European Bank for Reconstruction and Developmen

Aquilla Solar

KULAN PHOTOVOLTAIC SOLAR POWER PLANT

NON-TECHNICAL SUMMARY

1 PROJECT DESCRIPTION

The European Bank for Reconstruction and Development ("EBRD" or the "Bank") is considering providing financing to Aquila Solar LLP (FONROCHE International) (the Company) for the construction and operation of a 24 MWe Solar photovoltaic power plant Aquila Solar near Shonger village, Kulan Rural area, Zhambyl Region, Kazakhstan. The Project aims to provide renewable electrical energy for the region whose development is hindered by energy deficit. The Project is category B as environmental and social impacts from the project are expected to be site-specific or short term.

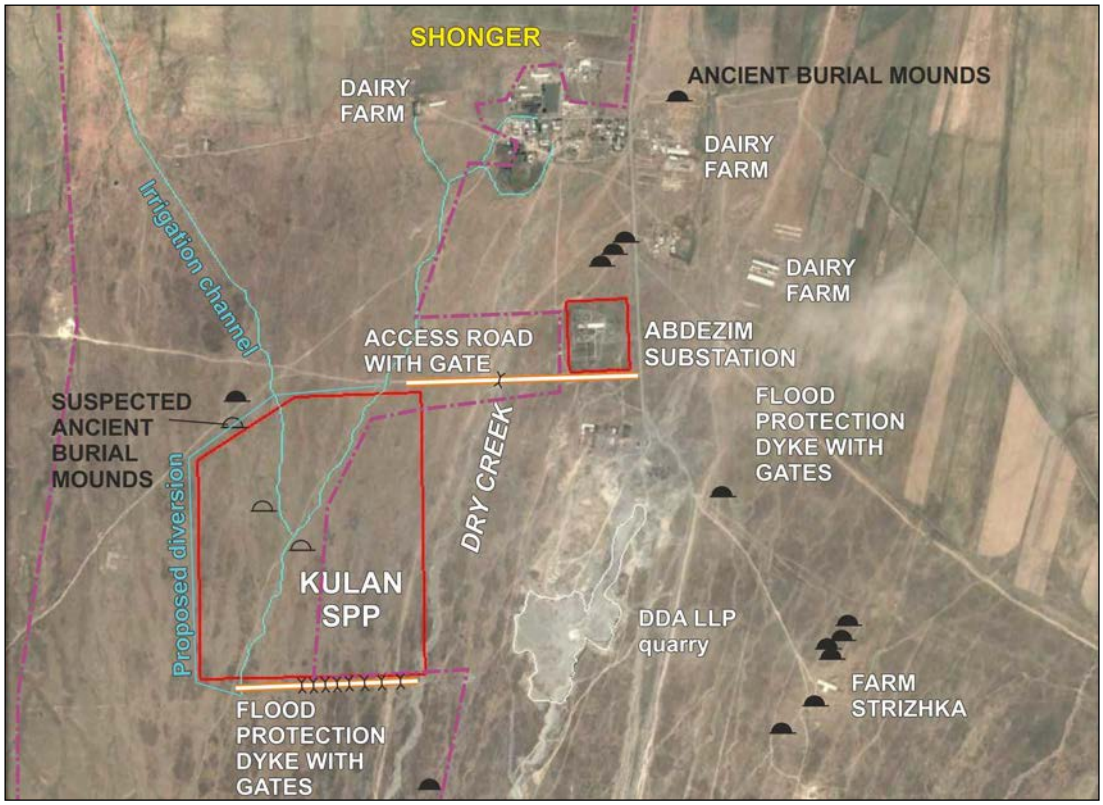

Figure 1 Showing Kulan SPP and Abdezim substation areas (red contours) and the main objects of the assessment. Purple dash line is Kulan Agricultural College land.

Over 93 000 fixed angle photovoltaic panels arranged in arrays capture up to 310W of the sun energy each. This power is transferred at over 600V potential to power gathering boxes and then to thirty six 680kVA DC/AC invertors from where the power ends up in a 10/110kV step up transformer. To make this happen 32km of cables have to be laid in the trenches dug in the ground. The fully automatic plant will be controlled by 8 electricians from control room. To transformer will be connected to the national grid substation 600m away via 110kV line. The substation components will be reconstructed to enable the connection and to cope with the specific to a solar plant load fluctuation.

The 74ha of the plant territory will be fenced and a small irrigation channel that runs through its territory redirected into the concrete troughs laid along the western and northern part of the plant fence. By this water supply to downstream users in Shonger and Kulan will be preserved. Initially water for construction was planned to be brought from Kulan town 5km away but to reduce load to the local road possibility of use of the irrigation water will be explored. Arrangement will be made with the channel managing company in order

not to jeopardize other users interests. The construction will last for 5 months. Up to 80 people, including engineers, office workers and service staff is planned to be involved. About 30 workers are planned to be employed locally others are planned to be accommodated in Kulan ensuring by this some income to the local population from space leasing and catering.

Being the hazard category 4, the plant environmental health safety and social performance is controlled at the regional level. The Company has the approved in 2014 EIA developed with the SPP detailed design and the permit for construction. The company plans to develop an EHS and social management system that includes engagement of the project stakeholders.

2 SOCIAL BENEFITS, IMPACTS AND IMPACTS MITIGATION MEASURES

Apart from the expected involvement of the local labour during the construction and benefits from property renting and catering, the main benefit from the plant operation will be more reliable supply of power and partial reduction of energy deficit in the region which should allow development of Kulan Industrial Zone and as a consequence appearance of new jobs and other sources of income.

The increased power reliability and availability will be noted in Shonger which after the substation reconstruction will be connected to it directly surpassing the need to share an outdated and overloaded transformer in Kulan.

A minor long term benefit may be from encouragement of the Kulan school graduates to obtain appropriate education to qualify for an electrician position at the plant. For this within its Corporate Social Responsibility Program the Company reviews possibility of provision of grants for talented pupils.

Another item considered for this Program is gradual reinstatement of the veterinary field clinic in Shonger to compensate Kulan Agricultural College for the land that it made available to the project. This land and vegetation on it will also benefit from fencing it out of excessive livestock load that resulted in severe overgrazing.

A long term benefit will be from making an example of renewable energy source profitability that may encourage other developers to invest in similar projects elsewhere and by this reduce the contribution of traditional fuels to the global warming.

2.1 Economic Displacement

Because the SPP takes only a small fraction of the available for pasturing land, no immediate impact from reduction of pasture area is expected. The long term impact may become significant if the number of livestock increases with time due to either the existing farms further development or reinstatement of the Kulan Agricultural College field clinic in Shonger. The solar power plant may also expand to the adjacent land taking more pasture land. This effect will be evaluated at the expansion design stage. Until then the Company will monitor the number of livestock in Shonger and three adjacent dairy farms and identify whether any of the changes relate to the reduction in pasture land.

2.2 Water Resources

Severe flooding of the SPP site is possible only in extremely high spring floods but in the event of positive temperatures during winter snowmelt water running on frozen ground may flood some parts of the site. The planned flood protection dyke above the plant fence will not transfer risk of flood to Shonger because diverted to the dry creek water will be held by the plant access road dyke. If this will be not sufficient, gates in the plant dyke will be opened to allow excess water to run through the plant and pass the village along eithgt dry creeks in a controlled way.

To minimise traffic load on Shonger road, the Company will review an option of taking both potable and technical water from the irrigation channel that runs through the site. Arrangement will be made with Zhambyl vodokanal to pay for the abstraction and to ensure that the downstream users interests are not jeopardized.

There will be no fuel storage at site. A small risk of localized ground and groundwater contamination with oil during construction will be reduced by arranging spills containing storages and through usage of trays under refueling connections.

2.3 Landscape and Visual Impact

There will be no changes to the landscape. Visual impact will not be significant despite that the 1.3m high and 770m long three sections of the panels and a 3.5m high transformer with the lighting poles will project on the beautiful mountainous landscape. These components will be seen only from Shonger and the Kyrgyz Ridge. Although from the Ridge the plant can be observed for up to 25km, no one lives in the ridge or visits it for as a tourist. Out of several dairy milk farms in the Shunkyr River valley only the one 6.2km away can observe the panels from 1060m altitude or being 260m above the plant. The rare viewer here will observe the plant through the existing 30m high towers of 220kV power line and will see the DDA quarry and the substation next to it and the settlement behind it. Thus for the mountainous viewpoints the plant will be a small addition to a built up landscape and association with a source of renewable energy is likely to be positive.

The Shonger residents focus in on the main street. Whoever happen to work in the gardens of three houses on the southern edge or the water well in the centre of the village, will observe the very top end of the hind side of the panels and the lighting poles next to the Abdezim substation structures that will merge with the existing array of power poles (see photo).

View on the solar panels and transformer from the centre of Shonger village

2.4 Local Traffic, Road Safety, Noise and Vibration

Transportation of the plant parts from the Lugovoye railway station and the consumables from Kulan will not require alteration of the town infrastructure as all parts do not exceed standard sizes. Impact from noise dust and vibration on one nearest to the road house in Shonger and a hamlet 350m southeast of Shonger is not expected to be significant as transportation will be conducted during the day along a paved road that is already used by the gravel and sand carrying dump trucks. It is estimated that on average one associated with the project truck will pass over this road each 7min. The houses are 20, 40 and 90m from the road and only the hamlet house windows face the road. Considering that the project duration will be only 5 months and the trucks will move only in day light, this impact is considered to be of low significance. To minimise the impact further, the Contractor will prepare traffic management plan.

There will be no significant traffic noise or air pollution during SPP operation.

2.5 Impacts to Existing Infrastructure and Public Services

Although the 50 workers that will be accommodated in Kulan will mainly be men, their presence in an almost 20 000 population town is unlikely to generate any notable impact or load on public services. Most of them are likely to originate from Kazakhstan or the former Soviet Union republics with lesser cultural and language differences. To exclude possibility of any conflicts with the local population, the Company will oblige the workers to follow the Worker Code of Behaviour. The contractors health and safety environmental and social performance will be controlled through various plans and procedures and regular audits.

2.6 Consistency with Policy, Law and Other Plans

The project is consistent with the State policy towards promotion of renewable energy sources, legal requirements and other plans for the area of influence. It fulfils the main strategic plan to eliminate regional deficit in energy to allow its further development.

2.7 Cumulative and Induced Impacts

Allocation of lands for SPP will take 74ha of Shonger pastures. This may lead to overgrazing on the remaining pastures. The Company reviews possibility to hand cut grass from the fenced areas to the cattle owners of the village thus making all pasture grass available.

Induced impacts will include further economic development of the region due to SPP construction and inflow of taxes to local budget.

2.8 Social Management Plans, Mitigation Measures and Compensatory Measures

Stakeholders will have access to up-to-date information on the project and grievance mechanism. Stakeholder engagement will be maintained according to the plan for the project duration. The effectiveness will be monitored and the plan updated as needed.

Single women families have been identified as a vulnerable group. During each decision making process, the Community Liaison Officer (CLO) will ensure that these families are considered. They will be evaluated and monitored every year and the most appropriate ways of engaging them in the decision making process will be developed. The families will be interviewed by the CLO in person at least once a year.

A Corporate Social Responsibility Program aimed at helping the local community will be developed and agreed with Shonger residents and Kulan Agricultural College. It is suggested that for the Program implementation a minimum lump-sum contribution of $30,000 is made during construction and then ~ $10,000 per year during the plant operation.The CLO will review possibility of inclusion in the program gradual reinstatement of the veterinary clinic. This would improve quality of education received by the College students and create several jobs in the village. The examination showed that clinic buildings were in a very poor condition, the water pipes removed and wastewater collection system clogged. Yet, the reinforced concrete carcass surgery house may be repaired for a start.

Grants for Shonger children that graduate from Kulan school can be introduced to finance obtainment of an appropriate for the need of the plant education.

A small gesture to the country cultural heritage may be made by installing information plates on the identified ancient burial mounds near the site and informing the Shonger community of their cultural value.

The degree of support will depends on the financial standing of the Company but it should be noted that being registered locally the Company will contribute significantly to local taxations.

2.9 Cultural Heritage, Impacts and Management Measures

Although archaeological registry indicates absence of ancient burial mounds, there is a small likelihood of their presence on the site. Chance find procedures should be applied during construction.

3 IMPACTS MONITORING

3.1 Process for Monitoring the Identified Impacts

Construction will be monitored through weekly checking adherence to the named above plans and mechanisms. During operation monitoring will be conducted monthly. Annual reports on environmental and social performance will reflect the plans implementation progress. The reports will be checked against the legislative and the EBRD performance requirements. Monitoring will be carried out throughout the life of the project.

3.2 Ongoing Solicitation of Further Comments

The Stakeholder Engagement Plan provides a mechanism for the consideration and response to further comments. It describes the Company approach to interacting with the stakeholders, including the general public, and the disclosure of relevant information with respect to Company's operations and the project.

Comments or grievance will be registered by the CLO in the grievance database. The CLO will be controlling the grievance handling process. The stakeholders can submit it in the information boards boxes, call or write a letter or an email. The EBRD website will also act as a platform to receive comments.

3.3 Process for Addressing any Issues Arising

The appointed Community Liaison Officer will ensure that the grievance mechanism is available to all stakeholders, involves an appropriate level of management and addresses concerns promptly, using an understandable and transparent process that provides feedback to those concerned without any retribution.

Further information can be obtained from the Community Liaison Officer Mr. Arman Mombekov, tel.: +7 701 770 91 31, e-mail: armantrz@gmail.com. Grievances and suggestions can be left in the mailboxes located in the rural area council on the information board, mail or electronically via e-mail. This mechanism does not limit the public's rights to use the conventional routes to place grievances and the available legal system.