

Meeting of the Board 13 – 15 December 2016 Apia, Samoa Provisional agenda item 16(e) GCF/B.15/13/Add.03

24 November 2016

Consideration of funding proposals – Addendum IX Funding proposal package for FP030

Summary

This addendum contains the following three parts:

- a) A funding proposal summary titled "Catalyzing private investment in sustainable energy in Argentina – Part 1" submitted by Inter-American Development Bank;
- b) No-objection letters issued by the national designated authorities or focal points; and
- c) Environmental and social report(s) disclosure;

These documents are presented as submitted by the accredited entity and the national designated authority(ies) or focal point(s), respectively. Pursuant to the Comprehensive Information Disclosure Policy of the Fund, the funding proposal titled "Catalyzing private investment in sustainable energy in Argentina – Part 1" submitted by Inter-American Development Bank is being circulated on a limited distribution basis only to Board Members and Alternate Board Members to ensure confidentiality of certain proprietary, legally privileged or commercially sensitive information of the entity.



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Funding Proposal

Version 1.1

The Green Climate Fund (GCF) is seeking high-quality funding proposals.

Accredited entities are expected to develop their funding proposals, in close consultation with the relevant national designated authority, with due consideration of the GCF's Investment Framework and Results Management Framework. The funding proposals should demonstrate how the proposed projects or programmes will perform against the investment criteria and achieve part or all of the strategic impact results.

Project/Programme Title:	Catalyzing private investment in sustainable energy in Argentina – Part 1
Country/Region:	Argentina
Accredited Entity:	Inter-American Development Bank
Date of Submission:	September 26 th , 2016



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Note to accredited entities on the use of the funding proposal template

- Sections **A**, **B**, **D**, **E** and **H** of the funding proposal require detailed inputs from the accredited entity. For all other sections, including the Appraisal Summary in section F, accredited entities have discretion in how they wish to present the information. Accredited entities can either directly incorporate information into this proposal, or provide summary information in the proposal with cross-reference to other project documents such as project appraisal document.
- The total number of pages for the funding proposal (excluding annexes) is expected not to exceed 50.

Please submit the completed form to:

fundingproposal@gcfund.org

Please use the following name convention for the file name: "[FP]-[Agency Short Name]-[Date]-[Serial Number]"



PROJECT / PROGRAMME SUMMARY



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A.1. Brief Project / Programme Information							
A.1.1. Proje	ect / programme title	Catalyzing private investment in sustainable energy in Argentina – Part 1					
A.1.2. Proje	ct or programme	Project					
A.1.3. Coun	ntry (ies) / region	Argentina					
A.1.4. Natio	nal designated authority (ies)	National Directorate of Program Organizations (DNPOIC)	s with International Credit				
A.1.5. Accre	edited entity	Inter-American Development Ba	ank				
A.1.5.a. Acc	ess modality	🗆 Direct 🛛 🖾 Internationa	Ι				
A.1.6. Execu	uting entity / beneficiary	Executing Entity: Inter-American Development Bank and Inter-American Investment Corporation Beneficiary: various renewable energy projects					
A.1.7. Projec USD)	ct size category (Total investment, million	□ Micro (≤10) □ Medium (50 <x≤250)< td=""><td>□ Small (10<x≤50) x Large (>250)</x≤50) </td></x≤250)<>	□ Small (10 <x≤50) x Large (>250)</x≤50) 				
A.1.8. Mitiga	ation / adaptation focus	🛛 Mitigation 🛛 Adaptation 🗆 Cross-cutting					
A.1.9. Date	of submission	September 26 th , 2016					
A.1.10. Project contact details	Contact person, position	Gian Franco Carassale – Lead Investment Officer Alfredo Idiarte - Advisory Services Team Gloria Visconti – Climate Change Lead Specialist					
	Organization	Inter-American Development Ba	ank				
-	Email address	gianfrancoc@iadb.org aidiarte@iadb.org gloriav@iadb.org					
	Telephone number	+1 202 623 3360					
	Mailing address	1300 New York Ave NW, Washington DC 20577					

A.1.11. R	esults areas (mark all that apply)
Reduced	emissions from:
\boxtimes	Energy access and power generation (E.g. on-grid, micro-grid or off-grid solar, wind, geothermal, etc.)
	Low emission transport (E.g. high-speed rail, rapid bus system, etc.)
	Buildings, cities and industries and appliances (E.g. new and retrofitted energy-efficient buildings, energy-efficient equipment for companies and supply chain management, etc.)
	Forestry and land use (E.g. forest conservation and management, agroforestry, agricultural irrigation, water treatment and management, etc.)
Increased	d resilience of:
	Most vulnerable people and communities (E.g. mitigation of operational risk associated with climate change – diversification of supply sources and supply chain management, relocation of manufacturing facilities and warehouses, etc.)
	Health and well-being, and food and water security (E.g. climate-resilient crops, efficient irrigation systems, etc.)



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Infrastructure and built environment (E.g. sea walls, resilient road networks, etc.) Ecosystem and ecosystem services

(E.g. ecosystem conservation and management, ecotourism, etc.)

A.2. Project / Programme Executive Summary (max 300 words)

Please provide a brief description of the proposed project/programme, including the objectives and primary measurable benefits (see <u>investment criteria in section E</u>). The detailed description can be elaborated in <u>section C</u>.

Argentina has embarked on an ambitious transformation process. Enhancing the efficiency and sustainability of its energy sector, which has struggled in the last few years as a result of previous policies, is key to help restore energy security, competitiveness, fiscal balances, and mitigate its environmental impact (as 43% of Argentina's GHG emissions in 2012 came from this sector, and emissions from the power sector increased by 64% in the last decade). One of the pillars of Argentina's new strategy for the sector lays on aggressively supporting and promoting development of renewable energies, to both tap on their economic benefits and diversify away from its increasing reliance on fossil fuels. The objective of the hereby proposed program (the "Program") is to help the Government of Argentina achieve the ambitious renewable energy penetration goals established by the recent Renewable Energy Law 27.191, by contributing to i) the successful financial close of the first few projects to be built as part of the new regulatory regime, and ii) the development of capacities of relevant public and private entities. Cognizant of the difficulties that securing long-term project debt posed in previous renewable energy public tenders, the Inter-American Development Bank Group (IDBG) is taking an active role in helping mobilize this type of financing so that projects can access adequately termed debt, with sufficiently long tenors, to ensure financial viability and allow them to go forward. With this, IDBG, which includes the Inter-American Development Bank (IDB), the Inter-American Investment Corporation (IIC), and the Multilateral Investment Fund (MIF), expects to contribute to the long-term development of renewables in various ways. First, by supporting early movers, helping demonstrate financial and technical viability of these projects under the rapidly evolving regulatory and investment conditions in Argentina, and that non/limited recourse financing can be properly structured for these projects. Second, by helping develop local capacities and resources (e.g. knowledge, strategies) to carry these projects and the broader renewable energy program forward. There has been little experience in Argentina with renewables and, more broadly, with project finance in the last fifteen years, so the first few projects will provide significant learning value for locals working in this sector (e.g. engineers, construction workers, lawyers, financial industry, regulators, policy planners). The Program will indirectly support the early stage development of some supply chains associated to the renewable energy industry. and enhance the basis for further replication and scale up. Projects developed under this Program will test the new regulatory environment, and help generate lessons for adjustments that may be required in the future. Finally, through the expected demonstration effect IDBG expects to help develop the insight and confidence required to crowd in other investors and lenders in subsequent tenders.

A.3. Project/Programme Milestone						
Expected approval from accredited entity's Board (if applicable)	The Program is expected to be approved within 120 days from the IDB signature of the AMA.					
Expected financial close (if applicable)	Most projects are expected to close by Q1 2018, based on timeline requirements of the first RenovAr ¹ tenders.					
Estimated implementation start and end date	Start: <u>01/01/2017</u> End: <u>31/12/2020</u>					
Project/programme lifespan	22 years					

¹ RenovAr is the name of the new Argentine national public tendering program for renewable energy launched to help achieve the objectives of Law 27.191.



FINANCING / COST INFORMATION GREEN CLIMATE FUND FUNDING PROPOSAL | PAGE 3 OF 45



B.1. Description of Financial Elements of the Project / Programme

Please provide a description of how the choice of financial instrument(s) will overcome barriers and achieve project objectives, and leverage public and/or private finance

The use of GCF investment resources will be aimed at helping structure and complete the long-term debt packages required for projects to be financially viable at competitive prices. For this, GCF resources will be made available in two modalities:

1) long-term project debt, matching the tenor that the IDBG will provide.

2) refinancing guarantees, which would help commercial lenders and commercial debt investors extend the tenor they can offer to those required by projects, otherwise generally restricted to 5-7 years. The guarantees would allow sponsors to accept financing that give these lenders the possibility to exercise early repayment options, by guaranteeing the refinancing of such loans. This instrument thus has the potential to crowd in commercial lenders and investors that would otherwise not be able to extend suitable terms and participate in the financing to deliver the volumes needed by the ambitious targets of the RenovAr public tendering program.

Through these two GCF instruments, IDBG expects to help leverage additional, adequately termed debt and timely close projects, to reduce the incidence of drop outs (awarded projects that are never built) that has been so high in previous tenders (just about 15% of the awarded capacity built in the previous renewable energy tender, in 2010).

The proposed USD 130M from the GCF would help mobilize investment for a total of about USD 650M, and support about 400 MW, which is equivalent to about 40%² of the capacity originally targeted by the first tender under RenovAr. If achieved, the GCF Program will have helped provide a meaningful contribution to the success of this government initiative with long-term demonstration and capacity building effects. This would help pave the way for the significant replication and scale-up required in the mid and long term to achieve Law 27.191's ambitious renewable penetration goals.

Component	Sub- component (if applicable)	Amount (for entire project)	Currency	Amount (for entire project)	Local currency	GCF funding amount	Currency of disbursement to recipient
Component 1. Financing of renewable energy power projects	Sub- component 1.1. Financing of renewable energy power projects	650	<u>million</u> USD (\$)			130 million USD	USD
Component 2. Enhancing policy, planning, regulation and project financing capacity	Sub- component 2.1 Support for sustainable development, operation and financing of renewable energy projects	1.0	<u>million</u> USD (\$)			1.0 million USD	USD

² While this % is referred to the capacity tendered under the first RenovAr tender, GCF's support will likely me spread throughout the first few tenders, to optimize its value add.



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	Sub- component 2.2 Support for Renewable Energy Center	0.5	<u>million</u> USD (\$)		0.5 million USD	USD	
	Sub- component 2.3 Support for Solar Energy Development	0.9	<u>million</u> USD (\$)		0.9 million USD	USD	
	Sub- component 2.4 Support for Development of other Renewable Energy Technologies	0.6	<u>million</u> USD (\$)		0.6 million USD	USD	
Total proj	ect financing	653	<u>million</u> USD (\$)		133 million USD		

B.2. Project Financing Information

	Financial Instru	iment	Amount	Currency	Tenc	or ³	Pricin	g
(a) Total project financing	(a) = (b) + (c	c)	653	<u>million USD</u> <u>(\$)</u>				
(b) GCF financing to recipient	(i) Senior Loans (ii) Guarantees (iii) Grants		130 (combined <u>million USD</u> total for loans <u>(\$)</u> and guarantees)		Loans: as defined in the term sheet. Guarantees: as defined in the term sheet.		As defined term she As defined term she	in the eet. in the eet.
			3	<u>million USD</u> <u>(\$)</u>	N/A	X	N/A	
	Total requested (i+ii+iii+iv+v+vi)		133	<u>million USD</u> (<u>\$)</u>				
(c) Co- financing to recipient	Financial Instrument	Amount	Currency	Name of Institution	Tenor	Pr	icing	Seni ority

³ Given the duration of the investment period and the maximum loan tenor to the Underlying Projects, the program duration will be 22 years.



FINANCING / COST INFORMATION



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<u>Senior</u> Loans	168⁴ 32⁵	<u>million USD</u> (<u>\$)</u> million USD (<u>\$)</u>	IDB IIC	TBD based on market and project condition	TBD based on market and project conditions	<u>Pari</u> <u>passu</u> <u>with</u> <u>GCF</u>
<u>Senior</u> Loans	125	<u>million USD</u> <u>(\$)</u>	B-lenders and co-lenders to be mobilized by IDBG and project sponsors	s Likely similar or shorter than IDBG's tenor.	TBD based on market conditions. Will vary by project and lender.	<u>senio</u> <u>r</u>
<u>Equity</u>	195	<u>million USD</u> <u>(\$)</u>	Project sponsors	<u>N/A</u>		junior
Lead financing	institution: IDE	3 and IIC				

How market price or expected commercial rate return was (non-concessional) determined?

Project sponsors define required rates of return based on multiple factors, including their business strategy in a particular market, their perception of the risk associated with the project and the investment environment, and the risk/reward parameters they manage (based on alternative investment opportunities in similar projects in other countries, for example). In terms of energy prices, for projects participating in the RenovAr public tender, such tender acts as a reverse auction with PPAs being awarded to the most competitive offers, with price being the most determinant factor for such competitiveness among technically acceptable proposals.

In the case of projects agreed and developed between private parties (i.e. without a public tendering process), the contractual price is determined through negotiation, based on aspects such as project cost structures, the cost of alternative sources of power, and the additional benefits and disadvantages associated to the project.

Please provide an overview of the size of total banking assets, debt capital markets and equity capital markets which could be tapped to finance the proposed project/programme.

Access to international financial markets has greatly hampered the growth of Argentine companies, which face extremely high costs. The National Government's international debt had been in selective default from 2012-2015, when currency restrictions were in place. Today, many financial institutions continue to put limitations on investment in Argentina. Based on IDBG's consultations with other lenders during the months leading to submission of this proposal, multilateral agencies looked likely to only be able to provide under USD 500 million total co-financing for the first RenovAr tender, with another USD 100-150 million coming from the European DFIs (in comparison with about USD 1-1.2 Billion of long-term debt financing required). Export credit agencies have shown very limited appetite as well. Commercial banks and vendors are likely to be only available for small tickets (up to 30 million) and at very short tenors of 5-7 years.

⁴ Intended target at time of proposal submission. This value could change depending on final selection of projects or evolution of macroeconomic conditions in Argentina.

⁵ IDEM previous footnote.





Please provide an overview of market rates (i.e. 1-year T-Bill, 5-year government bond, 5-year corporate bond (specify credit rating) and 5-year syndicate loan.

As discussed above, Argentina has only recently returned to the international capital markets. In April, it placed USD 16.5 billion in debt: USD 2.75 billion worth of 3-year notes at 6.25 percent, USD 4.5 billion of 5-year bills at 6.87 percent, USD 6.5 billion of 10-year bonds at 7.5 percent and USD 2.75 billion of 30-year bonds at 7.62 percent. The five-year bonds are currently yielding 5.02% or the equivalent of L+381. In July, Argentina returned to the bond market, placing a USD 1 billion 12-year bond yielding 6.625% and a USD 1.75 billion 20-year bond yielding 7.125%. To date, only top tier Argentine corporates have had access to international markets. YPF, Argentina's main oil company, issued USD 1.0 billion in 5 year bonds in March 2016, yielding 8.5% (B-). The company is currently in the market with a CHF 200 million issuance in the Swiss market. All of the syndicated loans recently issued in Argentina have been issued under a multilateral umbrella and have all been corporate obligations. The IFC issued a 5-year A/B loan to Axion Energy in May 2016, priced at L+500.



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Please fill out applicable sub-sections and provide additional information if necessary, as these requirements may vary depending on the nature of the project / programme.

C.1. Strategic Context

Please describe relevant national, sub-national, regional, global, political, and/or economic factors that help to contextualize the proposal, including existing national and sector policies and strategies.

In spite of various efforts during the last decade to promote renewable energy development in Argentina, renewables penetration remains very limited at 1.9% of total electricity supplied (or only 0.6% if small hydro is not considered) and 2.6% of installed capacity (or only 1% without small hydro) at the end of 2014. This is the result of inadequate design of previous initiatives and the complex investment environment in Argentina since the 2001-2002 financial crisis, particularly in the energy sector and for long-term investments intensive in upfront CAPEX, as is the case for renewable energy projects.

Over the last fifteen years, generation capacity in Argentina has grown steadily and mostly based on fossil fuel-based thermal generation. Such source has increased its participation from 42% in 2001 to 63% in 2015. The graph below shows how the increase in energy supplied in that period has almost been completely covered with thermal energy, with the aggregate of other sources remaining relatively stable at virtually the same level⁶.



Source: CAMMESA

The grid has therefore experienced a significant "carbonization" process, with GHG emissions from the national interconnected power system (SADI) increasing by 64% in the last decade, from about 28.4 Mton CO₂e in 2006 to 46.5 Mton CO₂e in 2015, as shown in the graph below. This is an average annual growth rate of over 7% of GHG emissions, which more than doubles the 3.4% average increase in energy consumption.

⁶ Hydro energy did not almost change: it was 41,507 GWh in 2001 and 41,464 GWh in 2015.



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Increase in GHG emissions from the power system. Source: Comisión Nacional de Energía Atómica

More generally, the Argentine power market is characterized by the unbundling and significant level of privatization of generation, transmission and distribution services that took place in the 1990s. While this model achieved certain efficiencies at the beginning, its initial operational model has changed over the years, following a series of measures implemented in the aftermath of the 2001-2002 crisis. Since then, policies implemented have resulted in a significant incidence of subsidies and reliance on transfers from the national government to sustain the operation of the sector. The combined effect of delinking power prices from costs and the significant escalation of generation costs over the last few years⁷ as a result of -among other factors- the increasing incidence in the generation mix of expensive imported fossil fuels⁸, has hindered the sustainability of the sector and has been putting a burden on fiscal accounts as government subsidies and transfers increased to unprecedented levels. The graph below shows the continued increase over the last decade in generation cost (as reflected by monomial spot prices blue line) and their increasing gap relative with monomial prices for distributors, resulting in a significant tariff deficit in the system.



Source: Ministry of Energy and Mining

In turn, a growing reliance on imported fossil fuels to overcome growing demand and the domestic production deficit have resulted from insufficient investment in oil and gas upstream development caused by some of the policies (distorting prices and incentives for investment) introduced in the aftermath of the 2001-2002 crisis. The increase in the government

⁷ Average power cost increased 19% from 2014 to 2015.

⁸ From 2014 to 2015, fuel oil and diesel consumption increased by 14% and 24% respectively.



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subsidies required has resulted in GoA spending over USD 8 Billion⁹ in subsidies to sustain the power sector in 2014 (or approximately 1.5% of GDP¹⁰). In addition, fossil fuel imports have been significantly hurting the trade balance in the last few years, with a trade deficit in the energy sector of the same order of magnitude as the power sector fiscal deficit. The graph below shows how Argentina has changed from being a net energy exporter to a new importer over the last five years.



Source: Ministry of Energy and Mining

Renewable energy technologies can help address several of these economic and environmental challenges simultaneously. On the economic side, renewables have the potential to reduce the cost of power supply as they displace thermal–based generation currently relying on imported fuel (which would also help mitigate the recurring impact on the trade balance). The marked decreases in CAPEX costs for wind and –especially- solar PV technology in recent years, combined with the outstanding resource quality in vast areas of Argentina, has the potential to result in very competitive generation costs for renewable energy. At the global level, renewables have in recent years been continuously setting new price records, with some of the most recent public auctions in Latin America reaching prices as low as USD 35/MWh (Mexico, 2016). This is lower than the average cost of thermal generation in Argentina, with the cost of some imported fossil fuels reaching levels many times higher in the recent past (e.g. USD 154/MWh for imported gasoil in 2014¹¹).

Access to adequate and efficient long-term financing is, however, the critical piece required to overcome the barriers faced in the past by renewable energy projects, to ensure they can be built timely and at competitive costs. As the new government administration in Argentina implements a series of reforms to improve investment conditions, the framework provided by the new Renewable Energy Law 27.191 and the 1,000 MW renewable energy tender underway at the time of submission of this proposal intend to outperform previous attempts by improving the economic support structure (e.g. fiscal benefits) and the legal and contractual framework. A key feature of the new government support mechanism is the "Trust Fund for Renewable Energy" (FODER) that has been provided by Law 27.191 to offer payment guarantees for all tendered power purchase agreements as well as project financing assistance. The graph below ¹² illustrates the

⁹ Informe de la Asociación Argentina de Presupuesto y Administración Financiera Pública (ASAP) Diciembre de 2014

¹⁰ Based on a GDP estimate of USD 548 Billion, from World Bank data.

¹¹ Argentine Renewable Energy Chamber, 2015. <u>http://www.energiaestrategica.com/wp-content/uploads/2015/10/Reporte-Ejecutivo.pdf</u>

¹² This graph, developed by GoA in mid 2016, illustrates the expected FODER functionality and contractual structure as conceived at the time the first RenovAr tender was being launched. There may be adjustments over time, as the RenovAr program is further developed (e.g. as subsequent tenders are launched).



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Another element of the new support mechanism put in place based on Law 27.191 provisions is a robust package of fiscal incentives, described in section C.6. This new framework under implementation by GoA is expected to enhance economic viability and investor confidence to help overcome the barriers to access long-term project finance that have hindered renewable energy development so far. A positive signal has been given by the market through the overwhelming response to the first tender (with offers for more than six times the capacity targeted).

C.2. Project / Programme Objective against Baseline

Describe the baseline scenario (i.e. emissions baseline, climate vulnerability baseline, key barriers, challenges and/or policies) and the outcomes and the impact that the project/programme will aim to achieve in improving the baseline scenario.

As previously explained, GoA has recently passed Renewable Energy Law 27.191, setting the basis for a new promotional regime and government effort to allow renewable energy generation to take-off at scale. Renewable energy development in Argentina has lagged behind relative to what regional peer countries (most notably Brazil, Uruguay, Chile, Mexico) have been able to achieve, in spite of Argentina's outstanding resource potential and dire need to diversify away from fossil fuels (currently 87% of its energy matrix), reducing energy costs and greenhouse gas emissions (GHG) while enhancing energy security.

The new government program (RenovAr) contemplates a series of fiscal incentives and financial support mechanisms, along with regulatory and contractual enhancements¹³ aimed at overcoming some of the investment barriers that resulted in the failure of previous government attempts.

¹³ Along with the renewable energy targets, penalties, incentives, and other regulatory aspects brought about by Law 27.191 and its subsequent implementation resolutions, GoA has been working on enhancing the bankability of the power purchase agreements offered under the tenders underway, through the consideration and inclusion –as



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The Law has defined ambitious renewable energy participation targets for the short, mid and long term, which the current administration now needs to deliver on. With that objective, GoA recently launched a first tender under the new regime to award PPAs for the construction of at least 1,000 MW of renewable capacity, with proposals due in September 2016. The graph below shows the targets set by the Law in terms of renewable energy penetration. The 20% target for 2025 implies reaching 10,000 MW in less than ten years, with only 800 currently installed (or just about 200MW without small hydro).



While the new program has generated significant interest among local and international project developers, availability of long term project finance to support these projects is likely to encounter some initial limitations due to the combination of risks involved: Argentina's still low –albeit improving- sovereign credit rating, the untested new regulatory environment, and the long term nature of the required investments, besides the other risks typically associated with projects financing of renewable energy projects (resource, technology, etc.). Many investors and lenders interested in this market will likely take some cautious initial steps, setting limits on the volume of capital and tenors. In this context, development finance institutions (DFIs) and dedicated climate finance sources such as the GCF are expected to play a critical role in supporting the first set of projects under the new scheme, providing the leadership and demonstration needed to crowd in other investors in this and subsequent tenders.

In this context, the IDBG is working to support the program with not only its own technical and financial resources, but also mobilizing additional resources from other development and commercial partners. The proposal hereby presented is an important part of such effort.

The objective of the program hereby proposed to the GCF is to help catalyze long-term private investment in sustainable energy in Argentina, by helping complete –along with other development and commercial partners- adequately termed financing packages for a set of first moving projects and demonstrate their technical and financial viability in the new policy, regulatory and investment environment. This would provide the insight and confidence required to crowd in other investors and lenders as part of the process and for subsequent tenders and projects.

To this end, IDB is proposing a GCF envelope of USD 130 Million with a primary objective of co-financing or providing refinancing guarantees to at least five renewable energy projects. GCF financing would be pari passu with IDBG loans, and will leverage a larger amount from the IDBG and an estimate of at least four times as much financing from all equity and debt sources combined, reaching a minimum investment level of USD 650 M. For this purpose, the IDBG will also seek to mobilize other co-lender and B lenders, through its syndication program, to allow the first set of projects to reach financial close and become operational within the aggressive timelines defined in the RenovAr program.

feasible- of clauses that would facilitate access to international project financing. This includes issues related to international arbitration and mitigation of convertibility and transferability risks, among other.



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C.3. Project / Programme Description

Describe the main activities and the planned measures of the project/programme according to each of its components.

The objective of the program is to help GoA achieve the ambitious renewable energy penetration goals established by Renewable Energy Law 27.191, by contributing to i) the successful financial close of the first few projects to be built under the new regulatory regime, and ii) the development of capacities of relevant public and private entities. For this purpose, the program will consist of a set of activities under the following two components:

Component 1 – Financing of Renewable Energy Power Projects

This component will be executed by IIC and will be focused on providing and mobilizing long-term debt financing for at least five projects, to cover the gap in availability of this type of financing and help projects timely reach financial close. For this purpose IIC will consider projects awarded a PPA as part of the RenovAr tenders (or those contracted between private parties that still contribute to Law 27.191's renewable penetration target) against eligibility and credit criteria agreed with the GCF for this Program.

Component 2 - Enhancing Policy, Regulation, Planning, and Project Financing capacities

This component will be executed by IDB and will be focused on providing targeted technical cooperation to both public and private sector entities, to help build the capacities, knowledge, and strategic planning resources needed to achieve successful implementation of RenovAr and other government renewable energy development programs aimed at delivering on the goals set by Law 27.191. Activities will include:

- a. Strategic environmental and social studies and training activities at national level that will help enhance regulatory and project implementation capacity in regards to environmental and social aspects for the development of renewable energy projects.
- b. Support to develop technical capacity on intermittent renewable energy dispatch.
- c. Capacity building for private contracting and financing of renewable energy projects, including development of project contract models, and training on project financing to relevant local entities.
- d. Capacity building activities to enhance gender-equity in supported projects and companies.
- e. Conceptualization and start-up support for the Renewable Energy Center.
- a. Support for development of various renewable energy technologies (e.g. solar, bioenergy, marine, geothermal), including development of resource/potential studies, strategic plans, incentive schemes, among other.

C.4. Background Information on Project / Programme Sponsor (Executing Entity)

Describe the quality of the management team, overall strategy and financial profile of the Sponsor (Executing Entity) and how it will support the project/programme in terms of equity investment, management, operations, production and marketing.

To mitigate risks for the success of the Program, from both the point of view of its development objectives as well as in terms of credit risks, the Program will prioritize projects that have been awarded a PPA through the RenovAr tender process, as part of which sponsors will have normally demonstrated and met certain minimum requirements in terms of financial strength¹⁴, experience with projects with similar technology, and level of development of the project. In addition, sponsors and their projects will have to meet the additional credit requirements agreed with the GCF for this Program. For example, the IDBG usually requires that the key parties that are part of the project have extensive experience in the construction, operation and maintenance of similar projects. This is typically accomplished by working with construction companies with experience in the country, commercially proven equipment suppliers that meet the industry standards, and operators with solid track records in providing operation and maintenance services to similar projects. This will be ensured through IDBG's due diligence process. In addition, and given that significant sponsor contingent equity support will likely be required to mitigate certain project risks (during both the construction and operation phases), the financial strength of sponsors will be a critical factor. Furthermore, minimum requirements in terms of debt service coverage ratios

¹⁴ A minimum of USD 250,000 of capitalization for each MW offered was required in the first tender of the RenovAr program.



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and reserve accounts, among other, have been established and will be further elaborated based on each projects' specific conditions.

C.5. Market Overview (if applicable)

Describe the market for the product(s) or services including the historical data and forecasts. Provide pricing structures, price controls, subsidies available and government involvement (if any).

Section C.1 above presents a detailed market description (as part of the strategic context discussion), including the historical evolution of the market. As a supplement to that, we hereby present additional information on current and incoming market participation. The table below presents the list of existing renewable installed capacity in Argentina, breaking it down by technology, capacity and location. This reconfirms the current limited penetration and size of renewable energy projects.

PROJECT ¹⁵	TECHNOLOGY	CAPACITY [MW]	PROVINCE	REGIÓN
ING.STA.BARBARA	Biomass	16	Tucuman	Northeast
TABACAL	Biomass	40	Salta	Northeast
S.MARTIN NORTE	Biogas	5	Buenos Aires	Gran Buenos Aires
S.MIGUEL Norte	Biogas	10	Buenos Aires	Gran Buenos Aires
ARAUCO EOLICO	Wind	25.2	La Rioja	Northeast
ARAUCO 2 EÓLICO	Wind	25.2	La Rioja	Northeast
DIADEMA EOLICO	Wind	6.3	Chubut	Patagonia
L.BLANC 4 ENARS	Wind	51	Chubut	Patagonia
NECOCHEA EOLICO	Wind	0.25	Buenos Aires	Buenos Aires
RAWSONI ENARSA	Wind	48.6	Chubut	Patagonia
RAWSONII ENARSA	Wind	28.8	Chubut	Patagonia
TORDILLO	Wind	3	Chubut	Patagonia
CHIMBE 1 FOTOVO	Solar	2	San Juan	Сиуо
C.HOND 1 FOTOVO	Solar	2	San Juan	Сиуо
C.HOND 2 FOTOVO	Solar	3	San Juan	Cuyo
S.JUAN I FOTOVO	Solar	1.2	San Juan	Cuyo

In terms of potential new market participants, the tender underway has gathered significant interest. By the September 5^{th,} 2016 closing date of the tender, 123 proposals were received, for a total of 6,336 MW (i.e. over six times the amount being tendered). Of them, 49 corresponded to wind projects for a total of 3,468 MW, mostly in the southern and central parts of Argentina; and 58 proposals were for solar PV projects, totaling 2,834 MW of capacity, mostly in the northwest and center of Argentina, along the Andean corridor. The table below summarizes the main metrics of proposals submitted to the first RenovAr tender.

Technology	# of Bids	Power bid [MW]	Average Power per bid [MW]	Power to be contracted [MW]
Wind	49	3,468.7	70.8	600
Solar	58	2,813.1	48.5	300
Biomass	5	44.5	8.9	65
Biogas	6	8.6	1.4	15
Mini Hydro	5	11.4	2.3	20

¹⁵ Please note that minihydro projects are not included in this list



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TOTAL	123	6,346.3	51.6	1,000	

Combined, wind and solar represented about 99% of the offered capacity.

C.6. Regulation, Taxation and Insurance (if applicable)

Provide details of government licenses or permits required for implementing and operating the project/programme, the issuing authority, and the date of issue or expected date of issue. Describe applicable taxes and foreign exchange regulations. Provide details on insurance policies related to project/programme.

Permits and licenses required as part of the first RenovAr tender:

- Environmental permit of the project, that authorizes the development and operation of the project, from the environmental point of view, and from the date of signing of the PPA without the need to process any further environmental authorizations. Issuing authority will normally be the relevant provincial agency of the province where each project is located.
- License as Generator, Cogenerator or Autogenerator Agent in the Wholesale Energy Market (MEM). Filing authority: Ministry of Energy and Mining. Date required: filing needs to be done by the time of presenting the proposal under the tender process; license approval needs to be secured by the time of signing the Commercial Operation Date (COD).

In terms of the tax regime, projects awarded a PPA under the RenovAr tender underway at the time of preparation of this proposal were eligible for consideration for the fiscal benefits established by Renewable Energy Law 27.191 and its subsequent regulations, including:

- Exemption of Import Duties for equipment, pieces, replacement parts, component parts and raw materials until December 31st, 2017.
- Accelerated Fiscal Depreciation.
- Advance VAT Return.
- Exemption of Minimum Presumed Income Tax.
- Exemption of Dividend Tax for the re-investment in infrastructure.
- Tax deduction of all financial expenses when calculating the Income Tax.
- Issuing of Fiscal Certificate subject to the proving of the inclusion of domestic goods.

In regards to foreign exchange regulations, since the new government administration took office in December 2015 it has been progressively releasing previously established foreign exchange controls that were limiting convertibility and transferability of foreign currency and thus hindering foreign investment. This, combined with the foreign currency denomination of the PPAs and some other relevant contractual provisions, enhances conditions for foreign currency financing of these projects. In terms of insurance, IDB requirements to projects for insurance policies will be consistent with international best practice standards for project financing. Specific policies will be required and reviewed for each project during the due diligence process. Such policies will be part of the security package for the project lenders, including GCF.

C.7. Institutional / Implementation Arrangements

Please describe in detail the governance structure of the project/programme, including but not limited to the organization structure, roles and responsibilities of the project/programme management unit, steering committee, executing entities and so on, as well as the flow of funds structure. Also describe which of these structures are already in place and which are still pending. For the pending ones, please specify the requirements to establish them.

The IDB, as Accredited Entity, will maintain the responsibilities of the Program to the GCF as per the terms to be agreed between IDB and GCF in the AMA and FAA. IDB will also directly execute non-reimbursable technical cooperation



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activities outlined as part of component 2. The IIC will execute the reimbursable investment component of the Program, i.e. the structuring and deployment of IDB, IIC and GCF capital into the renewable energy Underlying Projects.

The Accredited Entity is a public international organization, the purpose of which is to contribute to the acceleration of the process of economic and social development of its regional developing member countries in Latin America and the Caribbean, individually and collectively. The IIC is a multilateral development bank established to promote the economic development of its regional developing member countries by encouraging the establishment, expansion, and modernization of private enterprises (including those that are small and medium-scale) and partially and wholly-owned state enterprises (excluding operations with sub-sovereign governments) that are aligned with certain priority business areas, in such a way as to supplement the activities of the Accredited Entity. On March 30, 2015, the Boards of Governors of the Accredited Entity and the IIC authorized the transfer of operational and administrative functions and non-financial resources associated with non-sovereign guaranteed activities (i.e. private sector activities or "NSG Operations") from the Accredited Entity to the IIC (the Private Sector Consolidation), and resolved that, as of January 1, 2016, new NSG Operations and the administration of existing IIC operations and existing NSG Operations of the Accredited Entity will be carried out by the IIC.

The IIC's role as Executing Entity for GCF Proceeds will be subject to compliance with the Accreditation Master Agreement to be entered into between the GCF and the Accredited Entity and/or such other relevant arrangements. Supplementing this, at the project level, rights and responsibilities of project sponsors, lenders, and other project parties (e.g. Engineering, Procurement and Construction –EPC- and Operations and Maintenance -OM- contractors, equipment suppliers) will be defined under the project contracts, completing the governance structure of the program.

In addition, the IDB and IIC have developed over the years vast experience in blended finance through the implementation of programs with other climate funds (e.g. GEF, CIF, Canadian Climate Fund for the Private Sector in the Americas), and will resort to such expertise to ensure adequate and effective utilization of GCF resources to promote investments with climate value. The IDB Climate Change Division and the IIC Advisory Services Team will work along with the IDB Energy Division and the IIC Infrastructure and Energy Division to implement technical cooperation activities.





D.1. Value Added for GCF Involvement

Please specify why the GCF involvement is critical for the project/programme, in consideration of other alternatives.

Argentina has embarked in an ambitious transformation process, across its economy, and in particular in its energy sector. This process is aimed at restoring its operational efficiency, effectiveness, and sustainability. While the reforms underway are expected to improve conditions for long-term investment in the energy sector, gaining lenders' confidence to provide long-term project financing for renewable energy projects is a process that will take time and some meaningful initial demonstration that the new regulatory framework, policy direction and other relevant conditions are adequate and trustworthy. As described in Section B.3, commercial lenders and even development finance institutions (DFIs) have limitations in the volumes of financing they can provide in the short-term, particularly while Argentina's sovereign credit rating remains low. In this context, IDBG will need to play a crucial role (as it has already done in other countries when they were launching their renewables programs, to help overcome regulatory or off-taker risk perceptions) not only by directly financing some initial projects, but also mobilizing funding from climate finance sources such as the GCF and facilitating participation of B-/co-lenders considering their financing. Through this Program, GCF will help -as combined with IDBG capital- to fund about 50% of the investment cost for the equivalent of about 40% of the capacity initially targeted by the first RenovAr tender. This will be a key contribution for the success of the initiative, in helping ensure that some critical mass of awardee projects reach financial close and are built. This in turn will contribute to demonstrate the viability of renewable energy projects under the new regulatory and contractual framework, while crowding in additional lenders. In addition, the Program will provide technical cooperation to help develop the capacities of public and private entities as well as knowledge and strategic planning resources to enhance the chances of attainment of the goals of Law 27.191 and the broader GoA's renewable energy program.

In addition, the Program will help introduce –besides long term project debt- a financial product not available in Argentina for this type of investments. The proposed refinancing guarantees have the potential of allowing the participation of commercial lenders and investors that would otherwise not be able to participate. GCF's possibility of providing concessional pricing along with this instrument is critical for its chances of success, as guarantees always represent an additional cost to projects that is normally not fully offset by a proportional reduction in the premium required by guarantee beneficiaries. Concessionality is therefore critical in this case for projects to effectively benefit from the financial effect of increased leverage that is fundamental for the competitiveness and financial viability of renewable energy projects.

D.2. Exit Strategy

Please explain how the project/programme sustainability will be ensured in the long run, after the project/programme is implemented with support from the GCF and other sources, taking into consideration the long-term financial viability demonstrated in <u>E.6.3</u>. This should include a description of strategies for longer term maintenance of physical assets (if applicable).

The following elements will be the pillars of the long term sustainability of the program:

- The proposed program will finance an initial set of projects under GoA's new renewable energy program and regulatory framework, supporting short term objectives with longer term impacts, i.e. to allow the financial close, construction and operation of these projects to demonstrate their technical and financial viability under the new conditions in Argentina. It will act as a validation for investors and lenders unable to participate in the first rounds that the new framework (contractual arrangements, support scheme, etc.) is found to be adequate by the several players required to carry these projects forward (sponsors, services companies, lenders) and who take the lead in the first rounds, helping pave the way for future participants.
- One of the reasons why GCF's participation is required at this stage is the lack of long term financing, to a significant
 extent related to Argentina's still low sovereign risk rating. This is something GoA expects to change in the short/midterm as the new administration addresses the factors behind the low credit rating legacy, and which will be one of





the pillars of enhanced access to finance from commercial sources in the future that will reduce or fully eliminate the need for development and climate finance in subsequent tenders (as has been the case for example for the development of wind power in Mexico, now largely financed by commercial lenders).

- A key element of the program is the signing of long term PPAs for projects selected as part of the tender, providing a basis for predictability of the revenue model that is key for its commercial bankability and long term financial sustainability.
- The IDBG program will not be creating economic distortions, from the point of view that the terms of financing and key contractual requirements will follow market-based parameters and best practices. Any concessionality considered in this program will be targeted at overcoming short term risk or cost barriers.
- Finally, the capacity building focus of the proposed technical cooperation activities will develop resources whose
 objective and value goes beyond the projects directly financed by the program, and which will be another source of
 long-term sustainability.





In this section, the accredited entity is expected to provide a brief description of the expected performance of the proposed project/programme against each of the Fund's six investment criteria. Activity-specific sub-criteria and indicative assessment factors, which can be found in the Fund's <u>Investment Framework</u>, should be addressed where relevant and applicable. This section should tie into any request for concessionality made in <u>section B.2</u>.

E.1. Impact Potential

Potential of the project/programme to contribute to the achievement of the Fund's objectives and result areas

E.1.1. Mitigation / adaptation impact potential

Specify the mitigation and/or adaptation impact, taking into account the relevant and applicable sub-criteria and assessment factors in the Fund's <u>investment framework</u>.

Mitigation impact: assuming a 75:25 split (in terms of generation capacity) in investment between wind and solar PV, expected GHG emission reductions are about 614,000 Tons CO₂e per year, or about 15.3 Million Tons CO₂e during the life of the assets.

E.1.2. Key impact potential indicator

Provide specific numerical values for the indicators below.

GCF core	Expected tonnes of carbon dioxide equivalent (t CO_2 eq) to be reduced or avoided (Mitigation only)	Annual	614,000			
indicators		Lifetime	15,300,000			
Other relevant	Expected increase in the number of small, medium and large low-emission power suppliers, and installed effective capacity:					
indicators	At least 5 suppliers – 400 MW of renewable energy	av generation	capacity			

Describe the detailed methodology used for calculating the indicators above.

 Expected GHG emission reductions: UNFCCC/CDM – AM Tool 07 v5.0 - Methodological tool: Tool to calculate the emission factor for an electricity system Version 05.0 (https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v5.0.pdf)

E.2. Paradigm Shift Potential

Degree to which the proposed activity can catalyze impact beyond a one-off project/programme investment

E.2.1. Potential for scaling up and replication (Provide a numerical multiple and supporting rationale)

Describe how the proposed project/programme's expected contributions to global low-carbon and/or climate-resilient development pathways could be scaled-up and replicated including a description of the steps necessary to accomplish it.

Through the recently passed Law 27.191, GoA has set ambitious short- and long-term targets for renewable energy shares in the energy mix, in the form of obligations to be met, along with the required incentives, procedures and penalties required to help achieve them. Per such law, the following targets will be the policy and regulatory basis of the minimum expected level of scale up and replication: 8% by 2017 (measured at the end of 2018); 12% by 2019; 16% by 2021; 18% by 2023; 20% by 2025.





The current program aims to directly support at least 13% of the capacity needed to reach the 8% 2018 target. Based on this and Law 27.191 targets, replication would be a minimum of 6.6 times in the short term. The replication target is, however, many times larger as the Law's mid and long term targets are considered; the 10 GW aimed for 2025 would represent a 25x replication factor relative to the ~400MW targeted for support under this program.

GCF's contribution to materialize such intended replication will be two-fold. First, through the financing of an initial set of projects, GCF will contribute to future replication by:

- i) supporting the success of the first tenders, which will demonstrate and build confidence that development of this type of projects under the new regulatory regime is feasible;
- ii) generating lessons and feed them back to public authorities, to support learning and continued improvement of the RenovAr program (e.g. regulation, tender/PPA design); and
- iii) helping develop capacities of local private companies across the supply chain of wind and solar PV projects, which would result in efficiencies and enhance viability for future projects.

Second, the technical cooperation products (studies and consultant services) and activities (training) will provide supplemental capacity building support to the Ministry of Energy, other public entities at national and local level, and private sector actors including sponsors, financing institutions, academic institutions. These technical cooperation products will fill a significant gap in the country, especially those related to the development of strategic plans, pilot projects on some renewable energy applications, the Center for Renewable Energy, and practical skills for the development and financing of sustainable renewable energy projects.

As mentioned, the ambitious transformation process that Argentina has embarked on, with development of renewables being one of its cornerstones, is a process that will require time and a phased approach. This first program proposal to the GCF is targeted at helping address some of the most immediate financial and non-financial barriers around the launching of the RenovAr public tender program, as a key driver of the first phase of the transformation process. Given the vast needs and challenges ahead to complete the desired transformation towards more sustainable energy path (in terms of both generation and use) in Argentina, IDBG foresees that GCF support will likely become important in subsequent phases of the process and other areas facing investment and/or knowledge barriers, including other renewable technologies, transmission/distribution, distributed generation, energy efficiency, among other. As support needs and related strategies are further defined, supplemental interventions may be analyzed, discussed with GoA, and presented for GCF's consideration to further contribute to the implementation of a comprehensive transformation strategy.

E.2.2. Potential for knowledge and learning

Describe how the project/programme contributes to the creation or strengthening of knowledge, collective learning processes, or institutions.

As a result of failed past policies and the challenging environment for long-term investment that prevailed in previous years, Argentina lags significantly behind other reference countries in Latin America (Brazil, Uruguay, Chile, Mexico) in terms of development and penetration of renewable energy technologies. As of the end of 2015 there were only about 200MW (out of over 32GW of installed capacity) of wind and solar generation capacity, with very little financed by private capital in the form of long-term project financing, which has elsewhere normally been the prevailing financing modality used to developed these projects. As a result, Argentina has a significant learning curve to undergo in terms of local capacity development, including project design, financing, construction, operation and maintenance, as well as regulation and grid management for adequate integration of renewables, among other. The support this program will provide will allow to close financing, construct and operate the projects, thus providing an opportunity to transfer such knowledge to local actors. The technical cooperation activities will help further develop additional capacity and skills for successful implementation and replication of investments and of the government program.

E.2.3. Contribution to the creation of an enabling environment





Describe how proposed measures will create conditions that are conducive to effective and sustained participation of private and public sector actors in low-carbon and/or resilient development that go beyond the program.

The Program, in enabling the construction and commercial operation of an initial set of projects, will contribute to testing and validating the suitability of the new regulatory framework (adequacy of tender/PPA models and parameters, sufficiency of fiscal incentives, adequacy of risk mitigation support scheme developed –e.g. FODER-, interconnection and dispatching arrangements, etc.) while also providing lessons for their improvement in the continued implementation of the government program. In addition, the first few projects will help establish links with international investors, lenders, specialized consultants (engineering, legal, etc.), equipment suppliers, and further develop the capacities of local partners across the supply chains of the technologies involved in the program. Moreover, the IDBG will continue sharing technical expertise with the government and private entities (e.g. local sponsors, banks, private off-takers) on various aspects of project financing, including on key contract design aspects that enhance bankability of off-take arrangements, thus contributing to the development of an enabling environment.

The technical cooperation products will normally be public information that will be shared with all public and private sector parties interested in the development of renewable energy projects in the country.

Describe how the proposal contributes to innovation, market development and transformation. Examples include:

- Introducing and demonstrating a new market or a new technology in a country or a region
- Using innovative funding scheme such as initial public offerings and/or bond markets for projects/programme

Beyond what has been described already in previous sections in regards to the program's contribution to market development and transformation, another important contribution will be to help –through both its financial and technical cooperation support- bring project financing back to Argentina as a financing modality to develop infrastructure projects. This is something that was mostly absent during the last fifteen years, which results in many local financing institutions having missed (or never developed) much of their related expertise. Another potential innovation contribution of the program is the eventual demonstration of the usefulness of refinancing guarantees as a tool to help commercial lenders extend the tenors of the financing they can offer for this type of projects.

E.2.4. Contribution to regulatory framework and policies

Describe how the project/programme strengthens the national / local regulatory or legal frameworks to systematically drive investment in low-emission technologies or activities, promote development of additional low-emission policies, and/or improve climate-responsive planning and development.

The program's main contributions to strengthening the regulatory framework will be:

- a) In providing financing and supporting the debt structuring process, it will provide –through the detailed technical and legal due diligence process- valuable insight into potential weaknesses of the regulatory framework, including on the potential impact of some contractual parameters on the bankability or financial cost of the projects. Such insight will be fed back to the Ministry of Energy to help improve regulation and future tender and PPA models.
- b) IDB plans to conduct technical cooperation support, through the development of (i) a strategic study on bird and bat biodiversity and migration and (ii) a workshop on environmental and social impacts and risks of renewable energy projects in Argentina offered to i) local authorities responsible for permitting, ii) local consultants responsible for preparing the impact assessments of projects, and iii) project sponsors responsible for the development and implementation of projects and their mitigation and management measures. This will help enhance regulatory and project implementation capacity in regards to environmental and social aspects for the development of renewable energy projects.

Other technical cooperation products will provide valuable information for policy makers, including the Ministry of Energy and other authorities at national and local level; the studies will provide reliable and updated information, with long-term and strategic view, currently not available in the country.





E.3. Sustainable Development Potential

Wider benefits and priorities

E.3.1. Environmental, social and economic co-benefits, including gender-sensitive development impact

• Economic co-benefits

- Job creation: The program is estimated ¹⁶ to help create between 4,480 and 6,300 jobs, between manufacturing, construction and installation (MCI) jobs, and operation and maintenance (O&M) jobs.
- Environmental co-benefits
 - Improved air quality. To overcome power supply gaps, over the last few years the system has increasingly
 resorted to diesel-based distributed generation solutions, some of which were placed in urban areas, creating
 direct exposure to air and noise pollution. As renewable energy projects to be developed under this program
 follow adequate environmental and social safeguards and take root in Argentina, the need for these dieselbased solutions will be reduced, resulting in associated local environmental benefits.
- Social co-benefits
 - **Gender-sensitive development impact.** While we do not have a sound basis to estimate ex ante impact possible on gender-equity, the program will offer support for implementation of various type of activities aimed at improving job opportunities for women in the emerging renewable energy sector in Argentina. Such activities are described in the Annex, and related results will be tracked accordingly.

E.4. Needs of the Recipient

Vulnerability and financing needs of the beneficiary country and population

E.4.1. Vulnerability of country and beneficiary groups (Adaptation only)

N/A

E.4.2. Financial, economic, social and institutional needs

Describe how the project/programme addresses the following needs:

• Economic and social development level of the country and the affected population

As previously explained, the challenges associated to policies and investment conditions in Argentina in the last fifteen years (particularly in the energy sector) have resulted in insufficient and inadequate investment in the energy sector. This has compromised both the security and the sustainability of the system, with significant negative impacts on businesses and fiscal accounts, through the public transfers needed to subsidize the costs of suboptimal solutions such as the increased incidence of costly imported fossil-based solutions. The increase in the required government subsidies has resulted in GoA spending in 2014 over USD 8 Billion (or approximately 1.5% of GDP) in subsidies to sustain the power sector. In addition, fossil fuel imports have been significantly hurting the trade balance in the last few years, with a trade deficit in the energy sector of the same order of magnitude as the power sector fiscal deficit. The increased participation of renewables in the energy mix will contribute to not only reduce the cost of energy but also the reliance on expensive fossil fuel imports, reducing their impact on the trade and fiscal balance.

- Absence of alternative sources of financing (e.g. fiscal or balance of payment gap that prevents from addressing the needs of the country; and lack of depth and history in the local capital market)
- Does the country have a fiscal or balance of payment gap that prevents from addressing the needs?

As explained above, the management of the power sector in Argentina over the last decade has resulted in a net sectorial deficit at the fiscal and trade balance level. Success of the proposed program has the potential to help alleviate

¹⁶ Estimate based on global statistics collected by IRENA (<u>http://www.irena.org/rejobs.pdf</u>)





both (although it will depend on the details of the projects that are awarded the tender and built). This program may help reduce the cost of supply of energy, with renewable energy displacing expensive alternatives such as power generated based on costly fossil fuels; this could result in a reduction of the subsidies required from the government, and thus reduce the fiscal deficit. In addition, to the extent that the projects displace imports of fossil fuels, there could also be a trade and balance of payments benefit.

• Does the local capital market lack depth or history?

Argentina has traditionally had –for regional standards- a sophisticated capital market. However, it has not been able to significantly support development of renewable energy projects so far given the long term financing -15-20 years-required by these projects and the weaknesses of the investment framework (particularly for the energy sector) and contractual conditions in previous tenders, which made these projects not bankable under traditional project financing standards. The financing of the projects under this new tender (and the regulatory and contractual measures being adopted to address previous bankability problems) has the potential to demonstrate the viability of long-term project financing of renewable energy projects and crowd in financing from the local capital markets in the mid-term.

• Need for strengthening institutions and implementation capacity.

As explained in point E.2.4 above, the process leading to financial closing of the first few projects under the new regulatory and contractual regime, as well as their subsequent operation and supervision, will provide insights into aspects in need of adjustment or capacity building (at the regulatory, planning, and project financing levels). Some of the technical cooperation activities included as part of this program will help address those needs.

E.5. Country Ownership

Beneficiary country (ies) ownership of, and capacity to implement, a funded project or programme

E.5.1. Existence of a national climate strategy and coherence with existing plans and policies, including NAMAs, NAPAs and NAPs

Please describe how the project/programme contributes to country's identified priorities for low-emission and climateresilient development, and the degree to which the activity is supported by a country's enabling policy and institutional framework, or includes policy or institutional changes.

This program is fully consistent with Argentina's climate change priorities, as defined in the INDC submitted to COP 21, and where the scale-up of renewable energy generation is listed as a key contributor to its unconditional target of reducing emissions by 15% by 2030 relative to its Business as Usual (BAU) scenario. This is consistent with the high contribution of the energy sector in the country's GHG emission profile (43% share).

Further, Argentina indicated a conditional target of up to 30% by 2030 if it received support in the areas of adequate and predictable international financing, capacity building, and technology development, innovation and transfer. The proposed GCF program is consistent with these conditions (capacity building support and adequately termed financial support that will also contribute to technology transfer and crowding in investment from world-class international developers), so the program should also contribute to achieve the more ambitious conditional target.

E.5.2. Capacity of accredited entities and executing entities to deliver

Please describe experience and track record of the accredited entity and executing entities with respect to the activities that they are expected to undertake in the proposed project/programme.

IDBG is one of the lead lenders in the renewable energy field in Latin America and the Caribbean. IDBG has the goal of directing 30% of its lending activities to support projects to prevent or address the effects of climate change. As part





of that mandate, the IDBG has spearheaded the financing of private sector renewable energy across the whole continent, starting with the first private hydropower facility in Brazil in the early 90's to then support renewable energy projects across the whole continent. This experience has allowed IDBG to operate with multiple clients under different regulatory schemes and to support the financing of 18 projects totaling more than 1.5GW of installed capacity.

The IDBG has led the introduction of wind and solar power projects in the region. In 2009 it provided financing for the first commercial scale wind power plant in Mexico. The Project sells its output to a private offtaker and its successful implementation not only crowded in other lenders but also showed the way to other investors to replicate the model and introduce non-conventional renewable energy in the country.

In 2012 IDBG financed the first commercial scale solar PV power project in Chile, a 25MWp solar plant located in the Atacama region which is selling energy to a large mining operation. The Project was the first renewable energy project that provided energy to a mining company, a model later replicated by other mining operators. Later on, IDBG financed some of the first merchant solar PV power projects in Chile, which was then followed by massive investments in the region.

In 2013 and 2014, the IDBG financed in Uruguay the first wind and solar power projects, respectively, under a recently established regulatory framework and which was largely developed over the years with the support of IDBG. More recently, in May of 2016, the IDBG provided financing for the first solar PV power plant in El Salvador, an 80 MW facility that will sell energy to distribution companies under long term PPAs. Before completing the financing, the IDB Group worked extensively with the distribution companies to enhance the contractual framework to facilitate international long term financing in the country. The enhanced contractual framework is currently being used by distribution companies to launch a second tender for an additional 150MW.

The experience developed over the years has allowed the IDBG to build a cohesive team of investments and credit officers, environmental and social specialists and a network of experienced external consultants with substantial experience in the structuring of the financing for wind and solar power projects. This comprehensive team has the ability to deploy its knowledge in new jurisdictions and apply lessons learned across the whole continent in the structuring of new transactions. Furthermore, this experience has allowed the IDBG to develop internal best practice standards for the financing of wind and solar power projects, which will be applied for the financing of projects in Argentina under this program.

E.5.3. Engagement with NDAs, civil society organizations and other relevant stakeholders

Please provide a full description of the steps taken to ensure country ownership, including the engagement with NDAs on the funding proposal and the no-objection letter. Please also specify the multi-stakeholder engagement plan and the consultations that were conducted when this proposal was developed.

A description of the multi-stakeholder engagement process required from each beneficiary project is provided in section F.3 below.

In regard to consultations conducted to confirm the alignment of this program with government objectives, as well as the relevance of mobilizing GCF financing as part of the financial packages needed to close these projects, IDBG has had the following instances of consultation:

Government of Argentina: as part of IDBG's collaboration with the Ministry of Energy and Mining in the preparation
of the first RenovAr tender, IDBG proposed to that ministry and the Ministry of Finance the preparation and
development of this program with the GCF. The Ministry of Energy also presented to IDBG some of the ideas for
technical cooperation support, included in the Program proposal upon discussion with them. Both ministries
(including the National Directorate of Programs with International Credit Organizations –DNPOIC- within the
Ministry of Finance, which is GCF's NDA) have expressed their interest and support for it. A Letter of No Objection
from the NDA has been properly secured and submitted to the GCF.





- Potential co-lenders: the IDBG carried various rounds of consultation with other development finance institutions and a number of commercial lenders to assess appetite of financing renewable energy projects under new conditions. This helped confirmed the limitations some of these actors will have (amounts, tenors, number of projects, etc.) and thus the relevance of mobilizing additional financial support from the GCF to help close financing packages.
- Other industry stakeholders: in addition, the IDBG has actively participated in recent workshops and conferences
 organized in Argentina to discuss with government officials and private companies possibilities of support and
 provide feedback/recommendations on the new tender and contractual framework.

E.6. Efficiency and Effectiveness

Economic and, if appropriate, financial soundness of the project/programme

E.6.1. Cost-effectiveness and efficiency

Describe how the financial structure is adequate and reasonable in order to achieve the proposal's objectives, including addressing existing bottlenecks and/or barriers; providing the least concessionality; and without crowding out private and other public investment.

The adequacy of the instruments proposed to the GCF (long term project debt and refinancing guarantees to help secure sufficient adequately termed financing and allow financial close) is based on the following elements:

- Given the large size and upfront nature of the CAPEX investment required by renewable energy technologies (relative to other fossil-based alternatives with lower CAPEX demands and higher ongoing fuel costs) access to long term debt, with tenors of at least 12-15 years, has demonstrated globally to be critical for renewable energy projects to be cost competitive.
- 2) The market sounding conducted by IDBG with other lenders indicates that there will likely be limitations, visà-vis the USD 1-1.2 Billion long term debt financing needed to support the 1,000 MW initially targeted by the first RenovAr tender (and even more considering any additional capacity that may be awarded as part of such tender or subsequent ones), in the volume and tenors that commercial banks and development finance institutions will be able to provide. This is the combined result of i) the ambitious size of this first RenovAr tender (if successful, it will result in a five-fold increase in installed wind and solar PV generation capacity in just two years) and ii) the still low –albeit improving- credit rating of Argentina.
- 3) Lack of sufficient and adequate long-term debt financing has been the main reason behind the failure of previous government tenders, such as GENREN in 2010, where just about 15% of awarded projects and capacity got built.

The proposed two instruments are meant to provide (directly or indirectly) long-term project finance in line with project needs and thus helping overcome this financial barrier.

Please describe the efficiency and effectiveness, taking into account the total project financing and the mitigation/ adaptation impact that the project/programme aims to achieve, and explain how this compares to an appropriate benchmark. For mitigation, please make a reference to <u>E.6.5 (core indicator for the cost per tCO2eq)</u>.

Cost-efficiency of the proposed GCF program is high, at just 8.5 USD per ton of CO₂ abated. This is in the same order of magnitude as other similarly oriented programs proposed by IDBG in the past to other climate funds. For example, for the CTF Mexico Renewable Energy Program (IDBG's Private Sector component) cost-effectiveness at the program level was estimated at USD 8.33-11.11 of CTF investment per Ton of CO₂ abated.

Some of the pillars of the high efficiency of this program are:

- high expected leverage of the GCF contribution (1:4 ratio), based on which it will help finance about 40% of the total generation capacity initially targeted by the first RenovAr tender with less than 10% of the investment needed.
- high estimated capacity factor (40-45%) for supported wind projects, based on outstanding resources conditions in vast areas of Argentina.





Effectiveness is also expected to be high, based on the combination with IDBG capital and IDBG origination and structuring capacity. Between IDBG and GCF about 50% of the financing package will be provided, leaving just about 20% of additional debt required to get to financial close (assuming an average 30% of equity required). This should help projects timely meet the aggressive timelines required by the tender, and avoid the incidence of the very costly penalties thereby established.

E.6.2. Co-financing, leveraging and mobilized long-term investments (mitigation only)

Please provide the co-financing ratio (total amount of co-financing divided by the Fund's investment in the project/programme) and/or the potential to catalyze indirect/long-term low emission investment.

Cofinancing/leverage ratio: 1:4 (i.e. GCF provides 20% of total investment cost)

E.6.3. Financial viability

Please specify the expected economic and financial rate of return with and without the Fund's support, based on the analysis conducted in <u>F.1</u>.

The economic and financial analysis in section F.1 compares rates of return and societal economic benefits in the case of projects securing –based on GCF support and IDBG's additional mobilization capacity- the type of tenors typically required for renewable energy projects to be viable in scenarios of cost competition. The analysis compares the results of projects financed with debt at 7-year tenors (as it appears to be the maximum tenor feasible for most commercial lenders interviewed during IDBG's market analysis) and the 15-year tenors more typically seen as required in other markets, and which IDBG aims to provide based on demand from project proponents.

For a sample 100 MW wind project financed at 70% of debt with 15-year tenor, a 11.1% equity return required a tariff of USD 60/MWh. Under this scenario, financial rate of return was 9.8% and economic rate of return ranged between 20% and 33% (depending on whether the low –USD 90/MWh- or high –USD 154/MWh- alternative cost of energy was used). The significant increase of the economic rate of return relative to the financial one results from the combination of the social/economic value of the GHG emission reductions and the savings on energy costs, with the latter being the dominant factor in the scenario of the higher alternative cost of energy (where cost reductions are as high as 61%).

A similar level of debt leverage at a 7-year tenor would require a tariff of USD 68.6/MWh to yield the same return for the sponsors. This represents a 14.3% increase in the tariff, making the benefits related to the tariff reductions decrease at a rate of USD 8.6/MWh, for a total of USD 81M during the life of the plant.

From a different angle, the impact of the reduced tenor (if similar tariffs were aimed for) would be a reduction on equity returns of over 280 bps (from 11.1% to 8.3%). This type of reduction could lead sponsors from awardee projects to refrain from taking the project forward (thus not materializing neither the environmental nor the energy cost reduction benefits).

Similar results were found in the case of the solar project sample. A 10.5% equity return required a tariff of USD 65/MWh if financed at 15-year tenors. The financial rate of return in the base case (15 years) is 9.3% and economic rate of return ranges from 18% and 30%. Debt at 7 years in turn required a tariff increase of almost USD 9/MWh (for a total rate of USD 74/MWh) to maintain a similar return; this represents a 14% increase in tariffs, which would result in a reduction of the energy cost savings of about USD 47M throughout the life of the plant.

In summary, the most notable results from the analysis in terms of the impact of projects securing (with GCF and IDBG support) long-term, 15-year debt, versus financing projects based on the 7-year or shorter tenors that most commercial lenders appear to be limited to offer are:

i) equity returns are reduced by about 280 basis points if projects can only secure the relatively short tenors they are likely to obtain without the support of the Program.

ii) required energy prices to deliver the same equity return are about 14% higher if only 7-year tenors are available. The price reductions that the longer tenors IDBG and GCF participation would allow could therefore result in energy cost savings to consumers and/or tax payers of about USD 290M during the life of the plants.





Please describe financial viability in the long run beyond the Fund intervention. Please describe the GCF's financial exit strategy in case of private sector operations (e.g. IPOs, trade sales, etc.).

The GCF support is required at this stage given the challenges associated to long-term investment in Argentina today (among other, still low –albeit improving- sovereign credit rating), in particular given the financial status of the energy sector. As the government continues to advance on various macroeconomic and sector reforms, these hurdles are expected to be overcome in the mid-term, resulting in a sector that can be financed on a fully commercial basis. Outstanding renewable energy resource conditions in Argentina, adequate availability of other required resources, and the continued decrease in technology cost should ensure financial viability of these investments once the sectorial and general investment challenges are overcome. A more detailed analysis on the pillars for long-term sustainability of GCF target investment and its exit strategy is provided in section D.2.

E.6.4. Application of best practices

Please explain how best available technologies and practices are considered and applied. If applicable, specify the innovations/modifications/adjustments that are made based on industry best practices.

Based on IDBG's vast track-record financing wind and solar PV projects in Latin America, a number of best practices have been identified and consolidated by the IDBG credit team. These practices are considered by project teams and credit officers during due diligence and structuring of these transactions, and implemented as/when projects' specific conditions may allow. A number of them are already included in the credit and structuring requirements established for the Program, including those related to financial structuring (ratios, etc.), due diligence review, project contracts, warranties, etc.

The other driver and incentive for use of best technologies (beyond any credit requirements IDBG will set as a lender) is the competitive nature of the process, where most efficient, cost effective and reliable technologies (considering the life cycle of plants) will have an advantage over competing options, first during the evaluation of technical proposals (where some may be discarded if not found to be compliant with minimum technical requirements), and secondly, and most importantly, during the evaluation and ranking of economic offers, as price will be the most determinant competitiveness factor of eligible offers and is closely linked with the levelized cost of energy of each project, which captures life cycle costs and performance.

E.6.5. Key efficiency and effectiveness indicators

Estimated cost per t CO₂ eq, defined as total investment cost / expected lifetime emission reductions (mitigation only) (a) Total project financing US\$ 650 Million US\$ 130 Million (investment (b) Requested GCF amount GCF component) core (c) Expected lifetime emission reductions overtime 15.3 Million tCO₂eq indicators (d) Estimated cost per tCO_2eq (d = a / c) US\$ 42.4 / tCO2eq (e) Estimated GCF cost per tCO_2 eg removed (e = b / c) US\$ 8.5 / tCO2eq Describe the detailed methodology used for calculating the indicators (d) and (e) above. GHG emission reductions were calculated based on:





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- Grid emission factor of 0.49 tons CO₂/MWh calculated based on GoA data¹⁷ and UNFCCC/CDM AM Tool 07 v5.0 : Methodological tool to calculate the emission factor for an electricity system Version 05.0
- ii) Values for indicators (d) and (e) were calculated based on other Program targets (e.g. minimum of 5 projects and 400 MW of capacity) and assumptions on factors such as expected capacity factors, expected life of the assets, CAPEX costs, among other.

Expected volume of finance to be leveraged by the proposed project/programme and as a result of the Fund's financing, disaggregated by public and private sources (mitigation only)

Expected total leverage: USD 520 M, of which:

- IDBG: USD 200M
- Other B-/co-lenders (commercial banks and other DFIs): USD 125M
- Project sponsors/equity investors: USD 195M

Describe the detailed methodology used for calculating the indicators above.

- IDBG volume of financing based on preliminary internal target, subject to potential changes based on evolution of macroeconomic conditions or other relevant factors.
- Equity: based on an estimated 30% average across the portfolio.
- Other lenders: based on market sounding conducted by IDBG for appetite from other lenders.

Other relevant indicators (e.g. estimated cost per co-benefit	Job creation: 4,480-6,300 jobs
generated as a result of the project/programme)	GCF investment/job created = USD 20,600-29.000/job

¹⁷ <u>http://energia3.mecon.gov.ar/contenidos/verpagina.php?idpagina=2311</u>





F.1. Economic and Financial Analysis

Please provide the narrative and rationale for the detailed economic and financial analysis (including the financial model, taking into consideration the information provided in <u>section E.6.3</u>).

I. Introduction

As described in previous sections, the proposed GCF program is aimed at helping renewable energy awardee projects secure long-term debt financing, to allow them to timely reach financial close and advance to construction and operation, overcoming the access-to-finance hurdles based on which previous tenders failed ¹⁸. Long-term debt financing is key for the cost competitiveness of renewables, so projects aiming to prevail in the tender have built high debt leverage assumptions into their bids. As contracts are awarded, projects will need to secure consistent types and volumes of debt financing to successfully carry projects forward. Per IDBG's market sounding, limitations in the availability of long-term debt financing (i.e. with tenors of at least 12-15 years) may be encountered relative to the investment needs associated to the 1,000 MW initially targeted by the first RenovAr tender and any additional capacity that may be awarded as part of such tender or subsequent ones. This type of tenors seem to be available only from a limited number of DFIs. Appetite from the range of commercial banks consulted by IDBG seems to be for much shorter tenors (5-7 years). These type of tenors will be inadequate for the projects offering the lowest prices and therefore likely to succeed in the tenders. The economic and financial analysis hereby assesses the effect on tariffs and projects economics (equity, financial and economic rates of returns) of projects financed under these different tenor scenarios, to evaluate the impact that the proposed GCF's financial support and IDBG's additional mobilization efforts to secure sufficient long-term project debt could have.

II. Methodology

The approach used in this economic analysis is the stakeholder framework, in which the ERR (Economic Rate of Return) is calculated on the basis of two sample¹⁹ project's FRR (Financial Rate of Return) flow, by performing adjustments to reflect differences between private returns (i.e. benefits and costs) to the project itself (which are reflected in the FRR), vs. benefits and costs to other stakeholders and society as a whole. Since not all of the economic costs and benefits are quantifiable in a cost-effective way, or data on them available, quantitative adjustments of impacts on some stakeholders is complemented by qualitative discussion of the possible impacts on other stakeholders.

Both the FRR and ERR reflect the project's financial and economic costs and benefits flow's Internal Rate of Return over the project lifetime, which is the hypothetical discount factor which would have to be applied for the project costs to equal the project benefits over time. The higher this rate, the higher the project benefits are when compared to the cost.

While estimating some stakeholder benefits is readily possible based on sample project's financial projections and other relevant data, the limited immediate evaluability especially of more indirect and generally hard-to-attribute effects (such as longer-term indirect project impacts, or impacts on competition, business conditions, etc.) puts natural constraints on the quantitative analysis that can be performed. Nevertheless, this economic analysis intends to capture some of the most important of these impacts, with the resulting ERR believed to be a representative lower-bound measure for the project's economic impact.

The ERR calculation quantitatively captures:

- Project costs to the sponsors and financiers
- Project revenues (benefits) to the sponsors and financiers
- Differences between the price of energy paid to the projects and estimates of the energy sources (and their prices) displaced by these projects

¹⁸ In the 2010 GENREN tender program, 895 MW of renewable energy were awarded across 32 projects. As of 2015, only 7 of those projects, totalling 139 MW had been built. This represents just 15% of the capacity awarded.

¹⁹ One 100 MW wind project, and one 100 MW solar PV project, with cost assumptions based on references from similar projects financed by IDB in other countries, and resource, grid emission factors and alternative costs of energy based on local conditions.



 The estimated value to society of the avoidance of negative externalities (in the form of CO₂ emissions) due to energy generated by the GCF program's wind and solar PV power projects being used instead of energy produced by other, more emission-intense power plants.

III. Assumptions

Some of the mains assumptions to derive the additional economic value –beyond the financial returns- of the projects were the following:

- Alternative cost of energy: one of the main drivers of this renewed GoA's effort to promote and develop renewable energy generation is the significant impact that the increasing reliance on fossil fuel-based generation has had on fiscal and trade balances. According to a report from the Argentine Renewable Energy Association, the average cost of fossil solutions put in place to overcome energy supply deficits in the last few years was USD 390/MWh in 2014. This resulted from the combination of the fuel cost (an average of USD 154/MWh for gasoil) and other costs associated with such contracts. Given GoA's goal of displacing such expensive generation with the new renewable generation, and given the absence of projections of power costs in the market, we take the cost of the displaced fuel (just the USD 154 for the fuel, not the cost of the full contracts, to be conservative) as a reference for the counterfactual cost of energy. We also run the analysis using a more conservative (i.e. lower) alternative cost assumption of USD 90/MWh, which was indicated by some sources as a more representative average cost across various thermal generation technologies and fuels (including prices from imported and domestic sources), and which could be displaced by a higher penetration of renewables.
- Grid emission factor: 0.49 Ton CO₂/MWh of renewable energy supplied (per the methodology indicated in previous sections).
- Value of carbon: while there is intense ongoing debate about the incidence and the social costs of the greenhouse gas effect, as well as on the methodologies employed, there have been recent efforts to summarize and validate academic findings by testing across a wide set of climate change models and approaches used in this field. In 2010, an inter-agency working group²⁰ involving a wide array of U.S. government agencies and specialist institutions produced a report on official estimates for the (global) social costs of greenhouse gases, which was widely referenced²¹, with its estimates being consistently used in the analysis of U.S. regulatory impact analyses across agencies. This economic analysis uses the above-mentioned report's most recent central estimate for the social cost of carbon (USD per ton of carbon dioxide), being USD 33 for 2013 (in 2007 US dollars) and rising thereafter. In particular, the current estimate of USD 38/Ton CO₂ was used for this analysis.

IV. Results

For the sample 100 MW wind project, if financed at 70% of debt with 15-year tenor, a 11.1% equity return required a tariff of USD 60/MWh. Under this scenario, financial rate of return was 9.8% and economic rate of return ranged between 20% and 33% (depending on whether the low –USD 90/MWh- or high –USD 154/MWh- alternative cost of energy was used). The significant increase of the economic rate of return relative to the financial one results from the combination of the social/economic value of the GHG emission reductions and the savings on energy costs, with the latter being the dominant factor in the scenario of the higher alternative cost of energy (where cost reductions are as high as 61%).

A similar level of debt leverage at a 7-year tenor would require a tariff of USD 68.6/MWh to yield the same return for the sponsors. This represents a 14.3% increase in the tariff, making the benefits related to the tariff reductions decrease at a rate of USD 8.6/MWh, for a total of USD 81M during the life of the plant.

From a different angle, the impact of the reduced tenor (if similar tariffs were aimed for) would be a reduction on equity returns of over 280 bps (from 11.1% to 8.3%). This type of reduction could lead sponsors from awardee projects to refrain from taking the project forward.

²⁰ Interagency Working Group on Social Cost of Carbon, United States Government

²¹ E.g. in Greenstone, M. and Looney, A. "A Strategy for America's Energy Future: Illuminating Energy's Full Costs", Hamilton Project Strategy Paper May 2011, Brookings





Similar results were found in the case of the solar project sample. A 10.5% equity return required a tariff of USD 65/MWh if financed at 15-year tenors. The financial rate of return in the base case (15 years) is 9.3% and economic rate of return ranges from 18% and 30% (still high, even when lower than in the wind sample). Debt at 7 years in turn required a tariff increase of almost USD 9/MWh (for a total rate of USD 74/MWh) to maintain a similar return; this represents a 14% increase in tariffs, which would result in a reduction of the energy cost savings of about USD 47M throughout the life of the plant.

Further economic benefits have been qualitatively identified, but not quantified in the economic rate of return, given the difficulties assessing them for an unknown portfolio of projects. Among the main potential benefits to local communities and local environment, we find:

- Benefits stemming from the avoidance of more local (air, soil and water) pollution other than CO₂ emissions, since no estimate for their economic cost is available for this analysis.
- Potential direct and indirect benefits of project-caused job creation in the form of higher work income than the nextbest alternative for all project employees. Given the typically low local income levels in many of the remote wind sites, this benefit can potentially be quite important, especially for local stakeholders. A lack of estimates on the applicable wage of income differential prevented an inclusion of all such expected benefits.
- Benefits stemming from more energy price stability that shall occur with a more diversified energy matrix in the long run.
- Benefits associated with the potential reduction in fiscal and trade deficits.

NOTE: A supplemental economic analysis, focusing on the specifics of the projects to be supported by the program, once they are confirmed, will normally be conducted during the project preparation stage, and will allow assessing economic benefits and impacts more precisely. Some aspects of these analysis will be shared through the periodic reporting required based on the program's performance framework.

Based on the above analysis, please provide economic and financial justification (both qualitative and quantitative) for the concessionality that GCF provides, with a reference to the financial structure proposed in section B.2.

The analysis shows that the tenor of the debt financing that projects can access has significant impact on the tariff that is required to deliver a certain level of equity return. Based on the assumptions hereby made, projects financed with 7-year tenors require tariffs about 14% higher than those financed at 15 years (which is the tenor intended by IDBG for projects in the first RenovAr tender, and a level representative of those normally assumed across tenders in Latin America by sponsors behind the lowest bids and who get the contract awards).

In addition, the impact of the debt tenor on equity returns is significant. As seen in the previous section, for the sample wind project, the shorter debt tenor results in a reduction of equity returns of 280 basis points, which could result in a decision by an investor not to take the project forward (as has been the case in previous renewable energy tenders where the failure to secure adequately termed debt –among other things- resulted in only about 15% of the awarded capacity being built).

The GCF would therefore have strong additionality in this program by help securing –through its 15-year co-financing²² or the refinancing guarantees that would allow commercial lenders to extend their tenors- the long term debt required by these projects to reach financial close at competitive prices and help deliver the various economics benefits of these alternative and more sustainable sources of energy. Failure to secure properly termed debt risks repeating the results of previous tenders.

²² Or potentially longer tenors in subsequent tender rounds or in the financing of renewable energy generation contracted between private parties.



F.2. Technical Evaluation

Please provide an assessment from the technical perspective. If a particular technological solution has been chosen, describe why it is the most appropriate for this project/programme.

While the first RenovAr tender has been open to various renewable technologies (wind, solar PV, biomass, biogas and small hydro), pre-defined quotas favored wind (60% of the capacity allocation) and solar PV (30%). This is likely attributable to the better prospects for these technologies to quickly deliver scale, one of the main objectives of this tender (1,000 MW target). The market validated this assessment, with 99% of all capacity offered concentrating in wind and solar PV. Offers for wind and solar power capacity have exceeded the quota allocation by factors of 5.8 and 9.4 respectively. In turn, the other technologies did not initially reach the smaller quotas reserved for them.²³

The high level of offer for these technologies relates –among other- to the outstanding wind and solar resource conditions in vast areas of Argentina. Wind capacity factors exceed 40% in various regions. Global Horizontal Irradiation (GHI) in the northwest of Argentina reaches levels above 2,500 KWh/m², similar to northern Chile (e.g. Atacama desert) where there is more than 1.2 GW of solar PV in operation. The resource for both wind and solar PV in Argentina are therefore among the best of the world. The land required for these type of projects is normally vastly available where these resources are strong, given the low density of population and remoteness from population centers. Finally, the significant reductions in capex cost for these technologies (in particular for solar PV) have increased their cost competitiveness significantly relative to other renewable and fossil-based alternatives.

All these factors create the conditions for wind and solar PV power to become quite cost competitive in Argentina (assuming adequate financing can be obtained and cost of capital comes down), but also quite replicable and scalable.

For these reasons, and given the main objective of this Program of helping achieve in the short term the ambitious scale of renewable energy penetration targets (8% by 2018), the investment component of this Program is initially focusing on the two technologies that are better positioned to help reach such scale in the short term. IDBG will seek to support additional technologies through the technical cooperation component, as well as through potential subsequent programs.

F.3. Environmental, Social Assessment, including Gender Considerations

Describe the main outcome of the environment and social impact assessment. Specify the Environmental and Social Management Plan, and how the project/programme will avoid or mitigate negative impacts at each stage (e.g. preparation, implementation and operation), in accordance with the Fund's Environmental and Social Safeguard (ESS) standard. Also describe how the gender aspect is considered in accordance with the Fund's Gender Policy and Action Plan.

Environmental and Social Impacts and Risks

The potential key environmental, social, health and safety, and labor issues and risks associated with this Program are those related to the wind and solar PV generation sub-projects to be financed under the GCF Program. Key impacts and risks expected from the wind and solar projects are:

Wind projects (land-based):

Wind energy projects can result in adverse environmental or social impacts, which will vary in nature, intensity and duration based on the specific characteristics, location and size of the wind farm, as well as the specific environmental and social context. Depending on the area, the construction of access roads and transmission lines to connect the wind farms to the grid could intensify the adverse impact of these projects. The general risks and impacts during construction can include: (i) habitat disturbance; (ii) soil erosion; (iii) soil and water pollution; (iv) air emissions and dust generation;

²³ This may have also been due to aspects in the contractual framework that may have required further tailoring to be more conducive to the development of these technologies.



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(v) increased heavy traffic; (vi) noise and vibrations; (vii) loss of vegetation; (viii) occupational health and safety hazards for the workforce; (ix) community health and safety issues; (x) changes in local economy; (xi) changes in local societal structure/ dynamics; (xii) community expectations and conflicts; and (xiii) access to land/ land use changes. During operation, the risks and impacts can include: (i) bird and bat mortality due to collision with turbines and electrocution with transmission lines; (ii) habitat fragmentation from access roads and transmission lines; (iii) visual and landscape impacts, including shadow flicker effect; (iv) noise from mechanical and aerodynamic movement; (v) lighting and shade from blades; (vi) community health and safety hazards; and (vii) land use changes. In some specific cases, it may involve use of indigenous land/ territories; community/ stakeholder opposition and/or heightened expectations for local benefits.

Solar PV Projects:

Solar PV projects have more limited environmental and social impacts; however, the intensity of the impacts can vary depending on the location. The general risks and impacts during construction can include: (i) habitat disturbance; (ii) soil erosion; (iii) soil and water pollution; (iv) air emissions and dust generation; (v) increased heavy traffic; (vi) noise and vibrations; (vii) loss of vegetation; (viii) occupational health and safety hazards for the workforce; (ix) community health and safety issues; (x) changes in local economy; (xi) changes in local societal structure/ dynamics; (xii) community expectations and conflicts; and (xiii) access to land/ land use changes. During operations, impacts are primarily associated with (i) land use conversion and habitat loss; (ii) habitat fragmentation from access roads and transmission lines; and (iii) waste management associated with the disposal of solar panels. In some specific cases, access to water and water availability; use of indigenous land/ territories and community/ stakeholder perception and expectations for local benefits can be an issue.

Environmental and Social Due Diligence Process

Projects under this Program will undergo the environmental and social review process required for all direct investments (e.g., project finance). Projects will be reviewed against the standards of the IDB Environmental and Safeguards Compliance Policy and other IDB Policies as well as international best practices such as the IFC Performance Standards and World Bank Group Environmental, Health and Safety (EHS) Guidelines, including the General Guidelines and Industry-Specific Guidelines.

Eligibility: At the Eligibility stage, a preliminary category is provided to the project, based on the impacts and risks described in the EIA and other relevant documentation, including publicly available information. Only projects that are preliminarily Category B or C will be eligible. At this stage, an Environmental and Social Screening and Strategy (ESS) will be prepared, which indicates the most relevant environmental and social aspects or terms of reference for the due diligence.

Projects eligible under the Program will be projects Category B or C, defined as:

-Category B: projects have potential environmental and/or social impacts and risks that are less adverse than those of a Category A and which are generally limited to the project site, largely reversible and can be mitigated via measures that are readily available and feasible to implement in the context of the operation.

-Category C: projects are likely to result in very limited or no adverse environmental or social impacts or risks.

Category A projects will not be eligible for financing under this Program.

Appraisal: During appraisal, an environmental and social due diligence will be conducted by experienced Environmental and Social Specialists. Depending on the complexity of the project or the need for local expertise, an Independent Environmental and Social Consultant (IESC) may be hired to support the review. The due diligence will consist of a thorough review of relevant environmental, social, and labor and health and safety documentation, complemented with interviews with the project sponsor staff, consultants and contractors. During the site visit, the



proposed project's area of influence will be visited and meetings with relevant stakeholders will be held. The ESDD will typically address the following aspects:

- Confirmation that the project has been designed following good international industry practice;
- Review of the site selection and analysis of alternatives for the project and its associated facilities;
- An assessment of the project's Environmental and Social Impact Assessment (ESIA) and supporting studies, in compliance with international standards;
- An assessment of the project's Environmental, Health and Safety Management System, including plans and procedures, to assess their adequacy in terms of responsibilities, training, auditing, reporting, and resources to be made available to ensure adequate implementation;
- Organizational capacity, including at the corporate level as well as at the project level;
- Completeness and adequacy of the environmental and social baseline studies, including but not limited to: biodiversity (with emphasis on birds and bats and their migratory paths for wind projects), noise, traffic, land use, natural disaster risk and cultural heritage;
- Assessment of environmental and social impacts and risks, including where possible, quantitative analyses through modeling and other methods;
- Assessment of potential adverse socio-economic impacts of land acquisition/ easement, construction activities, temporary loss of access to agricultural land required for the installation of the transmission line; evaluation of mitigation and compensation framework and measures for the current land owners along planned transmission lines;
- Cumulative impacts;
- Adequacy of the mitigation measures, management and monitoring plans and programs;
- Human resources and labor policies, including compliance with local regulations;
- Completeness and adequacy of public consultation, disclosure and stakeholder engagement, including vulnerable groups;
- Environmental, social, labor and health and safety requirements passed on to contractors;
- Assess health and safety practices for workers and if the Project is meeting good international industry standards;
- Evaluation of risks of natural disasters and emergency response.

The project's environmental and social aspects will be reviewed against the applicable safeguards, policies, standards and guidelines.

The results of the meetings with stakeholders will be documented and input received from stakeholders will be taken into consideration in the overall assessment of the project's compliance and opportunities for improved environmental and social performance. Typical stakeholder to interview will include local authorities, local leaders, project-affected communities, other groups or entities with an interest in or an influence on the project.

As a result of the due diligence, an Environmental and Social Review Summary (ESRS) will be prepared and disclosed at least 30 days prior to approval on the website. The ESRS will include a link to the ESIA and other relevant project documents prepared by the project sponsor. The ESRS will include the main conclusions of the project's alignment with the applicable requirements. Any gaps or enhancements that need to be completed to align the project to the applicable requirements will be summarized in an Environmental and Social Action Plan (ESAP) and will specify the dates required for completion of each action. The ESAP will also be disclosed on the website as part of the ESRS.

Closing and Disbursement: The ESAP will be included as a condition to the loan agreement, together with other general environmental and social requirements in the legal documents. The conditions precedent (CP) to closing will be reviewed by the Environmental and Social Specialist for adequacy and completeness vis-à-vis the applicable requirements. Prior to each disbursement, the Environmental and Social Specialist will review the documentation provided by the project sponsor and verify if it satisfies the CPs for a given disbursement.



Supervision: During construction, projects will be supervised at least every six months to review compliance with the environmental and social covenants in the loan agreement, including compliance with standards of IDB's safeguards and policies as well as the ESAP requirements. During operations, projects will be supervised at least annually, with a more frequent review during the first years of operation. An annual report will be prepared for projects based on information provided by the project and the supervision visits. Some projects may also have an IESC that will support the review.

Multi-Stakeholder Engagement and Consultation

Projects will be reviewed against relevant IDB environmental and social safeguards standards that will be applied in accordance with the AMA and/or such other arrangements to be entered into by the parties. This includes requiring the client's engagement with affected communities and stakeholders through the disclosure of relevant project information, consultation, and informed, effective participation, consistent with the principles of good international industry practice (GIIP) such as the IFC Performance Standards. Stakeholder engagement must be commensurate to project risks and impacts and enable them to express their concerns in a timely manner as to the scope and effectiveness of environmental and social assessments, management plans and compensation schemes. Certain impacts related to resettlement, livelihood losses and indigenous peoples may require agreements with stakeholders. Projects must also include a grievance management mechanism commensurate with the complexity and level of conflict associated with the project. Special attention is paid to participation by vulnerable groups (such as women, indigenous peoples, and other ethnic minorities, low income and illiterate groups, youth, the elderly, and persons with disabilities).

During appraisal, projects require a site visit, which includes interviews with clients' staff, contractors, consultants and relevant stakeholders. These stakeholders commonly include: project-affected communities; local and State authorities; local leaders; local workers; organized groups with an interest in the project; NGOs/associations; academics/ scientific groups; and vulnerable groups. A preliminary list of stakeholders will be requested from the project sponsor and will complement it with research gathered during the due diligence review. The results of meetings and interviews with stakeholders are taken into consideration for the appraisal and supervision requirements.

Information will be disclosed in accordance with disclosure standards consistent with the AMA. In summary, disclosure requirements for projects that are Category B and C include:

- Category B: sub-project EIA and other relevant environmental analyses and disclosure template including ESRS 30 days prior to Board Approval, and
- Category C: Disclosure template including ESRS 30 days prior to Board Approval.

The operations under the GCF Program will be subject to an Independent Consultation and Investigation Mechanism (ICIM), which may apply in cases of complaints that the applicable policies have failed to be followed and, when as a result of such failure material adverse effects have occurred or might reasonably be expected to occur.

Gender Assessment and Action Plan. Please see detailed gender assessment and action plan in the Annex.

F.4. Financial Management and Procurement

Describe the project/programme's financial management and procurement, including financial accounting, disbursement methods and auditing.

Financial resources from the GCF will be managed according to the general provisions of the AMA between the GCF and the IDB. For this program in particular, GCF resources will be transferred to the GCF account at IDB based on the forecast of expected approval and disbursement requests of underlying projects, with sufficient anticipation to ensure disbursement obligations under the respective loan and guarantee agreements can be properly met. Based on such



project disbursement requests, IIC will request disbursement of GCF resources held in trust by the IDB to an IIC payment account, and subsequently from there to the projects. Disbursements into individual projects will be made according to pre-approved criteria to include the size of the loan, tenor, and certain debt-to-equity criteria, among other. Reflows (in the form payments of principal, interest or fees) will be made from projects to the IIC payment account, and from there to the GCF account held by IDB, and subsequently, following any AMA and FAA provisions, to the GCF.

GCF Proceeds will co-finance with the same level of seniority as IDB and IIC funding (pari-passu), as the case may be, and therefore a single IIC project team, with participation of IDB when required, will represent the interests of both IDB and IIC and the GCF in negotiating their participation in the financing, as well as in the execution, project supervision and portfolio management of the financing, including the exercise of any remedies in connection with any defaults or workouts. At the project level, relevant IDB environmental and social safeguards standards will be applied in accordance with the AMA and/or such other arrangements to be entered into by the parties.

The diagram below illustrates the expected flow of funds.



Flow of Funds





G.1. Risk Assessment Summary

Please provide a summary of main risk factors. Detailed description of risk factors and mitigation measures can be elaborated in G.2.

Project to be supported by this program will be exposed to two main types of risks:

- typical risk factors affecting renewable energy projects (resource, technology, etc.) which will be mitigated trough the structuring process of each transaction in accordance with IDB's best practices for lending to wind and solar power projects.
- ii) risks associated with the more idiosyncratic economic and investments conditions in the energy sector in Argentina. These risks are mitigated through a combination of government action (policy/regulatory improvements underway, specific risk mitigation structures developed for this program, such as the FODER guarantee scheme), and additional structural credit enhancements (debt reserve accounts, sponsor support, etc.) that IIC will require at the project level.

Details of such risks and mitigation strategies are listed below.

G.2. Risk Factors and Mitigation Measures

Please describe financial, technical and operational, social and environmental and other risks that might prevent the project/programme objectives from being achieved. Also describe the proposed risk mitigation measures.

Selected Risk Factor 1

Description	Risk category	Level of impact	Probability of risk occurring
Creditworthiness of the off-taker. Potential delay in payments by the off-taker for the energy delivered by the Borrowers may impact the Borrower's ability to serve debt.	Financial	Medium (5.1- 20% of project value)	High
Mitigatio	n Measure(s)		

Please describe how the identified risk will be mitigated or managed. Do the mitigation measures lower the probability of risk occurring? If so, to what level?

Until the reforms underway in Argentina's electricity sector (competitive processes to reduce cost of supply, adjustments to subsidy regime to enhance the cost recovery capacity of tariffs, etc.) are fully implemented, enhancing its sustainability, the off-taker's ability to pay the energy contracted under the RenovAr public tender program will depend to some extent on the monetary transfers it continues to receive from GoA.

In order to mitigate this risk, GoA has established a Renewable Energy Trust Fund (FODER) in which it will deposit financial resources with a face value equivalent to the obligations of one year of PPA payments that the off-taker needs to make under the RenovAr program. In case the off-taker fails to pay, the FODER has the obligation to pay on behalf of the off-taker, effectively mitigating the risk of occurring a delay in payment. In addition to the support of the FODER, the financing plan will include a Debt Service Reserve Account of no less than 6 months of Project debt service, which will be used to pay debt in the event of any cash short fall of the Borrower.





Selected Risk Factor 2						
Description	Risk category	Level of impact	Probability of risk occurring			
Resource Risk. Lower-than-expected wind or solar irradiation could reduce the ability of the Project to generate enough revenues to service debt.	Other	Low (<5% of project value)	Medium			
Mitigatio	n Measure(s)					
Lower wind availability or solar irradiation presents a risk for the Project due to its uncertainty and potential impact on the capacity of the Project to generate revenues. This risk will be mitigated through the use of conservative base-case assumptions for debt sizing that incorporates levels of energy production that will have a high probability of being exceeded. The IDB will size the debt following its best practice standards, which require that the cash available for debt service meets a minimum debt service coverage ratio agreed for the Program.						
In order to estimate the availability of the resources, the IDB will retain an external technical consultant (the "Independent Engineer" or the "IE") to independently analyze the wind measurements or solar irradiation using the best performing solar database presently available. For wind projects, the IDB will only finance projects that have a certain minimum time of on-site wind measurements with certified equipment acceptable to the IE.						
Selected Risk Factor 3						
Description	Risk category	Level of impact	Probability of risk occurring			
Loss of revenues caused by delays in construction and cost overruns.	Technical and operational	Medium (5.1- 20% of project value)	Medium			
Mitigatio	n Measure(s)					
Potential construction cost overruns or delays could lead to the need to have additional resources to complete the Project or impact the capacity of the Project to generate revenues to service debt at the beginning of the amortization of the loans. These risks will be mitigated through a set of minimum requirements for the EPC Contract, which will effectively transfer construction risk to the EPC Contractor. The EPC Contract will have a package of market-standard liquidated damages (the "LDs"), to be sized on a case-by-case basis taking into the account the opinion of the IE and considering the characteristics of project site and construction program. The LDs to be provided by the EPC Contractors or the Sponsor will be credit enhanced with a letter of credit posted by a financial institution acceptable to the IDB.						
If needed the IDB will also request additional support from Sponsor to cover risks that may be excluded by EPC Contractors.						
Selected Risk Factor 4						
Description	Risk category	Level of impact	Probability of risk occurring			
Technology Risk. Underperformance of the technology leading to lower production of energy and revenues.	Technical and operational	Low (<5% of project value)	Low			



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Mitigation Measure(s)

The Projects to be financed by the program will be exposed to risks related to the potential underperformance of its different components; in particular the solar panels and inverters and the wind turbines which could lower the capacity of the Project to generate revenues. This risk will be mitigated through i) the selection of commercially proven, independently certified wind turbines, solar panels and inverters, ii) O&M contracts that include a minimum plant availability guarantee, iii) solar panel degradation guarantee and defects guarantee provided by manufacturers of solar panels and wind turbines, iv) when appropriate, a major maintenance reserve accounts to perform scheduled maintenance and replacement of components.

In addition, the risk will be mitigated by contracting an experienced operation and maintenance company, which will ensure proper maintenance of all equipment in accordance with best industry practices.

Selected Risk Factor 5

Description	Risk category	Level of impact	Probability of risk occurring
Convertibility and Transferability Risk. Ability of the Borrower to convert Argentinean Pesos into US Dollars may affect its capacity to service debt.	Financial	High (>20% of project value)	Low
Mitigation	n Measure(s)		

The PPA is denominated in US Dollars, but payments will be made by the off-taker in Argentinean Pesos at the exchange rate of the invoice date. In the event that Argentina faces serious restrictions on hard currency, the Borrower may face difficulties converting Argentinean Pesos into US Dollars and to transfer them abroad to service debt.

This risk is mitigated given that the FODER gives the right to the Borrower to terminate the PPA and sell the project to FODER upon occurrence of a convertibility and transferability event.

Selected Risk Factor 6

Description	Risk category	Level of impact	Probability of risk occurring		
Relatively new regulatory framework	Other	Low (<5% of project value)	Medium		
Mitigation Measure(s)					

The Projects to be financed by the Facility will be among the first commercial scale wind and solar power projects to be financed in the country under the recently established RenovAr Program. Given the low penetration of renewable energy in the country it is expected that the Argentinean regulatory framework will need to evolve over time to adapt and modernize the regulation as more renewable energy enters the market and the electricity sector is normalized.

As an example, the PPA allows the off-taker to assign the obligation of the off-taker to large consumers or distribution companies, provided that the guarantee scheme provided by FODER remains in place. This expose projects to an additional off-taker risk which may create revenue volatility.

This risk is mitigated by GoA's strong commitment, established through Law 27.191, to increase the country's energy generation capacity from clean sources, which can only be achieved through a sustained level of investment.



RISK ASSESSMENT AND MANAGEMENT



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Sustainability of these investments over time will only be possible by a balanced regulatory framework that does not negatively affect the early entrants in the sector.

Selected Risk Factor 7			
Description	Risk category	Level of impact	Probability of risk occurring
Environmental and Social risks.	Social and environmental	Low (<5% of project value)	Low
Mitigatio	n Measure(s)		

Renewable energy power projects to be financed by the program (in particular wind) will be exposed to environmental and social risks. In particular, wind power projects may be affected by lower production resulting from mandatory shutdowns due to the presence of bats and/or migratory birds.

This risk will be mitigated by the application of the environmental and social safeguards, which require a comprehensive assessment of environmental and social risks and its corresponding action plan to mitigate such risks. Among them, Borrowers are required to conduct a flora and fauna survey, including birds during the migratory seasons, before the execution of any works. In addition, all Projects will be subject to a public consultation process to identify and address, as needed, the concerns of the affected communities (if any). This risk will be further mitigated through the exclusion of Category A projects from this Program.

Other Potential Risks in the Horizon

Please describe other potential issues which will be monitored as "emerging risks" during the life of the projects (i.e., issues that have not yet raised to the level of "risk factor" but which will need monitoring). This could include issues related to external stakeholders such as project beneficiaries or the pool of potential contractors.

GoA intends to increase the installed capacity of wind and solar power projects by approximately 50 times in the next 9 years. However further expansion in installed capacity will necessarily require additional investments in transmission capacity. Without it, curtailment may occur in the most congested nodes of the transmission system, potentially affecting the ability of projects to dispatch energy into the grid. The IDBG will monitor the evolution of new installed capacity and node congestion and collaborate with GoA to analyze the possibilities to expand the transmission capacity in the country.





H.1. Logic Framework.

Please specify the logic framework in accordance with the GCF's <u>Performance Measurement Framework</u> under the <u>Results Management Framework</u>.

H.1.1. Paradigm Shift Objectives and Impacts at the Fund level ²⁴							
Paradigm shift objective	S						
Shift to low-emission sustainable development pathways	 Please elaborate on the paradigm shift objectives to which the project/programme contributes. The program intends to help GoA change the pattern of investment in expansion of generation capacity, from the fossil-based solutions that have prevailed in the last decade to the ambitious renewable energy penetration targets (8% by 2017-2018; 20% by 2025) established by Law 27.191 for the next decade. To achieve this, the proposed program is the first of various support interventions that will be designed over the next few years to achieve such transformation. This program will support the first stage of such transformation process by helping GoA and private sector clients successfully close and build the first few renewable energy projects under Law 27.191's new regulatory regime. GCF's financial support to secure long-term project debt will help, in the context of limited availability of such type of financing, overcome the main barrier behind the failure of previous attempts. In the process of evaluating and closing such financing, the program will generate valuable insights that will be shared with relevant public authorities to continue to improve regulation, design of tenders and off-taking agreements, and government support instruments, in order to enhance delivery of GoA's long-term renewable energy penetration goals. In addition, program's dedicated technical cooperation activities will help enhance policy, regulatory, planning and project financing capacities of both relevant public and private sector entities, to support achievement of GoA's short- and long-term goals for a support achievement of GoA's short- and long-term goals for a support achievement of GoA's short- and long-term goals for a superiment. 						
Expected Result	Indicator	Means of Verification	Basel	Target		Assumptions	
	indicator	(MoV)	ine	Mid-term (if applicable)	Final	Assumptions	
Fund-level impacts							
M1.0 Reduced emissions through increased low-emission energy access and power generation	Tonnes of carbon dioxide equivalent (t CO ₂ eq) reduced or avoided as a result of Fund-funded projects/programme s	Aggregated results of projects' annual supervision report verified by an independent engineer and IIC Social &	0		15.3 million of tonne s of CO ₂ eq	The program's final target is based on the assumptions indicated in section E.6.5, which are expected to be representative of the program's	

²⁴ Information on the Fund's expected results and indicators can be found in its Performance Measurement Frameworks available at the following link (Please note that some indicators are under refinement): <u>http://www.gcfund.org/fileadmin/00_customer/documents/Operations/5.3_Initial_PMF.pdf</u>



RESULTS MONITORING AND REPORTING



		Environmenta I specialist			portfolio composition.
M1.0 Reduced emissions through increased low-emission energy access and power generation	Volume of finance leveraged by Fund funding (funding leverage factor)	Aggregated amount allocated to finance low- emission energy projects reported by IDBG	N/A	Volume: Total: USD 520 M GCF leverag e ratio:1:4	IDBG will aim for at least this leverage level through its additional mobilization efforts with B- and co- lenders.
M1.0 Reduced emissions through increased low-emission energy access and power generation	Cost per t CO ₂ eq decreased for all Fund-funded mitigation projects/ programmes	IDBG will calculate this value for each project in the GCF portfolio at the time of financial closing, based on total project cost and GCF financing to each project. IDBG will aggregate results and report to GCF for the whole portfolio.		USD 8.5 / ton CO ₂ avoide d	As indicated in section E.6.5.





H.1.2. Outcomes, Outputs, Activities and Inputs at Project/Programme level							
		Means of		Target			
Expected Result	Indicator	Verification (MoV)	Baseline	Mid-term (if applicable)	Final	Assumptions	
Project/program me outcomes	Outcomes that con	tribute to Fund	d-level imp	acts			
M6.0 Increased number of small, medium and large low- emission power suppliers	6.1 Proportion of low-emission power supply in the national market	Ministry of Energy and CAMMESA annual statistics	1.9% ²⁵ (2015)		Increase directly supported by financing component of program: 0.8% ²⁶ Law 27.191's national target: 8% ²⁷	Average 3-4% annual power demand increase during 2016-2019 period Financial closing and construction for first few projects occur within timelines established under RenovAr first tender.	
M6.0 Increased number of small, medium and large low- emission power suppliers	6.3 MWs of low emission energy capacity installed, generated and/or rehabilitated as a result of GCF support	IDBG's project supervision	2015: ~300MW (without hydro) ~800MW (includin g hydro < 50MW)		2019: Directly supported by GCF program: 400 MW GCF + previously existing: 700 / 1200 (without and with hydro, respectively)	There is a sufficient amount of projects of 50-100MW awarded contracts	
P ²⁸ 10.0 Jobs created by projects	10.1 Women and men employed in manufacturing,	IDBG's project supervision	0		4,480 ²⁹		

²⁵ Percentage relative to national demand in the wholesale power market. Per Law 27.191's definition, this includes power generated from all non-conventional renewable energy sources, including hydro up to 50 MW.
²⁶ Relative to 2016 energy consumption and renewable penetration goal.

²⁷ Target in Law 27.191 to be measured in 2018, given that Program will be prioritizing support for scale up in the first couple of years (2017-2018) towards meeting that target.

²⁸ "P" refers to indicators defined for this Program.

²⁹ Some reference values for women participation in related industries identified in the gender assessment are 17% in the "Energy, Gas and Water" sector, and 5.4% in the "Construction" sector, in 2012. These values however cannot be directly taken as the baseline for this program, or be used as a basis to meaningfully set a gender-disaggregated target for the Program. The Program will track employment by gender, however, and aim to do a comparison as meaningful as possible with these reference values.



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supported by program	construction and installation (MCI), and operation and maintenance (O&M) in the projects			MCI: 4,430 O&M: 50	
P11.0 Improved policy, planning and regulatory capacity of the Ministry of Energy	11.1 Number of areas/topics where the program has provided support	IDBG's project supervision	0	9 ³⁰	
P12.0 Increased institutional capacity for renewable energy	12.1 Renewable Energy Center created	IDBG's project supervision		Center created	
P13.0 Improved conditions and opportunities for women in the renewable energy industry	13.1 Companies implementing gender activities promoted by the Program	IDBG's project supervision	0	40% of beneficiary companies	At least 40% of beneficiary companies are interested in implementing proposed gender activities
Project/program me outputs	Outputs that contri	bute to outcor	nes		
P20.0 MWs of wind and solar PV generation capacity financed and installed with GCF financing support	20.1 MWs of wind and solar PV generation capacity installed with program's support	IDBG's project supervision	0	400 MW	
P21.0 Number of wind and solar PV projects financed and installed with GCF financing support	21.1 Number of wind and solar PV projects financed by GCF	IDBG's project supervision	0	5	
P22.0 Number of targeted studies, strategic plans and knowledge-	22.1 Number of studies completed	Ministry of Energy	0	8	

³⁰ Based on set of topics covered by Component 2 where support to the Ministry of Energy is provided: environmental & social, contract models, renewable energy center, solar map, solar energy pilots, thermo-solar, concentrated solar, biomass, marine, geothermal.



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sharing activities completed with GCF support	22.2 Number of training sessions completed	Annual Reports	0	3	
	22.3 Number of pilot projects completed		0	1	
P23.0 Projects implementing gender-equity activities	 23.1 % of companies considered for GCF financing that receive information about the three gender activities (internshi p, training, and certification) 23.2 % of companies receiving GCF financial support that contractually agree and plan for implementation of at least one gender activity. 23.3 % of companies that initiate implementation of agreed activities 	IDBG's project supervision	0	100% of companies being considered At least 40% of supported companies At least 40% of supported companies	

H.2. Arrangements for Monitoring, Reporting and Evaluation

Besides the arrangements (e.g. semi-annual performance reports) laid out in AMA, please provide project/programme specific institutional setting and implementation arrangements for monitoring and reporting and evaluation. Please indicate how the interim/mid-term and final evaluations will be organized, including the timing.

Monitoring, reporting and evaluation arrangements will comply with requirements established between GCF and IDB in the AMA.

Every project supported by the program will undergo the full IIC project cycle, including identification, eligibility review, due diligence evaluation, credit review, approval, pre-closing review, financial closing, disbursement, supervision, project closing (i.e. once debt has been fully repaid) and evaluation. As part of the approval process, every project supported by





the GCF will be subject to an ex-ante assessment on the rationale for the project, its expected development impact and the additionality of IDBG and the GCF's support. Such assessment will normally include an economic analysis of the main benefits associated with each specific project (in particular those identified in this program proposal).

The supervision of the projects financed by the GCF will be based on a detailed Monitoring and Evaluation plan that will be implemented to track project performance and achievement of results. Each project will count with a Results Matrix (that will at minimum include the indicators required to feed the GCF program performance framework presented above) stating the project's development objective and expected outcomes and outputs, following a vertical logic that explains how the development objective is expected to be achieved (clear definition of the relationships of cause and effect of how outputs and outcomes contribute to reaching the objective). Each outcome and output will be monitored through SMART indicators (Specific, Measurable, Achievable, Realistic and Time-Bound) and will include a baseline value and a target to be achieved, as well as a defined source of data or a clear data collection plan.

Each project will also have an ex-post evaluation plan in accordance with the Evaluation Cooperation Group-Good Practice Standards (ECG-GPS) guidelines that will assess the relevance, effectiveness, efficiency and sustainability of the projects in achieving their development goals. The ex-ante economic analysis prepared for the transaction will be updated at evaluation, including an assessment of the actual results of the main expected outcomes of the project, such as greenhouse gas emissions avoided as a result of increased supply of renewable energy, as well as other benefits steaming from the project.

Every year, the Portfolio Management Division of the IIC will prepare an Annual Supervision Report to monitor the progress of the project and update the indicators included in the Results Matrix of the project and any additional indicators included in the loan agreement. Project level results will be aggregated to assess the impact of the GCF's program in addition to the GCF's project-specific indicators.

"2016 - Año del Bicentenario de la Declaración de la Independencia Nacional"





NOTA	D.M.P.O	1.0	. N	· 103	0	
Ca	Der 30	44	9	1	2016	
BUENOS	AIRES,	1	2	OCT	2016	

REF.: Funding proposal for the GCF by the Interamerican Development Bank regarding the Project "Catalyzing private investment in sustainable energy in Argentina – Part 1".

Dear Madam, Sir,

We refer to the project "Catalyzing private investment in sustainable energy in Argentina – Part 1" in Argentina as included in the funding proposal submitted by the Inter-American Development Bank to us on the 26th of September, 2016.

The undersigned is the duly authorized representative of the National Direction of Projects with International Credit Agencies (DNPOIC), Undersecretariat of International Finance Relations, Ministry Of Treasury and Public Finances, the National Designated Authority/focal point of Argentina.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the project as included in the funding proposal.

By communicating our no-objection, it is implied that:

(a) The government of Argentina has no-objection to the project as included in the funding proposal;

(b)The project as included in the funding proposal is in conformity with Argentina's national priorities, strategies and plans;

(c)In accordance with the GCF's environmental and social safeguards, the project as included in the funding proposal is in conformity with relevant national laws and regulations.

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We also confirm that our national process for ascertaining noobjection to the project as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Mai

National Director of Projects with International Credit Agencies (DNPOIC) Undersecretariat of International Finance Relations Ministry Of Treasury and Public Finances

To: The Green Climate Fund ("GCF") Country Programming Division S / D



Environmental and social report(s) disclosure

Basic project/programme information						
Project/programme title	Catalyzing private investment in sustainable energy in Argentina – Part 1					
Accredited entity	Inter-American Development Bank					
Environmental and social safeguards (ESS) category	Category B					
Environmental and Social Imp	Environmental and Social Impact Assessment (ESIA) (if applicable)					
Date of disclosure on accredited entity's website	2016-11-12					
Language(s) of disclosure	English and Spanish					
Link to disclosure	English: <u>http://www.iadb.org/en/topics/climate-change/climate-</u> <u>change,19086.html</u>					
	Spanish: <u>http://www.iadb.org/es/temas/cambio-climatico/cambio-</u> <u>climatico,19086.html</u>					
	The ESMF contains a limited impact assessment (ESIA) consistent with the requirements of PS1.					
Environmental and Social Management Plan (ESMP) (if applicable)						
Date of disclosure on accredited entity's website	2016-11-12					
Language(s) of disclosure	English and Spanish					
Link to disclosure	English: <u>http://www.iadb.org/en/topics/climate-change/climate-</u> <u>change,19086.html</u>					
	Spanish: <u>http://www.iadb.org/es/temas/cambio-climatico/cambio-</u> <u>climatico,19086.html</u>					
	The ESMF contains a management plan equivalent of ESMP consistent with the requirements of PS1.					
Resettlement Action Plan (RAP) (if applicable)						
Date of disclosure on accredited entity's website	Not Applicable					
Language(s) of disclosure						
Link to disclosure						
Any other relevant ESS reports and/or disclosures (if applicable)						
Description of report/disclosure	Environmental and Social Management Framework (ESMF)					
Date of disclosure on accredited entity's website	2016-11-12					
Language(s) of disclosure	English and Spanish					
Link to disclosure	English: <u>http://www.iadb.org/en/topics/climate-change/climate-</u> <u>change,19086.html</u>					
	Spanish: <u>http://www.iadb.org/es/temas/cambio-climatico/cambio-</u> <u>climatico,19086.html</u>					
Other link(s)	Not Applicable					