

EBRD Request for Pipeline Merger in Kazakh Renewables CTF Sector Programme

Trust Fund Committee Questions and EBRD Responses

03-04-2017

UK Comments	EBRD Response								
<p>Could the team set out further details of the sub-projects under the KazREFF programme, which is stated to be oversubscribed at present.</p> <p>We are interested in sub-projects that will receive CTF funding and the expected results these projects will achieve (MW Capacity & GHG – if possible), the anticipated timeline (e.g. for ERDB Board Approval, Financial closure), other sources of finance for these and the likelihood of proceeding without CTF.</p>	A summary of the sub-projects details is presented in the table below.								
	Project	Planned capacity	Expected Annual GHG emissions avoided ¹	Expected Lifetime ² GHG emissions avoided	Expected/actual EBRD board approval	Expected financial closure	Expected funding from Concessional Sources	Expected funding from EBRD	Expected funding from other sources
		MW	tCO2e				USD Million		
	Project 1 (solar)	24	37,000	740,000	14-Dec-16	April 2017	9	24	17
	Project 2 (solar)	40	45,000	900,000	(5 Jul 17)	2H2017	16	25	41
	Project 3 (solar)	50	60,000	1,200,000	(19 Jul 17)	2H2017	15	50	30
	Project 4 (hydro)	39	160,000	3,200,000	(21 Jul 17)	(31 Oct 17)	10	27	14
	Project 5 (wind)	37	88,000	1,760,000	2H2017	2H2017	14	36	20
	Project 6 (solar)	16	19,000	380,000	20-Dec-16	1H2017	no CTF-finance ³	34	15
	Project 7 (solar)	50	60,000	1,200,000	TBC	2H2017	15	50	30
Total	256	469,000	9,380,000			79	246	166	
<p>¹ The methodology for the calculation of CO2 emissions reductions is in line with the joint-IFI methodology. The specific Kazakh CO2 margin is based on an EBRD-financed consultancy assignment. The presumed electricity output is assessed at a high probability factor, and can be considered conservative. In the existing KazREFF project Burnoye SPP, actual output figures were 7% and 14% higher for the first half year and full year of operations respectively, compared to predicted output volumes under the methodology at the time of EBRD Board approval.</p>									

	<p>² 20 years</p> <p>³ This small project has some very specific, non-replicable aspects that allow it to go forward without concessional support. It was however developed in the framework of the Kazakhstan Renewable Energy Financing Facility (KazREFF) Programme and benefits from indirect TA funding provided by the CTF as part of the TA for market development.</p> <p>The likelihood of sub-projects proceeding without CTF-support is low due to the following reasons:</p> <ol style="list-style-type: none"> 1) There is a lack of availability of long-term financing from local and international banks in Kazakhstan, and without long-term finance the refinancing risks are too high; 2) The early stage of the sector development and associated real and perceived risks of the renewables projects deters investors proceeding without external finance; and 3) There is considerable uncertainty about the availability of support from the Green Climate Fund at this stage, and this funding is unlikely to be available in 2017 even if the GCF Board were to approve funding at the July Board meeting.
<p>We understand that the GoK is considering linking the feed-in tariff to exchange rate in order to provide certainty to investors. When is this expected to happen, and if this proposed link does not proceed, or is significantly delayed, what impact will this have on the projects within the KazREFF pipeline?</p>	<p>The respective clause which states that feed-in tariffs could be adjusted for FX fluctuations is already presented in the law. Currently the Ministry of Energy is working on an introduction of a specific by-law which would provide an exact mechanism for feed-in tariffs calculation. The proposal is to partially index feed-in tariffs in case there would be significant depreciation/ appreciation of the local currency. The respective by-law is expected to be introduced before the end of 1H2017.</p> <p>If the proposed link does not proceed or is significantly delayed, the impact on each sub-project within the KazREFF pipeline will be analyzed separately for each-sub project during financial due diligence including by conducting sensitivity tests. We expect that the impact on the sub-projects financial standing would be moderate.</p>
<p>Could the team provide an overview of how the market context has changed since the KazREFF</p>	<p>The market overview for renewables and solid waste sectors is presented in the Appendix.</p>

and KWMF were originally approved by the CTF TFC.	
Is there still a clear need for concessional finance for the type of projects in the KazREFF pipeline?	There is still clear need for concessional financing for renewables sector to help overcome risk and cost barriers to the development of renewables projects in Kazakhstan, which are not sufficiently addressed by the feed-in tariff and/or other forms of government support, due to the early stage of development in the sector. In addition, loan tenors enabling long-term financing in hard or local currency from commercial banks is practically non-existent in Kazakhstan, especially for structured project finance transactions of this nature. This remains one of the most important barriers to commercial finance to renewables projects in Kazakhstan.
Are other investments in the sector proceeding without concessional finance?	The share of renewables in total electricity production in Kazakhstan is insignificant (less than 1% in 2016) with the total installed capacity being 252 MW (versus 21,300 MW total power generation capacity in Kazakhstan) out of which 50MW is represented by the Burnoye SPP project financed by the CTF and EBRD. Per our understanding, so far there are no operational mid or large scale renewable projects developed without concessional financing in the market. We expect that further demonstration effect of the viability through KazREFF and its successor programme will nevertheless help an unsubsidized pipeline of projects to develop over time, by creating a real market for renewables.
Could the team ensure the level of concessionality is appropriate and provides value for money of CTF investment.	The use of concessional financing for each sub-project will follow the relevant CTF and EBRD guidelines to ensure that it is providing the least concessionality and does not crowd out private investment. In particular, the EBRD teams are applying the floor pricing agreed at the operation change approval in November 2015. The amount of CTF financing and its pricing 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.
What lessons can be learnt, and shared with wider stakeholders, on challenges faced by KWMF projects?	There are the following challenges faced by KWMF projects: <ul style="list-style-type: none"> • Budgetary constraints of municipalities and limited capacity of municipalities in structuring and delivering commercially viable and sustainable projects. The challenges are in part caused by weak institutional and regulatory environments, lack of skills, weak financial and operational performance and insufficient private sector involvement. • Tariffs remain substantially below cost-recovery and sometimes do not even cover operation and maintenance costs. Cross-subsidies are widespread. Tariff issues remain politically sensitive and authorities are sometimes reluctant to approve tariff increases required for full cost recovery or make full service payments on time. In the experience of the Bank therefore, investments can only be stimulated through the provision of non-reimbursable grants instead of concessional lending. Overall this is the more appropriate option for KWMF, even though individual municipalities with a different set of priorities and higher capacity, such as Kyzylorda, may still be interested in participating in the programme.

Appendix 1: Overview of the solid waste market and renewable energy sector in Kazakhstan

Overview of the solid waste market

- Since 2012, pursuant to a resolution of the Agency for Protection of Competition, the solid waste management sector in Kazakhstan has undergone a complete reorganisation, aiming to separate waste collection and transportation activity from landfill management. Collection and transportation services have been passed to private operators, and tariffs are no longer subject to state regulation. These entities provide services under individual agreements with customers, either individually or represented by cooperatives of flat owners and condominiums. The market of waste collection/transportation may therefore be regarded as a free market. At the same time, tariffs for waste collection and disposal services provided by state-owned municipal enterprises are subject to stricter regulation.
- Currently, the Government of Kazakhstan is planning to improve existing waste management practices by tightening waste processing and landfill standards across Kazakhstan. Municipalities will be required to decrease the volume of landfilled waste, and arrange for the processing of recyclable materials. In the Ministry of Energy's view this can be best achieved by the establishment of integrated waste management facilities in the regions.
- In June 2014, Kazakhstan introduced the solid waste system modernisation programme for 2014-2050, an initiative directed at the improvement of efficiency, environmental safety, and waste collection compliance, transportation, recycling and landfilling. The programme includes several actions on further development of the solid waste sector to reach the indicative targets of 95 per cent sanitary landfilling and 40 per cent recycling levels by 2030.
- The very substantial regulatory changes that have been ongoing since 2012, and are still in progress, have had a substantial impact on KWMF's ability to gain traction in the market.

Overview of the renewable energy sector in Kazakhstan

Technical and Policy Background

- The market for renewable energy generation in Kazakhstan is nascent, while the 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 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. So far Kazakhstan has a cumulative installed RES capacity of 252 MW (versus 21,300 MW total power generation capacity in Kazakhstan) out of which 50MW is represented by the KazREFF Burnoye SPP project, which is sponsored by a JV between United Green Energy Limited with Samruk-Kazyna Invest LLP and co-financed by the CTF and EBRD.
- The Government of Kazakhstan has set a target to increase the share of renewables in Kazakhstan's energy balance to 3% by 2020. This is part of the country's NDC target of reducing greenhouse gas emissions by 15% below 1990 levels by 2030. Maintaining and growing the KazREFF pipeline is critical in this regard.

Legal/Regulatory Overview

- The Government of Kazakhstan has been working on the renewables regulations for several years. The first law was developed in 2009 and since then various ministries worked on its further development and optimization. Subsequently the "Renewable Energy Law" was introduced in June 2013 setting the framework

for the renewable energy development through introduction of feed-in tariffs. This law has also seen further evolution through the development of secondary legislation.

- According to the 2013 legislation, RES have priority of dispatch and have to sell electricity to a single off-taker in order to benefit from the feed-in tariff – the Financial Settlement Centre (FSC), which was established as a subsidiary of the National Grid Operator, KEGOC.
- The tariffs are fixed in Kazakh Tenge for each type of RES generation as presented below:

RES technology	KZT	EUR equivalent*
Solar	KZT 34.61/kWh	EUR 10.2 cents/kWh
Wind	KZT 22.68/kWh	EUR 6.7 cents/kWh
Small hydro	KZT 16.71/kWh	EUR 4.9 cents/kWh
Bio energy	KZT 32.23/kWh	EUR 9.5 cents/kWh

* EUR/KZT Exchange Rate is 338.41, as of 14 March, 2017.

- The tariffs are fixed for 15 years, subject to adjustments for CPI.
- The Law has already undergone amendments in early 2016 related to the creation of a reserve fund for payments of the FITs and indexation of the FITs to the USD/Tenge exchange rate. Currently, the Ministry of Energy is working on specific by-laws to give full effect to these amendments.

Support Item	2009 RES Legislation	2013-2016 RES Legislation
Policy making arm	Ministry of Industry and New Technologies	Ministry of Energy
Priority of dispatch	No, electricity produced by RES purchased to cover for grid losses	Yes
Grid Connection	According to the Grid Code	Grid Code + rules for privileged RES connection.
Tariff	Individual tariff, approved by the regulator based on the Feasibility Study	Guaranteed indexed feed-in tariff for 15 years, indexed to CPI annually: Solar – 34.61 tenge/kWh; Wind – 22.68 tenge/kWh; Hydro – 16.71 tenge/kWh; Bio energy – 32.23 tenge/kWh.
Power Purchase agreement	Bilateral Purchase and Sales Agreement with the nearest distribution company	All electricity from RES will be purchased by the FSC. Standard PPA and PSA approved as part of the January 2014 secondary legislation package.
Local Content Requirements	No	No
Tax and other incentives	No	No