Meeting of the Board
30 September –2 October 2017
Cairo, Arab Republic of Egypt
Provisional agenda item 14(g)

GCF/B.18/04/Add.02

11 September 2017

Consideration of funding proposals – Addendum II

Funding proposal package for FP047

Summary

This addendum contains the following three parts:

a) A funding proposal summary titled "GCF-EBRD Kazakhstan Renewables 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 Kazakhstan Renewables 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.

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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 Kazakhstan Renewables Framework
Country/Region:	Kazakhstan / ECA
Accredited Entity:	European Bank for Reconstruction and Development (EBRD)
Date of Submission:	December 21, 2016

GREEN CLIMATE FUND

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

Please submit the completed form to:
fundingproposal@gcfund.org

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

Section A: PROJECT / PROGRAMME SUMMARY

A.1. Brief Project / Programme Information			
A.1.1. Project / programme title		GCF-EBRD Kazakhstan Renewables Framework (the Framework/the Programme)	
A.1.2. Project or programme		programme	
A.1.3. Country (ies) / region		Kazakhstan / ECA	
A.1.4. National designated authority (ies)		Ministry of Energy of the Republic of Kazakhstan	
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 Entity:** EBRD **Beneficiary:** Eligible entities will be 1) local or international private or institutional companies or in exceptional cases local public investors developing renewable energy projects 2) electricity distribution and transmission companies.	
A.1.7. Project size category (Total investment, million USD)		☐ Micro (≤10) ☐ Medium (50<x≤250)	☐ Small (10<x≤50) ☒ Large (>250)
A.1.8. Mitigation / adaptation focus		☒ Mitigation ☐ Adaptation ☐ Cross-cutting	
A.1.9. Date of submission		December 21, 2016	
A.1.10. Project contact details	Contact person, position	Jan-Willem van de Ven, Associate Director, Energy Efficiency and Climate Change team George Holroyd, Head Multilaterals, Donor Co-Finance	
	Organization	EBRD	
	Email address	vandevej@ebrd.com holroydg@ebrd.com	
	Telephone number	+44 (0)20 73387821 +44 (0)20 73388594	
	Mailing address	European Bank for Reconstruction and Development, One Exchange Square, London, United Kingdom, 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)

Kazakhstan is one of the largest emitters of greenhouse gases ("GHG") in Central Asia, with ca. 72% of its electricity generated from coal. GHG emissions have increased by 40% since 2006 due to the economy's overdependence on fossil fuels. At the same time, Kazakhstan possesses significant resources of renewable energy, such as wind, solar and hydro. Access to a reliable source of energy is of fundamental importance for the economic development and improving living standards in Kazakhstan. Consequently, the diversification of energy sources and decarbonisation of the economy are priorities of the Government of Kazakhstan. To achieve the renewable energy targets, the Government of Kazakhstan adopted renewable energy regulation that includes the introduction of feed-in tariffs ("FiT") and work in progress auction scheme.

The EBRD proposes to the GCF to implement an investment framework programme with a 5 year duration leading to the total investments of USD 550 million from the EBRD, private sector investors, other financial institutions along with the proposed investment from the GCF. The investments will be in the form of loans to renewable energy sources ("RES") developers to finance the construction, connection to the grid, commissioning and launch of the RES projects (solar, wind, small hydropower and biogas) and to electricity distribution and transmission companies to finance modernisation and strengthening of the electricity grid to enhance the integration of RES into the electricity grid. Under the investment Programme, financing of small hydropower projects will not constitute more than 20% of the total Programme costs and will be limited to only financing of small hydropower projects with a capacity up to 35MW[1]. Biogas will constitute a very small portion of the Programme and is unlikely to exceed 20 MW on a cumulative basis.

The total investment amount of USD 550 million is estimated based on the projected pipeline of up to 330 MW RES projects. The total requested contribution from the GCF is USD 110 million - for concessional loans (USD 106 million) and technical assistance (USD 4 million).

The main objectives of the Programme are the following:

- to facilitate competitive entry of low-carbon investors into the market currently dominated by conventional fossil fuel power producers and kick-start renewable investments which have been stagnant due to market barriers;
- to support the construction of an estimated 330 MW of new RES capacity (ca. 18% of the Government's RES target by 2020) under the FiT scheme and the auction scheme (no more than 35% of the total GCF financing), in combination with the power network upgrades to facilitate this RES uptake;
- to support further regulatory reforms in the energy and carbon market of Kazakhstan, including the development of the auction system which is expected to lead to costs reduction ensuring long-term sustainability of RES projects; and
- to provide capacity building support to RES sector to promote gender equality through equal opportunities policies and practices within their operations.

Based on the experience with the current portfolio, the expected direct CO_2 emissions reductions by the new RES generation are ca. 0.64 million tons CO_2 equivalent per year once all sub-projects are operational (with the expected project lifetime of 20 years).

A.3. Project/Programme Milestone

Expected approval from accredited entity's Board (if applicable)	Approved on December 14, 2016

[1] In accordance with the Kazakh RES law, hydro power plant projects with capacity of up to 35 MW are considered as small hydro projects.

Expected financial close (if applicable)	4Q 2017 (first sub-project)
Estimated implementation start and end date	**Start:** 4Q 2017 (estimated signing date of the first sub-operation) **End:** 3Q 2022 (estimated expiry date of the investment period)
Programme lifespan	The investment period of the Programme is expected to be up to 20 years for Component #1 and up to 5 years for Component #2. The lifespan of the Programme is up to 20 years from the signing of the last loan agreement, making for a total lifetime of 25 years.

Section B: FINANCING / COST INFORMATION

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

The GCF-EBRD Kazakhstan Renewables Energy Framework will support Kazakhstan to develop capacity aggregating ca. 330MW RES projects, which will help Kazakhstan to achieve ca. 18% of its 2020 RES goals via the following two components: Component #1 – 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, and Component #2 – enhancing renewable energy integration, policies and planning through a comprehensive technical assistance and policy dialogue programme. Indicative information regarding the expected use of the funds for Component #1 and the budget for Competent #2 is presented in *Section C.3. Project / Programme Description*.

1) Component #1 – Scaling up renewable energy investments

The Programme will support the development and construction of 8-11 sub-projects with the total investment of up to USD 550 million within the next 5 years. The Programme will consist of the EBRD debt financing of up to EUR 200 million (USD 214 million in equivalent), the GCF financing of up to USD 106 million, other lenders co-financing and private sector investments of USD 230 million in predominantly private and in exceptional cases public developers to finance the construction, connection to the electricity grid, commissioning and launch of renewable energy projects and in electricity distribution and transmission companies to finance the modernisation and strengthening of the electricity grid in order to enhance the integration of renewable energy sources into the electricity grid. The focus of the Framework is on the renewables projects developed under the FiT scheme, although projects under the competitive tendering would also be eligible up to a maximum of 35% of the total GCF financing under Component #1. The proposed Programme will provide project sponsors access to a source of long-term debt financing required for financially viable renewable energy projects in Kazakhstan at competitive pricing. Appropriately structured, long-term debt financing is essential for the successful construction and implementation of RES projects as such financing source is limited in the domestic Kazakh market.

The provision of concessional financing from the GCF will help overcome risk and cost barriers for the development of RES projects in Kazakhstan, which are not sufficiently addressed by the FiT and/or other forms of the Government support, due to the nascent development of the sector.

2) Component #2 – Enhancing renewable energy integration, policies and planning

The provision of grant in the amount of USD 4 million for technical assistance by the GCF will enable the EBRD to work with the Government and key public sector stakeholders in further refining and developing the legal and regulatory framework, and building the national capacity necessary for promoting the development of RES projects.

The provision of GCF support is expected to have a transformational impact at a sector and country level, and will build upon the basis set by the Clean Technology Fund in Kazakhstan.

Component	Sub-component (if applicable)	Amount (for entire programme)	Currency	GCF funding amount	Currency of disbursement to recipient
Component 1. Financing of sub-projects	N/A	550	million USD ($)	USD 106 million	USD
Component 2. Technical assistance and policy engagement	Sub-component 2.1 Technical assistance and capacity building	3.5	million USD ($)	USD 3.5 million	USD

	Sub-component 2.2 Policy engagement	3.5	million USD ($)	USD 0.5 million	USD
Total		557	million USD ($)	USD 110 million	

B.2. Project Financing Information

	Financial Instrument	Amount	Currency	Tenor	Pricing
(a) Total project financing		557	million USD ($)		
(b) GCF financing to recipient	(i) Senior Loans (vi) Grants	106 4	million USD ($) million USD ($)	As defined in the term sheet Not applicable	As defined in the term sheet Not applicable
	Total requested (i+ii+iii+iv+v+vi)	110	million USD ($)		

	Financial Instrument	Amount	Currency	Name of Institution	Tenor	Pricing	Seniority
(c) Co-financing to recipient	Senior Loans Senior Loans Equity Grant	214[2] 93 137 3	million USD ($) million USD ($) million USD ($) million USD ($)	EBRD Other lenders Sponsors EBRD/ other donors	TBD based on market and project conditions. TBD N/A N/A	TBD based on market and project conditions. TBD N/A N/A	senior senior junior 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 Special Fund** (See the details in Section C.7) In line with the *Article 10 of the Agreement Establishing the EBRD ("AEB")*, the GCF resources are 'special resources' of the EBRD. The 'special resources' from the GCF and EBRD's 'ordinary capital resources' shall at all						

[2] The amount of USD 214 million is based on the EBRD's Board approved Framework for renewables in Kazakhstan in the amount of EUR 200 million. EUR/USD exchange rate 1.07 is used.

GCF and AE (if applicable)	times and in all respects, be held, used, committed, invested or otherwise disposed of entirely separately from each other. In this regard, the EBRD has established the GCF Special Fund (the "Special Fund") through which all payments from the GCF and repayments to the GCF will pass. The GCF resources in the Special Fund will not be comingled with the EBRD's ordinary capital resources or other donor resources as far as financial flows are concerned. The EBRD will treat the resources from the Special Fund as assets of the EBRD for the purposes of the privileges and immunities provisions of *the AEB*.

B.3. Financial Markets Overview (if applicable)

Commercial financing for long tenors and for structured project finance transactions is currently limited for renewable energy projects in Kazakhstan. Based on the studies carried out for the Burnoye solar project, long-term financing of renewable energy at the maturities required is not available from local commercial banks or from the domestic bond market.

Section C: DETAILED PROJECT / PROGRAMME DESCRIPTION

C.1. Strategic Context

Kazakhstan has been an early and enthusiastic proponent of sustainable development, aligning national strategic plans and programs with the green economy objectives. These are underpinned by ambitious low carbon and sustainability targets defined by the national legislation and international agreements. The ambitious targets established by these policy commitments require a significant scaling up of financing from the public and private sources.

Kazakhstan possesses significant renewable energy resources, such as wind, solar and hydropower. The country's hydro potential is estimated as 27 TWh per year and wind potential at 18 TWh per year while solar potential is estimated at 3.9-5.4 TWh as compared to the total annual electricity consumption of 91 TWh, out of which ca. 72% is met mainly by coal-fired power plants. The leading coal- and gas-fired power plants in Kazakhstan representing 80% of the fossil fuel-based installed capacity are built in the Soviet era and are more than 30 years old. Since the Government of Kazakhstan estimates that 73% of the existing power generation facilities are obsolete and require modernisation on the back of the forecasted increasing electricity demand at ca. 3.2% p.a. over 2010-2025, an overwhelming amount of investment is needed to restore and expand the power generation system. The levelised costs of electricity for supercritical coal (meeting the EU standards on pollutant emissions), wind and solar power plants are USD 52-59/MWh, USD 70-75/MWh and USD 86-96/MWh, respectively. When the environmental, health and climate externality costs of emissions are taken into consideration, together with the anticipated cost reduction in power generation from wind and solar on the back of the steep learning curve (e.g. IRENA estimates that LCOE for solar and wind between 2015 and 2025 could fall by up to 59% and 35%, respectively), it is expected that the difference in the levelised cost of electricity between coal and renewables will significantly narrow. As an example if the Kazakh Emissions Trading Scheme ("ETS") price costs be USD 5 per tonne of CO_2, then this equates in an additional electricity price of about USD 5 per MWh for high efficiency coal based power plants, which will cover 33% of the gap between RES and new coal. Based on the mentioned trends there is a strong additionality case for the GCF to sponsor and leverage the paradigm shift to renewable energy in Kazakhstan. The investment results under the Framework will encourage the Government of Kazakhstan and the sector to achieve the RES targets between 2020 and 2050, FiT scheme and carbon market. As the market grows over time, it will become attractive to the private sector.

Recognising climate change and environmental challenges associated with the coal-fired generation, and seeing the need to diversify the country's economy due to its over dependency on the natural resources sector, the Kazakh Government launched a strategic initiative called the Green Economy in 2013 under which a number of actions have been planned including the development of renewable energy sources. The initiative became the platform for Kazakhstan's commitment during the UNFCCC Conference of Parties in Paris as was communicated by the Kazakh Government in its Intended Nationally Determined Contribution (INDC) to reduce GHG emissions. The INDC, and now NDC as Kazakhstan ratified the Paris Agreement, calls for an economy-wide target of 15% reduction in GHG emissions by 2030 compared to 1990. This reduction target reflects a reduction of at least 22% below projected business as usual emissions. On 27th of October 2016, the Kazakh Senate adopted the Law "On ratification of the Paris Agreement". See the table below for the Kazakh key green economy targets.

Summary of key Green Economy targets

Sector	Indicator	2020	2030	2050
GHG Emissions	Reduction in GHG emissions (1990 baseline)	N/A	-15%	N/A
Electricity	Share of alternative source of electricity	3% (renewables only)	10% (renewables wind and solar) 20% (other alternative sources)	50%
Energy Efficiency	Reduction in energy intensity of GDP (2008 baseline)	-25%	-30%	-50%

The current renewable energy policy framework was introduced in Kazakhstan, with the support of the EBRD technical assistance, in June 2013 and assumes support of renewable projects through the FiT. Due to the introduction of the RES support mechanism, Kazakhstan's RES market has seen continued growth of the overall generation volume coming from wind, solar and small hydropower plants. Power generated from these sources increased by 32% in 2016 as compared to 2015, though in absolute terms it continues to remain relatively insignificant at less than 1% of the overall power generation.

The EBRD has been supporting the Government of Kazakhstan in developing the Green Economy legislation over the last 8 years, which includes the work on the development of commercially viable renewable energy legislation, the development of an emission trading system (Kazakh Emissions Trading Scheme), the development of the domestic carbon credit project, and the development of Kazakhstan's INDC to the Paris Agreement in 2015. The EBRD is currently working with the Astana International Finance Centre on the consideration of a Green Financial System, which would help to align capital flows with the green economic development.

Achieving Kazakhstan's vision of the green economy transition and closing the green investment gap will require a significant mobilisation of the private sector. There is a growing base of knowledge which demonstrates that private sector investment can be leveraged and barriers overcome through a range of proven measures and interventions. The Kazakhstan's financial sector is currently unable to support the private sector in opening up the innovative and technically demanding niche of RES projects. According to the recent EBRD research entitled "Green Financial System in Kazakhstan"[3], the current potential of the financial sector to support the Paris Agreement is limited. The financial sector is currently shallow in both absolute and relative terms, and is in need for financial instruments that can help to develop this nascent market. The EBRD proposes to scale up investment in RES in Kazakhstan by establishing the proposed Programme that will, with the support from the GCF, finance independent RES projects and scale up the RES investments in Kazakhstan.

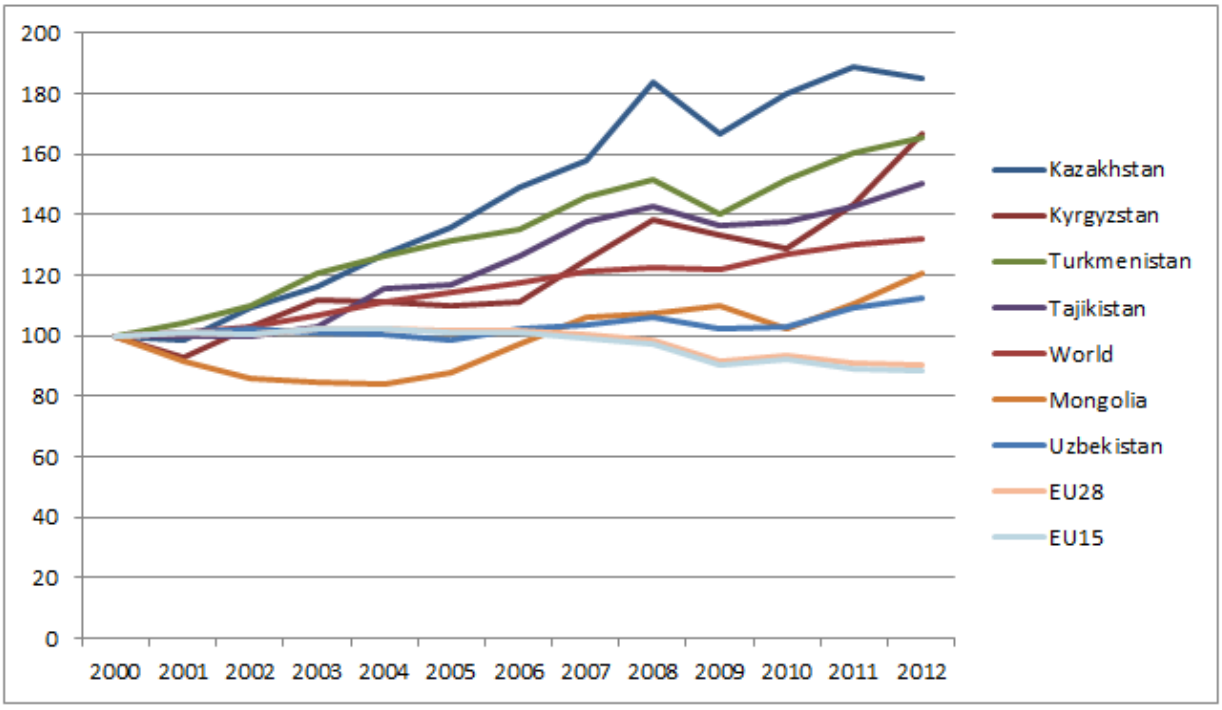
C.2. Project / Programme Objective against Baseline

Emissions baseline

Between 2000 and 2012, Kazakhstan almost doubled its GHG emissions, i.e. from 157 mtCO_2e to 291 mtCO_2e (WRI-CAIT, 2014). Compared to other countries in Central Asia, Kazakhstan is the largest GHG emitter in absolute terms, of which 85% is from the energy sector. In relative terms, Kazakhstan has the highest emissions growth rate in Central Asia during this period (Figure 1). As Kazakhstan generates 72% of its electricity from coal, this translates into a relatively high grid emission factor at 0.844 tCO_2/MWh.

Figure 1 GHG emissions indexed to 2000 level

[3] www.greenfinance.kz



Source: WRI-CAIT, 2014

Barriers

Renewable energy production in Kazakhstan is insignificant at less than 1%. This has been the case due to the following barriers:

- Financial barriers: the lack of availability of long-term financing from the local and international banks in Kazakhstan to fund RES projects, particularly given the long tenors these projects typically require. Availability of equity also constrained project development given that the macroeconomic risk perception is relatively high. Absence of full indexation of FiT for foreign currency fluctuations also constrains the development of RES as long-term local currency financing at affordable rates are limited in the country.
- High real and perceived risk for the first movers: the lack of private sector participation in RES projects as well as high transaction costs pose challenges in initiating investments.
- Infrastructure constraints: the current infrastructure needs to be assessed and enhanced to integrate RES into the grid.
- Constraints of institutional capacity: the regulatory bodies have constraints in the capacity in managing grid balancing, integrating RES projects into the domestic emissions trading system, reviewing and further developing and administering the RES tenders.
- Externality cost: with an abundant and cheap power generation source of coal, as well as a lack of an appropriate carbon price, it has been challenging for private sector project developers to compete with coal fired power plants in terms of costs given absence of internalisation of the environmental cost of using carbon-intensive energy sources.

Framework impact on baseline

The Framework will help to facilitate systemic change in the country's power generation sector where coal remains the dominant fuel by supporting the development of private renewable energy projects and moving towards sustainability of the power market. Furthermore, the Framework will have a demonstration effect of new ways of financing and new technologies, and will assist with the reduction of Kazakhstan's carbon intensity, with the expected GHG emission reductions of ca. 640,000 tonnes of CO_2 annually once all sub-projects are operational. The EBRD has developed a methodology to assess CO_2 reductions driven by the proposed Framework. For details, please refer to section E1.

The Framework will contribute towards the country's target on the share of renewables accounting for 3% of country's total power generation by 2020. No installed capacity target has been announced but, based on a certain assumptions related to the average load factor of various technologies and the future power generation, it is estimated to be ca. 1,800MW. In addition to

substitute carbon-intensive power generation at a country level, the increased installed renewable capacity supported by this Framework being in the southern regions of Kazakhstan would help reduce the power deficit in those areas. While the 3% RES target by 2020 may seem modest, the Framework is expected to have a demonstration effect in Kazakhstan's RES industry further contributing towards the Government's 30% alternative energy target by 2030.

C.3. Project / Programme Description

Proposed Operation

The EBRD proposes to the GCF to implement an investment Programme with a 5-year duration leading to the total investments of USD 550 million from the EBRD, private sector, other financial institutions along with the proposed investment from the GCF. The investments will be in the form of loans to RES developers to finance the construction, connection to the grid, commissioning and launch of the RES projects (solar, wind, small hydropower[4] and biogas).

The proposed Programme builds on the following milestone achievements and experience of the Bank:

i) Implementation of the *Ukraine Sustainable Energy Lending Facility* (USELF, see Annex 1);
ii) Successful development and operation of the largest solar power plant in Kazakhstan - the 50MW *Burnoye SPP* (see Annex 2); and
iii) Policy dialogue of up to 8 years with the Government of Kazakhstan on the green economy transition, including renewable energy legislation.

The benefit of the Programme for Kazakhstan is to develop the market of independent RES developers by creating a large pool of projects and project sponsors, attracting attention from both local and international banks, increasing the integration of RES into the energy market and enabling access to the carbon market, altogether ensuring long-term sustainability and competitiveness of the RES market. It will contribute towards the achievement of the 3% target share of renewable power generation at a country level by 2020, substitute carbon intensive power generation in the north and reduce the power deficit in the southern regions of Kazakhstan.

Furthermore, the Programme will contribute considerably to Kazakhstan's climate mitigation efforts. Kazakhstan is a country with very high emissions of CO_2 from power generation, and the RES financed by the Programme will therefore have a substantial impact on Kazakhstan's GHG emissions by adding clean energy into the power generation mix. Based on the experience with the current portfolio, the expected direct CO_2 emissions reductions by new and additional RES generation are ca. 0.64 million tons CO_2 equivalent per year once all sub-projects are operational, with an estimated lifetime of 20 years.

GCF Contribution

The total requested contribution from the GCF is USD 110 million for concessional loans and technical assistance.

Component #1: Scaling up renewable energy investments

The GCF is requested to provide **concessional financing** of up to USD 106 million, or ca. 19% of the total projects costs of USD 550 million to address the real and perceived risks and cost disadvantages as well as the lack of availability of long-term financing from the local and international banks in Kazakhstan. Eligible projects are the sub-projects either (i) awarded a PPA under the FiT Scheme or a competitive tender, in each case in terms acceptable to the EBRD, or (ii) electricity distribution and transmission companies to finance the electricity grid connection to enhance the RES integration into the electricity grid. The latter part of the sub-projects on the modernisation and expansion of the transmission and distribution networks aims to remove technical/technology and system operation barriers that currently hinder the efficient integration of RES, especially small- and medium-size wind and PV projects. Typical projects on the electricity distribution and transmission networks involve modernization and expansion of substations and lines modernisation, installation of Supervisory Control and Data Acquisition (SCADA) systems, automatic control and communication systems, energy management systems and smart metering systems. Financing of electricity distribution and transmission companies will not constitute more than 20% of total Programme costs and will be limited with the network modernization necessary for renewables integration into the grid. The total GCF financing of sub-

[4] Under the Kazakh FiT scheme, small hydropower is defined as an installed capacity below 35MW.

projects developed under a competitive tender will not exceed 35% of the total GCF financing under Component #1 of the Programme.

Pricing of the GCF co-financing will be determined based on detailed due diligence of the sub-projects individually and on the principles specified in the Term Sheet agreed with the GCF Secretariat. The concessional financing from the GCF is critical as it will reduce the financial risk for the project sponsors in a relatively untested market, address the cost disadvantages suffered by renewable technologies in Kazakhstan, and bridge a capital gap that would otherwise remain within the financial structure of the sub-projects, in the absence of commercial lending for renewable energy projects from local and international banks.

The EBRD anticipates that all solar and transmission and distribution sub-projects under the Programme will go under Category B and the wind, small hydropower, and potentially biogas projects will go under a combination of Category A and B. Hence each sub-project will be individually reviewed and categorised and a due diligence will be undertaken accordingly.

Component #2: Enhancing renewable energy integration, policies and planning

The Programme will be supported by a **technical assistance and policy dialogue** programme that will further unlock the renewable energy market potential in Kazakhstan and is estimated to amount USD 7 million. The GCF is requested to provide USD 4 million or 57% of this component to public entities and regulatory authorities to support regulatory reform and institutional capacity-building programme. Technical assistance to private developers will be sourced from the EBRD and/or other donors, but not from the GCF.

The following specific goals for the regulatory reforms have been set in consultation with the Kazakh authorities and other donors:

i) conduct systemic change in the sector;
ii) achieve critical mass of private RES projects; and
iii) enable high-level development of RES.

Further support of the regulatory reform programme financed by the Framework will target improvement of the three major instruments of the RES market development in Kazakhstan: FiT, introduction of the auction system and carbon price. The policy dialogue and technical assistance initiatives will include, *inter alia* the following aspects:

- Further review of the FiT system, and the mechanism of FiT calculation;
- Design and introduction of the auction based system for RES projects, in close coordination with other donors-sponsored projects;
- Development of the domestic energy and carbon market and integration of the RES projects/programmes in that market, and exploring the use of Paris Agreement article 6 instruments to further leverage the RES developments beyond the GCF sponsored programme to ensure a long-term sustainability; and
- Addressing barriers restricting women's access to employment and skills in the high-value energy sector.

All resources used for Component #2 will be used for the procurement of consultancy services according to the EBRD Procurement Policies and Rules.

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 mtCO_2 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 mtCO_2 emissions reductions. The projects financed by the 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. Please refer to the 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 the EBRD financing.

The EBRD also has a solid experience in working closely as a trusted partner to governments in promoting renewable and sustainable energy through policy dialogue. The EBRD has contributed towards the implementation of a number of frameworks for renewables in its countries of operation such as in Romania, Bulgaria, Ukraine, Poland, Mongolia, Serbia and more recently Jordan and Egypt, and intends to accelerate the initiative in Kazakhstan along with the GCF.

In 2016, the EBRD consolidated its proven record helping countries in their transition towards clean energy by financing 10 renewable projects amounting EUR 238 million and more than 300 MW. In Kazakhstan, as of 31 July 2017, the EBRD signed loan agreements for three renewable energy projects in Kazakhstan: Yereymentau wind farm (50MW), Burnoye solar (50MW) and Burnoye solar extension (50MW).

C.5. Market Overview (if applicable)

Electricity Market Overview

The country's power sector was shaped during the Soviet era and predominantly relies on coal-fired power plants concentrated in the North (ca. 72% of generation), next to large open pit coal deposits. Approximately 17% of electricity is generated by gas fired power plants and only about 10% comes from non-fossil fuel – five hydropower plants built several decades ago.

As most of the capacity is located in the North, the Southern Kazakhstan has historically experienced a power deficit and relies on high voltage transmission lines delivering electricity from the North as well as from the neighbouring Kyrgyz Republic. In total, there are 118 power stations in Kazakhstan with the installed electric capacity of 22GW and available capacity of ca. 19GW. At the same time, there are 41 power companies of which the five largest account for ca. 58% of generation, while the ten largest account for ca. 80% of the total electricity output.

Electricity production and consumption was growing steadily in Kazakhstan over the past 10 years apart from minor reductions in 2009 and 2013. Overall, the Kazakh economy remains energy intensive with oil & gas, mining and industrial companies being the major consumers of electricity, followed by households and the transport sector. Up until 2013, the country had an electricity deficit which was covered through imports from Russia and the Kyrgyz Republic. However, in 2013 Kazakhstan became a net exporter of electricity supplying excess capacity from the northern plants to Russia but that was suspended in 2015 due to the unfavourable KZT/RUB exchange rate. In 2016 exports to Russia were resumed supporting electricity generation in the country. At the same time, the country's power system lacks manoeuvrable balancing capacity and has to rely on Kyrgyz hydropower plants for balancing.

Electricity output and consumption in Kazakhstan, million kWh

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	1H16	1H17
Output	71,553	76,365	80,074	78,434	82,296	86,203	90,248	91,973	93,935	90,797	94,077	46,042	50,787
Change %	*6%*	*7%*	*5%*	*-2%*	*5%*	*5%*	*5%*	*2%*	*2%*	*-3%*	*4%*		*10%*
By fuel													
TPPs	63,813	68,217	68,495	71,574	74,306	78,354	82,640	84,268	85,689	81,371	82,110	40,394	44,494
HPPs	7,740	8,148	7,437	6,859	7,990	7,849	7,608	7,701	8,236	9,250	11,606	5,469	6,081
By zones													
North	55,420	57,873	59,081	59,724	65,204	68,314	70,970	71,916	72,676	69,258	70,968	34,935	39,256
South	7,636	9,224	10,914	8,161	8,229	8,484	9,487	9,915	10,469	10,810	11,731	5,594	5,498
West	8,498	9,268	10,079	10,549	8,862	9,405	9,790	10,141	10,790	10,729	11,377	5,513	6,033
Consumption	71,916	76,440	80,620	77,960	83,767	88,136	91,444	89,641	91,661	90,847	92,312	45,217	48,549
Change %	*6%*	*6%*	*5%*	*-3%*	*7%*	*5%*	*4%*	*-2%*	*2%*	*-1%*	*2%*		*7%*
By zones													
North	47,207	49,695	52,237	50,814	58,327	60,589	62,554	60,786	60,865	60,399	61,768	30,308	32,538
South	14,332	15,523	16,426	15,016	16,176	17,966	19,005	18,623	19,856	19,393	19,013	9,313	9,921
West	10,378	11,222	11,957	12,130	9,264	9,582	9,885	10,232	10,940	11,055	11,530	5,596	6,089
Net export	(363)	(75)	(545)	474	(1,472)	(1,933)	(1,197)	2,332	2,274	(51)	1,765	825	2,238

Source: The Kazakh Operator of Electric Power and Capacity Market

RES Market Overview

- The market for renewable energy generation in Kazakhstan is nascent, while technical potential is high. The country's hydro potential is estimated as 27 TWh per year and wind potential at 18 TWh per year while the solar potential is estimated at 3.9-5.4 TWh as compared to the total annual electricity consumption of 91 TWh currently dominated by coal fired power plants. As of 1Q2017 Kazakhstan has a cumulative installed RES capacity of 296 MW (or 1.3% of the total power generation capacity of 22 GW), of which 50 MW is represented by the Burnoye SPP project sponsored by a JV between United Green Energy Ltd with Samruk-Kazyna Invest LLP and financed by the EBRD.
- The Government of Kazakhstan has set a target to increase the share of energy generation from the RES in the country's energy balance up to 3% by 2020 (versus the current share of energy generation from the RES at less than 1%). This is part of the country's NDC target of reducing GHG emissions by 15% below 1990 levels by 2030.

Cumulative installed capacity by fuel type in 2015

Fuel type	Cumulative installed capacity, 2015
Coal	65.9%
Gas	20.4%
Oil	0.3%
Hydropower	12.8%
Non-hydro renewables	0.6%

Source: GlobalData

Legal/Regulatory Overview

- The Kazakh Government commenced the development of the renewables regulations in 2009 and subsequently the Renewable Energy Law in June 2013 by setting the Framework for renewable energy development via introduction of the FiT.
- As per the renewables law, RES has priority of dispatch and sell electricity to a single off-taker – the Financial Settlement Centre ("FSC"), a wholly owned subsidiary of the National Grid Operator, KEGOC.
- Upon the commencement of the commercial operation of a plant, the tariff is set fixed for 15 years subject to annual adjustments for the Kazakh CPI and differentiated by the types the RES in the following way:

RES technology	KZT	USD equivalent*
Solar	KZT 34.61/kWh	USD 11 cents/kWh
Wind	KZT 22.68/kWh	USD 7.2 cents/kWh
Small hydro	KZT 16.71/kWh	USD 5.3 cents/kWh
Bio energy	KZT 32.23/kWh	USD 10.2 cents/kWh

* USD/KZT Exchange Rate is 314.5, as of 28 April, 2017.

- In early 2017 the Ministry of Energy introduced amendments to the Renewable Energy Law including amendments on the FX indexation, an introduction of reserve fund and a siting plan on the recommended allocation of RES facilities. According to the amendments, a RES developer is entitled to indexation of the FiT provided that the project costs include liabilities in hard currencies in case of at least 25% devaluation or appreciation of tenge against USD. The FX indexation formula is presented below, where T_{t+1} is the FIT effective during time t+1, CPI_t is the consumer price index accumulated for 12 months, USD_t + 1 = current rate of tenge to US dollar and USD_t is average KZT / USD exchange rate calculated for the preceding 12 month period:

$$T_{t+1} = T_t * \left(1 + 0.7 * \frac{(CPI_t - 100\%)}{100\%} + 0.3 * \frac{USD_{t+1} - USD_t}{USD_t}\right)$$

- In the absence of more than 25% depreciation per year against USD, the FiT is adjusted only for annual CPI.
- The Ministry of Energy in January 2017 has introduced the reserve fund within the FSC to cover the short-term liquidity needs. The size of the reserve fund is to amount 3% of the total annual RES payments. The FSC is to accumulate the required amount of the reserves via additional surcharges in the RES support tariffs to the conditional consumers.
- Changes in the RES Law also provided for the need for a siting plan on the recommended allocation of RES facilities (the "Siting Plan"). This Siting Plan considers the RES development targets and its purpose is to identify the most suitable areas where RES should be implemented. The Siting Plan shall be established and approved by the Ministry of Energy at least once a year. In addition to the country-level targets, the Siting Plan provides a summary of all RES projects that can be connected to the network within a defined area.
- On 24 July 2017 the Government of Kazakhstan adopted a primary legislation which envisages an introduction of auction based system for further development of RES in Kazakhstan. It is expected that over the next year the Government of Kazakhstan would adopt a secondary legislation on an introduction of auction based system to be followed with a first auction on RES capacity conducted in 2018.

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

EBRD

Not applicable.

C.7. Institutional / Implementation Arrangements

Component 1

The Framework focuses on financing of the RES projects under the FiT scheme. Under the Programme each Borrower planning to develop a sub-project concludes a PPA, based on the Ministry Energy approved template, with the FSC. The key elements of the PPA are the following:

- Each Borrower (the "Seller") sells electricity generated at the relevant power plant (the "Facility") in accordance with and in the manner contemplated by the PPA.
- Seller's obligations will include designing, procuring, constructing, erecting, installing, testing, commissioning, owning, operating and maintaining the network assets necessary to interconnect the Facility to the transmission network in accordance with the relevant network connection directives. The Seller is required to install an electric meter on the site and comply with KEGOC's standards and instructions for the network operation.
- The FSC (the "Buyer") is required to buy all electricity generated by each Facility and recorded by the commercial meter at the point of delivery dispatch on a priority basis. No curtailment is allowed. The electricity generated by each Facility is then procured to the thermal electricity generators in proportion to their electricity output. Interest of 0.1% is charged on overdue amounts of payments from the Buyer per overdue calendar day. The total overdue interest is capped at 10% of the overdue amount. The term of the PPA is 15 years starting from the commercial operation date.
- In disputed occasions, the final source of amounts to be paid will be actual amounts generated/consumed in the wholesale electricity market provided by the National Dispatching Centre within KEGOC.

In addition to the PPA, the Connection Agreement is concluded between the regional electricity distribution company or KEGOC and each developer, setting out the terms of interaction between the parties relevant to the connection of and the delivery of electricity by each Facility to the network.

Under the Renewable Energy Law, the FSC sells the purchased electricity from the RES to the obligated purchasers (thermal generators) proportionately to their output at the tariff set by the FSC. The obligated purchasers are obliged to purchase electricity from the FSC at the tariff set monthly by the FSC, which includes the costs of purchasing the electricity from renewable energy sources. In accordance with the Renewable Energy Law, the obligated purchaser in turn sells the renewables electricity to large consumers and energy supplying companies along with the internal generated energy. There are currently 41 thermal generators of which 10 account for ca. 75% of the country's electricity generation.

Component 2

The EBRD will be directly involved in all aspects of the implementation of the grant component of the Programme. 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.

C.8. Timetable of Project/Programme Implementation[5]

		2017				2018				2019				2020				2021				2022			
Component / Subcomponent / Activity		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1 (loan for project finance)																									
1.1 Scaling up renewable energy investments*					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	c	
Component 2 (grant for technical assistance)																									
2.1 Technical assistance and capacity building**																									
2.1.a. Institutional capacity building (including implementation support for auctions and tenders, and project preparation for public entities)					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	c	
2.1.b. Vocational training development						x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	c	
2.1.c. Promote gender equality						x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	c	
2.1.d. Capacity building to FSC (MRV and telemetry requirements/rules)										x	x	x	x	x	x	x	x	x	x	x	x	x	x	c	
2.2 Policy engagement***																									
2.2.a. Design and introduction of the auction based system						x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	c	
2.2.b. Further review of FiT system, elaboration of the mechanism of FiT calculation					x	x	x	x	c																
2.2.c. Strategies for carbon market								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	c	
Subtotal of component 2																									
TOTAL																									

x: ongoing
c: complete

* related to output 1 in the logic framework in the funding proposal
** related to output 2 in the logic framework in the funding proposal
*** related to output 3 in the logic framework in the funding proposal

[5] The information is preliminary and depends on actual implementation of the Programme.

SECTION D: RATIONALE FOR GCF INVOLVEMENT

D.1. Value Added for GCF Involvement

The GCF involvement in the proposed Programme is critical as it will:

i) address real and perceived risks and cost disadvantages as well as the lack of availability of long-term financing from local and international banks in Kazakhstan;
ii) attract international and domestic private sector investors to participate in the Kazakh RES market;
iii) reduce the financial risks of the project sponsors in an untested market through decreased interest rate sensitivity and lower medium term cash flow pressure through longer term financing; and
iv) provide for bridging of a capital gap that would otherwise remain within the financial structure of the project.

Furthermore, through the proposed Programme, the GCF will facilitate achievement of the target on the share of renewable power generation at a country level (3% of total generation by 2020), reduce power deficit in the southern regions of Kazakhstan by increasing installed renewable capacity in the South and assist in the further development of the Kazakh Emissions Trading Scheme by the potential supply of domestic carbon credits. This supply of carbon credits is an essential part for the working of the Kazakh ETS, and hereby underwrites the paradigm shift towards pricing carbon for the emitters, and incentivising the carbon neutral technologies such as renewable energy. The RES projects may register for a domestic carbon credits status, which under the current rules may use international accepted methodologies, such as the Clean Development Mechanism. Finally, the successful implementation of the various sub-projects is expected to encourage the development of similar projects by other private investors, who have several concerns related to technical and operational challenges associated with severe climate conditions as well as commercial and regulatory risks related to the novel nature of the country's renewable energy market.

D.2. Exit Strategy

Sub-project Level

The exit strategy for development finance is through repayment of the EBRD/GCF loan at maturity.

Renewable Sector Level

Following the PPA expiration the individual sub-projects become price-takers in the electricity market. At a sector level, providing the financing and technical assistance will contribute to the development of a self-sustaining market for renewable energy projects in Kazakhstan, as outlined above.

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

The economy of the Republic of Kazakhstan is the largest economy in Central Asia. In 2015, the World Economic Forum ranked Kazakhstan the 50th out of 144 countries in its Global Competitiveness Ranking, which considers multiple macroeconomic and financial factors, such as market size, GDP, and tax rates, among others. The power industry is represented by more than 5.4% of total industrial output of the country in 2016. Most of Kazakhstan's electricity (ca. 72%) is produced by coal-fired power plants.

With respect to climate change, Kazakhstan ranks among the top 10 energy-intensive economies in the world about double the energy intensity of the USA or Canada. Mirroring the high-energy intensity, the country is the fourth most GHG intensive country in the world. Kazakhstan is more than twice as GHG intensive as the European and Central Asian regional average, and more than three times as intensive as the OECD average.

The CO_2 emissions of the electricity sector in Kazakhstan are substantial, at 0.844 tCO_2/MWh of electricity generated. Adding zero-emissions renewable energy capacity therefore has an immediate and substantial impact. In some locations, especially in the south of the country, adding power capacity will also help to balance the grid, and thereby reduce transmission system losses. Without taking the latter part into account, the introduction of the Programme will help to initialize the process of replacement of the outdated and polluting electricity generating technologies and is expected to achieve CO_2 reduction of at least 0.64 million tons CO_2 equivalent per year once all sub-projects are operational, for a lifetime of 20 years.

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*	643,229 tCO_2e (once all sub-projects will be in operation)
		Lifetime	12.86 $mtCO_2e$
	• *Expected total number of direct and indirect beneficiaries, disaggregated by gender (reduced vulnerability or increased resilience);* • *Number of beneficiaries relative to total population, disaggregated by gender (adaptation only)*	*Total*	3,000 short-term jobs (during construction) and 150 long-term jobs (during operation)
		Percentage (%)	N/A
Other relevant indicators	*Examples include:* • *Expected increase in the number of households with access to low-emission energy* • *Expected increase in the number of small, medium and large low-emission power suppliers, and installed effective capacity*		

- *Expected increase in generation and use of climate information in decision-making*
- *Expected strengthening of adaptive capacity and reduced exposure to climate risks*
- *Others*

The EBRD developed a standardised baseline methodology based on a CDM approach to conservatively assess CO_2 reductions driven by the Programme. The methodology calculates the CO_2 savings based on the total estimated installed capacity of wind, PV, hydro, bioenergy power plants to be deployed by the Programme in Kazakhstan. The grid emission factor ("EF") takes into account the current energy mix supplied in Kazakhstan and was estimated at 0.844 tCO_2/MWh based on the Project Design Document prepared for Yereymentau wind project**.** It is assumed that total RES capacity under the Framework to be developed will be ca. 330 MW in total consisting mainly of PV, wind and small hydro. With a conservative assumption of the load factors for these 3 main types of technologies, the estimated electricity production is 762,120 MWh, corresponding to 643,229 tons CO_2 per annum. The total CO_2 emissions reduction over lifetime of the sub-projects of 20 years is estimated at 12.86 million CO_2. The detailed calculation is set out below.

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	150	0.12	157,680	0.844	133,082	20	2,661,638
Wind	120	0.35	367,920	0.844	310,524	20	6,210,490
Hydro/ bioenergy	60	0.45	236,520	0.844	199,623	20	3,992,458
Total	**330**		**762,120**		**643,229**		**12,864,586**

Estimated cost for carbon reduction (total investment cost/expected lifetime emission reductions tCO_2eq)

- USD 106 million/tCO_2 for GCF contribution = 8.2 USD /tCO_2
- USD 550 million /tCO_2 for total Programme cost = 42.8 USD /tCO_2

The Programme's investment costs and the mitigation costs (USD per ton CO_2 mitigated over 20 years) are in line with those of the similar RES projects in other countries of the EBRD's operation such as Ukraine and Russia.

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 paradigm shift is envisaged to take place along three phases from short to long-term. In its current phase, the RES development is triggered by a FiT system and further leveraged by optional carbon credits for the Kazakh ETS as per legislation. The incentives provided will help to establish a beachhead capacity of renewable energy in Kazakhstan, enabling the development of national skills and a suppliers / services infrastructure. In a second phase within 2-3 years, Kazakhstan would fully switch to an auctioning system for additional RES capacity and generation, which would help to bring down the investment costs through competition. In a third phase the further decarbonisation of the power sector would be carried in full by the energy and the carbon market (Kazakh ETS), and by an increased demand for electricity through the electrification of other sectors (e.g. transport).

This Programme would focus its technical assistance activities across three different timelines, short, medium and long term. The long-term perspective is required to drive the transformational change, whilst short term the focus is on issues like implementing regulations and training and the medium term on the enabling of an auctioning system for renewable energy.

The Programme will enable the development of a scaled-up and viable RES market in Kazakhstan. By demonstrating the

commercial viability of the RES projects, it will encourage commercial lending in the future. The Programme will provide a highly visible demonstration to other potential developers that projects can be successfully implemented in this market. By supporting the development of RES projects in accordance with best international practices, the Programme will help establish standards that can be replicated and will further encourage other developers to enter the market. It is essential for suppliers to see a growing RES market uptake, for those to undertake upfront investments in setting up their development and services infrastructure. A well working suppliers network established in Kazakhstan is essential to reduce risks to operations and bring down transaction costs.

Furthermore, the Programme will support and facilitate financing structures which are not widely available for these types of projects from local banks but which may be expected to enter the market once precedents are established. As long-term, limited recourse financing is essential to enable increased levels of investment for renewable energy projects in Kazakhstan, the Programme could have a fundamental role in establishing this market.

The Programme will enable the involvement of private sector resources to design and implement RES projects taking full risk for long-term finance. This will allow bringing optimal private sector technical and financial expertise in diversification of energy sector in Kazakhstan.

A Theory of Change model for the Programme is provided in Annex 5.

E.2.2. Potential for knowledge and learning

The Programme is building on multi-annual and multi-donor engagement in the regulatory aspects of the Kazakh renewable energy sector. The EBRD has throughout been the lead donor agency in this field, and the results from the investment and tracking of the Programme will be fed back into the regulatory development process. This will also be a key element of the technical support and capacity building which will be provided to the Ministry of Energy, KEGOC (national transmission company), RES developers in order to strengthen local capacities to develop (project design, financing, construction, operation and maintenance) and integrate renewables into the grid.

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 local governance and institutional knowledge required for successful and sustainable implementation of RES projects.

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

The fundamental purpose of the Programme is to enhance the long-term viability of private sector participation in harnessing Kazakhstan'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 Programme builds on the ambitious efforts of the Kazakh Government to encourage the renewable generation market via the Renewable Energy Law, and the FiT/ auction scheme. In the long-term, the involvement of the private sector at scale is necessary to bring in the financing, the skills and the technology necessary to decarbonize Kazakhstan's carbon-intensive power sector to a level in line with the country's overall clean energy potential. The Programme brings together the necessary capacity enhancement and the provision of adequately blended financing in order to overcome the barriers, and to demonstrate and pave the way for sustained private sector participation in the long-term.

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

- design and introduce the auction based system for RES projects;
- develop the integration of the RES projects in domestic energy and carbon market, and explore the use of Paris Agreement article 6 instruments to further leverage the RES developments beyond the GCF sponsored programme to ensure a long-term sustainability;
- training and capacity building for FSC, KEGOC and regional distribution companies.

The purpose of the Programme is to enhance emission reductions and low-carbon development, by supporting the market for private sector investments in power generation from renewables in Kazakhstan. As such, the current proposal:

- Contributes to demonstrating the viability of a new marketsupports the uptake of low-carbon technologies with low market penetration rates.
- Makes use of funding support mechanisms which are relatively new for the Kazakh power sector and the blending of multilateral climate finance into project finance packages as proposed by the current Programme. 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.

The Programme will introduce and demonstrate viability and attractiveness of the new modern technologies, as well as project implementation and financing practices, resulting in facilitating competitive entry of low carbon players into a market currently dominated by their higher-carbon counterparts. Overall, the Programme will help unlocking the renewable potential of Kazakhstan and facilitate investments in the sector which would essentially create a new industry and bring in new players thus contributing to the competitiveness in the country's economy.

E.2.4. Contribution to regulatory framework and policies

The sub-projects under the Framework will seek to identify any remaining gaps in regulation drawing upon previous substantial work in consultations with the Kazakh authorities and other donors, and include regulatory support program that will help to

- conduct systemic changes in the sector;
- achieve the critical mass of private renewable projects; and
- enable high-level developments of the RES.

The planned program will provide support to the regulatory reform including carbon market related policy engagement, on best strategies to integrate the RES projects/programmes under domestic and/or Paris Agreement flexible mechanism; reviewing how the RES sector will be dealt with under the Kazakh Emissions Trading System carbon budget; supporting development of the MRV system; introduction of the auction based system for the RES projects. Framework will enable the policy shift that supports the move towards sustainability of RES market by creating a large pool of projects and project sponsor interest; and international integration of RES market development and enabling carbon market access, by this ensuring longer term sustainability of the framework regulatory outcomes.

The Programme will also contribute to ongoing national efforts to coordinate with the Government and support private sector actors to implement the first 3 year Action Plan for the Concept on the Family and Gender in the Republic of Kazakhstan to 2030, in partnership with the National Commission for Women, Family and Demographic Policy. In particular, the Programme will help facilitate clients to review and inform ongoing policy dialogue processes led by EBRD, with the long-term objectives of reducing legal and regulatory barriers affecting priority recruitment areas, expanding legal awareness for women's equal access to the labour market.

E.3. Sustainable Development Potential

Wider benefits and priorities

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

The Programme will bring:

- Socio-economic benefits through employment from construction and operation;
- Socio-economic benefits from sustainable energy supply;
- Socio-economic benefits from end-user costs reduction resulted from more efficient competitive tendering scheme;
- Cumulative effects on climate through reduction in GHG emissions;
- Decrease of air pollutant emissions and other types of environmental pollution associated with traditional energy production, leading to improved air quality and reduced health risks;
- Penetration of modern construction/production patterns and technologies, demand in high skilled personnel ;
- Enhanced access to employment opportunities for women in the high-value, high-growth energy sector.

Gender Impact

While the RES market is vital to Kazakhstan's economy, women are not equally sharing in increased employment opportunities in the Power and Energy sector, and are thus not well positioned to benefit from opportunities connected to the development of renewable energy sources. The Government's sectoral employment forecasts show that skills-related challenges are particularly pronounced in the natural resources and power & energy sectors. Based on employer surveys, the Ministry of Healthcare and Social Development anticipates that more than 10,000 vacancies will appear in the electricity supply sector over the next five years, across almost all levels and occupations. This corresponds to a 14% increase from a baseline of 279,941 jobs in 2015. Existing legal regulations that bar women from certain types of occupations will limit the extent to which these employment opportunities will be open to the widest possible talent pool. This creates challenges for employers as well as inclusion barriers. Women are currently only minimally represented in the Energy sector (ca. 31% of total Industry Employment) and are particularly absent from the higher paying jobs (with average ~20% pay gap across all salary levels – the third largest gap by sector in Kazakhstan. Not only are there legal prohibitions against women working in certain jobs but also few women possess the university and vocational skills training that would qualify them for positions in RES engineering, industrial management and core operations. Without attention to strengthening equality of opportunity in the Framework, existing legal exclusions to women working in specific roles are expected to spill-over and discourage women from applying their talents or seeking training opportunities in RES sectors.

Strengthening of women's participation in the high value RES sectors: Given the scale of the proposed Programme, 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. For example, it will be ensured that appropriate infrastructure for women (e.g. separate bathrooms) and security measures will be put in place to accommodate female workers in the otherwise male dominated energy sector. The implementation of additional measures will be sought in line with EBRD Environment and Social Policy ("ESP") Performance Requirements ("PR"), safeguarding 'decent and fair workplace' principles and core labour standards: for example, equal pay for work of equal value, labour rights, occupational health-care services, enhanced safety standards, childcare services for women with children, and on–site kindergartens for children of working parents. The EBRD will also develop partnerships with vocational education and training ("TVET") institutions and Kasipkor Holding (public authority responsible for the quality assurance of colleges and universities), to enhance young women's access to developing relevant technical skills through training unskilled or low-skilled women to ensure their recruitment in companies that will execute sub-projects. This intervention can potentially benefit the local female labour force, as many more women – who otherwise might have been unemployed – will have access to economic opportunities in the energy sector through training and placement programs offered. Sub-projects under the framework will aim to strengthen equal opportunities ("EO") for women to compete on equal footing with men. Progress strengthening EO in the sub-projects will inform and be reflected in on-going national policy dialogue with the Government of Kazakhstan on addressing legal and regulatory barriers to women's employment. An overview of strengthening equality of opportunity and gender equality through Kazakhstan Renewables Framework is outlined in Annex 3. RES project developers will also aim to promote workplace equality and a culture of diversity by supporting the move of women workers from semi-skilled to skilled and managerial/leadership positions through training/reskilling, mentoring, and employing 'buddy' systems and other programs/systems. RES project developers will also aim to raise awareness of gender issues within public and private entities working in the energy sector in Kazakhstan by conducting a series of gender awareness workshops, especially in relation to the topic of gender in the workplace, to enable concerned entities get a better sense of what it takes to achieve gender equality in the work environment.

Addressing gender and household consumption practices: At sub-project level, a consumers' survey will be undertaken before the commencement of activities as well as after the provision of services to assess both men and women consumers' satisfaction levels with energy provision. This will enhance the client's knowledge of consumers' preferences and further improve the services provided through identifying and addressing consumers' different needs in terms of access to and use of electricity, ultimately leading to improved customer satisfaction and efficient corporate practices.

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

Economic Impact

There is very limited local experience and knowledge in the area of RES in Kazakhstan. The continuing high inertia in the sector of renewable energy leads to lack of risk appetite of investors and needs to be mitigated by the success story of RES projects.

Concessional financing provided to the RES projects will address the remaining market barriers of limited availability of commercial financing for renewable energy projects, and prohibitive lending conditions of local financial institutions for innovative types of investments such as RES projects.

Social Impact

At the request of the Government of Kazakhstan in 2012 the EBRD has commissioned a study on the affordability and potential social impact of RES for Kazakhstan that demonstrated that electricity cost increases are not a significant portion of residential expenditure even with relatively high penetrations of RES investments in need of FiT support.

Overall, renewables are not expected to create affordability issues in the near future for several reasons. Reaching the 3% target would require about 1.5 to 2GW of renewable capacity to be built over the next four years requiring investment of ca. EUR 2-3 billion. One of the main constraints to achieve this would be the lack of long-term debt financing, particularly in local currency. Furthermore, even if the target is achieved renewables would still represent a relatively small portion of the sector cash flows. In the long run, once the PPA expires after 15 years the energy production at such plant is likely to continue and it would become a price taker. Finally, the cost of renewable energy projects has been decreasing steadily, which is likely to lead to reduced tariff levels for new projects, while at the same time the cost of thermal generation will continue to increase with inflation and thus the gap between renewable tariff and thermal will become smaller.

The EBRD also commissioned a study to analyse the social impact of renewable energy feed-in-tariffs in Kazakhstan with the objective of addressing concerns of governmental agencies that inflation and a rapid build-up of renewables capacity will become unsustainable in social terms due to the added electricity tariff. Though the findings of the study show that electricity is not a significant proportion of residential expenditure even with relatively high penetrations of renewable energy investments, the Bank will work with clients and appropriate regulatory authorities to ensure that renewable energy feed-in-tariffs do not adversely affect the coverage of electricity, especially among poor households and those headed by women, widows, persons with disabilities, and elderly persons. Tariff levels that do not properly reflect women's lower incomes or their use of energy – related appliances will constrain women's energy access. For that purpose, gender-sensitive public consultations will be undertaken to assess communities' willingness to pay. In this context, it is important for the AE to note that connections or user-fee requirements that do not integrate affordable options – such as revolving funds, grants, and affordable credit facilities to improve household connectivity – will neglect the needs of poor households, vulnerable persons (including the disabled, elderly, widows) and female–headed households. To note, the country gender profile states that women in Kazakhstan typically make decisions related to household energy consumption, therefore changes in the costs and source for electricity generation may fall disproportionately on women.

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

The Kazakh Government launched a strategic initiative called the Green Economy in 2013 under which several actions have been planned including the development of renewable energy sources. The objective is to bring the share of new renewable energy in electricity generation from nearly zero to 3% by 2020, and then to increase it further to 30% by 2030 and 50% by 2050.

The initiative became the platform for Kazakhstan's commitment during the UNFCCC Conference of Parties in Paris as was communicated by the Kazakh Government in its INDC to reduce GHG emissions. On 16th of November 2016, the President of Kazakhstan signed the Law "On ratification of the Paris Agreement". The INDC, and now NDC as Kazakhstan ratified the Paris Agreement, calls for an economy-wide target of 15% reduction in GHG emissions by 2030 compared to 1990 reflecting a reduction of at least 22% below projected business as usual emissions.

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

The EBRD was established in 1991 to nurture a new private sector in a democratic environment. The EBRD provides project financing for banks, industries, and businesses, both new ventures and investments in existing companies. It also works with publicly owned companies, to support privatization, restructuring state-owned firms and improvement of municipal services. The Bank uses its close relationship with governments in the region to promote policies that will support the business environment. The Bank also has a strong environmental mandate and is committed to financing projects that are environmentally sound and sustainable.

The EBRD's activities in the area of green finance are driven by its Green Economy Transition (GET) Approach. This approach consists of providing finance, supporting policy reform and providing technical assistance. Under the GET, the EBRD has committed over EUR 1,464 million (USD 1,566 million equivalent) in green finance in Kazakhstan since 2006. The supported projects cover such areas as cleaner energy and renewables. These account for around half of the total volume. The EBRD has been the lead in Kazakhstan's participation in the Clean Technology Fund, which provides USD 200 million of concessional climate finance to Kazakhstan, and which has enabled a range of high-priority projects supporting the move towards a Green Economy in Kazakhstan.

The Bank signed loan agreements for three renewable energy projects in Kazakhstan: Yereymentau wind farm (50MW) Burnoye solar (50MW) and Burnoye solar extension (50MW).

Beyond finance, the EBRD has been working with the Government of Kazakhstan on improving the regulatory framework for green finance by supporting policy reform in areas such as renewable energy, energy efficiency and carbon markets. The Bank's activities in the Kazakh power sector have delivered major impacts in terms of energy efficiency, renewable energy and decarbonisation of the country's economy. The EBRD has a long history of engagement with the government on sustainable energy, dating back to 2008, and has been close involved in the Renewable Energy and Green Economy Laws, and the Kazakh Carbon Market development.

The Bank has a strong, well-established presence in the ECA region and is therefore uniquely well placed to contribute to the challenge of climate change adaptation in the region. It has a network of around 200 professional staff located across the region to support project development, implementation and monitoring, together with sustained policy dialogue and business relationships with governments, local institutions, industry, banks, utilities and investors. The EBRD currently operates in 36 countries within the region and has at least one resident office within each of these. Some larger countries, such as Kazakhstan and Turkey, also have sub-regional offices to bring EBRD staff closer to the business needs. Regional offices are typically staffed by a mixture of international and national staff and provide an in-depth knowledge of the social, economic, and political conditions within the country and help to generate and implement new projects as well as monitor existing operations, and facilitate dialogue and business relationships with governments, local institutions, industry, banks, utilities, and investors.

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

Engagement with NDA

The EBRD has several meetings with Ministry of Energy (NDA) with regards to this Programme through face-to-face meetings, presentations and email correspondence. The Programme inputs were included in the National Plan of Kazakhstan for the GCF. Ministry of Energy provided its no-objection letter for the Programme on 24 February 2017.

The Strategic Environmental Review ("SER") conducted by the EBRD in 2014-2015 included two-tier public consultations campaign. As required by the EU SEA Directive, all relevant stakeholders were identified (central and local authorities, professional community, NGOs and general public) and consulted on the scope of the assessment, and then were given the possibility to review and comment the SER report. Consultations were hold in Almaty and Astana. The stakeholder engagement plan as well as the consultations minutes are available at the SER website: http://kazreff-ser.com/index.html

Engagement with stakeholders including Civil Society Organisations ("CSOs")

The EBRD recognises the important role of CSOs in raising awareness and stimulating behavioural change and has engaged with a wide range of stakeholders including local CSOs.

The Programme's design and implementation are consistent with the Fund's requirements for stakeholder engagement and disclosure, as well as the GCF's Criteria for Programme and Project Funding. A Stakeholder Engagement Framework, developed according to the principles of the EBRD's ESP PR10 will guide communication with and participation of stakeholders to continue to engage throughout the course of the project. This will have two tiers: on the project level, developers will be requested to fully comply with the above-mentioned PR 10; on the Programme level, targeted measures will be designed, including, but not limited to, regular monitoring of public awareness of the programme progress, public disclosure of information, where relevant going beyond the requirements of national/local legislation, as well as developing meaningful customized consultation mechanisms. By this, the Stakeholder Engagement Framework will ensure that the views and concerns of local stakeholders are adequately reflected and that the Programme objectives, risks, and results are communicated effectively, ensuring local ownership of this Programme.

The Programme will ensure that careful stakeholder mapping is undertaken, that consultations are designed in a gender responsive way and that women have an equal opportunity to participate in project related discussions and initiatives.

The EBRD requires its clients to be aware of and respond to stakeholders' concerns related to the project in a timely manner. For this purpose, the client will establish an effective grievance mechanism, process, or procedure to receive and facilitate resolution of stakeholders' concerns and grievances, in particular, about the client's environmental and social performance. EBRD requires a Grievance Mechanism to be developed as an integral part of the Stakeholder Engagement Plan during the ES due diligence for all sub-projects.

EBRD also has its own Project Complaint Mechanism that has also established its own accountability mechanism, the Project Complaint Mechanism ("PCM"), that has been established to assess and review complaints about Bank-financed projects. It provides individual(s) and local groups that may be directly or adversely affected by an EBRD project, as well as CSO's, a means of raising complaints or grievances with the Bank, independently from banking operations.

PCM has two functions:

- a Compliance Review function which seeks to assess whether a Bank approved project complies with relevant the EBRD's policies, specifically relevant environmental policies and project-specific provisions of the Public Information Policy, and
- a Problem-solving Initiative which has the objective of restoring dialogue between the parties, where possible, to trying to resolve the underlying issues giving rise to the complaint or grievance. A problem-solving initiative might include independent fact-finding, mediation, conciliation, dialogue facilitation, investigation or reporting.

E.6. Efficiency and Effectiveness

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

E.6.1. Cost-effectiveness and efficiency

The Programme will address the barriers discussed earlier and facilitate private sector participation in a sector that has a limited private sector engagement. The Programme will introduce and demonstrate viability and attractiveness of the new modern technologies, as well as project implementation and financing practices, such as limited recourse-based finance, project finance, etc. Implementation of the Programme will demonstrate that projects containing green energy components, RES in particular, can be replicated in the long-term.

The financial structure is adequate and reasonable in order to achieve the proposal's objectives, including addressing existing barriers for scaling up of renewable energy sources, providing the least concessionality and without crowding out private investment. From a risk-return and contribution perspective, this is the least concessionality that was identified based on the EBRD's experience. The amount of the GCF financing for each sub-project will be calibrated on a project by project basis in accordance with the EBRD's guidelines on the use of concessional finance.

The impact the GCF's contribution goes beyond supporting crucial infrastructure investment needs and mobilises technical assistance programmes with a transformative impact on the Kazakhstan's energy sector through promoting development of renewable energy resources. Key to cost efficiency will be the size of the programme, as well the fact that both the GCF and the EBRD would sponsor this Programme. The size would help to give comfort to the technology suppliers that face costs to establish and market themselves. Size and presence of the international organisations, may help to create the investors comfort needed to price more competitively. In turn it may also attract a larger number of market players. Eventually market size and growth will be the key basis for cost efficiency, which can be augmented by increasing standardisation, procedures established and demonstration effects from the project

The estimated cost of carbon emissions reduction (total investment cost/expected lifetime emission reductions tCO_2 eq), assuming project lifetime to be 20 years are the following:

- USD 106 million/tCO_2 for GCF contribution = 8.2 USD /tCO_2
- USD 550 million/ tCO_2 for total Programme cost = 42.8 USD / tCO_2

This compares well to the estimations for social cost of CO_2 emissions.

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 totaling USD 550 million (i.e. estimated total investment cost under this framework). The projects are expected to have a minimum equity of 25% and be financed with a maximum leverage of 75%, corresponding to maximum total debt financing needs of USD 413 million. The GCF aggregate contributions of USD 106 million for subprojects financing will account for ca. 19% of the total projects costs. The EBRD will provide co-financing of USD 214 million from its own resources, representing up to c.39% of the project costs. Other co-financers are expected to contribute with loans representing up to 17% of the total projects cost.

The programme will enable the GCF to leverage a significant amount of co-financing, approximately USD 444 million compared to USD 106 million requested from the GCF (the co-financing ratio - total amount of co-financing divided by the Fund's investment in the programme – equals 4.2x). Regarding the technical assistance component, the total estimated budget for the various assignments is USD 7 million, of which the GCF is expected to contribute USD 4 million and USD 3 million will be contributed by EBRD and/ or its donors.

The impact the GCF's contribution goes beyond supporting crucial infrastructure investment needs and mobilises technical assistance programmes with a transformative impact on the Kazakhstan's energy sector through promoting development of renewable energy resources.

E.6.3. Financial viability

The Programme will enable the development of a scaled-up and viable RES market in Kazakhstan. By demonstrating the commercial viability of the RES projects it will encourage commercial lending in the future. The Facility will provide a highly visible demonstration to other potential developers that projects can be successfully implemented in this market. By supporting the development of RES projects in accordance with best international practices, the Programme will help establish standards that can be replicated and will further encourage other developers to enter the market. The significant renewable energy resource conditions in Kazakhstan and the continued decrease in technology cost should ensure financial viability of investments once the sectorial and general investment challenges are overcome. The exit strategy for development finance is through repayment of the EBRD/GCF loan at maturity.

E.6.4. Application of best practices

The proposed programme will bring the best international practices as well as well-adjusted technologies to the renewable energy sector in Kazakhstan. The sub-project company will hire a reputable international advisor who will complete the necessary measurements, energy yield assessment and financial feasibility studies. Also the EBRD may provide a Technical Cooperation assignment under a cost sharing arrangement with the company in order to assist both the company and the EBRD in project preparation and confirm technical as well as technological appropriateness, thus ensuring that the best available technologies are applied.

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 Programme financing	USD 550 million
(b) Requested GCF amount	USD 106 million
(c) Expected lifetime emission reductions overtime	12.86 mtCO_2eq
(d) Estimated cost per tCO_2eq (d = a / c)	**USD 42.8 / tCO_2eq**
(e) Estimated GCF cost per tCO_2eq removed (e = b / c)	**USD 8.2 / tCO_2eq**

It is assumed that total RES capacity to be developed will be ca. 330 MW in total consisting mainly of wind, PV and small hydro. Based on EBRD's in-house methodology, the estimated electricity production is 762,120 MWh, corresponding to 643,229 tons CO_2 per annum. The total CO_2 emissions reduction over lifetime of the sub-projects of 20 years is estimated at 12.86 mtCO_2eq. The detailed methodology is presented in Section E1.2.

The Programme's investment costs and the mitigation costs (USD per ton CO_2 mitigated over 20 years) are in line with those of the similar RES projects in other countries of the EBRD's operation such as Ukraine and Russia.

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

Expected total leverage: at least USD 444 million, of which:

- EBRD: EUR 200 million (ca. USD 214 million equivalent);
- Sub-project sponsors/ equity investors: USD 137 million;
- Other co-lenders (commercial banks and other IFIs): at least USD 93 million.

The EBRD amount of EUR 200 million is based on the EBRD's Board approved Framework for renewables in Kazakhstan.

Other relevant indicators (e.g. estimated cost per co-benefit generated as a result of the project/programme)	N/a

Section F: APPRAISAL SUMMARY

**** The information can be drawn from the project/programme appraisal document.***

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 Kazakhstan. These barriers manifest themselves either in non-availability of finance or in inflexible 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, 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 Kazakhstan 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 2).

Overall, through this Framework, GCF and EBRD financing will demonstrate and scale up commercially viable renewable energy projects in Kazakhstan 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

The technical evaluation will be analysed at the sub-project level.

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

The SER findings are summarized in Annex 4. The SER resulted in developing an assessment kit for developers, bankers, and environmental professionals working on RES projects in Kazakhstan. This includes customized templates for all RES technologies, based on the identified potential significant environmental and social impacts, for the ESAP, NTS, and SEP for RES projects in Ukraine.

Environmental
In 2014 the EBRD has already undertaken a SER (modelled after the EU practice of Strategic Environmental Assessment, SEA). The SER included two rounds of public consultations; reports are available at: http://kazreff-ser.com/index.html The results are to our best knowledge still valid.

The Framework could consider financing Category A sub-projects. Therefore, the Framework's overall environmental and social risk category is I1, defined by the GCF as, "When an intermediary's existing or proposed portfolio includes, or is expected to include, substantial financial exposure to activities with potential significant adverse environmental and/or social risks and/or

impacts that are diverse, irreversible, or unprecedented." All sub-projects under the Framework will be implemented in compliance with the Bank's stringent Environmental and Social Sustainability Framework.

Categorisation

EBRD categorises each project to determine the nature and level of environmental and social investigations, information disclosure and stakeholder engagement required. This will be commensurate with the nature, location, sensitivity and scale of the project, and the significance of its potential adverse future environmental and social impacts. Past and present environmental and social issues and risks associated with project-related existing facilities will be subject to environmental and social appraisal regardless of the categorisation.

A project is categorised as:

- A when it could result in potentially significant adverse future environmental and/or social impacts which, at the time of categorisation, cannot readily be identified or assessed, and which, therefore, require a formalised and participatory environmental and social impact assessment process.
- B when its potential adverse future environmental and/or social impacts are typically site-specific, and/or readily identified and addressed through mitigation measures. Environmental and social appraisal requirements may vary depending on the project and will be determined by EBRD on a case-by-case basis.
- C when it is likely to have minimal or no potential adverse future environmental and/or social impacts, and can readily be addressed through limited environmental and social appraisal.

Initial Environmental and Social Examinations are carried out where insufficient information is available at the time of categorisation to determine the appropriate category and scope of appraisal.

Category A Projects

Within the Kazakhstan Renewables Framework, sub-projects which may be categorised as A include: medium size wind farms and small hydropower, which typically are category B projects, but may be categorised as A, if they are located in a sensitive location.

Sub-projects categorised as A will adhere to a multi-tiered approval process within the EBRD, require 120-day disclosure and consultation period prior to consideration of EBRD's Board of Directors and will be required to meet EBRD's Performance Requirements.

Category B and C Projects

Sub-projects categorised as B or C will be approved through the EBRD's established processes and implemented in compliance with the Bank's stringent Environmental and Social Sustainability Framework and will be required to meet the Bank's Performance Requirements.

Some sub-projects may involve resettlement or economic displacement of communities; however, typically land is leased or acquired on a voluntary basis through negotiated contracts. Most if not all projects are expected to be developed and implemented by private sector companies and public expropriation procedures cannot be applied to the land acquisition arrangements.

The Bank requires Resettlement Policy Framework or Livelihood Restoration Framework for a sub-project if environmental and social due diligence identifies it could have resettlement or economic displacement impacts.

There will be no impact on indigenous people's communities (as there are no indigenous peoples groups in Kazakhstan).

A stakeholder engagement plan will be required for all sub-projects to be developed in compliance with EBRD Performance Requirement 10 on Information Disclosure and Stakeholder Engagement. PR 10 sets out a framework for good international practice relating to stakeholder engagement recognises the importance of an open and transparent engagement between the

client, its workers, local communities directly affected by the project and, where appropriate, other stakeholders. The EBRD requires stakeholder engagement as an on-going process which involves (i) public disclosure of appropriate information, (ii) meaningful consultation with stakeholders, and (iii) an effective procedure or mechanism by which people can make comments or raise grievances. The process of stakeholder engagement should begin at the earliest stage of project planning and continue throughout the life of the project. It is an integral part of the assessment, management and monitoring of environmental and social impacts and issues of the project.

Gender
The Programme 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 Programme. This approach will be incremental and would set a proper benchmark for other projects to follow.

The Programme 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. The EBRD has established the GCF 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 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[6], 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
- 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

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

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 sub-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 Programme is exposed to several risks that can have a considerable impact on the success of the sub-projects. The identified two main risks are regulatory and project implementation. The EBRD's experience in the country mitigates risks related to the implementation. The regulatory risks are mitigated through sub-projects' structure. The occurrence of environmental and social risks is covered and mitigated by the application of the EBRD's rigorous environmental and social standards as set out in its 2014 Environmental and Social Policy linked below:
http://www.ebrd.com/news/publications/policies/environmental-and-social-policy-esp.html

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	Other	High (>20% of project value)	Low

Mitigation Measure(s)

This risk is mitigated by the strong institutional commitment to renewable energy. The Government expects that the cost of renewable energy projects would continue to decrease further, that in turn would lead to reduced tariff levels for new projects, while at the same time the cost of thermal generation will continue to increase with inflation and thus the gap between renewable tariff and thermal would become smaller. Conversely, renewables plays favourably for the country in the context of global carbon reduction efforts and especially in the light of the emissions reduction target set by the climate change discussions in Paris.

Selected Risk Factor 2

Description	Risk category	Level of impact	Probability of risk occurring
Completion risk and cost overruns	Technical and operational	Medium (5.1-20% of project value)	Low

Mitigation Measure(s)

Completion risk and cost overruns is expected to be mitigated through an EPC contract with a reputable company for each sub-project. In addition the sponsors are expected to provide completion and cost-overrun guarantees for each sub-project.

Selected Risk Factor 3

Description	Risk category	Level of impact	Probability of risk occurring
Forex risk - GCF financing will be provided in USD while the sub-projects tariffs are set in KZT.	Financial	Medium (5.1-20% of project value)	Low

Mitigation Measure(s)

Recently the Government of Kazakhstan approved the rules for the determination of the FiT which stipulate the partial (30%) indexation of the FiT for USD/KZT fluctuations in the case a local currency depreciates by more than 25% per year against USD, whereas the remaining 70% of the FiT is adjusted for CPI. In the absence of more than 25% depreciation per year against USD, the FiT is adjusted only for annual CPI. This risk is expected to be mitigated by additional credit enhancement instruments,

such as a DSRA account, to be structured in each sub-project subject to financial due diligence results. The EBRD will conduct a sensitivity analysis to assess magnitude of the risk for each sub-project individually.			
Selected Risk Factor 4			
Description	Risk category	Level of impact	Probability of risk occurring
Creditworthiness of the off-taker	Technical and operational	Medium (5.1-20% of project value)	Low
Mitigation Measure(s)			
The renewables legal framework sets a 15-day gap between due dates for payments to the off-taker and by the off-taker, thus, mitigating the cash gaps risk. The new amendments to the Renewable Energy Law stipulates an establishment of reserve fund in the amount of 3% of the FSC's annual RES payments that cover the FSC liquidity issues. The reserve fund is accumulated and replenished from the additionally surcharges to the electricity consumers (the obligated purchasers) and is subject to adjustment on a monthly basis. KEGOC is the national transmission grid operator of Kazakhstan owned 90% by SWF Samruk-Kazyna, the sovereign wealth fund. KEGOC is rated BB (negative), Baa3 (negative), BBB- (stable) by S&P, Moody's and Fitch respectively.			
Selected Risk Factor 5			
Description	Risk category	Level of impact	Probability of risk occurring
Interest Rate risk	Financial	Medium (5.1-20% of project value)	Medium
Mitigation Measure(s)			
The EBRD financing will be provided under floating rate which is volatile and may increase in the future. The Bank will conduct a sensitivity analysis in order to assess the magnitude of the risk for each sub-project.			
Selected Risk Factor 6			
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)			
For each sub-project the irradiation/ wind/ hydro/ bioenergy resources may be insufficient to service the debt and the technology employed may fail to deliver the expected electricity generation. This will be mitigated by reviewing the assumptions and technology chosen by independent consultants during the technical due diligence for each sub-project.			
Selected Risk Factor 7			
Description	Risk category	Level of impact	Probability of risk occurring
Connection & curtailment risk	Technical and operational	Medium (5.1-20% of project value)	Low
Mitigation Measure(s)			
Connection & curtailment might be a risk due to lack of technical regulations and standards for renewable sources as well as the aged grid infrastructure. Each sub-project's grid authorization (including a connection agreement with a network company) as well as load-flow of the network will be reviewed as part of the technical due diligence for each sub-project.			
Selected Risk Factor 8			
Description	Risk category	Level of impact	Probability of risk occurring

Environmental & Social risk	Technical and operational	Medium (5.1-20% of project value)	Low
Mitigation Measure(s)			
The programme is submitted with an ESMS as required by the GCF rules. The sub-projects will be assessed according to EBRD policies. A comprehensive Environmental and Social Action Plan ("ESAP") will be developed during the preparation of each sub-project capitalising on the outcomes of the Strategic Environmental Review implemented by the Bank for the RES projects in Kazakhstan in 2012 – 2014. The project-level ESAP will be an integral part of the financing agreements between the EBRD and project developers.			
Other Potential Risks in the Horizon			
Specific emerging or idiosyncratic risks will be identified on a sub-project basis.			

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[7]	
Paradigm shift objectives	
Shift to low-emission sustainable development pathways	The fundamental purpose of the Framework is to support the efforts towards low-carbon growth in Kazakhstan through achieving sustainability of the RES market by creating a large pool of projects and project sponsors interest; and providing international integration of the RES market development and enabling carbon market access, thus enabling the scale necessary to bring the energy sector, and so the economy as a whole, onto a lower-carbon development path. The paradigm shift objectives are therefore the following: • To provide a transformational impact at a sector/country level by a number of capacity building initiatives that would address caveats in institutional capacity in managing grid balancing, integrating RES projects into the domestic emissions trading system, reviewing and further developing the calculation mechanism for the FiT; and to address barriers restricting women's access to employment and skills in the high-value energy sector • To support clarity and eliminate policy ambiguity and regulatory uncertainty, which in turn deters private sector involvement in the RES projects, and address perceived high risk of the RES projects • To share knowledge and best practices to improve first movers experience by bringing in best practice in project management, tender processes, and environmental and social practices • To help finance and bring to financial close a critical number of first projects in RES to demonstrate the sector's viability and success stories to improve investments attractiveness and potentially make the RES projects attractive to local financiers The multi-level approach to encouraging the development of a private sector-led investment market of RES projects in Kazakhstan 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 12.8 million tonnes of CO_2 (with the expected project lifetime of 20 years). Finally, by serving as a successful and practical example of low-carbon development approach, the Framework has the potential to influence planning in other countries in Central Asia and elsewhere.

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	EBRD project monitoring reports and if			12.8mt	No projects implemented at present under this framework.

[7] 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

		applicable independently verified MRV reports for domestic carbon credits.	N/a	4 – 5 mt CO_2e	CO_2e	Over the first five years, monitoring will be conducted against an average CO_2 reduction number of 643ktCOeq/year, taking into account: i) the investment period, ii) the final amount of MW installed; and iii) relevant climatic changes; and iv) other factors beyond the reasonable control of the AE/EE

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	Low emission power supplies represent less than 1% of electricity supply	N/a	3% national target for 2020.	The Government is ready to accept EBRD advice; political environment is favourable towards improvement of regulatory framework for RES development; market forces such as fossil fuel prices and equipment/technologies prices are conducive for RES development in Kazakhstan. Current share of about 1% new renewables, monitoring over the first five years against target of 330 MW taking into account: i) the investment period; ii) financing conditions in the market; iii) the final amount of MW installed; and/or iv) other factors beyond the reasonable control
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	0	Monitoring over the first three years against target of 330 MW taking into account: the investment	330MW	

				period; financing conditions in the market; the final amount of MW installed; and/or other factors beyond the AE/EE's reasonable control		
P10.0 Jobs created by projects supported by Programme	10.1 Women and men employed in construction and installation, and operation and maintenance in the projects	Reports from the recipients	0	n/a	3,000 short-term jobs (during construction) and 150 long-term jobs (during operation)	Data related to gender to be collected where feasible

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, in particular at the end of the investment period.	no projects implemented under the Framework currently	4-5	8-11	
	Volume of financing		no projects implemented under the Framework currently	N/A; proportional to the above number of the projects;	Up to USD 550 million	
2.Capacity building for public institutions on RES project implementation support, MRV system, vocational training and promote gender equality	Number of capacity building workshop held; number of attendants	EBRD monitoring report, consultant report	N/A	N/A	To be provided before first disbursement with the	

					procurement plan	
3. Policy dialogue activities on the introduction of auction-based system, review of FiT system and strategies for carbon market	tbc	EBRD monitoring report, consultant report	N/A	N/A	To be provided before first disbursement with the procurement plan	

Activities	**Description**	**Inputs**	**Description**
Regarding output 1	• Conduct technical, financial, environmental and social due diligence • Assist throughout the procurement and implementation of technologies • Ensure the procurement processes are in line with EBRD and the GCF policies and rules • Monitor the performance of technologies post implementation	Financial resources and technical expertise deployed to develop, assess, finance and report on projects	Specific plans to be prepared, capitalizing on the EBRD experience with Ukraine Sustainable Energy lensing Facility (operational), and Egypt RES Framework (under development)
Regarding output 2	• Provide training to relevant authorities on RES project implementation support for auction and tenders, project preparation for public entities. • Promote vocational training in RES industry. • Promote gender equality in the employment in RES industry • Provide training to relevant authorities on MRV and telemetry requirements/rules.	Expertise and skills transfer	Specific plans to be prepared; capacity building programs will be designed to cover needs assessment, methodology identification, trainings curricula development, capacity building monitoring system design; and guidances and other methodological documents developed to ensure multiplication effect
Regarding output 3	• Design and introduction of the auction based system • Further review of FiT system, elaboration of the mechanism of FiT calculation • Develop Strategies for carbon market	Expertise and skills transfer	Specific plans to be prepared; subject to the relevant regulatory development. Activities under this category will only be designed with consideration of the projects of other IFIs and donor organization, acting in the field of RES in Kazakhstan; this will build on the EBRD experience of donor coordination in policy filed, to achieve synergy and avoid duplication

H.2. Arrangements for Monitoring, Reporting and Evaluation

I. MONITORING

Monitoring, arrangements will comply with the relevant GCF policies (MAF, AMA, etc)

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

II. REPORTING

Reporting and evaluation arrangements will comply with the relevant GCF policies (MAF, AMA, etc)

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

Reporting of EBRD to the GCF

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.

The monitoring and reporting procedure guiding the Programme will be agreed between the GCF Secretariat and GCF prior to signing the financing contract for the first sub-project. The monitoring and reporting report will be submitted to the GCF on an annual basis.

III. EVALUATION

Evaluation arrangements will comply with the relevant GCF policies (MAF, AMA, etc)

1. According to the GCF requirements, both an independent mid-term and final evaluation will be carried out.

2. Project evaluation by EBRD in-house staff and its independent advisors

Throughout the Framework lifecycle, the EBRD in-house staff 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. Final report will be prepared by the EBRD in-house staff.

3. 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
☒	Market study (based on publicly available information)
☒	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
	EBRD case study for Kazakhstan Renewable Energy Engagement
	EBRD project case study – Burnoye SPP

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

Annex I: UKRAINE SUSTAINABLE ENERGY LENDING FACILITY (www.uself.com.ua)

In 2009, the EBRD launched a financing facility, initially called the Ukraine Renewable Energy Direct Lending Facility and later renamed as the Ukraine Sustainable Energy Lending Facility ("USELF").

USELF accelerated the development of the renewable energy sector in Ukraine, through an innovative combination of EBRD commercial financing, dedicated technical assistance support, and concessional grant co-financing (climate finance). USELF was initially approved in 2009 for up to EUR 100 million. The Facility consisted of EUR 50 million in EBRD commercial financing, EUR 20 million in climate finance from the Clean Technology Fund ("CTF") and EUR 30 million of sponsor equity. This was supported by technical assistance of USD 8.45 million (EUR 6.62 million equivalent) from the Global Environment Facility ("GEF"). USELF has combined effective policy dialogue and financing support for the nascent renewable energy sector in Ukraine, supporting the efforts of the Ukrainian government to reduce the country's dependence on imported fossil fuels.

In the context of Ukraine's critical need for increased renewable energy production, USELF was designed to:

- provide financing and technical assistance for renewable energy projects to demonstrate the benefits of such investments;
- encourage and support policy dialogue and institutional capacity building that foster a favourable environment for the development of renewable energy;
- build capacity among project developers and encourage a vibrant private sector for renewable energy investment.

Through USELF, the EBRD aimed to provide non-recourse debt financing directly to domestic enterprises to fund small and medium-sized renewable energy projects, including solar, wind, small hydro and biogas.

To ensure effective implementation of the Facility, the EBRD applied its proven business model for sustainable energy businesses, which combines investment with technical assistance and policy dialogue.

A grant of USD 8.45 million provided by the GEF for technical assistance was used to support work on:

- addressing regulatory issues;
- conducting environmental assessments;
- delivering capacity building and project support.

The Facility marked the first implementation of non-recourse finance or project finance in Ukraine for smaller-scale renewable energy projects, further supported in a fully-integrated package by policy dialogue, institutional capacity building, and project preparation. These support activities were essential to the success of USELF and would not have been possible without generous contributions from the CTF and GEF. Through these activities USELF has strengthened the business environment for private sector renewable energy, and fostered the development of related projects.

After a slow start, due to the under-developed nature of the country's renewable energy sector, the Facility signed first seven renewable energy projects by the end of 2013. These use biogas, small hydro, wind, or solar energy to generate heat and power. USELF fully committed its initial allocation, and was replenished with another USD 50 million in 2014. With a robust project pipeline remaining, and ongoing weakness in the commercial financing sector for renewable energy, Phase II replenishment is now well developed. Using further leverage from this replenishment, USELF continues strengthening the long-term sustainability of the sector. Second replenishment is under consideration potentially for 2017.

Table 2: USELF in figures	
Total CO_{2eq} emission reductions as a result of the use of renewable electricity	5.2 million tons (over 20 year lifetimes)
Total electricity generated from renewables	216 GWh annually
Investment facilitated into renewable energy projects reached	USD 120 million
New renewable power generation capacity installed	60.45 MW

Annex 2: BURNOYE SPP PROJECT

The financing was extended to Burnoye Solar-1 LLP, a project company founded by a joint Kazakh-UK venture, Samruk-Kazyna United Green LLP. The EBRD lent KZT 14.06 billion (USD 75 million equivalent), and the CTF lent EUR 13.8 million (USD 14.8 million equivalent) to the project which is pioneering the use of a non-recourse project finance structure.

The venture is owned by UK-based United Green Energy Limited and Samruk Kazyna Invest LLP, the investment arm of Kazakhstan's sovereign wealth fund.

Work on the Burnoye Solar project started following the adoption in 2014 of the Renewables Law on which the EBRD cooperated closely with the Kazakh government. Burnoye Solar is located in the energy-deficit Zhambyl region in south Kazakhstan, in an area close to Western Europe-Western China highway. The project was implemented jointly by local and European contractors, with the advantage of ensuring a transfer of technology into the country. Taxes from the plant will be paid into the local budget.

Graph: MAP INDICATING THE LOCATION OF BURNOE PROJECT

ANNEX 3: GENDER ANNEX

A. Kazakhstan Country Gender Profile

Purpose and scope: This is a short summary of a gender profile prepared in 2015 for the EBRD and updated in 2016, using publicly available sources. It is not intended to be an exhaustive overview of all gender-related issues in this country.

Key points	The population of the Republic of Kazakhstan is highly diverse, comprised of over 100 ethnic groups. There is a supportive legal framework for gender equality, although in practice women's access to finance, employment and services remains influenced by traditional norms and stereotypes regarding gender roles, according to which women are expected to retain primary responsibility for family care and unpaid domestic work. Women in southern Kazakhstan and rural areas tend to face greater obstacles in acquiring land and property or in accessing public services compared to their urban counterparts.
Access to services	**Rural/urban divide** Kazakhstan's economic growth has not translated into a better socio-economic situation for women and men outside Almaty and Astana. As such, the rural/urban divide is a major determinant of living standards and access to services. Women in rural areas contend with fewer opportunities for paid employment, a greater burden of domestic work and a lack of infrastructure and access to services. Poverty incidence is twice as high in rural areas, although it is also particularly high in households with large numbers of children, and increasing in female-headed households. **Transport** Women tend to use public transport more than men in Kazakhstan, and they travel more often with children (ADB, 2012). Access to transport is more difficult in rural areas compared to urban areas, where some municipal governments – including Almaty – have started investing in more robust systems of public transport. Nevertheless, urban infrastructure still suffers from the after-effects of underinvestment for more than 20 years. Field research for one of the EBRD-supported projects revealed no issues regarding sexual harassment on public transport amongst passengers or drivers; however, sexual harassment is a difficult issue to broach in Kazakhstan or elsewhere and requires further research. **Water and sanitation** According to ADB (2012) study, access to water is a particularly acute problem in rural areas, where households have far less access to piped water and collecting water for household use is predominantly a female responsibility. Same study found that women in rural areas spend a significant amount of time transporting and treating water (i.e. for cleaning, bathing, cooking, drinking and livestock). This was particularly the case in remote areas, where access to water is most limited. **Energy** Women tend to be the 'frontline users' of electricity (given that they are more bear primary responsibility for household chores and child care and therefore spend more time in the home), but men are most often responsible for paying the bills (ADB, 2012). In rural areas, women tend to be responsible for – and spend a significant amount of time on – fuel collection (i.e. wood or dried animal dung). Kazakhstan's district heating systems are considered inefficient and outdated, resulting in up to 30% heat loss annually (UNDP, 2012). In urban areas, experts estimate that 65% of the total municipal heating system is in need of replacement or repair, and those residential buildings, in particular, experience considerable heat loss (ADB, 2012). This is true of old and

	new buildings: women have raised concerns that new housing is built quickly and cheaply, resulting in heating deficiencies. A gender assessment of three district heating projects in Kazakhstan (Grontmij 2014) found that there are important differences between men and women in terms of their heating priorities and choices. For example, women tend to place a higher priority on safety issues (and therefore tend to prefer district heating rather than gas) and are also more likely to submit complaints regarding heating issues (as a consequence of the fact that women tend to be more affected by heating issues). **Waste management** Kazakhstan is in the process of implementing a number of projects for processing solid waste in Almaty, Aktau, Astana, Zhambyl, Karaganda, Shymkent, Petropavlovsk and Ust-Kamenogorsk (Babkina, 2012). There was no information available about gendered patterns of household waste management in Kazakhstan. **Education** Primary and secondary enrolment rates are the same for boys and girls. Strong gender patterns persist in tertiary education that contribute to labour market segregation: women remain concentrated in traditionally "female" fields of study (humanities, education, health) and are less likely than men to study in technical fields that would lead to higher wages (energy, transport, construction). **Health** Women generally make their own decisions about health care, but some women, especially adolescent girls, face obstacles in access to sexual and reproductive health services. Older women, women with disabilities and rural women have more limited access to health care. Men's health is significantly poorer than women's. **Childcare** During the Soviet period, childcare services were widely available in the form of public kindergartens, crèches and nurseries. Today, there are fewer childcare services in operation and they have become more expensive, making it increasingly difficult for working women to combine their paid work and domestic responsibilities. This 'double burden' is considered a barrier to advancement at work. According to ILO (2013), most women prefer to return to work after their children reach 1 to 3 years of age.
Access to employment	**Labour force participation** Women's labour force participation reaches 68%, compared to 78% for men, which is higher compared to the regional average for Europe and Central Asia (World Bank Gender Indicators). The gap between women and men's labour force participation narrowed slightly over the 2000s. Until now, lower levels of participation for women have been partly accounted for by a lower retirement age for women. As such, recent reforms to introduce equalised retirement ages for women and men could result in slightly higher rates of labour force participation for women (ADB, 2013). **Horizontal segregation** Women remain concentrated in lower-paid sectors and occupations. To some extent, women are excluded from working in a number of occupations in traditionally male-dominated sectors (e.g. extractives, construction, and transport) as a result of the long list of jobs that are prohibited for women by legislation (women are prohibited from working in 299 occupations, including in mining, construction, metalworking and the booming oil and gas sector**).** Most working women are concentrated in services, such as, education and health care, many of which are public sector jobs and typically offer lower salaries than male-dominated occupations in extractives, construction and industry. **Vertical segregation**

	Women remain disadvantaged when it comes to seeking promotion in the workplace. In 2013, only 18.8% of Kazakh firms had a woman as a top manager (WB World Development Indicators). Traditional beliefs and stereotypes about men and women's abilities often hamper women's access to higher hierarchical positions in the workplace. Men are generally perceived as being more 'natural' leaders than women (ADB, 2012). **Informal employment** Informal employment is heavily concentrated in agriculture. In non-agricultural sectors, men and women are equally likely to be informally employed (Rutkowski, 2011), but women are more likely to be informally employed in agriculture. In 2009, the proportion of women among rural informal workers reached 59% (ADB, 2012). **Wages** Women earn on average 69.5% of men's wages (KAS, 2013). This gap can partly be explained by the horizontal segregation of the labour force (women are more prominently represented in the fields of education, health care, social services, hotels and restaurants), as well as forms of direct and indirect discrimination against women.
Access to finance/property	**Access to credit** Women enjoy equal access to finance in terms of legal rights and loan procedures; however, in practice, women's access to credit is more limited than men's. One of the main issues is the fact that most banks require collateral as a condition for loans, which is more likely to present difficulties for women, who are less likely to own property or assets than men (ADB, 2012). **Ownership of land and other assets** Women have equal rights under law to own, use and administer property. In practice, however, women are less likely than men to own land and other assets. Property acquired during marriage is often registered in the name of the husband or male head of household, especially in rural areas. This can act as a barrier to finance. As a result, only 9% of the total number of farms is registered in women's names (ADB, 2013). A lack of business literacy, skills and experience can also present a barrier. Reasons cited by women for not seeking bank loans include the difficulty, time, and cost involved in drawing up and notarising documents necessary for loan applications. Also, women generally have limited experience in developing the business plans required for business loan applications (ADB, 2012).
Decision-making	**Representation in national parliaments** There are no voluntary or obligatory quotas for women's representation in Parliament. Share of women in national parliament is currently 23.8% (KAS 2012). **Patriarchal norms and values related to the sexual division of labour** A 2012 survey indicated that 53.6% of Kazakhs believe that the husband / father should be the family's primary income-earner, and 36.3% believe that the husband / father should be the "leader, defender and protector" of the family. Respondents from the city of Almaty tended to give more gender-equal responses than respondents from other areas (Tengrinews, 2012). Nevertheless, as noted by ILO (2013), these ideas are out of step with the reality in many homes in Kazakhstan, where women and men often share income-earning responsibilities, as reflected by high levels of women's labour market participation.

Key indicators: Women and men in the economy

		Female	Male	Female & Male
Labour force	**Labour force participation** (% of women, men and total population aged 15-64 who are economically active) *World Bank 2014*	68	78	73
	Self-employment (% of female, male and combined employed population who are self-employed) *WB World Development Indicators, 2012*	31.6	31.8	31.7
	Unpaid family workers amongst the self-employed (% of self-employed workers who are unpaid family workers) *Estimates by UN Women based on 2011 data from KAS*	2.5	2.4	2.5
	Informal employment (% of workers who do not contribute to a pension scheme and do not have an employment contract) *Rutkowski 2011, using 2009 figures*	N/A	N/A	33.2[8]
	Unemployment rate (15+ years) (% of female, male and combined population aged 15+ years who are unemployed) *KAS, 2013*	6.5	4.1	5.3
	Public sector employment (% of workforce that is employed by government) *LFS (2010 data) via ILOSTAT*	13.8	9.5	23.3
	Child labour (% of girls & boys that are child labourers – i.e. those aged 5-17 working in contravention of ILO C138 or 182) *UNICEF database, 2012*	2.1	2.4	2.2
	Gender pay gap (Women's average monthly earnings as a % of men's) *KAS, 2013*	69.5		
Business	**Firms with female participation in ownership** (% of all firms) *WB World Development Indicators, 2013*	28.3		
	Bank account at formal financial institution (% female and male population aged 15+) *WB Gender Statistics, 2011*	43.7	40.2	N/A
	Loans in the past year from a financial institution (% female and male population aged 15+) *WB Gender Statistics, 2011*	14.4	11.5	N/A
Government	**Representation in national parliaments** (% of seats in a lower chamber held by women/men) *KAS, 2012*	23.8	76.2	[100]

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B. Gender Action Plan on Strengthening Equal opportunities in Projects

Activities	Indicators and Targets	Timeline	Responsible organisations (excluding the FP)
Impact: Increased number of low carbon investors and RES developers promoting women's economic empowerment **Outcome**: Improved access to energy efficiency and renewable energy skills and employment by women and men. **Means of verification:** Gender disaggregated data assessed against appropriate indicators to measure enhanced access for women to energy efficiency and renewable energy skills and employment			
Output 1: 75% of loan clients fund-wide contribute to strengthening women's access to energy efficiency and renewable energy employment			
• Measures to increase workforce diversity by strengthening RES develop Equal Opportunities (EO) policies and practices • Measures to increase workforce diversity by reducing legal and regulatory barriers and promoting women's equal access to employment via focused policy dialogue • Implement knowledge-sharing practices with RES developers and local women's Economic empowerment NGOs • Develop EO policies and practices to sign up to the UN Women's Empowerment Principles (WEPs) • Establish gender equity in local supply-chain talent identification and recruitment	Data of Res developer IEs disaggregated by gender and classified as strengthening Equal Opportunities based upon achieving one of the three criteria below: 1. At least 30% women on RES developer company board or in senior management positions 2. At least 30% of RES developer employees are women 3. At least 30% of RES interns/ on-the-job trainees are women b. Contribute with employers' or industry organisations (eg., Kazenergy; National Chamber of Entrepreneurs) to the development of policy brief or guidance note to Ministry of Labour, Mining Association and high level stakeholders to remove discriminatory	a. Gender ratio achieved by third year of programme operation and until programme completion b. By end 2020 c. By end 2020 d. By end 2020 e. e. By end 2020	IE reporting

Activities	Indicators and Targets	Timeline	Responsible organisations (excluding the FP)
	clause from Labour code, Article 16 as they pertain to prohibitions on women working in Energy c. Number of knowledge products produced by RES of own research & lessons learned to reducing existing knowledge gaps on reducing formal and informal barriers faced by women and men as economic actors in renewable energy sector d. Number of RES signed up to the UN Women's Empowerment Principles (WEPs) e. Number of RES adopting contracting requirement/ procurement policy mandating primary contractor to adopt EO policy and practices		
Output 2: Promote gender equality in energy efficiency and renewable energy vocational training skills and accreditation			
• Develop outreach programmes targeted at women to promote vocational training system in partnership with technical and vocational education	• Data on potential technical and vocational education and training (TVET) inquiries disaggregated by sex • Aim for 35% of	Throughout the programme operation	IE HR departments

Activities	Indicators and Targets	Timeline	Responsible organisations (excluding the FP)
and training (TVET) institutions and Kasipkor Holding (public authority responsible for the quality assurance of colleges and universities) • Support for women workers to move from semi-skilled to skilled and managerial/leadership positions through development of targeted training/ reskilling, mentoring, 'buddy systems' etc • Undertake targeted advertising in women employment forums and organisations. • Undertake knowledge-sharing with local women's economic empowerment NGOs. • Spread awareness on the gender diversity dimensions of the RES sector through marketing and publicity strategies	internship/ on-the-job training inquiries from women		
Output 3: Households and individuals (males and females) with improved access to low- emission energy sources			
• Undertake gender sensitive public consultations to assess women's willingness to pay for improved access to low- emission energy sources	• Number of households, and individuals (males and females) with improved access to low- emission energy sources • Percentage of sub-projects that have applied gender-equitable stakeholder consultations • (Female-headed) household expenses on	Throughout the programme operation	Consultant, AEs; Assumes that it will typically not be possible to measure improved access from large- grid systems; therefore, the data will be linked to off- grid access (e.g., solar panels) and mini- grid systems.

Activities	Indicators and Targets	Timeline	Responsible organisations (excluding the FP)
	energy (electricity) / percentage change in expenditure for household energy needs by women.		
Output 4: Knowledge management products and gender awareness workshops highlighting equal gender access to RES skills and employment to be prepared and disseminated			
• Highlight gender goal achievement status and report on gender disaggregated statistics in progress report • Publish case studies to represent gender diversity of the programme and disseminate these on public forums • Conduct workshops highlighting equal gender access to climate finance programmes	One time each year of programme operation		AEs

ANNEX 4: STRATEGIC ENVIRONMENTAL REVIEW FOR KAZAKHSTAN RENEWABLE ENERGY SOURCES (SUMMARY) http://kazreff-ser.com/index.html

The EBRD commissioned a Strategic Environmental Review focusing on renewable energy technologies in optimal areas of Kazakhstan. The renewable energy technologies specifically reviewed in this SER include hydropower, on-shore wind, solar, biogas and geothermal technologies. The SER complies with the EBRD's Environmental and Social Policy and its Public Information Policy.

The purpose of the SER process was to review the key environmental issues associated with the implementation of specific renewable energy development on a national basis. When specific projects are proposed to the Bank, a project-level environmental review is still required. The outcomes of the SER help to focus the scope and provide relevant guidance for subsequent environmental reviews of specific renewable energy projects within Kazakhstan. A subsequent project-level environmental review conducted by the EBRD team for each specific project proposal uses the information in the SER report to identify mitigation strategies and adapt them for implementation at the project level.

The EBRD's environmental and social policy requires compliance with both European Union (EU) directives and national law for projects and programmes funded through EBRD. Therefore, the SER was guided by the EU Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (usually known as the SEA Directive). The SER provides a high level overview of potential environmental effects along with recommendations and guidance for renewable energy development in Kazakhstan. The key stages of the SER were as follows:

- Stage A (Scoping) - Setting the context and objectives, establishing the baseline, and deciding the scope;
- Stage B: Developing and refining alternatives and assessing effects;
- Stage C: Preparing the SER report; and
- Stage D: Consulting on the draft SER report.

Renewable Energy Scenarios

Areas with good potential for renewable energy development in Kazakhstan have been identified at the scoping stage. The renewable energy technologies specifically reviewed in this SER include hydropower, on-shore wind, solar, biogas and geothermal technologies. Further analysis of potential locations, technologies and operating conditions of the renewable energy resource scenarios have been undertaken as part of the SER and detailed in the environmental and/or social high sensitivity areas are discussed in detail in the SER report. Environmental and social factors that could significantly impact the effectiveness, economic feasibility, and therefore, the siting of these facilities are addressed in technical reports (RPERs) for each technology.

Stakeholder Engagement

The SER was developed in compliance with the EBRD's Environmental and Social Policy and its Public Information Policy as well as being guided by the EU SEA Directive. Stakeholder consultation were been on-going during scoping, and continued throughout the SER process. In line with EBRD requirements, a Stakeholder Engagement Plan (SEP) was being developed and implemented, setting the scope and timescales for consultation throughout the SER and beyond.

SER resulted in:

- Assessment instruments for specific investment projects and their appraisal and permitting. This has two components: the first one is an annotated list of areas/locations most suitable for development of mini-hydro, wind, solar, biogas and geothermal facilities (to provide an indication for future development). The second one is a recommendation for a focused environmental and social due diligence process for individual projects which takes account of the findings and recommendations of the SER and the requirements of the Bank's Environmental and Social Policy and associated Performance Requirements.
- Identification and (where possible, determined in consultation with the Bank) quantification of environmental, social or technical obstacles to be encountered or benefits arising when developing the indicated facilities.
- Capacity building for consultants and developers in environmental and social compliance with the Bank Environmental, Social, and Public Information Policy; and for regulators in SEA procedures and processes

ANNEX 5: THEORY OF CHANGE MODEL

Activities	Results	Impacts
1. Concessional finance • Investment in building generation capacity from renewable energy source and modernising transmissions network. 2.1 Technical assistance and capacity building • Provide project-level assistance to public entities. • Support the development of MRV system, the introduction of the auction-based system for RES projects, and the development of telemetry requirements for remote monitoring of RES projects. 2.2 Policy dialogue • Support regulatory reforms to address market barriers for RES investment. • Review and further develop the domestic carbon market to integrate RES projects.	• Enhance access to finance for RES-related projects. • Build at least 330MW RES capacity contributing to at least 18% of the national RES target by 2020. • Modernise transmission network to facilitate higher penetration of renewables in the grid and reduce network losses.	• Demonstrate new replicable RES projects and instigate appetite for investment in the industry resulting in an increased share of RES in the country's energy mix. • Strengthen institutional and regulatory system for RES projects resulting in competitive entry of RES. • Reduce carbon emissions of 12.86mt CO2e over the project lifetime (GHG emissions reduction due to network loss is not included).

Assumptions

- RES projects are not financially viable in the absence of the programmes components; given access to finance, potential investors will invest in RES projects.
- Domestic RES project developers lack the capacity to initiate and develop RES investment; given technical support, potential investors will improve the ability to identify, evaluate and implement RES projects.
- Given support in policy dialogue, an enabling and lasting regulatory environment will be created for RES projects.

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24.02.2017 № 18-01-988/И

The Green Climate Fund ("GCF")

Re: Funding proposal for the GCF by the European Bank for Reconstruction and Development ("EBRD") regarding the Kazakhstan Renewables Framework

We refer to the Kazakhstan Renewables Framework in Kazakhstan as included in the funding proposal submitted by the European Bank for Reconstruction and Development ("EBRD") to us on 21 December 2016. The proposal envisages up to EUR 100 million financing in the form of concessional lending and EUR 5 million in the form of technical assistance grant from the GCF for the scale up of the use of renewable energy sources in Kazakhstan.

The undersigned is the duly authorized representative of the Ministry of Energy of the Republic of Kazakhstan, the National Designated Authority/focal point of Kazakhstan.

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

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

(a) The government of Kazakhstan 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 Kazakhstan'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.

Sincerely,
Minister

K. Bozumbayev

0042405

Environmental and social report(s) disclosure

Basic project/programme information	
Project/programme title	GCF – EBRD Kazakhstan Renewables Energy Framework
Accredited entity	European Bank for Reconstruction and Development
Environmental and social safeguards (ESS) category	Category A

Environmental and Social Impact Assessment (ESIA) (if applicable)	
Date of disclosure on accredited entity's website	2017-03-06
Language(s) of disclosure	English and Russian
Link to disclosure	Strategic Environmental Review (SER) Report Renewable Project Environmental Review Report – Wind Appendix A – Receptor 'value', 'vulnerability' and 'sensitivity' **Website:** http://www.ebrd.com/what-we-do/get/knowledge-hub.html The SER and the related documents are equivalent to the ESIA.
Other link(s)	http://
Environmental and Social Management Plan (ESMP) (if applicable)	
Date of disclosure on accredited entity's website	2017-03-06
Language(s) of disclosure	English, Kazakh and Russian
Link to disclosure	Environmental and Social Management Framework and System (ESMFS) **Website:** http://www.ebrd.com/what-we-do/get/knowledge-hub.html The ESMFS is equivalent to the ESMP.
Other link(s)	http://
Resettlement Action Plan (RAP) (if applicable)	
Date of disclosure on accredited entity's website	Not Applicable
Any other relevant ESS reports and/or disclosures (if applicable)	
Description of report/disclosure	Not Applicable