

Cover Page for CTF Project/Program Approval Request <sup>[a]</sup> Dedicated Private Sector Programs (DPSP-III)			
1. <b>Country/Region</b>	Global. CIF Countries, with early indicative pipeline in some of the following countries: Bangladesh, Brazil, Egypt, India, Jordan, Mexico, the Philippines, and Vietnam	2. <b>CIF Project ID#</b>	[CIF AU will assign ID]
3. <b>Public or Private</b>	Public		
	Private		<b>X</b>
4. <b>Project/Program Title</b>	Solar Distributed Generation (SDG)		
5. <b>Is this a private sector program composed of sub-projects?</b>	Yes		<b>X</b>
	No		
<b>6. Financial Products, Terms and Amounts</b>			
<b>Financial Product</b>		<b>USD (million)</b>	<b>EUR (million)<sup>[b]</sup></b>
Grant		2.0	
Fee on grant			
MPIS (for private sector only)		0.8	
Public sector loan	Harder terms		
	Softer terms		
Senior loan			
Senior loans in local currency hedged			
Subordinated debt / mezzanine instruments with income participation		Maybe	
Second loss guarantees		Maybe	
Equity <sup>1</sup>		32.2	
Subordinated debt/mezzanine instruments with convertible features			
Convertible grants and contingent recovery grants			
Contingent recovery loans			
First loss guarantees			
Other (please specify)			
<b>Total</b>		<b>35.0</b>	

<sup>1</sup> Possibly in local currency equivalent

7. <b>Implementing MDB(s)</b>	IFC
8. <b>National Implementing Agency</b>	Private sector
9. <b>MDB Focal Point</b>	Andrey Shlyakhtenko, CTF coordinator; Joyita Mukherjee, CIF focal point
<b>10. Brief Description of Project/Program (including objectives and expected outcomes)<sup>[c]</sup></b>	
<p>The <i>Solar Distributed Generation Sub-Program</i> (the <i>Sub-Program</i>) proposal is the first proposal submitted to the Trust Fund Committee (TFC) following the endorsement of the CTF <i>DPSP III</i> envelope in December 2017. This <i>Sub-Program</i> is part of the <i>Window 2: Renewable Energy Plus</i>, of the <i>DPSP III</i> USD 520 million funding envelope. The <i>Sub-Program</i> will conduct a series of coordinated activities across several countries aimed at promoting Distributed Generation (DG) solutions and business models – an emerging and promising alternative structure of power supply.</p> <p>For a long time, electrification planning in many developing (and developed) countries has focused on centralized large-scale generation in combination with grid extension. This traditional approach tends to be expensive, driven by fossil fuels with volatile prices and high greenhouse gas (GHG) emissions, plagued by unreliability, and has not yet evolved sufficiently to meet rising local and highly dispersed demand. As populations continue to grow, the demand for electricity is rapidly rising, leading to larger supply-demand imbalances. Regular rolling blackouts, which occur due to demand overload, increase in frequency across the entire developing world. Added to this are the costs of existing non-renewable generation in developing countries that can be some of the highest in the world and transmission and distribution inefficiencies that contribute to high end-user tariffs. This growing list of deficiencies is highlighting the insufficiency of centralized generation approach alone and putting additional pressure on national governments to develop solutions.</p> <p>In the meantime, faced with a poor quality of electricity supply, many customers in developing countries counter outages by relying on self-supply through back-up generators, relying on dirty fuels such as kerosene or diesel. These back-up solutions typically lead to generating additional – often sizeable – amount of GHG emission and pollution. For example, diesel generators in India contribute 10 to 20 per cent of urban pollution, depending on the pollutant. Further, these back-up solutions are significantly more expensive than if the electricity is supplied by a utility. This holds especially true for small firms, for which the cost of self-supply by back-up generators becomes prohibitively high and outages has a great impact on their productivity.</p> <p>In this context, while governments continue working to improve centralized electricity systems, DG in its various forms, is expected to play an increasingly important role in the energy plans of developing countries across the globe. According IEA, 72% of the additional people gaining electricity access globally by 2030 are expected to do so through the DG. This equates to 485 million people. Over the last several years, a choice of solar PV technology for DG applications has differentiated itself from other DG options. Falling costs, comparatively straightforward technology, free and predictable fuel source, ability to be physically delivered even in remote locations, and high modularity and scalability of systems have grown to become clear advantages of the solar PV technology.</p> <p>To stimulate the growth of the share of DG (including RE/solar DG) in the energy mix, many governments around the world are developing regulations and incentives that provide conducive</p>	

enabling environment to attract private sector participation. However, certain market barriers/risks remain and inhibit the rapid scale up of private sector investment. Significant strides need to be made to de-risk the sector through a supportive regulatory environment, market intelligence, and aggregation of clients ultimately providing a higher degree of certainty for equity and debt investors to earn commensurate risk-reward for assuming high levels of risk.

In response to these needs, this *Sub-Program* intends to take a collective approach of advisory services/technical assistance and investments to accelerate market development, in countries where investments are yet to emerge and pursue investments in other countries where a pipeline has developed. The *Sub-Program* will concentrate the efforts on supporting and expanding a pipeline of solar PV DG project across countries, where investment conditions are becoming “nearly right” for these types of investments and where the governments are committed to move the DG agenda forward. In particular, the *Sub-Program* will pursue a pipeline of project across a number of CIF countries, including Bangladesh, Brazil, Egypt, India, Jordan, Mexico, the Philippines, and Vietnam. Some of the projects in the IFC’s pipeline are already advancing at a steady pace and are expected to cross the finish line quickly, while some others will require a further collective effort of the advisory and investment teams. While not all the projects from the current pipeline will be able to reach financial closure, there will be sufficient private sector activity from current or new pipeline projects to fully utilize the requested funding.

By supporting several first-mover private sector investments in solar DG projects in up to three or four countries, the *Sub-Program* will not only provide a critical demonstration effect of the financial viability of these projects and business models, but will also support the efforts of governments of these countries to improve quantity and quality of access to energy. As such, in case of success, the *Sub-Program* will promote the uptake of solar DG solutions by investors, financiers, suppliers, and ultimate end-users, as well as enhance the capacity of government policy makers to provide positive enabling environments.

Based on the rough shape of the projects in the current pipeline and expected needs of these projects, it is estimated that this *Sub-Program* could support approximately 140 MW of Solar DG capacity, leveraging up to USD 135 million of private sector financing (including financing from IFC and other financiers) and leading to GHG emission reductions of 87, 000 tCO<sub>2</sub>e/year and about 1,740,000 tCO<sub>2</sub>e over the life of the assets. IFC expects that the first sub-project may reach financial closure in less than a year from the time of the *Sub-Program* approval.

<b>11. Consistency with CTF investment criteria</b>	
(1) Potential GHG emissions savings	Please see Section 2.1 of the <i>Solar Distributed Generation</i> proposal
(2) Cost-effectiveness	Please see Section 2.2 of the <i>Solar Distributed Generation</i> proposal
(3) Demonstration potential at scale	Please see Section 2.3 of the <i>Solar Distributed Generation</i> proposal
(4) Development impact	Please see Section 2.4 of the <i>Solar Distributed Generation</i> proposal
(5) Implementation potential	Please see Section 2.5 of the <i>Solar Distributed Generation</i> proposal

(6) Additional costs and risk premium	Please see Section 2.6 of the <i>Solar Distributed Generation</i> proposal
<b>Additional CTF investment criteria for private sector projects/ programs</b>	
(7) Financial sustainability	Please see Section 2.7 of the <i>Solar Distributed Generation</i> proposal
(8) Effective utilization of concessional finance (including a detailed analysis on how the proposal meets the minimum concessionality principles, and on how it is aligned with the blended concessional finance principles)	Please see Section 2.8 of the <i>Solar Distributed Generation</i> proposal;  For analysis on how the proposal meets the minimum concessionality principles and on how it is aligned with the blended concessional finance principles please see Section 2.9 of the <i>Solar Distributed Generation</i> proposal;
(9) Mitigation of market distortions	Please see Section 2.9 of the <i>Solar Distributed Generation</i> proposal
(10) Risks	Please see section 2.10 of the <i>Solar Distributed Generation</i> proposal
<b>12. For DPSP projects/programs in non-CTF countries, explain consistency with FIP, PPCR, or SREP Investment Criteria and/or national energy policy and strategy</b>	
The exact portfolio composition and country focus under the <i>SDG Sub-Program</i> cannot yet be defined. While the focus of the <i>Sub-Program</i> will be on supporting broad global solar DG market, sub-projects under this <i>Sub-Program</i> will seek synergies, where practical, with the work being undertaken under CIF Country Investment Plans (CIP) and will be consistent with directions of the countries' national energy policy and strategy.	
<b>13. Stakeholder Engagement</b>	
Stakeholder engagement will take place at the sub-project development stage and will follow the IFC rules and procedures. The work will be organized in an effective way, similar to other projects undertaken by IFC in RE markets across number of countries.	
<b>14. Gender Considerations</b>	
Gender aspects will be given thorough consideration and addressed at the sub-project level depending on the issues and opportunities that are identified at the appraisal stage for each sub-project.	
<b>15. For projects/programs with activities in countries assessed as being at moderate or high risk of debt distress, macro-economic analysis to evaluate the potential for the CTF project or program to impact the country's debt sustainability</b>	
Investments undertaken by IFC are not expected to require sovereign guarantees and, therefore, will not necessarily be reflected in the country's debt service requirements, thereby not affecting the country's debt sustainability.	

16. For public sector projects/programs, analysis of how the project/program facilitates private sector investment		
17. Indicators and Targets		
Project/Program Timeline		
Expected start date of implementation <sup>[d]</sup>	N/A	
Expected end date of implementation <sup>[d]</sup>	N/A	
Expected investment lifetime in years (for estimating lifetime targets)	20	
Core Indicators		Targets <sup>[e]</sup>
GHG emissions reduced or avoided over lifetime (tons of CO <sub>2</sub> -eq)		1,740,000
Annual GHG emissions reduced or avoided (tons of CO <sub>2</sub> -eq/year) (specify: upon completion of the project/program / on the maximum year / on a representative year)	In a representative year	87,000
Installed capacity of renewable energy (MW)		140
Number of additional passengers using low-carbon transport per day		N/A
Energy savings cumulative over lifetime of investment (MWh)		N/A
Annual energy savings (MWh/year) (specify: upon completion of the project/program / on the maximum year / on a representative year)		N/A
Identify relevant development impact indicator(s)		Targets
18. Co-financing		
	Please specify as appropriate	Amount (in million USD)
MDB 1	IFC	35-50
MDB 2 (if any)		
Government		
Private Sector		85-100
Bilateral		
Others (please specify)		
<b>Total</b>		135
19. Expected Date of MDB Approval		
IFC expects that the first investment under the <i>SDG Program</i> could reach IFC Board approval as soon as in July 2018, with the other sub-projects following later, but in any event complying with the CTF Pipeline Management and Cancellation Policy.		

NOTES:

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting CTF funding approval by the Trust Fund Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left

[c] Please provide the information in the cover page or indicate page/section numbers in the accompanying project/program proposal where such information can be found.

[d] Insert "not applicable" (N/A) if dates cannot be determined at the time of submission (e.g. private sector programs)

[e] Insert value N/A if indicator is not applicable to the project/program.

Version March 2, 2018