



Meeting of the CTF Trust Fund Committee
Washington D.C. (Virtual)
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CTF FUTURES WINDOW PROPOSAL



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CTF/TFC.27/5/Rev.1
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PROPOSED DECISION

The CTF Trust Fund Committee reviewed the document CTF/TFC.27/5/Rev.1, *CTF Futures Window Proposal*, and welcomed the document.

The CTF Trust Fund Committee notes the proposal to use any future canceled resources for the CTF Futures Window as part of the Dedicated Private Sector Program III (DPSP III) and approves the proposal for immediate effect.

1. Introduction

1. The Dedicated Private Sector Program (DPSP) under the Clean Technology Fund (CTF) has been the primary vehicle for programming available resources following the completion of most country investment plans. The third phase of DPSP (DPSP III), which utilized resources made available from cancelled operations starting in June 2017, was successfully completed in June 2020.
2. Following the completion of DPSP III, the CTF Trust Fund Committee (TFC) considered options for authorizing the use of additional cancelled resources at meetings in November 2020 and June 2021, but deferred taking a decision both times. At the June 2021 meeting, following a discussion on the proposed CTF Futures Window, the TFC instructed the CIF Administrative Unit (CIF AU), in cooperation with the Multilateral Development Banks (MDBs), to further develop the proposal, with a focus on “its scope and expectations regarding private sector co-finance.” This document presents a fuller proposal for the CTF Futures Window and includes more in-depth discussion on the priority issues identified by the TFC.

2. Rationale for CTF Futures Window

3. Since the completion of DPSP III, CTF has accumulated about USD 223 million from cancelled operations¹. These resources are not yet authorized to be used for new operations, nor can they currently be diverted to support other CTF-supported funding windows like the oversubscribed pipeline for the Global Energy Storage Program (GESp) or the new Accelerating Coal Transition (ACT) Investment Program. Additionally, they cannot be transferred to support programs under the Strategic Climate Fund (SCF) like the new Renewable Energy Integration (REI) program.
4. CIF AU and the MDBs have worked to develop a solution to both utilize cancelled resources in a way that can build on the successful track record of previous CTF investments, while allowing for flexibility to respond to emerging areas of clean technology investments. The potential solution is the CTF Futures Window, which would extend DPSP III while allowing for the funding of projects from the pipeline of other CTF windows.
5. With the support of the MDBs, CIF AU proposes establishing the CTF Futures Window to use existing and additional cancelled resources that may become available over the next three years (September 2021 to September 2024) to support DPSP-type operations and projects in the unfunded GESp pipeline and other projects not funded through other CIF programs . Demand for GESp resources is high and some MDBs have expressed a desire to use cancelled resources to support their pipeline.

¹ Since September 2018, USD 635 million in CTF resources have been made available for reprogramming, with an average of USD 127 million reported cancelled during each reporting period.

6. Cancelled resources from DPSP and CTF Investment Plan operations would replenish the CTF Futures Window as they are made available. MDBs will be encouraged to submit projects within their respective resource envelopes when ready. Following the initial approval of use of cancelled resources and in line with CIF policy, MDBs will need to send the TFC concept notes for projects before submitting their funding requests for final approval by the TFC. Projects which already have approved concept notes, such as those in the GESP pipeline, will not need to resubmit.

2.1. Value of DPSP III Model

7. The specific aspects of DPSP III that the CTF Futures Window would extend are as follows:
 - a. objective and principles – readiness, thematic fit, innovation, leverage, impact;
 - b. country access – all CIF countries are eligible;
 - c. first three thematic investment areas – energy efficiency, renewable energy plus, and sustainable transport^{2F}.
8. One of the primary challenges in developing a sustainable mechanism for utilizing resources in CTF at present is the uncertain level of those resources. Without predicting future TFC decisions or contributions, cancelled resources are the most likely source of support for new operations outside the contributions made specifically to GESP and other CIF programs. Cancelled resources are not regularly replenished, so it can be challenging to ensure resource availability matches project development within the potential eligible pipeline. That said, MDBs have expressed a preference to finance projects as funds become available in an attempt to seize investment opportunities and not to wait for a large accumulation of cancellations.
9. The logic supporting the extension of DPSP III into the CTF Futures Window is that it provides administrative efficiency through well-established processes for the MDBs and CIF AU. Allocating small amounts of cancelled resources to different new initiatives would not likely lead to significant pipeline development. Having a single window can help balance demand for resources for more traditional CTF-type investments, supporting the full GESP pipeline, and responding to fast-moving demand in emerging areas of work like e-mobility and green hydrogen.

3. Expanded Scope of Thematic Investment Areas

3.1. Renewable Energy Plus (RE Plus)

10. The concept of Renewable Energy (RE) Plus under DPSP III was defined based on the changing role of concessional public financing in the sector. In the past, RE investments were mainly for supporting the first use of RE technologies in a country by providing gap-filling finance to turn RE projects economically viable. With reduced technology costs and

² For elaboration on all these aspects of DPSP III, please see CTF DPSP III Proposal (CTF/TFC.20/5).

lower perceived risks, conventional wind and solar energy require less public concessional financing now than they did in the previous decade. RE Plus aims for scaled-up RE deployments by de-risking private investments and increasing viability gap funding. There is still potential for this concept in CIF low-income countries where the installation of renewable energy technologies remains underdeveloped.

11. Distributed RE generation and waste-to-energy were covered under DPSP III RE Plus, and thus would remain eligible under the CTF Futures Window. Distributed generation complements grid-connected RE generation in scaling up RE deployments. With relatively fast installation and fewer grid-connection challenges, distributed RE generation is increasingly competitive with centralized generation. Similarly, waste-to-energy technology with net greenhouse gas reduction brings the same benefits.

3.2. Energy Efficiency

12. Energy efficiency under the CTF Futures Window is a broad thematic area that includes efficiency markets for municipal, commercial, and residential consumers. Municipal energy efficiency includes street lighting, improvements in water utilities, energy management systems, tri-generation, and other efficiency measures for public buildings. Commercial and residential efficiency includes pumps and efficient appliances, lighting, and ceiling fans. The Futures Window could be well-positioned to provide special attention on energy-efficient cooling.

3.3. Sustainable Transport

13. CTF Futures Window may also support electric vehicles and green hydrogen as a transportation fuel in addition to the original scope of sustainable transport thematic area under DPSP III. The technologies supported under DPSP III include public transportation such as rail and bus rapid transit, integrated traffic management systems and Integrated Operations Control Center (IOCC), green logistics in maritime and intermodal transport, and other fuel and energy-efficient technologies.

3.4. Emerging Clean Technology Sectors

14. The type of clean technologies that CTF can support are not limited to the three categories above, and opportunities to provide resources for new areas of zero-carbon development continue to emerge. Sectors related to energy and resource efficiency, such as green building certification (specifically carbon neutrality goals) in the building sector or wastewater and solid municipal waste management are examples where there is currently burgeoning demand for concessional resources. Other areas that may be adjacent to the thematic areas above can be submitted to the Futures Window for consideration by the TFC on a case-by-case basis.

3.5. Other CTF Funding Windows

15. In addition to the three DPSP III thematic areas, operations that are part of the pipelines established for GESP³ would also be eligible for Futures Window funding. The CTF Futures Window will play a crucial role in filling resource gaps for existing DPSP III thematic areas and GESP. While GESP eligible and more traditional DPSP projects may emerge with high quality and readiness, limited resources are a real constraint. The CTF Futures Window can bring additional resources to sustain these catalytic investment areas. New CIF program like ACT and REI will not be eligible for funding at this time. The TFC can revisit this issue in the future should it choose to do so.
16. The following table summarizes the areas initially supported under DPSP III and the areas that are to be additionally supported by CTF Futures Window. The window will support both DPSP III thematic areas and further-added technologies and activities.

Table 1. Current and Potential Thematic Activities under CTF Futures Window

DPSP III Thematic Areas	Newly added technologies and activities for funding under CTF Futures Window
<ul style="list-style-type: none"> ▪ Thematic area 1 EE: <ul style="list-style-type: none"> - Municipal Energy Efficiency (EE) including street lighting, EE improvements in water utilities, energy management systems, tri-generation, and other EE measures for public buildings - Commercial and residential buildings EE such as pumps and efficient appliances, lighting, and ceiling fans - Industrial EE including heat recovery and other EE improvement measures in energy-intensive industrial sub-sectors, such as chemicals, cement, pulp and paper, glass, iron and steel, and aluminum - Power system efficiency, including smart grids 	<ul style="list-style-type: none"> ▪ Special attention on energy-efficient cooling
<ul style="list-style-type: none"> ▪ Thematic area 2 RE plus: <ul style="list-style-type: none"> - De-risking private investments in solar and wind power supply infrastructure - Energy storage and technologies that would be eligible for GESP financing - Distributed generation, including RE and waste-to-energy - Newer RE technologies such as floating solar and CSP-PV hybrid 	<ul style="list-style-type: none"> ▪ Green hydrogen <ul style="list-style-type: none"> - Green fuels for heating

³ The GESP pipeline and eligible activities can be found in the GESP Indicative Pipeline and Monitoring and Reporting Approach document, approved by the TFC in December 2020.

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- Thematic area 3 Sustainable transport:
 - Mass transit such as rail and bus rapid transit
 - Integrated traffic management system and Integrated Operations Control Center
 - Green logistics in maritime and intermodal transport
 - Other fuel and energy-efficient technologies
 - Electric vehicles
 - Green hydrogen as a transportation fuel and other clean fuels
-

4. Ways to Increase Private Sector Participation

17. The CTF concessional financing can facilitate private sector participation in three aspects. First, the deployment of CTF concessional resources can play a crowding-in effect and bring private investors directly at the project level. Second, at the market level, the CTF funds can drive down technology costs, support first-movers, and create and de-risk markets. Third, clean energy technologies supported by CTF Futures Window can enable private players to enter the unbundled power sector value chain.
18. At the project level, CTF financing can attract private investments into high-risk projects that benefit from MDB involvement. CTF grants, contingent recovery grants, and guarantees can provide credit enhancement to the level appropriate for private investment mobilizations. Equity investments can provide value-added, patient capital to climate related ventures as well as support corporate climate action in developing markets through a signaling effect to private equity investors. CTF funding structured as subordinated loans for less proven technologies can attract more risk-averse senior lenders. Longer tenors and/or grace periods of CTF loans reduce cash-flow risks and encourage commercial lenders to offer financial terms aligned with project bankability needs.
19. Finally, MDB involvements in transactions can also provide additional comfort to local banks who are less familiar with financing low carbon energy projects.
20. Public-private partnerships (PPP) and financial intermediaries capitalized with CTF funding are two modalities that can contribute to leveraging additional private investments. In some cases, concessional CTF funding provided to the public partner in the PPP structure can significantly contribute to render a project commercially viable and competitive, consequently unlocking additional private equity and debt. The Morocco Noor CSP projects are good examples of leveraging private investments through a PPP business model. Financial intermediary structures that benefit from CTF junior equity, such as the Facility for Energy Inclusion and the Africa Renewable Energy Fund II, are effective in leveraging private participation and investments on larger scales. EE projects are classic examples of on-lending and guarantee facilities. Distributed generation and geothermal exploration projects financed through project financial intermediaries are recent trends.
21. Given that CTF Futures Window will be fast and flexible in its project processing, private sector projects in need of fast deployed concessional financing may benefit from the window. For example, while auctions have been critical to the growth of the renewables pipeline globally, many RE project sponsors seek financing after winning contracts in

auctions. Projects in this situation may be an area where CTF Futures Window can quickly kick-in. MDBs, however, should structure such transactions to avoid distorting markets or crowding out private finance.

22. At the market level, CTF loans with more favorable terms than those offered by commercial institutions can inform local players that: (i) clean technology projects are not necessarily riskier than other investment opportunities, and (ii) long-term loans are possible with proper risk assessments. Project finance teams in local commercial banks at times have limited understanding of nascent clean energy technologies and risk evaluations. As a result, local banks may be unable to provide sufficient financing that they would have provided to conventional energy projects such as thermal generation. When funded by CTF on longer tenors, projects may enjoy healthier cash-flows and in some cases higher debt-equity ratios. The enhanced gearing ratios can demonstrate to commercial banks that such financing structures are possible, and accelerate a culture change among banks that adopt the leverage ratio expectations of their public sector peers for these projects.
23. Once the local banks become comfortable with clean energy technologies, as a result of their first deals, they might be willing to increase their exposure to the market. Conventional solar and wind sectors demonstrated this market impact. Local banks in the countries with developed financial markets, such as Thailand, are now willing to provide finance and as a result, concessional finance is no longer needed.
24. Another expected market impact is capacity building and technical assistance. MDB supervisions of CTF-funded projects can help national implementing agencies build up experiences of operating low carbon energy projects at international standards. Technical assistance provided by MDBs can contribute to creating new clean energy policies and supporting power sector reforms. In the long term, enhanced capacities of public players and the authorizing policy environments for clean energy deployments can lower the risks involved in project investments and thus provide more comfort to private investors.
25. Finally, in the long term, energy storage and RE technologies funded under CTF Futures Window can provide enabling infrastructure for private players to enter the unbundled power sector value chain once the policies and regulations allow. Those technologies will mitigate connection challenges, transmission risks, and curtailment risks for private RE producers. Also, RE integration technologies to improve grid system flexibility and stability can provide more technology options for future private ancillary services providers.

5. Potential Operations from MDBs

5.1. AfDB

26. AfDB is involved in discussions with the Eastern and Southern African Trade and Development Bank (TDB), a development financial institution involved in a green-labelled equity instrument (“Green Shares”). A first for any development finance institution globally, this capital raise by TDB will be designed and timed to meet growing demand for climate assets from global investors and to accelerate sustainable infrastructure

deployment and green growth in Africa. This green capital issuance is expected to lead to a leverage effect of 1 to 4 at the TDB level, a figure that is expected to increase to 1 to 10 at the project level. The deployment of capital by TDB would take place over a 5-year ramp up period and accelerate a green realignment in TDB's assets representing significant additionality and increase in green content from approximately 5% of total portfolio today to more than 15% by 2030.

27. AfDB is considering, in addition to its own investment, a total of USD 20 million in CTF resources to this transaction. An amount that could increase depending on the total capital needs as well as the appetite of other investors, including private sector.
28. AfDB has identified other eligible projects in CIF pilot countries that would require at least an additional USD 20 million in CTF resources.

5.2.ADB

29. The potential projects under CTF Futures Window could include Pumped-Storage for Renewable Integration Project in Viet Nam. The project aims to be one of the first pumped-hydro energy storage facility in the country, and support curtailment reduction which is solar and wind projects. This private sector project, with CTF loan and grant amounting to approximately USD 40 million, can leverage up to \$630m in co-financing from ADB and other sources including private sector to install 1.2GW storage power capacity. The ADB Board approval of this project is expected in Q2 of 2022.
30. ADB is supporting India with a technical assistance to develop green hydrogen policy framework, country roadmap and demonstration investment projects pipeline. To showcase the pilot project physically, ADB plans to provide a result-based lending (RBL) with the Indian Oil Corporation Limited (IOCL) through the government of India's Sovereign Guarantee. RBL is an innovative financing tool since it is based on disbursement-linked indicators of various targets, including physical outputs, policy and regulatory mechanisms (e.g., pricing and incentives), commercial and operational arrangements, corporate strategies, private participation, and social, environmental, and gender initiatives. The green hydrogen pilot demonstration production plant will be developed with a concentrated solar power generation plants. ADB hopes to invest nearly \$400m in developing this project (Green Fuel Demonstration Project) together with estimated up to \$45m in concessional senior loans from CTF.

5.3.EBRD

31. There is a emerging opportunity for CTF to make a pioneering investment in the first green hydrogen project in Egypt. Egypt currently produces grey/polluting hydrogen from natural gas that is mainly used in the refining and industrial sectors. The project consists of a 100 MW electrolyser together with a 50 MW solar plant and 170 MW wind farm to supply the required renewable power feed to be developed by a consortia of private sector participants. The project is highly relevant as it comes as part of the government's plan to decarbonise the energy sector, in line with its NDC commitments under the Paris Agreement. The technology is the first green hydrogen project in Egypt and given its

nascent nature an expensive technology. As such it requires a considerable grant component in order to make it economically viable. The CTF support will be used to co-finance alongside private sector participants to address first mover and environmental externalities and enable the construction of the first green hydrogen production plant. The project is expected to have a clear demonstration effect for the private sector participation in the hydrogen development in the region.

32. In addition, there are multiple areas of complementarity between the CTF Futures Window and the EBRD's *Green Economy Transition (GET) 2021-2025* approach. While operational details remain subject to confirmation, we see potential for combining investments with technical assistance and policy dialogue, including enhancing climate corporate governance, in the following areas:
- a. **Green Financial Systems** - providing direct and intermediate green credit lines to qualifying partner financial institutions (PFIs) for on-lending into sustainable cooling, energy efficiency and small-scale renewable energy projects, building on EBRD's experience with Green Economy Financing Facilities (GEFFs);
 - b. **Cities and Environmental Infrastructure** - facilitating and stimulating private green investments in: urban transport, district energy, energy efficiency in buildings, solid waste and other interventions that improve the city's adaptation and resilience to climate shocks, leveraging EBRD's experience with Green Cities.
 - c. **Energy Systems** – modernizing grids to accommodate increasing volumes of RE generation capacity (e.g. in Ukraine, Turkey, Kazakhstan, Uzbekistan) through investments in interconnectors, network augmentation/reinforcement, energy storage, smart grids, smart meters, energy exchanges, and micro/off- grids;
 - d. **Industrial Decarbonisation** - promoting the uptake of low-carbon technologies and stimulating behavioral change in energy-intensive industries, agribusinesses and the mining sector. For instance, EBRD is in discussions with clients in Jordan and Egypt to support pilot green hydrogen generation projects;
 - e. **Sustainable Connectivity** - accelerating e-mobility by promoting the transfer and market penetration of emerging electric mobility technologies across the value chain, with prime focus on e-bus operations (across intra-city and intercity segments) as well as corporate fleets, and public charging infrastructure.
33. Depending on the funding available under the CTF Futures Window, we could structure 1-3 programmes along these thematic areas in the short term. Depending on the programme structure, CTF funding would be offered in the form of viability gap payments, concessional loans, other repayable structures and targeted grants, which would help to leverage further EBRD funding and other commercial co-financing.

5.4. IDB

34. CTF DPSP III Programs range amongst the most efficient in terms of deployment ratios of CIF funding at IDB Invest. As of August 31, 2021, the [Innovative Instruments for Investment in Zero-Carbon Technologies \(i3-0\) Phase I](#) has reached a 90% deployment ratio across 6 blended finance approved transactions (USD 31 million out of USD 35 million available). 3

additional transactions in the approval path have earmarked additional USD 18.4 million completing the deployment of the i3-0 Phase I Program and tapping into USD 14.9 million of the USD 25 million available in the [i3-0 Phase II Program](#) (60% of the resources available i3-0 Phase II). . These transactions include equity investments, subordinated loans and senior loans with gender, diversity and inclusion performance-based interest reductions.

35. The objective of the i3-0 Program is to support innovation in (i) the initial deployment of clean technologies, and (ii) the implementation of business or financing models enabling their significant scale-up. The i3-0 Program addresses technologies that are consistent with a long-term pathway to reach zero GHG emissions from fossil fuel combustion, namely renewable energy, efficiency in the use of electricity, conversion from fossil fuel to electricity in end-use applications, and flexibility measures such as energy storage.
36. IDB Invest intends to expand the i3-0 Program scope towards the CTF Futures Window by supporting the following new themes in Latin America and the Caribbean:
37. In 2020, IDB Invest and Engie reached the financial closing of [the pilot for decarbonization](#) aimed at incentivizing the decommissioning of coal thermal power plants and the replacement of the energy generated by these assets with clean technology projects. This financing product was provided with CTF resources. IDB Invest intends to use the CTF Futures Window to replicate this pilot instrument in Brazil and Colombia if these opportunities were to materialize before the establishment of the ACT Program.
38. IDB Group is supporting the advance of green hydrogen technology in Latin America and the Caribbean. To that extent, the availability of technical assistance resources and donor funds will become critical to support both policy dialogue and the first projects in the region. Amongst others, Brazil, Colombia and Costa Rica have already unveiled initiatives to foster their strategic position in this sector.

5.5. IFC

39. IFC projects under the CTF Futures Window will seek to maximize the impact of climate finance, in line with the stated goals of both CTF and the World Bank Group Climate Change Action Plan (2021-2025). Selected activities will evaluate, finance, and mobilize capital to help create markets for new clean technologies and business models. Within the energy sector, for example, support for IFC private sector clients will be designed to help them benefit from: (i) technological improvements such as battery storage, green hydrogen, and decarbonization techniques; (ii) solutions that foster resilient energy systems; and (iii) innovative business models that offer significant opportunities to scale up clean energy access. For example, IFC sees significant potential in expanding the use of business models and technologies such as distributed generation/off-grid systems, offshore wind and floating solar in developing and emerging economies.
40. IFC is currently developing distributed generation/off-grid projects in countries with low energy access (includes multiple countries in Sub-Saharan Africa, e.g., South Africa, Zambia); as well as off-shore wind and floating solar projects (includes Asian countries with land scarcity). These projects stand to benefit from CTF concessional funding.

5.6. World Bank

41. The first World Bank project for funding under CTF Futures Window is Scaling-up Distributed Solar PVs in Turkey. The project aims to expand solar generation through the World Bank Program for Results product. CTF Loan and grant, amounting to USD 30 million, will be blended with USD 300 million IBRD loans to (i) be on-lent to distributed PV customers, developers, aggregators, and battery energy storage system (BESS) developers, and (ii) subsidize BESS. The World Bank Board approval of the project is expected in October 2020.
42. Another one is Indonesia Sustainable Least-Cost Electrification – 1 (ISLE) project. The project aims to increase access to electricity generated from low-carbon sources in Eastern Indonesia, where the access rate is lower than the other parts of the country. The project consists of four components which are: (i) adding 426 MWp solar power generation capacity, (ii) grid strengthening to integrate 950 MWp solar generation by investments in transmission infrastructure and BESS for load shifting and voltage/frequency support, (iii) last-mile electrification complemented with off-grid solar and (iv) capacity building. CTF will finance the BESS element with a USD 15 million loan from the CTF Futures window and a USD 19 million grant from GESP. The World Bank Board approval of the project is expected in May 2022



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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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