**Meeting of the Board**
4 – 6 April 2017
Songdo, Republic of Korea
Provisional agenda item 11(e)

**GCF/B.16/07/Add.02**

14 March 2017

# Consideration of funding proposals – Addendum II

## Funding proposal package for FP039

**Summary**

This addendum contains the following three parts:

a) A funding proposal summary titled "GCF – EBRD Egypt Renewable Energy Financing Framework" submitted by European Bank for Reconstruction and Development;
b) No-objection letter issued by the national designated authority(ies) or focal point(s); 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 "GCF – EBRD Egypt Renewable Energy Financing Framework" submitted by European Bank for Reconstruction and Development 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.

# Table of Contents

GREEN CLIMATE FUND

# 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: | GCF-EBRD Egypt Renewable Energy Financing Framework |
| Country/Region: | Egypt |
| Accredited Entity: | European Bank for Reconstruction and Development (EBRD) |
| Date of Submission: | 20th February, 2017 |

GREEN CLIMATE FUND

## Contents



***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]"

**List of abbreviations and acronyms**

| | |
|---|---|
| BOOT | Build, Own, Operate and Transfer |
| CCGT | Combined Cycle Gas Turbine |
| CSA | Cost Sharing Agreement |
| E&S | Environmental and Social |
| EEHC | Egyptian Electricity Holding Company |
| EETC | Egyptian Electricity Transmission Company |
| EGP | Egyptian Pound |
| EgyptERA | Egyptian Energy Regulatory Agency |
| EPC | Engineering, Procurement and Construction |
| ESAP | Environmental and Social Action Plan |
| ESIA | Environmental and Social Impact Assessment |
| GDP | Gross Domestic Product |
| IFI | International financial institution |
| MENA | Middle East and North Africa |
| MoERE | Egyptian Ministry of Electricity and Renewable Energy |
| NCC | Network Connection Contract |
| NREA | New and Renewable Energy Authority |
| O&M | Operation and Maintenance |
| PPA | Power Purchase Agreement |
| PV | Photovoltaic |
| SESA | Strategic Environmental and Social Assessment |
| TC | Technical Cooperation |
| $TCO_{2e}$ | Tonnes of Carbon Dioxide Equivalent |
| UA | Usufruct Agreement |
| USD | US Dollar |

## Section A: PROJECT / PROGRAMME SUMMARY

| A.1. Brief Project / Programme Information | | |
|---|---|---|
| **A.1.1. Project / programme title** | | Egypt Renewable Energy Financing Framework (the Framework) |
| A.1.2. Project or programme | | programme |
| **A.1.3. Country (ies) / region** | | Egypt |
| **A.1.4. National designated authority (ies)** | | Ministry of Environment; there will be a steering committee comprising of EBRD, the Ministry of Environment and the Ministry of Electricity and Renewable Electricity to monitor the implementation of the Framework. |
| **A.1.5. Accredited entity** | | European Bank for Reconstruction and Development (EBRD) |
| A.1.5.a. Access modality | | ☐ Direct ☒ International |
| A.1.6. Executing entity / beneficiary | | Executing Entities: The European Bank for Reconstruction and Development (EBRD)<br>Beneficiaries:<br>a. Local and international private sector renewable energy investors or special purpose vehicles; in exceptional cases local public investors.<br>b. Local institutions and policy makers responsible to create the enabling environment for RE investments |
| A.1.7. Project size category (Total investment, million USD) | | ☐ Micro (≤10) ☐ Small (10<x≤50)<br>☐ Medium (50<x≤250) ☒ Large (>250) |
| A.1.8. Mitigation / adaptation focus | | ☒ Mitigation ☐ Adaptation ☐ Cross-cutting |
| A.1.9. Date of submission | | 20 February, 2017 |
| A.1.10. Project contact details | Contact person, position | Andreas Biermann, Head of Policy and Climate Finance, Energy Efficiency and Climate Change team<br><br>Marta Simonetti, Deputy Head of Multilaterals, Donor Co-Finance |
| | Organization | EBRD |
| | Email address | biermana@ebrd.com; simonetm@ebrd.com |
| | Telephone number | +44 (0) 20 7338 7358; +44 (0) 20 7338 7259 |
| | Mailing address | One Exchange Square, London EC2A 2JN |

A.1.11. Results areas *(mark all that apply)*

Reduced emissions from:

☒ 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 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.)

☐ 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 investment criteria in section E). The detailed description can be elaborated in section C.*

Egypt had the world's fourteenth highest Greenhouse Gas (GHG) emissions growth rate in the 1990-2012 period (WRI, CAIT, 2014) and is among the top 6 greenhouse gas emitting countries in the EBRD region (World Bank, Total GHG Emission database, 2014). It faces significant challenges in diversifying its electricity sources away from its more than 90% reliance on hydrocarbons (gas and oil). Renewable energy production to date has primarily been hydro power (2,300 MW – c. 7%). Scaling up renewable energy will help Egypt meet its climate change mitigation commitments as well as reducing the country's fuel import bill and thus saving foreign exchange reserves.

Egypt has launched an ambitious programme to change its energy mix and to foster the development of renewable energy. The government has worked for many years to prepare the framework for renewables, which is currently based on the Renewable Energy Law dated 21 December 2014. The Sustainable Energy Strategy to 2035 approved in October 2016 builds on previous strategies emphasising the importance of renewable power and confirms the target (established in 2008) for renewable sources to provide 20% of electricity generation by 2022, with the private sector expected to deliver most of this capacity.

Despite the progress made by the government to develop the regulatory framework there has been limited development so far towards the renewable energy target, primarily because there are barriers to the implementation and financing of the projects, namely:

(i) the uncertainty and high transaction costs associated with the first private renewable energy debt projects,
(ii) the limited availability of debt from commercial sources, particularly given the required long tenors,
(iii) the need to establish an adequate infrastructure to integrate renewables into the grid, and
(iv) the need to design and implement competitive tenders for renewable energy.

The GCF-EBRD Egypt Renewable Energy Financing Framework (the Framework) will support Egypt to achieve its goals via two components: Component 1 – Enhancing renewable energy integration, policies and planning through a comprehensive technical assistance programme; Component 2 – Scaling up renewable energy investments, by blending EBRD and GCF financing and leveraging additional debt financing from international and development financial institutions and in the future from commercial banks, as well as private sector investments.

Overall, the Framework will catalyse the development of a competitive, efficient renewable energy market that will allow Egypt to achieve its renewable energy targets, while increasing the share of privately owned generation capacity. The projects to be implemented with co-financing from the Framework are expected to generate around 1,400 GWh electricity annually and result in avoided GHG emissions of about 800,000 tCO2e annually once all projects are operational.

GCF funds will only be used for subprojects with an Environmental and Social Categorisation of B.

| A.3. Project/Programme Milestone | |
|---|---|
| Expected approval from accredited entity's Board (if applicable) | 24/05/2017 |
| Expected financial close (if applicable) | 30/09/2017 (first project) |
| Estimated implementation start and end date | Start: Q3 2017 (estimated signing date of the first loans to the subprojects)<br>End: Q3 2022 (estimated expiry date of the framework) |
| Project/programme lifespan | The programme lifespan is expected to be up to 5 years for Component 1 and 23 years for Component 2. |

## Section B: FINANCING / COST INFORMATION

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

The GCF-EBRD Egypt Renewable Energy Financing Framework (the Framework) will support Egypt to unlock its vast renewable energy potential by addressing key barriers hindering its development through two key components:

1) **Component 1 – Enhancing renewable energy integration, policies and planning**

The Framework will include a broad technical assistance program that will help creating the enabling environment for private sector renewable investments in Egypt. The technical assistance program will include 3 key sub-components:

a) **Enhancing planning and RE integration** – this sub-component aims at ensuring that the new renewable energy capacity developed as part of this framework is successfully integrated into the electricity grid. Specifically, the aim is to ensure that the network absorption capacity will be sufficient to preserve the Very High (VHV), High Voltage (HV) and Medium Voltage (MV) networks' security and balance and that the electrical system performance will not be technically degraded once new renewable energy generation plants are commissioned. This component will further enhance the grid planning work that the Egyptian government has conducted.

b) **Enhancing capacity for administering RE tenders** – this sub-component will seek to provide the relevant institutions (including but not limited to the regulator and the off taker) with advice on the practical implementation measures needed for the successful launch and completion of competitive tenders for renewable energy. This element could be extended to provide support to investors and financiers in the preparation of the subprojects.

c) **Promoting gender equality** – this sub-component will include technical training to relevant projects to strengthen equality of opportunity for women and men to access and benefit from employment and other economic benefits connected to the development of renewable energy sources.

2) **Component 2 – Scaling up renewable energy investments**

The Framework will support the development and construction of renewable energy projects totalling USD 1 billion. The scale of this investment reflects the scale of the need, and opportunity, for renewable energy in Egypt. This investment in the first wave of private renewable projects in Egypt will directly deliver significant renewable capacity and catalyse the development of a new industry in the country.

The project will leverage EBRD and GCF finance to attract additional investments from international and development financial institutions and commercial banks, as well as equity investments from the project sponsors. The framework envisages debt financing from GCF and EBRD of up to USD 500 million. The aggregate value of the GCF loans would be up to USD 150 million, which would co-finance up to 15% of total project costs in any single project, with the amount allocated to each project decided based on specific needs. EBRD will provide financing representing up to 35% of the cost of each project and the remaining debt is expected to be provided by another international or development financial institution or, at a later stage of the programme, by a commercial lender. The equity contribution is 25% of the project costs translating into investment from the private sector of USD 250 million.

The **total financing expected from the GCF and the EBRD** is provided in the table below:

| Component | Total amount | Currency | GCF | EBRD |
|---|---|---|---|---|
| 1. Enhancing renewable energy integration, policies and planning | 7.0 | million USD ($) | 4.7 | 2.3 |
| 2. Scaling up renewable energy investments | 500 | million USD ($) | 150 | 350 |
| **Total programme financing** | **507** | **million USD ($)** | **154.7** | **352.3** |

**B.2. Project Financing Information**

| | Financial Instrument | Amount | Currency | Tenor | Pricing |
|---|---|---|---|---|---|
| **(a) Total project financing** | **(a) = (b) + (c)** | 1,007 | million USD ($) | | |
| (b) GCF financing to recipient | (i) Senior Loans | 150 | million USD ($)million USD ($) | As defined in the term sheet. | As defined in the term sheet. |
| | (vi) Grants | 4.7 | million USD ($)million USD ($) | Not applicable. | Not applicable. |
| | | | | | |
| | Total requested (i+ii+iii+iv+v+vi) | 154.7 | million USD ($)million USD ($) | | |

| | Financial Instrument | Amount | Currency | Name of Institution | Tenor | Pricing | Seniority |
|---|---|---|---|---|---|---|---|
| (c) Co-financing to recipient | Senior Loans | 350 | million USD ($) | EBRD | TBD based on market and project conditions. | TBD based on market and project conditions. | senior |
| | Senior Loans | 250 | million USD ($) | Other lenders | TBD. | TBD. | senior |
| | Equity | 250 | million USD ($) | Sponsors | N/A | N/A | junior |
| | Grant | 2.3 | million USD ($) | EBRD | N/A | N/A | Options |
| | Lead financing institution: EBRD | | | | | | |
| | Each GCF loan under the Framework will be provided alongside a loan from EBRD and other co-financiers loans on a pari passu basis. | | | | | | |
| (d) Financial terms between GCF and AE (if applicable) | **GCF Special Fund**<br>In line with *Article 10 of the Agreement Establishing the EBRD (AEB)*, the GCF resources are 'special resources' of EBRD. The 'special resources' from GCF and EBRD's 'ordinary capital resources' shall at all times and in all respects be held, used, committed, invested or otherwise disposed of entirely separate from each other. In this regard, EBRD will establish the GCF Special Fund ('the Special Fund') through which all payments from the GCF and repayments to the GCF will pass. GCF resources from the Special Fund will not be commingled with EBRD's ordinary capital resources or other donor resources as far as financial flows are concerned. | | | | | | |

## B.3. Financial Markets Overview (if applicable)

Financial barriers represent a key barrier to the mobilization and scaling up of renewable energy in Egypt, mainly due to (i) the uncertainty and high transaction costs associated with the first private renewable energy projects and (ii) the macroeconomic situation, which results in both an increased cost of capital and limited availability of debt from commercial sources for renewable projects, particularly given the required long-tenors of the projects and current Central Bank of Egypt (CBE) regulations (for local commercial banks). These barriers manifest themselves either in non-availability of finance or in inflexible grace periods and loan tenors that are not adapted to the characteristics of such investments.

The analysis below refers to the Feed in Tariff Scheme, which started in October 2014 with Round 1. The tariff was then revised and some of the terms of the PPA revised by a decree in September 2016, which launched Round 2 (details are provided in section C.5).

Local commercial banks are prohibited from providing hard currency financing for the renewable energy projects under the feed in tariff program in Egypt. This restriction is part of wider capital controls set by the CBE that prohibits local commercial banks from providing hard currency funding to projects/companies that generate their revenue in EGP (local currency).

The commercial banks also face limitations to finance in EGP. The lack of available and accessible commercial finance on offer by local financial institutions hinders the ability of sponsors to invest in renewable energy in Egypt. Finance facilities that address these barriers can contribute simultaneously to increasing market confidence, reducing risk perception and attracting private investors into this market segment.

## Section C: DETAILED PROJECT / PROGRAMME DESCRIPTION

### C.1. Strategic Context

Egypt's energy sector faces a number of major challenges. First, there is sustained growth in power demand, driven by economic growth, population growth and changing consumption habits. During the past several years, electricity demand grew on average 6-7% per year. In the period 2011-2014, the nominal installed capacity in Egypt was c.30 GW, some of the fleet at that time was past the end of its service life and much of the rest has low efficiency and/or availability. Actual available capacity at that time was reported to be 22-24 GW, against a summer peak of c.27 GW in 2014. Second, more than 90% of generating capacity is designed to run on gas but there is a shortage of domestically produced natural gas which forces the power sector to rely on expensive and polluting heavy fuel oil and diesel or, since 2015, LNG imports. In the short term, the Egyptian government has addressed these challenges by securing gas supply through the lease of two floating storage regasification units to allow for liquefied natural gas imports, and also by securing sufficient generating capacity through (i) the completion of a fast-track investment programme which targets steam and open cycle turbines, and (ii) a large contract with Siemens to construct 14.8 GW of CCGTs by 2018.

Nonetheless, the Egyptian government is cognizant of the need for a sustainable change in the country's energy mix towards renewable energy to both address these challenges and to move to a more environmentally sustainable and diverse electricity sector. The Sustainable Energy Strategy to 2035, which builds on previous strategies articulating the same theme, emphasizes the importance of renewable power and confirms the target (originally established in 2008) to secure 20% of Egypt's electricity generation from renewable sources by 2022, with the private sector expected to deliver most of this capacity.

In recent years, the Egyptian government has moved both to increase the speed and scale of renewable energy development and to place much greater reliance on the private sector for financing and implementation of this increase. Accordingly, Egypt has established a robust regulatory framework, built around the Renewable Energy Law (Law 203/2014) dated 21 December 2014, and two Feed-in-Tariff Decisions (Prime Ministerial Decree 1947/2014 dated 27 October 2014 (round 1) and Cabinet of Ministers Decree 2532/2016 dated 22 September 2016 (round 2).

This framework sets out several mechanisms to reach Egypt's renewable targets:

i. Publicly owned facilities procured by state agencies or companies and funded from sovereign loans. This is the model used to date.

ii. Feed-in tariff (FiT) Scheme - Privately owned projects of up to 50 MW relying on private finance, selling power to EETC, relying on a 20/25-year power purchase agreement. These projects would rely on a fixed FiT established by the government from time to time. The initial target for this programme, launched in October 2014, is 2,000 MW of wind capacity and 2,300 MW of solar photovoltaic capacity. No projects under this scheme have entered operation as at end-February 2017.

iii. Competitive tenders - Privately owned projects relying on private finance, selling power to EETC, relying on a 20/25-year FiT. These projects would be selected, and the tariff will be determined through a competitive tender process. Some tenders for wind, solar photovoltaic and CSP have been issued.

iv. Privately owned projects selling through the grid to private off-takers.

The focus of the Framework is on the second of these mechanisms, the feed-in tariff scheme, although projects under the third mechanism would also be eligible up to a maximum of 25% of the total GCF financing under Component 2. The fourth mechanism is currently being supported by a joint EBRD/CTF/GEF Programme called SPREF (http://www.ebrd.com/work-with-us/projects/psd/semed-private-renewable-energy-framework.html).

FiT Scheme – This programme covers both solar and wind energy and the authorities have earmarked certain territorial areas for each technology. The solar projects to be built under this scheme will primarily be built on land owned by the New and Renewable Energy Agency (NREA) near the village of Benban in the province of Aswan in Egypt, while the wind projects will primarily be located on land dedicated for the FiT wind scheme owned also by NREA on the Gulf of Suez. The Strategic Environmental and Social

Assessment (SESA) for the Benban site has been completed and disclosed in 2016, whereas the SESA for wind projects is currently being conducted. Details on the environmental and social studies for these areas are provided in section F.3.

The initial period of the FiT scheme expired in October 2016 (i.e. round 1). The Egyptian government announced a second round of the FiT scheme in September 2016 (i.e. round 2). This round has revised and lower tariffs, and some changes to the contractual framework. The Framework's focus is on supporting this second round.

Competitive tenders - In 2009, and also during the past two years, EETC has launched various tenders for wind and solar projects above 50 MW, offering a long-term power purchase agreement (PPA) and selecting the cheapest technically compliant bid. However, those projects were repeatedly delayed. The wind projects launched to date under competitive tenders are all located in the Gulf El Zeyt, which has high wind resources. Separately EETC is running three similar competitive tenders for solar PV and solar CSP projects.

All of these tenders are currently on hold pending the progress on the FiT Scheme, which is important to generate lessons learned and establish confidence in the Egyptian renewable sector. One of the key goals of this Framework is establish an environment where competitive tenders are successful in Egypt. The Framework aims to achieve this both through technical assistance to assist the authorities to bring these tenders to a successful conclusion and design further tenders, and to establish, through a successful implementation of the FiT scheme, confidence in the Egyptian renewable market.

## C.2. Project / Programme Objective against Baseline

**Emissions baseline**

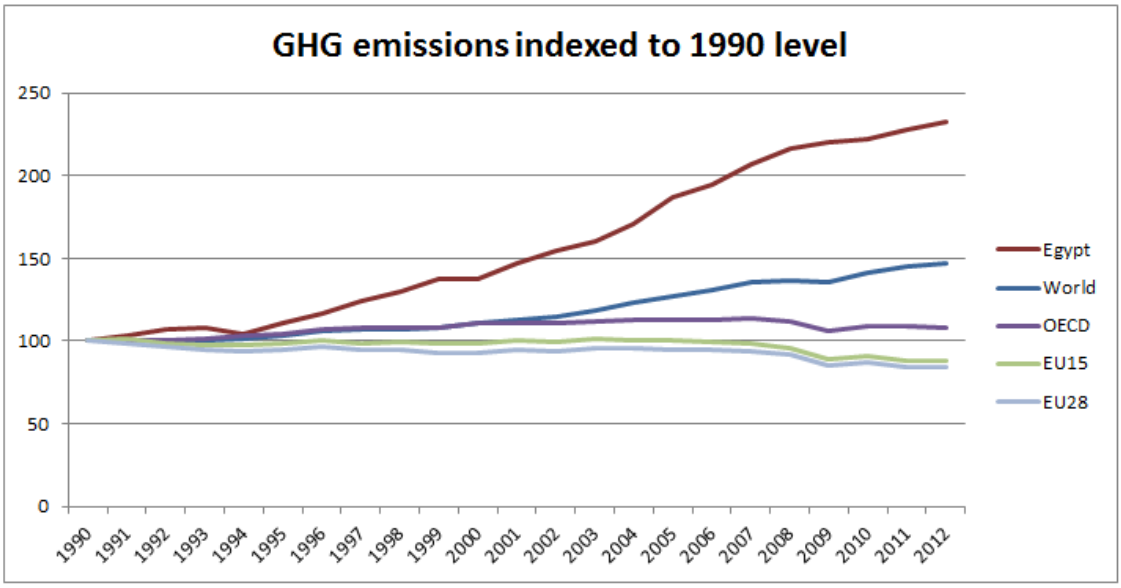
Between 1990 and 2012, Egypt has more than doubled its GHG emissions, i.e. from 124 million $tCO_2e$ to 288 million $tCO_2e$ (WRI, CAIT, 2014). Egypt had the fourteenth highest emissions growth rate during this period in the world, and such surge is significantly higher compared to the growth in global emissions, as well as in OECD and various European countries (Figure 1).

Besides increased industrial output, population growth and other developments, this increase in GHG emissions is due to the fact that power generation in Egypt is dominated by fossil fuels, which account for over 90% of the electricity production; hydro and other renewables (solar and wind) represent around 8% and 1%, respectively.

This mix translates into a relatively high grid emissions factor at 0.581 $tCO_2$/MWh, which is likely to increase due to the publicly announced plans to invest in more fossil fuel-based generation capacity in the medium-term.

Additionally, the structure of the power sector is such that private sector-driven expansion in renewable generation has not been possible at scale until recently. The electricity sector is state dominated, has been until recently vertically integrated, and consumption is subsidized. Given the pressures to expand generation, whilst limiting reliance on imported fuels and easing the fiscal burden of subsidies, the Government has taken steps to setup a favourable regulatory climate for a higher level of private sector involvement, including in expanding generation capacity. This includes the launch of the FiT scheme for private sector renewable developers since 2014.

**Figure 1: GHG emissions indexed to 1990 level**




Source: WRI-CAIT, 2014

Therefore, the current baseline context for the Framework consists of the following aspects:

- very limited wind and solar-based generation capacity (accounting for approximately 1% of generation, or some 770 MW reported installation as of 2015);
- a relatively high grid emissions factor, in contrast to the abundant clean generation potential; and
- limited private sector-led development of new renewable capacity.

**Barriers**

Renewable energy production in Egypt to date has primarily been hydro power, principally from the Aswan High Dam (2,300 MW – c. 7% of production). In view of the limited potential for additional hydropower and increasing water scarcity driven by climate change, Egypt must rely on other renewable energy sources to develop its power generation capacity and reduce its greenhouse gas emissions. Despite Egypt's vast renewable energy potential (e.g. it receives some of the highest solar radiation in the world and it has an abundant wind resource in the Suez Gulf area; for details see section C.5), there has been very limited development in renewables.

This has been the case due to key barriers, such as: financial barriers, high perceived risk for first movers, infrastructure constraints and lack of institutional capacity for administering RE tenders. Without addressing these key barriers, the development of a market for renewables and the involvement of the private sector are likely to remain limited and non-sustainable.

The Framework aims to address the barriers described above as follows:

| Type of barriers | Barriers | Measures to overcome barriers |
|---|---|---|
| Financial | a) High investment needs<br>b) Perceived risk for first movers<br>c) High cost of capital | GCF and EBRD financing will address the lack of adequate long-term financing for renewables and reduce the costs for first movers. This will demonstrate and scale up commercially viable renewable energy projects |
| Technical/Institutional | Grid infrastructure constraints to integrate renewables | Technical assistance will support the relevant public institutions to assess and enhance the infrastructure for the uptake of renewables |

| | | |
|---|---|---|
| Institutional | Gap to renewable energy targets/ Lack of institutional capacity | Technical assistance will increase Egypt's institutional capacity for administering RE tenders |

**Framework impact on baseline**

The Framework will accelerate the development of renewables generation by facilitating the increased participation of the private sector. The Framework will do so by improving the regulatory groundwork set up by the Egyptian Government, namely the FiT scheme introduced since 2014.

The investments which will be directly supported via the Framework will result in a doubling of the current renewable energy capacity over the course of the Framework. In the longer-term the Framework will catalyse additional clean generation capacity, resulting in a lower emission factor for the grid.

## C.3. Project / Programme Description

The Framework aims at supporting Egypt to unlock its vast renewable energy potential by addressing key barriers hindering its development via EBRD's proven business model of combining finance with technical assistance and policy dialogue.

The framework will contribute to support Egypt in fulfilling its Nationally Determined Contributions to climate change mitigation as well as its ambitious target to supply 20% of its electricity generation from renewable energy sources by 2022. The current regulations provide feed-in tariff support for 4,300MW of renewable energy capacity, of which 2.3 GW for solar PV and 2 GW for wind. The total electricity generated once all the projects under the framework will be operational is equivalent to 805,280 Egyptians' annual consumption (based on the World Bank's 2013 data).

The programme will include two key components:

***Component 1 – Enhancing renewable energy integration, policies and planning***

The Framework will include a comprehensive technical assistance program that will help creating an enabling environment for private sector renewable investments in Egypt. The technical assistance program will include 3 key sub-components:

**a)** Enhancing planning and RE integration – this sub-component aims at ensuring that the new renewable energy capacity developed as part of this framework is successfully integrated into the electricity grid.

**b)** Enhancing capacity for administering RE tenders – this sub-component will seek to provide the relevant institutions (including but not limited to the regulator, NREA and the off taker) with technical assistance needed for the successful completion of competitive tenders for renewable energy.

**c)** Promoting gender equality – this sub-component will include technical training to relevant subprojects to strengthen equality of opportunity for women and men to access and benefit from employment and other economic benefits connected to the development of renewable energy sources.

***Component 2 – Scaling up renewable energy investments***

The Framework will support the development and construction of renewable energy projects totalling USD 1 billion with an EBRD-GCF contribution of USD 500 million. The scale of this investment reflects the scale of the need and opportunity for renewable energy in Egypt. This investment in the first wave of private renewable projects in Egypt will both deliver significant renewable capacity in its own right and catalyse the development of a new industry in the country.

The Framework will leverage on EBRD and GCF finance to attract additional debt financing. The aggregate value of the GCF loans would be up to USD 150 million, which would co-finance up to 15% of total project costs in any single project, with the amount allocated to each project decided based on specific needs. EBRD will provide financing representing up to 35% per project and the remaining debt is expected to be provided by other international and development institutions or, at a later stage of the Framework, by commercial lenders. The equity contribution is 25% of the projects costs translating into investment from private sector of USD 250 million.

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

Since its inception, the EBRD has in total invested EUR 22.2 billion over 1,267 climate mitigation and adaptation projects to promote efficiency and innovation investments in energy for its countries of operation which resulted in 83.6 mtCO2 emissions reductions. The EBRD has been financing renewable energy projects since 2006 and has as of 31 December 2016 financed more than 4.54GW of renewable energy capacity for total investments of EUR 2.4 billion. These investments in renewable energy alone led to 12.4 mtCO2 emissions reductions. The projects financed by EBRD include all technologies and in particular wind, hydro and solar.

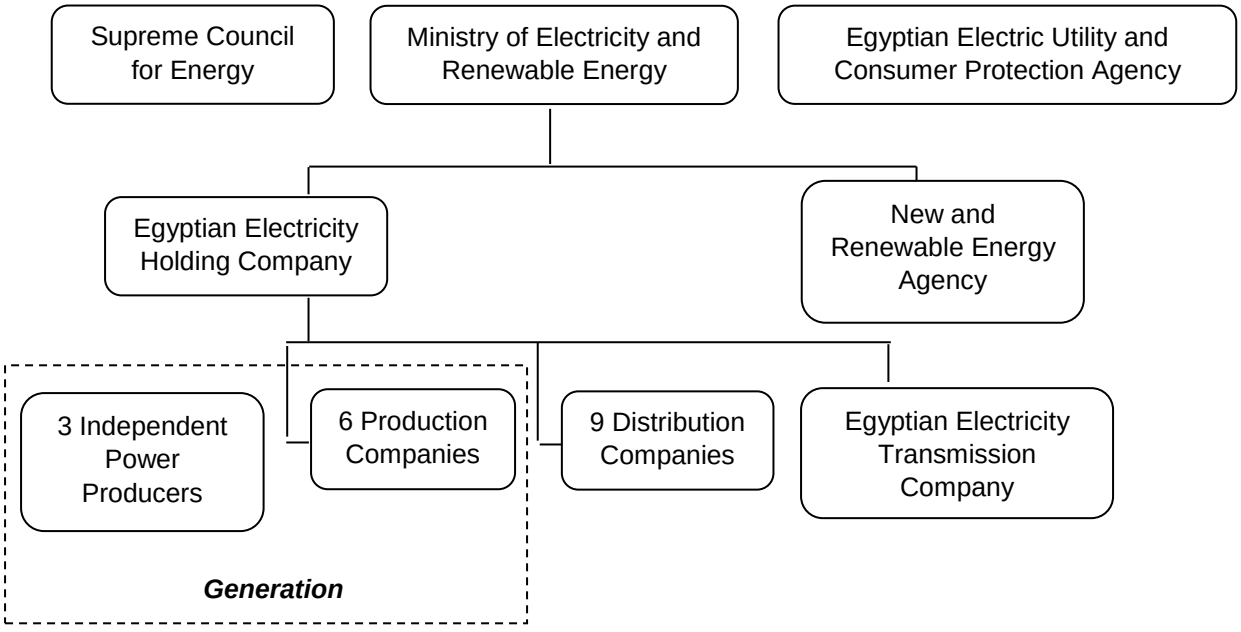
The EBRD is committed to increase the share of renewable energy projects financed on an annual basis as part of its Green Economy Transition (GET) Approach to deliver the mandate of transition impact. GET aims to reduce GHG emissions, increasing the role of cleaner fuels and renewable energy, supporting reform and commercialisation of the power sector including through the mobilisation of private sector infrastructure investment. See link to EBRD's GET Approach http://www.ebrd.com/what-we-do/strategies-and-policies.html.

All projects are subject to appraisal under the EBRD's Environmental & Social Policy (ESP) to ensure sustainable development of all operations receiving EBRD financing.

The EBRD also have a solid experience in working closely as a trusted partner to governments in promoting renewable and sustainable energy through policy dialogue. The EBRD has helped the catalysis of many frameworks for renewables in its countries of operation such as in Kazakhstan, Romania, Bulgaria, Ukraine, Poland, Mongolia, Serbia and more recently Jordan, and intends to do the same in Egypt with the support of GCF.

## C.5. Market Overview (if applicable)

**1. Electricity Sector Structure in Egypt**




The Egyptian electricity sector is administered by the Ministry of Electricity and Renewable Energy (MoERE). The sector is overseen by the Supreme Energy Council, which is chaired by the Prime Minister and brings together all relevant Ministers, including those of Electricity and Renewable Energy, Petroleum, Finance, Environment and Investment.

The sector is regulated by the Egyptian Electric Utility and Consumer Protection Regulatory Agency (EgyptERA). EgyptERA is responsible for implementing policy decisions, administering licenses and, since July 2015, setting tariffs.

The sector is primarily operated by the Egyptian Electricity Holding Company (EEHC), which is 100% owned by MoERE. EEHC in turn owns:

- the Egyptian Electricity Transmission Company (EETC)[1], which both owns and operates the high voltage network and acts as single buyer for all wholesale electricity;
- six generation companies (five thermal and one hydroelectric) which own and operate most of Egypt's electricity generation plants; and
- nine distribution companies, which supply electricity to all consumers and own and operate the medium and low voltage networks.

In addition there are three privately owned Build-Operate-Own-Transfer (BOOT) gas-fired plants totalling 2.25 GW that were implemented in the late 1990s and are currently owned by the Malaysian company Powertek; these companies sell all their generation to EETC under long-term power purchase agreements.

**2. Responsible institutions for the development of Renewable Energy in Egypt**

The responsibility for developing renewable energy in Egypt is shared between three entities, under the overall supervision of the MoERE and the Supreme Energy Council:

a) The Egyptian Electricity Transmission Company (EETC). EETC is the owner and operator of the Egyptian high voltage network and also the sole wholesale purchaser of electricity in Egypt's single buyer market model.

b) The New and Renewable Energy Authority (NREA). NREA was established in 1986 as a state agency responsible for developing renewable energy. It is independent from EEHC and the other state-owned electricity companies but reports to the Ministry of Electricity and Renewable Energy.

c) The Egyptian Electric Utility and Consumer Protection Regulatory Agency (EgyptERA). EgyptERA is the sector regulator. Specifically in relation to renewable energy its powers include: granting generation licenses, approving the terms of power purchase agreements, general oversight and regulation of the sector.

**3. Egyptian Renewable Energy Market**

Renewable energy in modern Egypt began in 1970 with the commissioning of the Aswan High Dam. In addition to its effects on irrigation and waterflows the Aswan dam also has the capacity to generate 2,300 MW of electricity – at the time of construction sufficient to meet more than half of Egypt's needs. Over time demand growth has meant that the dam, together with a few smaller dams on the Nile which add a further 500 MW, meets only c.7% of Egyptian electricity consumption. There is limited further potential to develop hydroelectric power in Egypt given the absence of other major rivers. In the early 2000s, faced with growing demand for electricity and the growth of renewable energy worldwide the Egyptian authorities began to promote the development of wind energy. This was driven also by the realization that Egypt possesses, on the Gulf of Suez, some of the best wind resources in the world as well as irradiation levels. In addition there is no shortage of land on which to site wind or solar farms.

The strategy for renewable energy was first set by the Supreme Energy Council's February 2008 decision to set a target of 20% of electricity production to be met from renewable sources by 2020 (updated to 2022 in the 2035 Energy Strategy). Reflecting market dynamics at the time the bulk of this was expected to come from wind. Accordingly, the Egyptian authorities developed wind projects on two separate tracks: (i) a series of state-owned windfarms; and (ii) the launch of build–own–operate (BOO) projects through tenders. Currently, Egypt has three state-owned utility-scale non-hydro renewable energy plants: a 547 MW windfarm at Zafarana, towards the north of the Gulf of Suez, a 200 MW windfarm near the Gabl El Zeit on the Gulf of Suez and a hybrid gas and solar thermal plant at Kureimat, with a total capacity of 140 MW, of which 20 MW is solar. Together these projects generate less than 2% of annual electricity consumption.

[1] In accordance with the 2015 Electricity Law EETC will move to independent public ownership.

**4. Current Framework for Renewables in Egypt**

The Renewable Energy Law sets out the four separate paths on which the Egyptian authorities are now proceeding to develop renewable energy:

i. State-owned projects: NREA will continue to develop a number of windfarms initiated before 2011.
ii. Feed-in tariff Scheme: the Egyptian government issued a decree in October 2014 (Round 1) allowing qualified private operators of wind and solar PV projects of up to 50 MW to secure a long-term power purchase agreement (PPA) with EETC at a fixed tariff. This programme aimed at securing 2,000 MW of wind and 2,300 MW of solar PV capacity by 2017. The tariff was revised and some of the terms of the PPA revised by a decree in September 2016 (Round 2). This Framework is expected to finance mainly projects under Round 2.
iii. Competitive tenders: a third path to promote renewables is the launch by EETC of competitive tenders for wind and solar projects above 50 MW, offering a long-term power purchase agreement and selecting the cheapest technically compliant bid. The first of these projects is the 250 MW Gulf El Zeyt BOO windfarm originally launched in 2009. Subsequently there were a few tenders launched but projects are still to be awarded. The TC element of this framework will aim to assist the authorities to successfully develop and implement these competitive tenders.
iv. Merchant projects: Consistent with the general trend towards greater liberalization and private participation in the Egyptian power sector, the government is also keen to promote renewable energy projects that will deliver their power to the high voltage network but sell it bilaterally to commercial and industrial consumers.

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

Not applicable.

## C.7. Institutional / Implementation Arrangements

**Component 1**

The EBRD will be directly involved in all aspects of the implementation of the grant component of the program. All procurement will be done in accordance with EBRD's Procurement Policies and Rules, which stipulate a strong involvement in working with clients on all related documents and processes.

**Component 2**

The focus of the Framework is the financing of solar and wind projects under the FiT scheme. Each SPV planning to develop a subproject under the FiT Scheme will conclude a power purchase agreement (PPA) with EETC with the following key elements:

- Each SPV (the **Seller**) will assume the obligation to design, procure, construct, erect, install, test, commission, finance, own, operate and maintain the relevant power plant (the **Facility**) in accordance with and in the manner contemplated by the PPA. The Seller will be obliged to sell all electricity to EETC. At the end of the term of the PPA the Seller will have the obligation to decommission and remove the Facility.
- EETC's obligations include designing, procuring, constructing, erecting, installing, testing, commissioning, owning, operating and maintaining the network assets required to allow the Facility to connect to the transmission network in accordance with the Network Connection Contract.
- EETC is also obliged to purchase all electricity generated by each Facility.
- The term of the PPA is 25 years from the commercial operation date for solar projects and 20 years for wind projects.

The Network Connection Contract (NCC) will be concluded between EETC and each SPV planning to develop a project under the FiT Scheme (the Power Producer), and sets out the terms of interaction between the parties relevant to the connection of and the delivery of electricity by each Facility to the transmission network of Egypt.

The Usufruct Agreement (UA) sets out the terms under which the New and Renewable Energy Authority (**NREA**), the landlord of the Benban site and other public land made available for the FiT Scheme, will make the site available to each SPV planning to develop a project under the FiT Scheme on such land (the **User**). The term of the UA will be concurrent with the PPA.

The Cost Sharing Agreement (CSA) is concluded among three parties: EETC, NREA and each SPV planning to develop a project in Benban and other public land made available for the FiT Scheme under the FiT Scheme (the Developer) and sets out the rights and obligations of EETC and NREA in constructing certain infrastructure for the site and the Developer's obligation to pay for costs incurred for such infrastructure.

## C.8. Timetable of Project/Programme Implementation

| TASK | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 | Q16 | Q17 | Q18 | Q19 | Q20 | Q21 | Q22 | Q23 | Q24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Component 1*** | | | | | | | | | | | | | | | | | | | | | | | | |
| *Enhancing planning and RE integration* | | | | x | x | x | x | x | x | x | c | | | | | | | | | | | | | |
| *Tendering scheme design choices* | | | | x | x | x | x | x | x | x | c | | | | | | | | | | | | | |
| *Assessment of areas to develop to administer tenders* | | | | | x | x | x | x | x | x | x | c | | | | | | | | | | | | |
| *Drafting of tendering documents and rules/launch tenders* | | | | | x | x | x | x | x | x | x | x | x | c | | | | | | | | | | |
| *Practical support in administering tenders* | | | | | | | x | x | x | x | x | x | x | x | x | x | c | | | | | | | |
| ***Component 2/ FiT Scheme*** | | | | | | | | | | | | | | | | | | | | | | | | |
| *EBRD and GCF Board Approvals* | | x | x | x | c | | | | | | | | | | | | | | | | | | | |
| *Financial Close* | | | x | x | x | c | | | | | | | | | | | | | | | | | | |
| *Construction Period* | | | x | x | x | x | x | c | | | | | | | | | | | | | | | | |
| *Commercial Operation Date* | | | | | | | x | x | x | c | | | | | | | | | | | | | | |

## Section D: RATIONALE FOR GCF INVOLVEMENT

### D.1. Value Added for GCF Involvement

The GCF's involvement in the proposed Project is critical to support Egypt in tackling climate change and exploit its vast and currently untapped renewable energy potential. With support from GCF and other partners, it will be possible to break current barriers and take renewable energy electricity generation in Egypt to a 'tipping point', from where private and public investments materialise and renewable energy targets can be achieved. The GCF-EBRD Renewable Energy Financing Framework will rely on the EBRD's proven business model of combining finance with technical assistance and policy dialogue to remove barriers hindering investments and promote a sustainable, replicable model for financing.

GCF involvement in financing the GCF-EBRD Renewable Energy Financing Framework is critical for the following reasons:

**Enhance the environment for private sector renewable energy investments:** GCF contribution to support technical assistance would provide government, regulator, and project developers with capacity to and undertake actions to further improve the regulatory and investment environment for renewables.

**Improve access to financing:** The proposed programme will help to reduce the cost of capital in an untested and challenging market.

**Fill the financing gap:** The availability of additional capital from the GCF in addition to the EBRD will address the lack of long-term financing from local and international banks in Egypt and bridge capital gaps in the financing structure of individual projects.

**Support private sector engagement:** While existing renewable energy capacity has been driven by public programmes, this would be the first renewable energy programme in Egypt working directly with the private sector which would enable to transform the market and scale up renewable energy investments in Egypt beyond the Framework.

GCF finance under the Framework would both address the capital shortfall and enable affordable access to finance by covering first movers' additional costs. In turn this would facilitate the widespread deployment of renewable energy and significant progress towards the government's target for the feed-in tariff programme. A successful implementation of this programme would validate Egypt as a major renewable energy market, catalysing scale, investor appetite and efficiencies that would lead to much greater renewables penetration, extending the impact of the Framework beyond the projects financed by it.

### D.2. Exit Strategy

Project financed under the Framework will benefit from long-term power purchase agreements, guaranteeing to purchase all of their outputs for substantially all of the asset life, and longer than the tenor of GCF and EBRD loans. This will assure the sustainability of the projects throughout their lives.

At the sector level, the creation of a vibrant group of private sector renewable project developers and the supporting institutional networks, such as legal, engineering advisors, will ensure that the programme will have a paradigm-shifting impact on the renewable energy sector in Egypt.

## Section E: EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

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 Investment Framework, should be addressed where relevant and applicable. This section should tie into any request for concessionality made in section B.2.

### 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

Egypt's current electricity generation is over 90% produced by gas and oil-fired plants. The balance is almost entirely provided by hydropower, which has limited potential for further development. Egypt is the 2nd largest economy in Africa (IMF WEO, 2016), with a growing population and economy. Consequently electricity demand is increasing rapidly, having grown at a compound annual growth rate of 4% between 2004 and 2014.

Implementation of the Framework will deliver 600 MW of new generating capacity, generating approx. 1.4 GWh of clean electricity annually and thereby directly avoiding emissions of more than 0.8 mt$CO_2$e per year.

#### E.1.2. Key impact potential indicator

*Provide specific numerical values for the indicators below.*

| | | | |
|---|---|---|---|
| *GCF core indicators* | *Expected tonnes of carbon dioxide equivalent (t $CO_2$ eq) to be reduced or avoided (Mitigation only)* | *Annual* | 793,971 t$CO_2$e (once all projects will be in operation) |
| | | *Lifetime* | 18,933,163 t$CO_2$e |
| | • *Expected total number of direct and indirect beneficiaries, disaggregated by gender (reduced vulnerability or increased resilience);*<br>• *Number of beneficiaries relative to total population, disaggregated by gender (adaptation only)* | *Total* | 4,000 short-term jobs (during construction) and 200 long-term jobs (during operation) |
| | | *Percentage (%)* | N/A |
| *Other relevant indicators* | *Examples include:*<br>• *Expected increase in the number of households with access to low-emission energy*<br>• *Expected increase in the number of small, medium and large low-emission power suppliers, and installed effective capacity*<br>• *Expected increase in generation and use of climate information in decision-making*<br>• *Expected strengthening of adaptive capacity and reduced exposure to climate risks*<br>• *Others* | | |

*Describe the detailed methodology used for calculating the indicators above.*

EBRD developed a methodology to conservatively assess $CO_2$ reductions driven by Framework. The methodology calculates the $CO_2$ savings based on the total estimated installed capacity of wind and PV power plants expected to be deployed by the programme in Egypt. The grid emission factor (EF) takes into account the current energy mix supplied in Egypt and was assumed to be 0.581 $tCO_2$/MWh.

| Technology | Unit installed capacity (MW) | Capacity factor | Annual electricity Generation (MWh) | Grid EF (tCO2/MWh) | Annual emissions avoided (tCO2) | Lifetime (yr) | Lifetime emissions avoided (tCO2) |
|---|---|---|---|---|---|---|---|
| Solar PV | 480 | 0.25 | 1,051,200 | 0.581 | 610,747 | 25 | 15,268,680 |
| Wind | 120 | 0.30 | 315,360 | 0.581 | 183,224 | 20 | 3,664,483 |
| Total | 600 | | 1,366,560 | | 793,971 | | 18,933,163 |

## 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)

The Framework will accelerate the early-stage development of Egypt's renewable generation market, by directly supporting a critical mass of private sector-driven generation projects and the necessary strengthening of the regulatory context. This in turn will provide durable market development, contributing to the further development of power projects under the current FiT scheme on one level, towards the Government's renewable generation targets, on a higher level, and ultimately towards further harnessing of the country's vast renewable energy potential beyond this target.

Firstly, the projects directly supported by the Framework are envisaged to account for 600 MW of new solar and wind-based generation capacity. This represents approximately 14% of the additional clean capacity ensilaged to be fostered by the FiT scheme, which has an overall target of 4,300 MW of additional clean capacity.

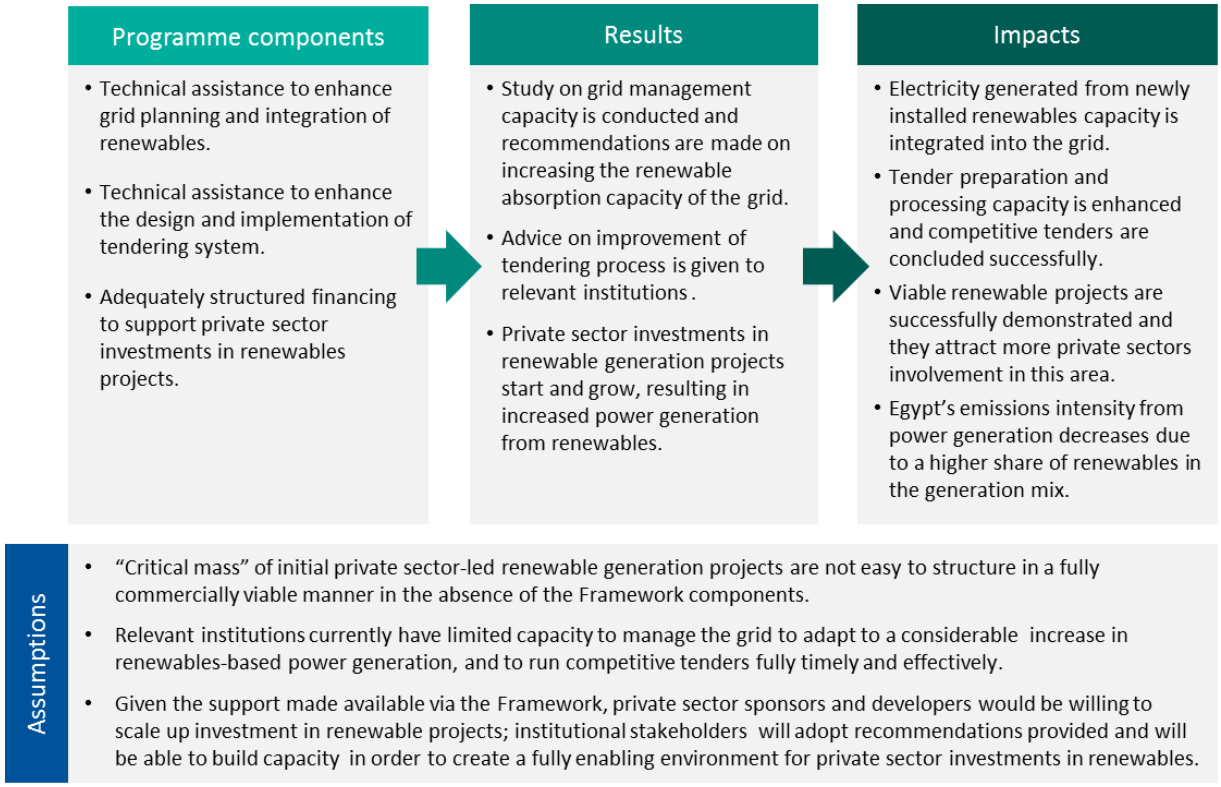
Therefore, within the horizon of the current renewable capacity targets (2022) and given the stated aims of the FiT scheme (4,300 MW in new capacity), the replication potential multiple of the efforts which will be enabled by the Framework (600 MW), can be approximately 7 times the capacity targets of the Framework.

The FiT scheme is the private sector-driven window of the wider energy sector target of 20% of electricity generation in 2022 being based on renewable sources. The progress towards the 20% wider target will be sought via all four project development windows described under the Renewable Energy Law of 2014. However, further materializing Egypt's vast renewable potential beyond this target will require sustained growth of private sector investments to as to continue scaling in the long-term.

The Framework contributes to this durable scaling up of the renewable energy market by:

- Increasing the ability of authorities responsible for the management of the grid to better assess, anticipate and enhance the capacity to accommodate in a sustainable manner new renewable energy capacity;
- Addressing some of the most immediate non-financial barriers around project development through training and knowledge transfer, such as the improved management of the tendering processes and systems;
- Providing adequately termed and blended financing for a critical number of first projects, demonstrating the viability of investing in this market; this building up of a track-record would result over time in enhanced capacities and linkages between projects sponsors, developers, suppliers, financiers and consultants.

**Figure 2 – Theory of change diagram of Framework**




### E.2.2. Potential for knowledge and learning

In order to accelerate the development of a private sector investment market for renewable generation, the Framework aims to enhance capacity at the level of multiple stakeholders: private sponsors and developers, state authorities in charge of managing the grid, the FiT system and tendering, and indirectly local suppliers, consultants and financiers. This capacity enhancement will instil learning at all these levels via the transfer of best practices and skills in the sector, drawing on experiences from other markets where EBRD has contributed to the development or fine-tuning of private-sector driven renewable energy markets.

Examples of concrete knowledge transfer and strengthening elements are the policy advisory activities to entities involved in grid management and tendering, namely:

- Assisting with grid modelling, thus providing clarity for grid management and flexibility with regards to accommodating new capacity;
- Training to improve tender processes will lead to testing and fine-tuning the adequacy of tendering and PPA models, of processes, and of IT and management systems;
- Cooperating on bringing individual projects to financial close will introduce best practices, for instance of environmental and social impact assessment, and will provide a highly valuable demonstration effect for future private project sponsors and local commercial financiers in understanding how private sector renewable projects can be adequately structured so as to manage real and perceived risks.

These activities will result in the build-up of valuable lessons learnt and the enhancement of linkages between authorities, sponsors, financiers, suppliers and construction and consulting companies, and consequently the adequate strengthening of governance and institutional knowledge at the level of the public authorities involved.

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

The fundamental purpose of the Framework is to enhance the long-term viability of private sector participation in harnessing Egypt's renewable energy potential, thus enabling the scale necessary to bring the generation sector, and so the economy as a whole, onto a lower-carbon development path. The Framework builds on the ambitious efforts of the Egyptian Government to encourage the renewable generation market via the Renewable Energy Law, and via the FiT scheme.

Concretely, the following activities will create conditions conducive to sustained private investments in the sector:

- Strengthening the capacity of authorities to take necessary measures to connect and balance new clean generation capacity to the grid, aims to reassure investors and consumers that the energy system can accommodate low carbon sources at scale;
- Enhancing the ability of authorities to run competitive tenders will lead to competition among sponsors so that high-performing and effective projects are structured and implemented;
- Working with sponsors, developers and various experts so as to bring projects to financial close will help build up track-record in applying best practices in project development (impact due diligence assessments, conclusion of adequate PPAs, agreeing tailored financing packages, gender inclusion measures) thus leading to a lowering of perceived risks and increased private sector interest to invest, including after the current Framework resources and the current FiT-window are used up.

The purpose of the Framework is to enhance emission reductions and low-carbon development, by supporting the market for private sector investments in solar and wind-based generation in Egypt. As such, the current proposal contributes to demonstrating the viability of a new market, supports the uptake of low-carbon technologies with low market penetration rates and makes use of funding support mechanisms which are relatively new for the Egyptian power sector. Namely, these are the recently introduced FiT scheme, and the blending of multilateral climate finance into project finance packages as proposed by the current Framework. Some of the capacity strengthening activities will target the enhanced management of the FiT scheme so as to make it sustainable, flexible and attractive for continuous investments.

### E.2.4. Contribution to regulatory framework and policies

The Framework directly supports the achievement of the renewables target adopted by the Government of Egypt, i.e. 20% of electricity generation from renewables by 2022 (up from a current level of approx. 8% of which hydro represents the bulk), a target which has been the basis for the current FiT setup and wider renewables regulatory context. This context is part of a major reform programme to address the decarbonisation of Egypt's power sector and its dependency on subsidies.

The Framework aims to make the robust renewables regulatory environment a success for private sector participation, by complementing it with practical knowledge sharing and capacity enhancement and by making available adequately termed and priced financing for accelerated project structuring and implementation.

The Framework fosters the success and improvement of the current legal and regulatory architecture supporting renewable generation via the following:

- The capacity enhancement work at the level of entities managing the grid and the FiT scheme will strengthen preparedness (modelling of the grid capacity will underpin adequate PPAs and balancing actions) and responsiveness (recommending actions to gradually accommodate more capacity and adjust FiT rewards over time), providing clarity for regulatory decisions which will affect the viability and sustainability of the FiT scheme and the grid in the longer-term.
- The project-level activities (tendering, structuring, financing) will test the regulatory context and lead to learning via practical actions on the ground and fine-tuning of regulations according to a growing track-record.

These developments will ultimately underpin Egypt's willingness to increase its level of ambition in taking further climate action via its Nationally Determined Contributions. Given its demographic and economic growth, Egypt's policy environment needs to actively and continually target low-carbon development, however this can only be achieved once the current regulatory infrastructure achieves its full potential. The Framework directly supports this.

**E.3. Sustainable Development Potential**

Wider benefits and priorities

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

Egypt's initial efforts to promote renewable energy are focused on the south of the country so that the Framework will also support economic development in a poor and undeveloped region.

The Framework will bring:

i. Socio-economic benefits through employment from construction (c.4,000 short term jobs) and operation (c.200 long-term jobs), typically in poor and underdeveloped areas of Egypt

ii. Socio-economic benefits from sustainable energy supply

iii. Cumulative effects on climate through reduction in GHGs

iv. Decrease of air emissions and other types of environmental pollution associated with traditional energy production

v. Increased market penetration of modern construction/production patterns and technologies, demand in high skilled personnel

vi. Reduction in water abstraction and consumption

Additionally, given the scale of the proposed Framework, it would create an opportunity to work closely with eligible RES project developers to develop and implement a comprehensive plan to ensure women and men are able to equally access opportunities connected to operations in terms of direct technical and operations skills and employment. EBRD will also seek to develop partnerships with vocational/technical training schools, to enhance young women's access to developing relevant technical skills. Attention will also be paid to developing a strong and effective public relations and information campaign on the extent of the long term benefits of renewable energy

**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

Egypt is highly vulnerable to climate change impacts, because of a combination of water stress and increasing pressure on infrastructure from a rapidly growing population. It is expected that the private sector will play the leading role in the implementation of the renewable energy capacity required to limit the above-mentioned climate change impact. In this context, the proposed Framework will address the financial constraints of private sector developers and overall reduce the vulnerability of Egypt to climate change by reducing Egypt's GHG emissions.

As discussed in section B.3, a major barrier to promoting renewable energy in Egypt is the lack of local and international commercial lending.

Further to the above, the involvement of the private sector in developing renewable energy projects in Egypt is essential in addressing the lack of capacity at NREA and EETC. Currently the wind farms operating in Egypt (747 MW) are all developed and owned by NREA and therefore, it will be challenging for NREA to develop and implement the rest of renewable projects that are expected to be developed until 2022 to reach the country's target of 20% of renewable energy from total electricity generation.

## 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

Egypt has demonstrated a strong commitment to the development of renewable energy, both at the policy and strategic level through the adoption of ambitious and specific targets, and at the detailed implementation level through the development of a detailed contractual and regulatory framework. This commitment is articulated in the 2014 Renewable Energy Law and the two feed-in tariff decrees described above, and also the Sustainable Energy Strategy 2035 which confirmed the country's target of reaching 20% of electricity generation from renewable sources which require the addition of c. 10GW of wind and solar capacity to the system by 2022.The strength of this commitment is reflected in the renaming of the Ministry of Electricity as the Ministry of Electricity and Renewable Energy in 2015.

The importance of renewable energy in reducing Egypt's greenhouse gas emissions is also emphasised in Egypt's Nationally Determined Contribution (NDC) as part of the 5 key strategic policies for tackling climate change mitigation.

Egypt has established robust institutions to implement its renewable energy strategy, including a dedicated state agency NREA and a dedicated feed-in tariff unit within EETC. These two entities cooperate closely with the sector regulator, EgyptERA and are supported by international technical and legal advisers. The close cooperation between these authorities and the IFI community over many years gives confidence both in the Egyptian authorities' commitment to the sector and their capacity to implement their renewable strategy.

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

Since its inception, the EBRD has in total invested EUR 22.2 billion over 1,267 climate mitigation and adaptation projects to promote efficiency and innovation investments in energy for its countries of operation which resulted in 83.6 mtCO2 emissions reductions. The EBRD has been financing renewable energy projects since 2006 and has as of 31 December 2016 financed more than 4.54GW of renewable energy capacity for total investments of EUR 2.4 billion. These investments in renewable energy alone led to 12.4 mtCO2 emissions reductions. The projects financed by EBRD include all technologies and in particular wind, hydro and solar.

The EBRD has a dedicated team for renewable energy investments. The expertise of the team ranges from banking and finance to engineering.

The EBRD has also a dedicated team for mainstreaming gender considerations across the Bank's portfolio, into investments and policy dialogue activities who provides technical expertise on gender issues across sectors and whose activities specifically focus on promoting women's (a) access to finance and entrepreneurship; (b) access to employment and skills; and (c) access to services.

In line with its recently adopted Strategy for the Promotion of Gender Equality (2016-2020), the Bank aims to mainstream gender in its operations until 2020. See the following link to EBRD's Gender Strategy: http://www.ebrd.com/gender-strategy.html

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

The EBRD has met and discussed in details the GCF-EBRD Renewable Energy Financing Framework with the GCF focal point at the Ministry of Environment as well as with all relevant line ministries (i.e. Ministry of Electricity).

Additionally, the EBRD has engaged extensively with a number of key stakeholders on the E&S elements of the FiT programme including the regulatory authorities, project developers, other IFIs, NGOs and local communities. This has resulted in a number of initiatives to ensure that projects under the scheme are developed in accordance with IFI E&S requirements. EBRD has seen this initiative extend to other projects in country by private sector developers and has raised the capacity and awareness of the regulatory authorities. The programme is also setting standards in the country regarding information dissemination and

stakeholder engagement. These elements will be further developed and demonstrate replicable behaviours once the subprojects under the programme start to be developed.

Specifically in relation to the solar projects to be built under the FiT scheme, EBRD completed a SESA for the Benban solar site in January 2016. This process included extensive public disclosure and consultation. The consultation activities are summarised in the Environmental and Social Management System (ESMS Annex). A similar process in line with EBRD policies will be applied for further subprojects.

**E.6. Efficiency and Effectiveness**

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

E.6.1. Cost-effectiveness and efficiency

Essential to the development of the renewable energy sector in Egypt is to increase the participation of the private sector, which has been hampered by the lack of adequate commercial long-term debt financing, which this Framework proposes to address.

The construction of 600MW of capacity under the FiT Scheme with a 20 years support for wind power plants and 25 years for solar facilities will require debt financing of USD 750 million. Local commercial banks are prohibited from providing hard currency financing for the renewable energy projects under this FiT Scheme and the high cost of the funding in local currency makes this option economically unviable and unattractive for renewable energy investors. (as described in section B.3). The availability of financing from GCF will address the lack of long-term commercial debt in Egypt and bridge capital gaps in the financing structure of individual projects.

The cost-efficiency of the proposed Framework in Egypt is high, as the analysis on the emission reduction potentials of the financing under the Framework shows that 1 tonne of CO2 equivalent emissions reductions can be achieved with GCF contribution of USD 7.9.

Analysis has been done based on the operations of a typical solar plant with 50MW built under the FiT Scheme round 2. Based on a grid emissions factor of 0.581 tCO2e/MWh, each typical project is estimated to contribute to approximately 60,000 tCO2e of annual avoided emissions, which results in around 800,000 tCO2e/yr of total avoided annually once the full programme is implemented.

The high efficiency of this project is expected to be achieved via:

- Leveraging of GCF financing: with each USD financing from GCF expected to leverage USD 4 additional debt financing, including the EBRD financing, and to mobilise a total of USD 5.7 of financial sources, including equity contributed by the sponsors.
- High operational efficiency: the estimate of CO2 savings were calculated based on an average 25% load factor (over 25 years) for a typical solar plant operating in the Benban complex. It is expected that the contribution of the financing of wind project to be like the solar projects or even better (i.e. lower cost per avoided per tCO2e) given the higher load factors of wind plants compared to solar plants.

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

The programme will support the development and construction of renewable energy projects totalling USD 1 billion (i.e. estimated total investment cost under this framework). The projects are expected to be financed with a maximum leverage of 75%, corresponding to total debt financing needs of USD 750 million. The GCF aggregate contributions of USD 150 million for subprojects financing will account for up to 15% of the total financing required to deliver the projects and represent 20% of the debt needs. The GCF's leverage ratio to EBRD and other additional financial resources is projected to be USD 1 : USD 5.7. The EBRD will provide co-financing of USD 350 million from its own resources, representing up to c.35% of the project costs. Other co-financers are expected to contribute with loans representing up to 25% of the total project cost.

Regarding the technical assistance component, the total estimated budget for the various assignments is USD 7m, of which GCF is expected to contribute USD 4.7m and USD 2.3 million will be contributed by EBRD's bilateral and multilateral donors.

### E.6.3. Financial viability

*Sector level* - Through this Framework, GCF and EBRD financing will demonstrate and scale up commercially viable renewable energy projects. Therefore, once the financing of the first wave of private sector renewable energy projects in Egypt is concluded and the projects reach commercial operations, it is expected that other new private investors will be able to attract adequate long-term financing from local and international commercial banks.

*Subprojects level* - Project financed under the Framework will benefit from long-term power purchase agreements, guaranteeing to purchase all of their outputs for substantially all of the asset life, and longer than the tenor of GCF and EBRD loans. This will assure the sustainability of the projects throughout their lives.

### E.6.4. Application of best practices

EBRD is committed to applying good international practices to select best available technologies (BAT) as well as manage environmental and social risks and impacts. Based on EBRD's vast experience in financing renewables projects, a systematic best practice approach has been established. These best practices include assessments of financially and technically feasible technologies, which also bring desirable environmental and social benefits. Where benchmarking data are available, the assessment process will make a comparison between the proposed project and good international practices. Another incentive for proposed projects to use BAT is that this Framework will assist to design and implement a competitive tender process, which will result in the winning bids offering the most cost-efficient technologies.

### E.6.5. Key efficiency and effectiveness indicators

*GCF core indicators*

Estimated cost per t $CO_2$ eq, defined as total investment cost / expected lifetime emission reductions (mitigation only)

| | |
|---|---|
| (a) Total project financing | US$ 1,000 m |
| (b) Requested GCF amount | US$ 150m |
| (c) Expected lifetime emission reductions overtime | 18,933,163 $tCO_2eq$ |
| **(d) Estimated cost per $tCO_2eq$ (d = a / c)** | US$ **52.8 / $tCO_2eq$** |
| **(e) Estimated GCF cost per $tCO_2eq$ removed (e = b / c)** | US$ **7.9 / $tCO_2eq$** |

A methodology for expected lifetime emissions reductions is detailed in section E.1.2.

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)

The breakdown of the funding resources of the Framework is detailed in section B.2. The GCF's leverage ratio to EBRD and other additional financial resources is projected to be USD1 : USD 5.7

## Section F: APPRAISAL SUMMARY

### F.1. Economic and Financial Analysis

A detailed economic and financial analysis will be conducted at project level for investments that meet the Framework's eligibility criteria. The financial analysis of a typical project to be financed under this Framework has been provided to the GCF Secretariat. A sector, as well as a regulatory and market analysis, has also been provided to the GCF Secretariat.

As mentioned throughout this funding proposal, there are currently financial barriers hampering the mobilization and scaling up of renewable energy in Egypt. These barriers manifest themselves either in non-availability of finance or in inflexible grace periods and loan tenors that are not adapted to the characteristics of such investments.

A comparison has been provided to the GCF Secretariat between several financing scenarios for the financing of a typical project under the FiT Scheme round 2, which is the focus of the Framework. Such analysis has showed that there is currently no commercial lending available at terms which would ensure the bankability of the projects and attract private investors. The analysis also highlighted the importance of the GCF funding to unlock the financial feasibility of the first wave of private sector renewable energy projects through the blending of concessional financing with financing from EBRD and other international and development financial institutions.

The demonstration effect of the feasibility of the first wave of private renewable energy projects in Egypt will show the viability of the sector which will then attract new private investors, local and international commercial banks which will be able to propose adequate long-term financing with no concessionality needs.

Further economic benefits can also be added as described earlier in the document, such as benefits from the GHG emissions avoided and the successful implementation of the FiT Scheme, which would set the basis for further renewable energy support mechanisms, namely through the launch of competitive tenders (that this Framework will also support via Component 1).

Overall, through this Framework, GCF and EBRD financing will demonstrate and scale up commercially viable renewable energy projects in Egypt while catalysing a paradigm shift not only within the electricity sector in the country but also within the local and international financial markets.

### F.2. Technical Evaluation

Technical evaluation will be conducted at a project level as it is site specific and construction contracts specific and it is on-going for the subprojects in the pipeline. A high level market study presenting the context for this programme in the Egypt is annexed to this funding proposal

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

**Environmental and Social aspects**

Under the EBRD's 2014 E&S Policy the Framework itself will not be categorised and each Subproject will be subject to full project and sponsor-specific environmental and social due diligence with the support of an independent consultant. A similar approach is supported by the IFC's E&S Policy and associated Performance Standards and therefore GCF's requirements. EBRD anticipates that all Solar projects under the FiT scheme will be Category B and the wind projects will be a combination of Category A and B. On the basis of this each Subproject will be individually reviewed and categorised and due diligence will be undertaken

accordingly. Under GCF's "Comprehensive Information Disclosure Policy of the Fund" it is understood that the Framework would be categorised according to the anticipated risk profile of the individual Subprojects would require site specific assessments consistent with the approach of EBRD. With this in mind it has been agreed with GCF that Category A projects will be excluded from receiving GCF financing so that this framework will overall be considered Category B.

*Solar Subprojects:*

The E&S risks and impacts associated with the development of an individual 50 MW solar photovoltaic project in an area of low environmental and social sensitivity are likely to be readily identified, assessed and mitigated through the adoption of good E&S practice. In the absence of any site specific sensitivities or concerns associated with any one project it is anticipated that each solar Subproject will be categorised B (I-2), and this will be confirmed during project appraisal.

Most of the Subprojects are expected to be implemented on one specific 37 km2 plot allocated to NREA for these purposes near Benban in Upper Egypt. This plot is divided into 41 subplots, each allowing for a plant of 20 MW or 50 MW, with a total capacity for the entire site of 1,800 MW. When complete this site will be the largest solar complex in the world delivering significant environmental benefits to a country that is largely dependent on fossil fuels for energy production. However, the concurrent development of a large number of projects on such a site has the potential to give rise to a number of cumulative risks and impacts such as: workforce sourcing; resource needs; logistical arrangements; and the requirement for associated facilities including grid connection(s), even though the impacts of each individual project are not anticipated to be significant.

Recognising this concern NREA, with EBRD support, initiated a Strategic Environmental and Social Assessment (a SESA) to ensure that these cumulative impacts were identified and managed. The EBRD has engaged with its clients and also worked with other IFIs and the Egyptian authorities to ensure that Developers under the Solar FiT site cooperate in the management of these impacts. This has extended to working with the authorities and the developers in building an E&S governance structure and sufficient management capacity to deliver on the SESA commitments collectively. The SESA and its related Non-Technical Summary have been disclosed in English and Arabic and include a comprehensive E&S Action Plan (or ESMP in line with GCF terminology). The documents in English and Arabic can be found here: http://www.ebrd.com/work-with-us/projects/esia/egypt-renewable-feedintariff-framework.html

Each Subproject will be subject to the full E&S Due Diligence and the usual disclosure requirements, during the ESDD period it will be confirmed that no Category A projects will be included in the framework. Each subproject will be disclosed by EBRD and project specific environmental and social action plans (ESMP) will be developed to ensure the objectives of the framework are met; that the outcomes of the SESA are duly considered and actioned; and that the delivery of each Subproject is undertaken in accordance with the PRs/PSs and GCF's requirements.

*Wind Subprojects:*

The FiT Wind programme has identified three areas for wind development in Egypt, namely: a) East of Nile; b) West of Nile; and c) Gulf of Suez/ Ras Ghareb

Adopting a similar approach to the Solar FiT programme, EBRD and other agencies have recognised that additional information regarding E&S sensitives is required in order for such developments to progress in line with international E&S standards. As a result a series of Strategic Environmental and Social Assessments of these areas that have been designated for development have been initiated. A particular focus of these SESAs is the potential ornithological impacts of projects individually and in accumulation with others.

It is anticipated that windfarms could be up to 250MW and some will therefore to Categorised A. In addition there will be a series of smaller windfarms planned in low E&S sensitive areas that are likely to be Category B (I-2) and these subprojects would be appraised by EBRD on a case by case basis to ensure that these subprojects can be structured to meet the various E&S

requirements, are disclosed individually appropriately and that all relevant supporting documents (ESMS) have been prepared accordingly. This method will screen out any Category A projects from receiving GCF financing under this framework.

**Gender aspects**

The energy market is vital to Egypt's economy and women can in particular benefit from opportunities connected to the development of renewable energy sources. Women in Egypt currently work primarily in services and agriculture, with only very small numbers in power and energy (World Bank 2011). With appropriate university and vocational skills training, however, women can also access employment opportunities in RES engineering, industrial management and core operations. The World Bank (2011) estimated that addressing women's under-representation in higher-value occupations such as RES would reduce the productivity gap and boost worker's output in Egypt by 3-25 per cent. By strengthening equality of opportunity in this framework, women are expected to be encouraged to apply their talents and seek training opportunities in RES sectors.

The Gender plan for the Framework will ensure that all consultations with stakeholders will be designed in a gender responsive way and women will be equally consulted and participate in all discussions related to the subprojects. This approach will be incremental and would set a proper benchmark for other projects to follow.

The Framework is accompanied by a Gender Action Plan template for subprojects.

## F.4. Financial Management and Procurement

Financial resources from the GCF will be managed according to the general provisions of the AMA between the GCF and the EBRD. EBRD will establish the GCF Special Fund ('the Special Fund') internally, through which all payments from the GCF and repayments to the GCF will pass.

In using the resources of the GCF ('Special Fund resources') for this Programme, the EBRD will apply the same internal financial management policies and procedures as are applied when administering technical assistance or making a loan, from its ordinary capital resources. The EBRD will exercise the same amount of care and diligence to 'Special Fund resources' as for its own capital resources. Compliance to the EBRD policies and requirements will be monitored and reported by the EBRD Office of the Chief Compliance Officer (OCCO).

**PROCUREMENT**

**1. EBRD's Procurement Policies and Rules (PP&R)**

The EBRD aims to help create reliable and stable markets for climate technologies in its regions and thus puts strong emphasis on procurement of relevant goods and services.

The EBRD's Procurement Policies and Rules (PP&R) are designed to promote efficiency and effectiveness and to minimise credit risk in the implementation of the EBRD's lending and investment operations.

Among the EBRD's PP&R[2], three are of particular relevance to this Programme.

Relevant PP&R with regards to the Programme are as follows:

- 3. Procurement Rules for Public Sector Operations

[2] http://www.ebrd.com/news/publications/policies/procurement-policies-and-rules.html

- 4. Procurement in the Private Sector
- 5. Procurement Rules for Consultant Services

**2. Event of violation of procurement policies and EBRD Enforcement Policy and Procedures**

The EBRD requires that clients, including beneficiaries of Bank-financed operations, as well as tenderers, suppliers, contractors, concessionaires and consultants under EBRD-financed contracts, observe the highest standard of transparency and integrity during the procurement, execution and implementation of such contracts. In pursuance of this policy, The EBRD defines prohibited practices, namely coercive practice, collusive practice, corrupt practice, fraudulent practice and theft (PP&R Section 2.9).

Any occurrence, or suspected occurrence, of a Prohibited Practice in the procurement, award, or implementation of a Bank-financed contract in the context of a Project shall be dealt with in accordance with the provisions of The EBRD's Enforcement Policy as defined in the EBRD's Enforcement Policy and Procedures.

## Section G: RISK ASSESSMENT AND MANAGEMENT

| G.1. Risk Assessment Summary |
|---|
| The level of key risks that will affect the Framework performance are generally moderate and expected to be mitigated to a substantial degree by EBRD's established operational tools and control mechanisms. Key risks to this Framework are listed in section G.2 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 |
| ***Regulatory risk/reliance on feed-in tariff*** | Financial | High (>20% of project value) | Low |
| Mitigation Measure(s) | | | |
| This risk is mitigated by the strong institutional commitment to renewable energy. This risk is further mitigated by a robust contractual framework supported by a sovereign guarantee for EETC's payment obligations under the power purchase agreement. | | | |
| **Selected Risk Factor 2** | | | |
| Description | Risk category | Level of impact | Probability of risk occurring |
| ***Forex risk*** because of a mismatch between EBRD and GCF financing provided in USD while the project tariff is paid in EGP. | Financial | Low (<5% of project value) | Medium |
| Mitigation Measure(s) | | | |
| This risk is substantially mitigated by indexation of a portion of the feed-in tariff to the then applicable USD:EGP exchange rate. | | | |
| **Selected Risk Factor 3** | | | |
| Description | Risk category | Level of impact | Probability of risk occurring |
| ***Creditworthiness of the off-taker***. | Financial | High (>20% of project value) | Low |
| Mitigation Measure(s) | | | |
| This risk is mitigated by the provision of a sovereign guarantee for EETC's payment obligations. | | | |
| **Selected Risk Factor 4** | | | |
| Description | Risk category | Level of impact | Probability of risk occurring |
| ***Completion and cost overruns risk*** | Financial | Medium (5.1-20% of project value) | Low |

| Mitigation Measure(s) | | | |
|---|---|---|---|
| This risk is expected to be mitigated for each project through an EPC contract or similarly robust construction arrangements, appropriate contingency and/or cost overrun arrangements and detailed technical due diligence. | | | |
| **Selected Risk Factor 5** | | | |
| Description | Risk category | Level of impact | Probability of risk occurring |
| ***Operation/technology risk***.. | Technical and operational | Medium (5.1-20% of project value) | Low |
| Mitigation Measure(s) | | | |
| These risks will be mitigated by detailed due diligence and robust operation and maintenance arrangements. | | | |
| **Selected Risk Factor 6** | | | |
| Description | Risk category | Level of impact | Probability of risk occurring |
| ***Connection and curtailment*** | Technical and operational | Medium (5.1-20% of project value) | Low |
| Mitigation Measure(s) | | | |
| Contractually this risk is mitigated by the take-or-pay nature of the offtake arrangements. Each project will also be subject to technical due diligence to confirm that offtake of all of its generation is technically feasible. | | | |
| **Selected Risk Factor 7** | | | |
| Description | Risk category | Level of impact | Probability of risk occurring |
| ***Environmental and social risk***. Each subproject under the framework will have an associated with an environmental and social action plan (an ESAP) an Environmental and Social Management System (an ESMS) to ensure compliance with EBRD's 2014 Environmental and Social Policy, the IFCs Performance Standards and therefore GCF's requirements. | Social and environmental | | Medium |
| Mitigation Measure(s) | | | |
| ESAPs and ESMPs will be developed both for the framework and at subproject level to ensure uptake and implementation of appropriate mitigation measures.<br><br>Where collective issues need to be developed at a strategic and collective level the ESAP / ESMP will require that an appropriate E&S governance structure is developed so that common standards are developed and adhered to. At a subproject level the responsibilities of a single developer will be clearly identified to ensure that subproject level mitigation measures are clearly identified and implemented.<br><br>The resulting risk of E&S impact following ESMP/ESAP and mitigation implementation is considered to be low for category B projects and low – moderate for Category A projects. | | | |

| 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.* |

** Please expand this sub-section when needed to address all potential material and relevant risks.*

## Section H: RESULTS MONITORING AND REPORTING

### H.1. Logic Framework.

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

| H.1.1. Paradigm Shift Objectives and Impacts at the Fund level[3] | |
|---|---|
| **Paradigm shift objectives** | |
| *Shift to low-emission sustainable development pathways* | The fundamental purpose of the Framework is to enhance the long-term viability of private sector investments in harnessing Egypt's renewable energy potential, thus enabling the scale necessary to bring the generation sector, and so the economy as a whole, onto a lower-carbon development path.<br><br>The paradigm shift objectives are therefore two-fold:<br>• Enhancing capacities at all levels to accommodate a sustainable growth in renewable energy investments – this will include: strengthening the ability of the authorities responsible for managing the grid and the FiT schemes to visualize and manage the capacity of the system to take in renewable capacity; sharing knowledge to improve the tendering processes and systems; bringing in best practice at in structuring projects, for instance via adoption of high environmental and social impact assessments, etc.<br>• Helping bring to financial close a critical number of first projects, by providing adequately project finance, using the GCF resources – this will test and lead to fine-tuning of the regulatory context and will demonstrate valuable project implementation track-record for more private sector investors to follow.<br><br>This multi-angled approach to encouraging the development of a private sector-led investment market in Egypt's renewable potential will provide durable context for the country to continue decarbonizing its power sector over the long-term. Directly, the impact indicator for the Framework contribution to this development is represented by the estimated emission reductions to be achieved via the generation of clean energy throughout the lifetime of the assets. This will be around 19million tonnes of $CO_2$. |

[3] 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):
http://www.gcfund.org/fileadmin/00_customer/documents/Operations/5.3_Initial_PMF.pdf

| Expected Result | Indicator | Means of Verification (MoV) | Baseline | Target | | Assumptions |
|---|---|---|---|---|---|---|
| | | | | Mid-term (if applicable) | Final | |
| **Fund-level impacts** | | | | | | |
| *M1.0 Reduced emissions through increased low-emission energy access and power generation* | M1.1 Tonnes of carbon dioxide equivalent (t CO2eq) reduced or avoided | Programme level mid-term report (15 years after operation) and final report (23 years after operation) | N/A | N/A | Around 19,000,000 | |
| *M1.0 Reduced emissions through increased low-emission energy access and power generation* | M1.2 Cost per tCO2eq decreased for all Fund-funded mitigation projects/programmes | Programme level mid-term report (15 years after operation) and final report (23 years after operation) | N/A | N/A | N/A | |

**H.1.2. Outcomes, Outputs, Activities and Inputs at Project/Programme level**

| Expected Result | Indicator | Means of Verification (MoV) | Baseline | Target | | Assumptions |
|---|---|---|---|---|---|---|
| | | | | Mid-term (if applicable) | Final | |
| **Project/programme outcomes** | **Outcomes that contribute to Fund-level impacts** | | | | | |
| M6.0 Increased number of small, medium and large low-emission power suppliers | 6.1 Proportion of low-emission power supply in a jurisdiction or market. | EBRD board document, reports from the recipients | N/A | N/A | tbc | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 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 | EBRD board document, reports from the recipients | N/A | N/A | 600 | |
| **Project/programme outputs** | **Outputs that contribute to outcomes** | | | | | |
| 1.Commercially viable renewables projects are identified, financed and implemented | Number of projects (depending on project size) | EBRD project monitoring reports | N/A | N/A | 8-12 | |
| | Volume of financing | | N/A | N/A | Up to USD 1 billion | |
| 2.Technical advice to enhance the enabling infrastructure for the uptake of renewables | Completion of the model on the renewable energy injection capacity into the grid | EBRD monitoring report, consultant report | N/A | N/A | tbc | |
| 3.Capacity building for public institutions to prepare competitive tenders | Number of capacity building workshop held; number of attendants<br><br>RE capacity awarded/built through existing/future tenders | EBRD monitoring report, consultant report | N/A | N/A | tbc | |
| **Activities** | **Description** | | **Inputs** | | **Description** | |
| Regarding output 1 | • Conduct technical, financial, environmental and social due diligence<br>• Assist throughout the procurement and implementation of technologies<br>• Ensure the procurement processes are in line with EBRD and the GCF policies and rules | | Financial resources and technical expertise deployed to develop, assess, finance and report on projects | | Specific plans to be prepared | |

| | | | |
|---|---|---|---|
| | • Monitor the performance of technologies post implementation | | |
| Regarding output 2 | • Conduct a grid study to ensure the increased renewables capacity can be connected to the grid without imposing unacceptable effects on the grid | Expertise on grid code | Specific plans to be prepared |
| Regarding output 3 | • Training of relevant authorities on designing and implementing a competitive tender process | Expertise and skills transfer for competitive tender process | Specific plans to be prepared |

## H.2. Arrangements for Monitoring, Reporting and Evaluation

**I. MONITORING**

Implementation of each project under this Framework will be managed and monitored at project and Framework level by both EBRD's in-house staff, Project Implementation Unit, and procured consultants. The EBRD has dedicated staff in its sectors teams, risk departments and regional offices that will conduct due diligence and monitor project risks and prepare mitigation measures throughout the Framework lifecycle.

**II. REPORTING**

**1. Reporting of project companies to the EBRD**

As specified in Loan Agreements between project companies and EBRD, project companies are obliged to report on the use of proceeds of the Programme and the environmental and social performance of the project to the EBRD on annual basis.

The implementation consultants of Component 1 will officially report progress on a periodic basis to EBRD staff throughout the Framework lifetime. The subprojects of Component 2 will be required to provide financial and the environmental and social reporting, among other.

The EBRD will provide to the GCF a) semi-annual activity performance reports on the status of GCF funded activities throughout the relevant reporting period, and b) final evaluation reports at the end of the implementation period of the Framework:

a. Semi-annual Performance Reports, including the disbursements made during the relevant period, the implementation status of the Funded Activity and the monitoring of results and impacts of such Funded Activity.
b. Upon completion, projects will be subject to the EBRD formal evaluation process. A final report prepared by the independent Evaluation Department (EvD) sets out the results and impacts achieved, as well as their sustainability, scalability and lessons learned, during the relevant period.

**III. EVALUATION**

**1. Project evaluation by the EBRD in-house staff and its independent advisors**

Throughout the Framework lifecycle, both the EBRD in-house staff and its independent advisors (such as technical and environmental and social advisors) will evaluate the success and risks of projects. A final report of each project will include review and evaluation of the financial and technical performance of projects, capacity building results, climate mitigation and adaptation impact, as well as donor visibility and marketing outreach.

**2. Project or Framework level evaluation by the independent EBRD Evaluation department**

The independent Evaluation Department evaluates the performance of the EBRD's completed projects and Framework. The Evaluation Department is a department independent of the EBRD's various banking divisions (and hence of the developers and managers of the projects they evaluate); therefore, EvD reports solely to the Board of Directors (i.e. to the representations of the shareholding governments). The EvD evaluates the effectiveness, relevance and input efficiency of projects and provides the Board with important insights into the implementation of projects, impacts, success stories and lessons learnt. Under the EBRD's Public Information Policy, EvD publishes summaries of its independent project evaluations.

**Section I: ANNEXES**

| I. Supporting Documents for Funding Proposal | |
|---|---|
| ☒ | NDA No-objection Letter |
| ☐ | Feasibility Study |
| ☒ | Integrated Financial Model that provides sensitivity analysis of critical elements (xls format, if applicable) |
| ☐ | Confirmation letter or letter of commitment for co-financing commitment (If applicable) |
| ☒ | Project/Programme Confirmation/Term Sheet (including cost/budget breakdown, disbursement schedule, etc.) – *see the Accreditation Master Agreement, Annex I* |
| ☒ | Environmental and Social Impact Assessment (ESIA) or Environmental and Social Management Plan (If applicable) |
| ☐ | Appraisal Report or Due Diligence Report with recommendations (If applicable) |
| ☐ | Evaluation Report of the baseline project (If applicable) |
| ☒ | Map indicating the location of the project/programme |
| ☒ | Timetable of project/programme implementation |
| ☒ | Gender Annex |

** Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*

Arab Republic of Egypt
Ministry of Environment

**To**: The Green Climate Fund ("GCF")

**Cairo, 23rd February, 2017**

**Re**: Funding proposal for the GCF by European Bank for Reconstruction and Development - EBRD regarding GCF-EBRD Egypt Renewable Energy Financing Framework

**Dear Sir/Madam**,

We refer to the programme "GCF-EBRD Egypt Renewable Energy Financing Framework" as included in the funding proposal submitted by European Bank for Reconstruction and Development - EBRD to us on 23/2/2017.

The undersigned is the duly authorized representative of the National Designated Authority/focal point of Egypt, Dr. Yasmine Fouad.

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 Egypt has no-objection to the programme as included in the funding proposal;
(b) The programme as included in the funding proposal is in conformity with Egypt's national priorities, strategies and plans;
(c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

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

**Kind regards,**

Yasmine Fouad

**Yasmine Fouad,**

**Assistant Minister for Sustainable Development and External Affairs**

**Egyptian Ministry of Environment**

# Environmental and social report(s) disclosure

| Basic project/programme information | |
|---|---|
| **Project/programme title** | Egypt Renewable Energy Financing Framework |
| **Accredited entity** | European Bank for Reconstruction and Development |
| **Environmental and social safeguards (ESS) category** | Category B |

| **Environmental and Social Impact Assessment (ESIA) (if applicable)** | |
|---|---|
| Date of disclosure on accredited entity's website | 2017-03-03 |
| Language(s) of disclosure | English and Arabic |
| Link to disclosure | Strategic Environmental and Social Assessment (SESA)<br>http://www.ebrd.com/work-with-us/projects/esia/egypt-renewable-feedintariff-framework.html |
| Other link(s) | |
| **Environmental and Social Management Plan (ESMP) (if applicable)** | |
| Date of disclosure on accredited entity's website | 2017-03-03 |
| Language(s) of disclosure | English and Arabic |
| Link to disclosure | Environmental and Social Management Framework and System (ESMFS)<br>http://www.ebrd.com/what-we-do/get/knowledge-hub.html |
| Other link(s) | |
| **Resettlement Action Plan (RAP) (if applicable)** | |
| Date of disclosure on accredited entity's website | Not Applicable |
| Language(s) of disclosure | |
| Link to disclosure | |
| Other link(s) | |
| **Any other relevant ESS reports and/or disclosures (if applicable)** | |
| Description of report/disclosure | Not Applicable |
| Date of disclosure on accredited entity's website | |
| Language(s) of disclosure | |
| Link to disclosure | |
| Other link(s) | |