensure safe recovery or disposal and no toxic fumes or waste gets generated in the process. This will include guidelines/standard operating procedures for battery recycling facilities, standards for battery waste recycling and waste disposal out of recycling facilities, and identification of appropriate recycling technology.
- Support safety practices for BESS. The TA component will include studies which will evaluate the safety practices surrounding manufacturing, transportation, handling, and installation including policy and regulatory framework for testing, codes and standards for safety requirements, and environment health and safety standards for battery storage use in India. Since there are currently limited/no safety regulations or guidelines for the use of Lithium or Lithium-ion batteries during the manufacturing, transportation, installation, and operation/maintenance phases, the funds will be used to develop a guidebook for the local government, buyers, and operators, outlining the safety plan from transportation to operation stage as well as recommendations for first responder and engagement plan for local responders.
- Renewable energy integration: At COP27 held in November 2022, Gol unveiled its Long-Term Low Carbon Development Strategy<sup>4</sup> focusing on expanding renewable energy (RE) generation and grid strengthening to ensure energy security. The TA would support integration of RE in charging infrastructure by recommending institutional setup for EV and energy coordination, developing regulatory measures to promote single window

<sup>&</sup>lt;sup>4</sup> India's Long-Term Low-Carbon Development Strategy, Submission to the United Nations Framework Convention on Climate Change, Ministry of Environment, Forest and Climate Change, Government of India, 2022

clearance, and providing implementation support to unlock green charging across parking locations- residential, office and commercial and associated business models.

- **Exploring new technologies for energy storage.** The TA component will include a study to explore examples of successful storage technologies in use globally, other than battery storage, such as mechanical storage which uses innovative technologies to harness kinetic or gravitational energy to store electricity. This study will consider local weather conditions and availability of resources to make recommendations for use of similar technologies in India. The TA will facilitate coordination between the policy makers, industries, and research institutes on the emerging areas in energy storage, testing facilities and standards.
- **Consumer awareness.** The TA component will include awareness campaigns to sensitize key stakeholders in the areas of battery safety, recycling and reuse of batteries, financial evaluation and sustainability, smart charging, e-bus contracting, and so on.

# 7.5 IDB

## 7.5.1 GESP: Program to Support Economic Recovery in Mexico

- 22. The IDB follows CTF guidelines in recommending a necessary grant element that is tailored to the additional cost and risk premium of this relatively new type of PV+BESS investment, and a 3-year execution period for the program is foreseen. There is prior experience with BANCOMEXT acting as executor of prior operations both of which have published Project Completion Reports with satisfactory results, qualifying BANCOMEXT's performance as excellent).
- 23. Grants to Reduce Financial barriers hampering BESS uptake and deployment. While the local financial sector is solid and well-capitalized, financial depth in Mexico is low relative to other major economies in Latin America. Total financing to firms reaches only 24.1% of Gross Domestic Product (GDP) and small firms account for just 15% of total financing to firms in the private sector. Also, while new credit granted to large companies has stabilized, smaller companies continue to show a larger reduction in their portfolio levels. As is the case in the rest of the region, data confirms that local SME face particularly greater credit constraints at base, which is exacerbated during periods of macroeconomic contraction.
- 24. **Financing Credit Guarantees.** CTF resources will be used to finance a revolving credit guarantee fund managed by BANCOMEXT to partially cover loans granted by either BANCOMEXT itself or an intermediary FI, to SME investing in projects with BESS. BANCOMEXT operates as both first and second tier lender, depending on the size of the borrowing SME; smaller firms are serviced through second tier operations.
- 25. **Grants and Loans to promote Social Inclusion**, surveys suggest that 30% of microenterprises and SME are owned by women -compared to a 13% average share in Latin America- and that 35% of these firms are partially or fully credit constrained, compared to 28% of those owned by their male counterparts. Additionally, only 3.9% of women microenterprises and SME, report using banks to finance investments, compared to a 17.4% share in the case of men.

#### 7.5.2 DPSP Futures Window: Climate Innovation Regional Program

- 26. The IDB Group funding proposal outlines the use of **USD 3.0 million in grants for Technical Assistance (TA) activities**. Up to USD 0.5 million of this grant will be managed by the IDB Lab and up to USD 2.5 million will be managed by IDB Invest.
- 27. In private sector projects, TA supports knowledge generation, advisory, and capacity building to facilitate investment in high impact projects and enterprises. In more mature markets that require first loss structures to enable crowding in of commercial capital, TA can serve as an enabler to generate data and information needed for the prospective investors' decision-making process.
- 28. Similar to blended finance, TA is crucial to compensate uncertainty, increased risk, or higher upfront costs associated with investments in innovative and clean technologies, and to ensure the resilience of investments. Furthermore, TA is often instrumental in originating investment opportunities, facilitating the investment decision, reducing risk and uncertainty in projects related to disruptive technologies, and facilitating leapfrogging for emerging markets via knowledge transfer and best practice adoption from developed markets.
- 29. In this context, IDB Group's TA window is expected to provide the following grants on a rolling basis (tailor-made solutions may also be accommodated as long as they remain compatible with the IDBG Climate innovation Regional Program overarching targets), which can be categorized into the following:
  - **Project Preparation TAs:** covers prefeasibility studies, feasibility studies, market readiness studies, business model generation and validation, technological de-risking assessments, and similar projects, which facilitate decision making for both project sponsors and investors regarding the techno-economic outlook of a particular opportunity. Examples: supporting the conceptual engineering of a green ammonia production facility, validation of the business model for an electric car leasing project, supporting first time green bond issuers in e.g., identifying the market potential, evaluating the feasibility and structuring.
  - **Operational assistance TAs**: covers the provision of technical, corporate governance, E&S, and legal due diligence services. These would be lent to projects where the nature of the investment or the size of the transaction may demand high due diligence costs that may represent a barrier for investment to the sponsor. Examples: legal due diligence for renewable energy PPA's in a jurisdiction with a maturing regulatory framework for such opportunities.
  - Innovation in contractual models TAs: supports the preparation of contractual and legal instruments that can facilitate business model or stakeholder articulation innovation, provided by specialized legal consultants that can frame such assistance in local jurisdiction. Examples: supporting a public-private scheme for an electric bus metropolitan project with overarching structuring services.
  - Gender smart appraisal TAs: supporting the promotion of gender equality across EE, RE, and sustainable transport projects, across the asset lifetime. Specific results-based

incentives on gender and inclusion KPIs may be linked to these TAs. Examples: performing a gender appraisal study on the construction and operation of a solar PV portfolio being considered for financing, quantifying the expected gender gap in construction and operation of the assets, coupled to training that promotes a diversified workforce.

• **Knowledge and dissemination TAs:** develop knowledge products (either client or market facing) that can help build the stakeholders involved and perform monitoring, evaluation, and dissemination activities for supported projects and investments. This is a cross-cutting TA category.

# 7.6 IFC

### 7.6.1 DPSP Futures Window: Green Hydrogen Pilot Program

- 30. Green hydrogen is a developing technology used mostly in early-stage projects, with costs ranging from USD 3-8/kg, which is at least 2-3x the cost of producing hydrogen from fossil fuels and with conventional power generation technologies. The production cost for green hydrogen is particularly sensitive to power prices, plant utilization rates, and capital costs with the electrolyzer representing the most significant expenditure. As a result, commercial viability for green hydrogen remains elusive as it is still more expensive than other forms produced by fossil fuels. Achieving cost parity with blue hydrogen, for example, would require a swift and sustained drop in costs of renewable energy generation and in electrolyzer costs.
- 31. The significant capital investment required in pilot projects is difficult to overcome without low-cost financing and/or government support. Due to the high first-mover and electrolyzer costs associated with early-stage pilot projects at the scale envisioned, Viability Gap Financing (VGF) is needed to help reduce the cost of capital to offset the additional costs of going green and make the projects economically viable. Given IFC's preliminary assessment of the nature and size of the market barriers in different countries, it is possible that the entire amount requested under the IFC CTF Futures Window Global Green Hydrogen Pilot Program might need to be used in the form of VGF. IFC will retain flexibility to structure CTF funds, however, in a most appropriate and capital efficient manner. The type of financial instrument and terms of financing will be designed to adequately address market barriers and to catalyze the uptake and scale-up of innovative green hydrogen investments with a minimum level of concessionality.

#### 7.6.2 GESP: IFC Energy Storage Program

- 32. The deployment of energy storage systems (ESS) technology remains limited outside developed economies. Despite the major reductions in system costs that have been achieved over the past several years, utility-scale energy storage remains an expensive technology. The significant upfront investment required remains the most significant barrier to growth and is difficult to overcome without low-cost financing and/or government support (including appropriate regulatory frameworks).
- 33. Energy storage is capital intensive, and costs have risen recently due to increased demand and supply chain constraints, especially for technologies that follow best sourcing practices.

As a result, ESS deployment remains concentrated mainly in developed countries that benefit from the higher purchasing power of end consumers and government subsidies. Concessional finance through VGF and the range of financial instruments available to the CTF GESP will support the deployment of ESS at scale in developing countries.

34. Demonstrating the performance of energy storage technologies and systems in frontier markets without significant cost is a key barrier for grid-level ESS deployment at scale. IFC is supporting several sub-projects, one of which involves the construction of a solar PV power plant with battery energy storage systems (BESS). The project seeks to increase the share of RE in a market where solar energy is only 5 percent due to the absence of storage to meet firm dispatch requirements, and where the market has a roughly 33 GW deficit of energy generation required to meet the demand and margin requirements. CTF concessional resources in the form of VGF are needed to partially offset the extra costs associated with BESS technology, particularly following IFC best practices concerning responsible Tier 1 suppliers that have well-established and transparent supply chains, which would otherwise make the project unviable.

# **Annex 1: Scenario Analysis Assumptions**

The financial analysis focuses on the economics of CCMM for the first 20 years (2023-2042). Table 3 provides highlights of key assumptions applied in the CCMM modelling.

Annual project commitments by TFC	USD 500 million
CTF product mix	97% loans & 3% investment grants
Composition of CTF projects	65% public & 35% private sector
Liquidity reserve	CTF 1.0 projects fully funded on commitment, while CTF 2.0 projects
	funded based on liquidity policy of 24 months of net cash
	disbursements
Loan Contributor seniority	Loan Contributors to rank senior to the CCMM bonds in respect of the
	CTF 1.0 Reflows. The Loan Contributors, however, would not have
	access to CTF 2.0 resources
Loan Contributor reserve	Equal to the maximum principal and interest payable to each Loan
	Contributor in any 12-month period in the remaining term
Capital adequacy	Fair value adjustments to address concessional nature of CTF's loan
	portfolio have been made, with minimum threshold capital adequacy
	ratio set at 25% (to maintain AA rating)
CCMM bond issuances	For modelling purposes, 5-year "plain-vanilla", fixed rate, bullet
	maturity, USD debt issuances were assumed
Annual CCMM bond interest cost	Market base rate (5-year forward USD SOFR swap curve rate) + 50 bps
	(expected indicative spread for an AA rated issuer)

## Table 3. CCMM Base Case – Key Assumptions

### Key Financial Analysis Indicators

The main indicators examined in the financial analysis include the following:

- The *Minimum Risk-Adjusted Capital (RAC)* ratio represents the lowest annual capital adequacy ratio for the 2023-2042 period. The goal is to ensure a ratio above 25 percent, which would be consistent with an AA rating.
- *Year of first bond issuance* (to support liquidity needs) excludes the potential inaugural first bond issuance in 2023 used to establish CCMM as an issuer in the capital markets.

- *Bond issuance* represents the cumulative CCMM bond issuance expected in each of the periods shown i.e., first 5 years, first 10 years.
- The *Maximum Debt-to-Equity* ratio indicates the degree of leverage of the issuer for the 2023-2042 period.
- The *Minimum Liquid Asset to Gross Debt* ratio represents the lowest annual debt ratio for the 2023-2042 period.
- Projected Operating Income/(Loss) represents the operating performance of CCMM<sup>5</sup> for the 2023-2042 period.

<sup>&</sup>lt;sup>5</sup> Projected operating income/(loss) is comprised of interest income and fees earned on CTF portfolio assets, interest income earned on treasury/investment assets, less interest expense associated with loan contributor obligations and market borrowing, general and administrative expenses, project-related expenses and expected credit losses on CTF portfolio assets.

#### **The Climate Investment Funds**

The Climate Investment Funds (CIF) were established in 2008 to mobilize resources and trigger investments for low carbon, climate resilient development in select middle and low income countries. To date, 14 contributor countries have pledged funds to CIF that have been channeled for mitigation and adaptation interventions at an unprecedented scale in 72 recipient countries. The CIF is the largest active climate finance mechanism in the world.



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