Clean Energy Asia

Non-Technical Summary

Clean Energy Asia LLC

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Clean Energy Asia

Contents

1 Introduction

This non-technical summary (NTS) provides a summary of the project description, the benefits of the project and the mitigation of potentially adverse environmental and social impacts for the proposed Tsetsii Wind Farm Project in Mongolia (hereafter referred as a Project). The information in this document is based on the findings of the Environmental and Social Impact Assessment (ESIA) studies undertaken by Sgurr Energy Limited with specialist ecological and ornithological input from Turnstone Ecology Limited, Nature Friendly LLC, and Mongolica Co. Ltd.

1.1 What is the Project?

The Project is a wind farm with a total installed capacity of 50MW comprising 25 wind turbine generators (WTGs). The wind farm is to be constructed in Tsogttsetsii soum (district), in the South Gobi region of Mongolia. The Project, which is currently in the tendering phase, is considering the use of 2MW WTGs. In addition to the WTGs and their foundations, a network of around 18km of underground cabling will be installed to collect the energy generated by the WTGs and transmitted to an on-site substation. The on-site substation will transport the electricity generated via a 34km overhead transmission line to the main grid at Tavan Tolgoi Substation (TTSS). A network of on-site roads will be constructed to allow construction and maintenance of the Project.

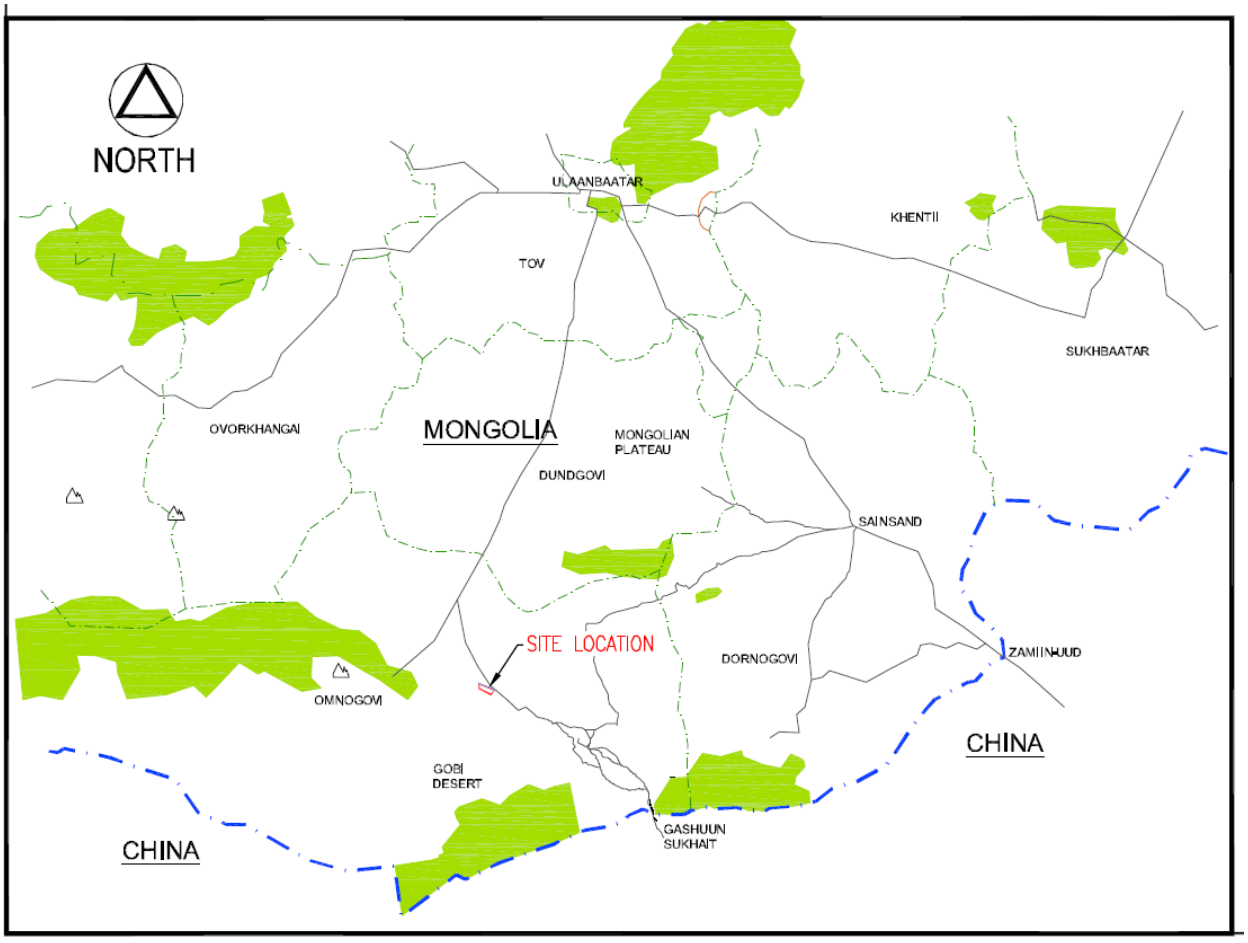
1.2 Who is developing it?

The Project is being developed by Clean Energy Asia LLC (Project Company) which is the subsidiary of Newcom Group (51%) and Softbank Energy (49%). Newcom Group is active in the development of a number of renewable and thermal power projects in Mongolia. Softbank Energy as the minority stakeholder is primarily acting in a financial investment role with respect to the Project.

1.3 Where is the Project Located and what is its Area of Influence?

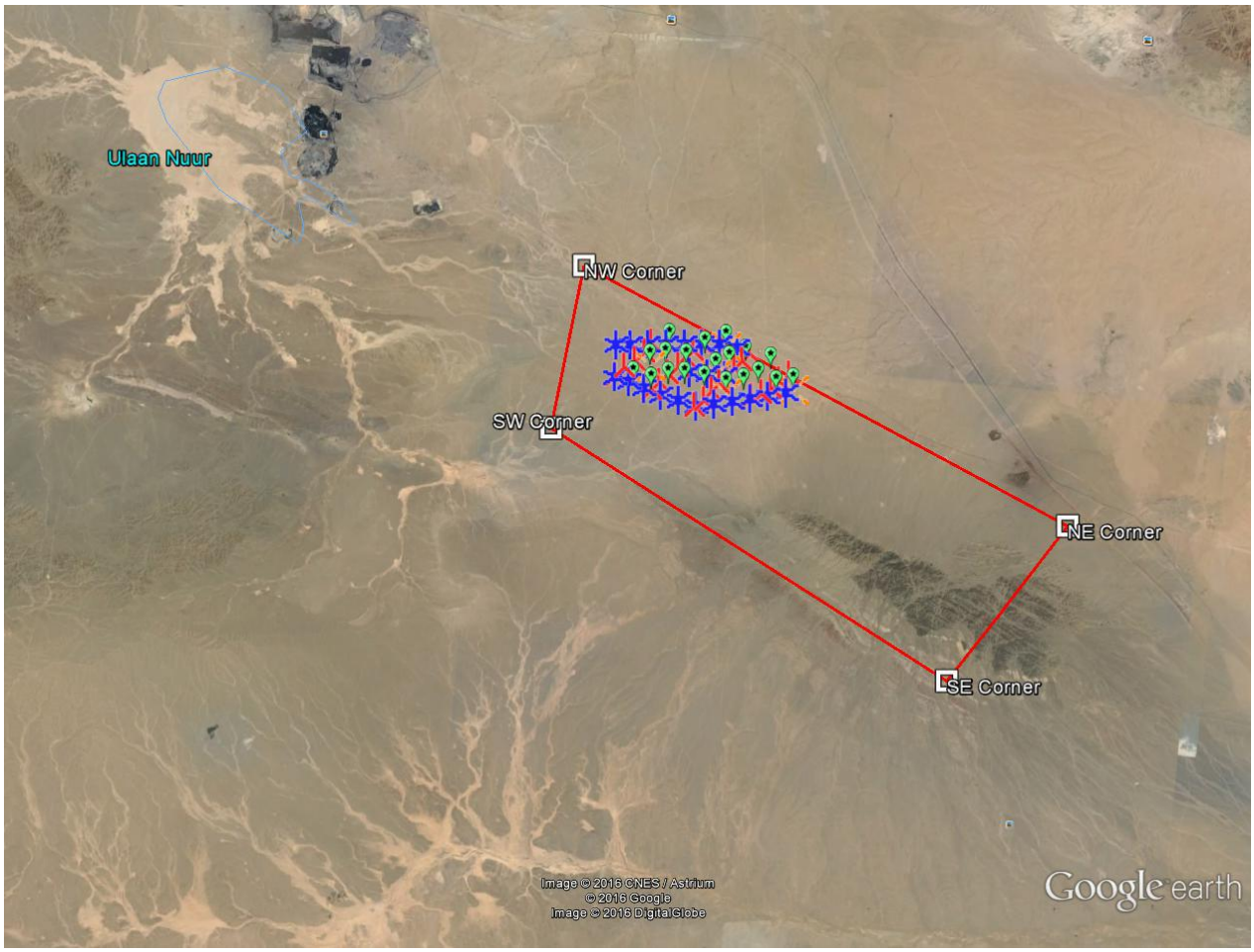
The Project is located in the Tsogttsetsii soum of Umnugovi aimag (province-level administrative unit) in the South Gobi region of Mongolia approximately 542km south of Ulaanbaatar. The area is open desert and the site itself is very sparsely vegetated. The closest settlement is Tsogttsetsii approximately 22km to the north. Nomadic herders graze their animals periodically and utilise wells and winter shelters located around the Tsetsii Uul (mountain) to the south east of the project site. The land for the Project is government owned land and has been leased by the project company from the government. The location of the Project is presented below in Figure 1.1 and the location of the WTGs is presented in Figure 1.2 which is sited in the northern corner of the Tsetsii land lease area. Additionally, Figure 1.3 presents photos from the Project site to illustrate the landscape and surrounding of the immediate project area.

Figure 1.1: Tsetsii Wind Farm Project location



Source: Environmental and Social Impact Assessment Report, Sgurr Energy, 2016

Figure 1.2: Project overall land lease area and location of proposed WTGs, number of layouts still under consideration and illustrated with differing colours.



Source: Google Earth Pro, used under license

Figure 1.3: Photos illustrating general landscape and surrounding views of the Project site

Source: Mott MacDonald

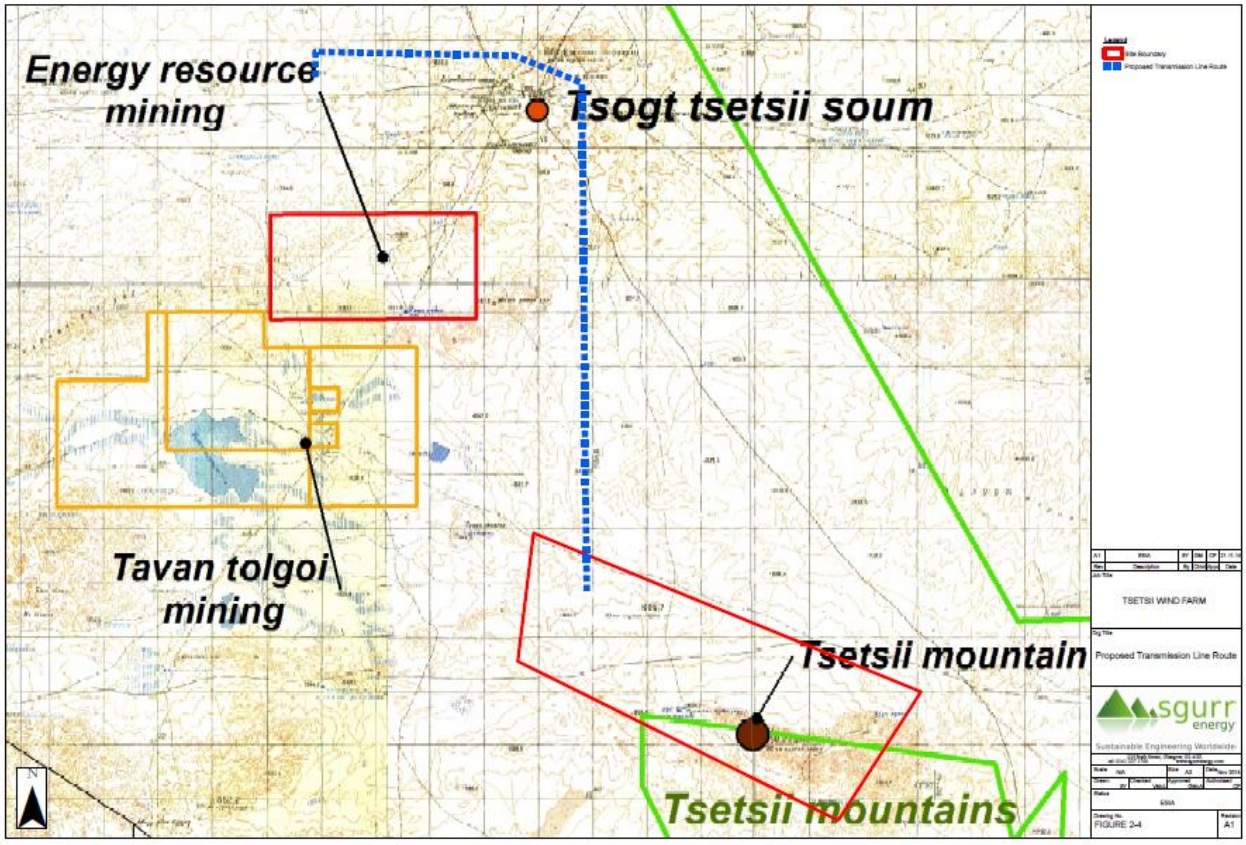
The components of the Project will consist of:

- 25 WTGs (currently three different models are being considered Vestas V100-2.0MW, V110-2.0MW or Gamesa G97-2) with either 78, 80 or 95m hub heights and a total maximum capacity of 50MW and an overall height of 130m including blades.
- On-site substation and control centre compound including permanent workers' accommodation and site office.
- An underground electrical collection system which interconnects the WTG with the site substation.
- 34km 110kV overhead transmission line from the site substation at the control centre to the existing grid substation at TTSS located west of Tsogttsetsii.
- On-site access roads from paved highway to the Project site and from control centre to the WTGs.

There are two large open-pit coal mines at Tavan Tolgoi and Ukhaa Khudag located north-west of the Project site. One is owned by Erdenes Tavan Tolgoi (a government owned company) the other by Energy Resources. The Project site boundary is located approximately 8km from the Tavan Tolgoi mine at its closest point.

The selected route for the overhead transmission line is shown in Figure 1.3. The transmission line will have approximately 113 steel lattice transmission towers, 23m tall, with an average span of 300m between each and a total footprint of approximately 0.4ha.

Figure 1.4: Selected route for 110kV transmission line from Project to the Tavan Tolgoi substation and Tavan Tolgoi and Ukhaa Khudag open pit coal mines



Source: Environmental and Social Impact Assessment Report, Sgurr Energy, 2016

In addition to the direct Project site and the footprint of transmission line, the following potential areas of influence are also identified:

- The area in which the WTGs are visible with respect to landscape and visual effects
- The area of elevated noise during construction and operation
- Area equal to 10 times the rotor diameter around each WTG with regard to potential shadow flicker effects
- Potential area of ice/mechanical throw from blades with regard to health and safety risks
- Area impacting bird species present in the wind farm area and along the transmission line route

1.4 How will materials and WTGs be transported?

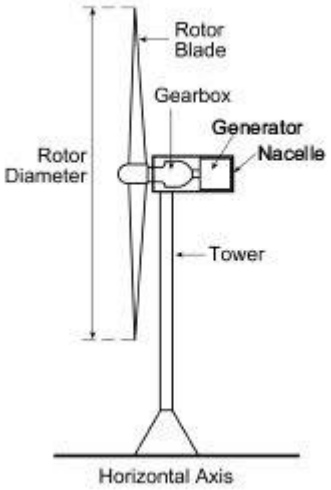
The site access tracks will be linked to the paved roads at the site boundary running to the Chinese border at Gashuun Sukhait which were developed by the mine operator with ownership transferred to the government. There could be minor disruptions in traffic on this route to bring construction equipment from Ulaanbaatar to the site.

Construction works will increase the number of large vehicles on local roads and might damage the roads. Overall, the impact on existing transportation infrastructure will be minor adverse to negligible, and of short duration. Existing roads will be rebuilt or upgraded during construction works, which will be a benefit for local communities using these roads.

1.5 How does a WTG generate electricity?

There are three main parts of a wind turbine[1]; rotor blades, gearbox and tower. The electricity is generated when the wind naturally passes over the blades, and blades turn a shaft located inside the gearbox. The rotational movement is increased by the gearbox and turned into electricity by using magnetic fields. The generated power is then regulated by a transformer to the right voltage and fed into the national grid system. Figure 1.5 present components of a typical wind turbine.

Figure 1.5: Components of a typical wind turbine



Source: http://www.gov.scot/Resource/Img/150324/0044577.jpg

[1] https://www.nottingham.ac.uk/renewableenergyproject/documents/windturbinetechnology.pdf

2 Rationale for the Project

2.1 Why is the Project needed?

Mongolia has adopted a national program aimed at reducing greenhouse gas emission and promoting the use of renewable power which includes wind, solar, geothermal and hydropower-based energy. The government led initiative aims for an increase in renewable energy usage to provide 20-25% of national energy production by 2020.

At the moment coal supplies provide over 95% of the country's electricity; the central energy system supplies Ulaanbaatar, three other cities, and six aimags with electricity and heating from coal-fired combined heat and power (CHP) facilities, the rest of the aimag's energy is supplied through coal-fired CHPs and diesel generators. Low reliability and efficiency of heat and electricity supplies, both economic and operational, has been and remains a consistent problem particularly in rural areas. Demand for power is increasing by 5-7% each year, currently gaps in peak load of the energy system is filled by power from Russia.

Currently the Mongolian power system is only home to a single Independent Power Project, the 50 MW Salkhit Wind Farm which is also the only large scale renewables project on the grid. Two other wind projects are currently in the financing stage, the Project and Sainshand Wind Farm, a 52 MW wind farm in the South-East of Mongolia. Based on the U.S Department of Energy wind resource map of Mongolia (2001), the country is suitable of accommodating wind energy development, making wind power an important part of achieving national renewable energy targets. The Project aims to meet this demand in rural areas by reducing reliance on coal for electricity generation and helping to solve the issue during peak loads by utilizing the wind energy potential of Mongolia.

It is therefore considered to be the most appropriate option for energy generation in this location.

2.2 What are the Project benefits?

The Project will have a positive benefit through the displacement of greenhouse gas emissions produced through thermal energy generation. Approximately 230,000 tons of greenhouse gas emissions would be displaced as a result of the Project. There would be 180,000 tons of coal and 1.2 million tons of water saved through Project implementation. Production of electricity at the wind farm will overall help reduce the amount of imported electricity[2].

The Project has indirect benefits of helping to facilitate further infrastructure development for railway, road and electrical infrastructure.

[2] Information Memorandum, CEA (2015)

2.3 What alternatives were considered?

The Tsetsii site was selected based on the U.S Department of Energy wind resource map of Mongolia (2001). In 2008 the Project Company began to lease a total of 7,290ha in the Tsogttsetsii soum of Umnugovi province to investigate the potential for a wind farm. The final footprint of the wind farm is approximately 700ha and the selection of this area within the larger lease has been based on the outcome of the feasibility study and ESIA. A feasibility study ensued along with the collection of wind data confirming suitability of the site, therefore no alternative site locations were considered. The consideration of alternative technologies has been limited to varying models of WTGs.

The government led initiative to increase use of renewable energy in Mongolia aims for renewable energy to provide 20-25% of national energy production by 2020, therefore the 'do nothing' scenario was not considered.

2.4 What is the current status of the project development?

The development cycle for the Project includes a continuous process of obtaining various permits and approvals. The Constitution of Mongolia (1992) specifies that the legislative system of Mongolia comprises international and domestic law to protect the environment. The Constitution includes several environmental provisions. The government established institutional structures, including the Ministry of Environment, Green Development and Tourism (MEGDT) and developed new environmental legislation. This Ministry coordinates the work of several agencies, including the National Agency of Meteorology, Hydrology and Environment Monitoring, the Land Agency, and the Water Authority Agency. In Mongolia, the MEGDT determines whether or not a project requires a detailed Environmental Impact Assessment (DEIA).

The MEGDT confirmed that a DEIA was required for the Project and it was completed in 2014. MEGDT formally accepted it in accordance with the following requirements:

- Environmental baseline conditions
- Project design and analysis of alternatives
- Recommendations for minimising and mitigating measures as well as eliminating potential and significant adverse impacts
- Analysis and calculation of the extent and distribution of adverse impacts and consequences
- An estimation of accidents and risks
- Environmental Protection Plan or Environmental Management Plan
- Environmental monitoring program
- Stakeholder consultation

In addition to DEIA approval, other key permits that are likely to be required are:

- Land lease certificate
- Special license for energy plant construction
- General Environmental Impact Assessment (GEIA) or DEIA approval for the transmission line
- Land use agreement
- Permission for underground water usage
- Temporary workers accommodation approval

The land for wind turbine locations, platforms, permanent access roads, and the transformer stations has been fully secured through long-term land lease agreements. DEIA procedures for regulatory requirement have been

completed in 2014 and construction is envisaged to start in 2016. Obtaining the remaining permits is currently ongoing.

2.5 What is the Environmental and Social Impact Assessment process?

In addition to the national EIA an environmental and social appraisal has been undertaken against the provisions of the European Bank for Reconstruction and Development's (EBRD) Environmental and Social Policy (ESP) 2014 which reflects the fundamental principles of the European Union (EU) environmental legislation including EU directives that address issues of environment protection, social and environmental risk management, information disclosure and stakeholder engagement.

The project has been assessed by EBRD against their ESP 2014 as a category "B" project. Category B projects are defined as "potential adverse future environmental and/or social impacts are typically site-specific, and/or readily identified and addressed through mitigation measures".

Table 2.1: Applicability of the EBRD PRs (2014)

EBRD Performance Requirements	Description	Applicable to the Project?
PR1: Assessment and Management of Environmental and Social Impacts and Issues	Requires assessment of negative and positive environmental and social impacts at an early stage of project development and the adoption of a systematic approach to monitor and manage impacts on an on-going basis.	Yes
PR2: Labour and Working Conditions	Requires that the pursuit of economic growth through employment creation and income generation must be accompanied by protection of the fundamental rights of workers. It is designed to maintain sound worker-management relationships and promote fair treatment, non-discrimination and equal opportunities for workers.	Yes
PR3: Resource Efficiency, Pollution Prevention and Control	Requires a project-level approach to pollution prevention and control as well as resource efficiency in line with European and international legislation and practices.	Yes
PR4: Health and Safety	Addresses the responsibility to avoid or minimise the risks and impacts to community health, safety and security of the local community that may arise from project–related activities, with particular attention to vulnerable groups.	Yes
PR5: Land Acquisition, Involuntary Resettlement and Economic Displacement	Is triggered when land acquisition is undertaken involuntarily when the Project has right to legally expropriate land. Resettlement refers both to physical displacement (relocation or loss of shelter) and to economic displacement (loss of assets on land or access to assets on land that leads to loss of income sources or other means of livelihoods).	Yes
PR6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Requires that projects avoid or mitigate threats to biodiversity arising from their operations, as well as manage renewable natural resources in a sustainable manner. Where critical or natural habitats are affected, projects must achieve 'net gain' or 'no net loss' in biodiversity respectively.	Yes
PR07: Indigenous Peoples	Requirement to safeguard the rights of indigenous peoples, identified as social groups with identities that are distinct from mainstream groups in national societies, and who are often among the most marginalised and vulnerable segments of the population.	N/A given the geographic location of the project
PR08: Cultural Heritage	Aims to ensure that developers protect cultural heritage in the course of project activities and to support the conservation of cultural heritage.	Yes

EBRD Performance Requirements	Description	Applicable to the Project?
PR09: Financial Intermediaries	Is triggered when EBRD provides project finance to financial intermediary operations, i.e. financial services providers.	No – EBRD would finance the Project directly although additional Lenders are involved.
PR10: Information Disclosure and Stakeholder Engagement	Requires project developers to identify stakeholders potentially affected by their project, disclose sufficient information about impacts arising from the projects and engage with stakeholders in a meaningful and culturally appropriate manner throughout the lifecycle of the project and to provide for grievance mechanisms that are scaled to the risks and potentially adverse impacts of the Project.	Yes

The national DEIA was supplemented by an international Environmental and Social Impact Assessment (ESIA) prepared by Sgurr Energy Limited. The ESIA aimed to bring the assessment process in line with the requirements of international lending institutions, which covered both the wind farm and the transmission line.

2.6 Who has been consulted and what consultation will be undertaken in the future?

Mongolian legislation is currently being updated to address public consultation needs for Renewable Energy Projects. No public consultation activity was carried out during the DEIA process. As part of supplementary work for the international ESIA four meetings have been held during the scoping phase to introduce the Project and the ESIA process to stakeholders. The ESIA will be disclosed following completion of the specialist studies.

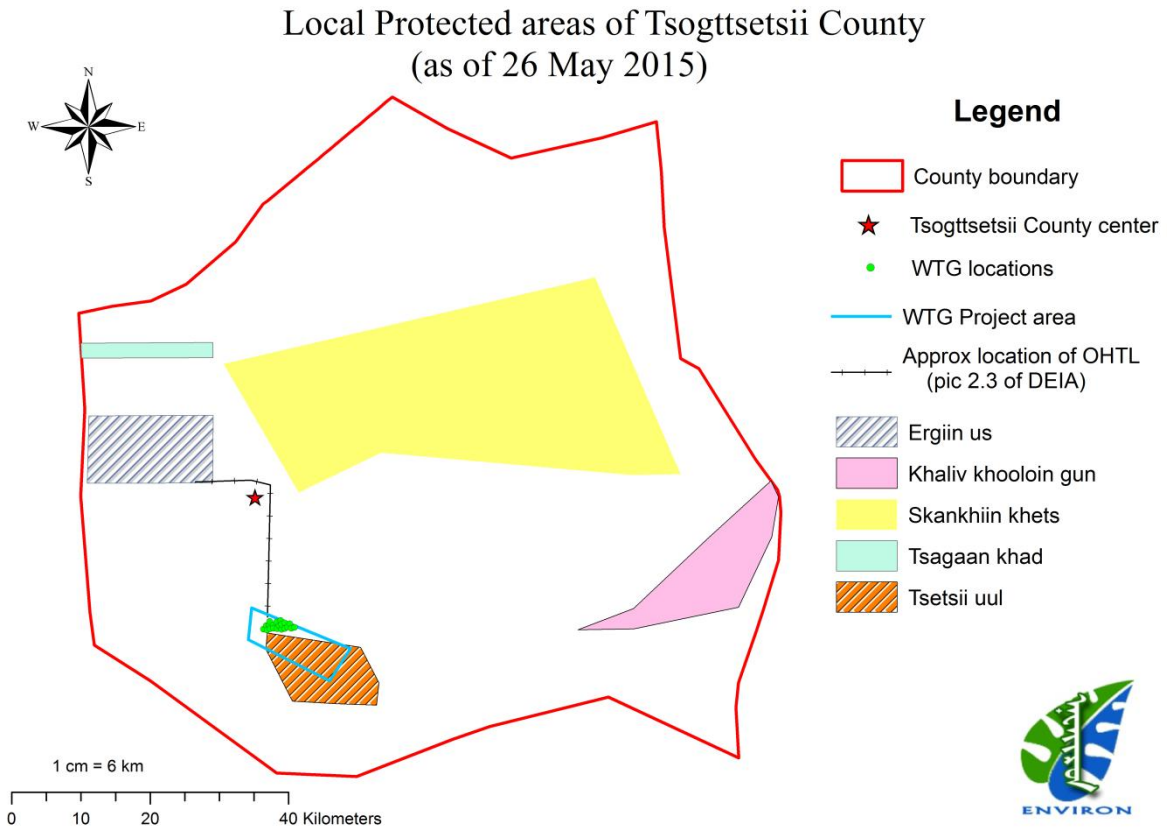
A Stakeholder Engagement Plan (SEP) has been developed, which identifies stakeholders who will be consulted as part of the disclosure of the ESIA and during the construction and operation of the Project. The SEP is disclosed alongside this document.

2.7 What are the current environmental and social conditions at the site?

2.7.1 Protected areas

The Project does not lie directly within any internationally or nationally designated areas for nature conservation or Key Biodiversity Areas (i.e. areas of high biodiversity value); however, the wider site area (which includes areas that will not be developed) is located directly within the Tsetsii Mountain Special Protected Area (SPA). Figure 2.1 provides an overview of the latest boundaries of local SPAs, this is based on Tsogttsetsii County's parliament resolution on local protected areas dated 26 May 2015.

Figure 2.1: Special Protected Areas of Tsogttsetsii County



Source: Environ

2.7.2 Environmental setting

The land lease area comprises approximately 7,290ha of remote, relatively flat open desert and sparsely vegetated with average altitude of 1,550m above sea level. The mean annual precipitation at the site is 99.4mm with 5.7% occurring in winter as snow and 94.3% as rainfall in summer. Strong dusty storms take place in spring time.

There are no streams or bodies of surface water within or close to the 700ha footprint of the wind farm site. There are hand dug wells used by nomadic herders in the south of the site close to Tsetsii Uul. There were reported numbers of 50 springs near the Tsogttetsii town however the number has now dropped to five within the soum. Furthermore, mineral concentration in the water at Tsogttsetsii is high therefore it is understood that the project impact on drinking water sources is a high priority consideration.

Land surfaces are largely eroded by intensive fractures and cracks with high to moderate seismic conditions. There is no significant depth of topsoil.

There are no known archaeological or cultural heritage features within the Project site with the exception of small ovoos. These are thought to be border markers and reported to be of limited cultural significance during consultation.

The ornithological study area considered 20km of the proposed project as well as the nearby Tsetsii Mountain SPA (the survey area). Fifty three resident breeding bird species were identified in the survey area, with three species being recorded directly within the wind farm footprint. The Project and wider study area is located within the Central Asian Flyway for migratory birds; however, low numbers of birds were recorded during surveys undertaken in the spring and autumn periods. The Project area is not considered to be located within a migratory bottleneck and is unlikely to be used as a stop-over site due to the lack of open water or feeding habitat.

2.7.3 Social setting

The population of Tsogttsetsii soum has risen sharply in recent years primarily as a result of growth in mining, however the area surrounding the land lease area is very sparsely populated. The local economy is characterised by traditional animal husbandry with growing employment in the mining sector.

Recent population growth has put a strain on social and community facilities however a new hospital has been built in Tsogttsetsii to deal with increased demand. A new secondary school has also been developed with funding from one of the local mining companies.

One of the main health concerns in the area relates to water quality and water availability. Outside the soum, herder families are reliant on shallow wells.

3 Environmental and Social Impacts and Benefits of the Project

3.1 Overview

Table 3.1 describes the main environmental and social impacts (positive and negative) identified in the DEIA/EISA associated with the Project for construction and operation and the mitigation measures which will be implemented to remove or reduce the level of impact from the Project to acceptable levels.

Table 3.1: Summary of Environmental and Social Impacts and Proposed Mitigation Measures

Air
Under normal operating conditions there will not be any air quality impacts from the Project's activities. During construction, earthworks and on-site transportation may give rise to fugitive dust emissions which could lead to significant nuisance for local herders and the grazing of their herds. To mitigate this, the Project management plans require laying gravel along main access roads within the site to minimise dust emissions, in addition transport around the site will be limited to designated routes.
Water
The total water consumption needs for both the windfarm and the overhead transmission line are estimated to be 49,813m^3 over the 18 month construction period. Water requirements are proposed to be sourced from the local mine at Tavan Tolgoi or from Tsogttsetsii soum. The ESIA identifies that this may place additional demands on water providers (soum or the mine) that are not sustainable. The Project Company has committed to assess the current water resource availability and undertake a study to determine what percentage can be sustainably used by the Project without adversely affecting local residents and herders. The study will investigate if shallow aquifer would be able to supply sufficient quantity of water without affecting nearby wells used by herders. Should the study not indicate that water may be used in a sustainable way, alternative options will be sourced to bring water to the site from elsewhere. The construction impacts on ground water are identified to be minor given that it assumes groundwater within the project area is not of drinking quality and a new well will not be developed on site. Best practice techniques for minimising contaminated run-off to ground will be employed during construction.
Waste (hazardous and non-hazardous)
All solid waste will be collected and stored for transportation to an appropriate waste disposal facility. A Waste Management Plan will be developed setting out the exact plans for this. In addition, uncontained dumping of food waste or other rubbish will be avoided so as not to attract scavengers and / or prey species.
Soil Erosion
Movement of staff and materials to and from the site along the access roads may result in degradation of tracks and erosion. To mitigate this all vehicles will be using the designated routes, and where possible grass cover will be maintained. Also, drainage channels will be vegetated following initial construction work to stabilize areas of bare earth.
Noise
No impacts exceeding day or night time thresholds are anticipated to any permanent sensitive receptors within the project area. One seasonal ger receptor was identified as affected during the survey work in 2014 being located with the footprint of the

proposed wind farm. To mitigate the risk to nomadic herders, the Project Company will set up communication channels with local herders to share information to enable the project affected communities to make an informed decision on where to locate their gers so that noise nuisance risks are avoided. This is anticipated to be required on an annual basis.

Traffic and Transport

WTG components will be transported over land from China, either direct from the fabrication factory in China or from a suitable port. With regard to the transportation, no serious problems are anticipated with regards to transport from China. A new 245km hard-surface road parallel to the existing coal transport gravel road from Ukhaa Khudag to the Gashuun Sukhait border crossing has been completed and has been operational since October 2011. The road from the border to site handles trucks with load capacities of up to 100 tons.

Appropriate traffic management measures will be put in place as required during transportation of these abnormal loads to ensure minimal disruption to other users of the proposed route.

Damage to road edges and general 'wear and tear' of the road may occur through increased heavy good vehicles movements. It is difficult to identify the extent to which this may occur however, it is likely that, at worst, there would be an impact of moderate significance, pre-mitigation.

Any impact to roads, road infrastructure or private property along the road side as a result of transporting equipment to site will be made good at the end of the Project construction phase.

Landscape and Visual

Detailed assessment of landscape and visual impacts is provided for both the wind farm site and the transmission line. The assessments identify that for both the landscape impacts are not significant. The wind farm has potential to result in visual impact on workers at the mine as well as seasonal gers, the impact is considered to be moderate and some screening of the lower half of the WTGs occurs due to the slightly undulating landscape. No additional mitigation is proposed.

Ecology and Nature Conservation

Designated Sites for Nature Conservation

Based on assessments no adverse negative effects on the Tsetsii Mountain SPA are considered likely for the species which occur or have the potential to occur in the Project area which also occur in the SPA.

Habitats and Flora

Wind farm - No plant species of conservation importance were recorded during the surveys (i.e. those categorised as threatened on the IUCN Red List or Mongolian Red Data Book (RDB)). The effects on plant species as a result of the Project are likely to be negligible and no targeted species specific mitigation measures are anticipated.

Transmission line –there may be some localised impacts along the transmission line route. Further studies and development of a Biodiversity Management Plan (BMP) are planned at the local level to determine these aspects.

Fauna

The effects on reptiles and amphibians as a result of the Project will be negligible to low and no targeted species specific mitigation measures will be required.

One mammal for which a potential impact has been identified is the five-toed pygmy jerboa as a result of habitat loss. The impacts on five-toed pygmy jerboa will be reduced through siting WTGs away from the (limited) areas in which they were found; therefore making any adverse effects from habitat loss negligible. The impacts on the two gazelle species from the wind farm are also likely to be negligible given the current level of disturbance in the Project area from grazing livestock and vehicle movements.

Bats

One species of bat, Alashanian Pipistrelle (Hypsuga alaschanicus) (IUCN Red List Least Concern), was recorded in the study area; however, no bats were recorded within the Project direct area of influence. Very low bat activity was observed throughout the study area; therefore based on the survey findings impacts on bats are considered to be negligible.

Birds

The presence of Saker Falcon in the Project area triggered the need of a Critical Habitat Assessment as defined by EBRD PR 6. Based on the assessment the survey area (20km of the proposed Project) it was determined that the area is not critical habitat for this species. Given the low occurrence of the birds in the area and the mitigation measures that will be implemented, no measurable adverse impacts are considered likely or any reduction of the local population.

Mitigation will be guided by on-site data obtained from the general programme of monitoring during operation. This will be documented in a detailed species specific monitoring and mitigation plan for Lammergeier, Cinereous vulture, Saker falcon and Pallas's sandgrouse as part of the BMP. In particular, should large flocks (1000+ birds) begin to congregate in the vicinity of WTGs 1 and 12, or where such large numbers are attracting Saker falcon, further mitigation will be implemented during high risk periods to reduce collision risk.

Given the relatively limited flight activity of target species within the Project area (i.e. those most at risk of collision with the operational WTGs such as raptors), the collision risk for all species is considered to be low and not significant.

No nesting birds categorised as threatened on the IUCN Red List or Mongolian RDB were recorded within the Project area. Therefore the loss of habitat, as well as other associated impacts such as disturbance, is not considered significant and no species specific mitigation measures will be required.

Impacts from the transmission line are considered to be limited as long as precautionary mitigation measures are implemented such as bird flight diverters and installation of nesting platforms to attract the Saker Falcon away from electrocution risk areas on the transmission towers.

The ESMP recommends further biodiversity surveys/monitoring for all species groups. This will include full details on the implementation of mitigation and enhancement measures as well as operational monitoring obligations. Key mitigation measures to be implemented are the installation of bird diverters, micro-siting of turbines and installation of nesting boxes and nesting platforms.

Shadow Flicker

The project has assessed potential shadow flicker impacts assuming worst case scenarios. Shadow flicker impacts are considered negligible more than 10 x the rotor diameter of the WTG from the WTG, equating to 1100m, Only one receptor location within this set back was identified this being a representative location for seasonal temporary residences (gers) within the wind farm site. The ger was predicted to experience levels exceeding the 30 hour per year and 30 minutes per day limits.

To mitigate the risk to nomadic herders, the Project Company will set up communication channels with local herders to share information to enable the project affected communities to make an informed decision on where to locate their gers so that shadow flicker impacts are avoided. This is anticipated to be required on an annual basis.

Accommodation Camps and Influx of Workers

The Project will employ up to 200 workers during construction. All workers would live in a temporary construction workers camp, likely to consist of traditional gers on the Project site. The ESIA predicts a maximum impact equal to an increase of 3% compared to the current population in the soum. As a result, there would be minimal change in overall population or housing demand and the impact is assessed to be minor. The increased employment opportunities are likely to be minor beneficial and temporary.

A likely indirect impact of this increased employment is of an additional influx population moving to Tsogttsetsii soum to seek jobs related to the Project. A workforce of 200 job seekers could well lead to an overall population influx of 800 new residents (assuming average family size of four), the majority of whom would be based in Tsogttsetsii soum centre. As mitigation

measure a Population Influx Framework will be developed, in conjunction with local government authorities and other companies in the area, to address potential indirect impacts of the Project on the local community, including on community infrastructure such as water supply, public health infrastructure and waste water treatment.

Labour and Occupational Health and Safety

The Project will operate under Mongolian labour legislation, which provides guidance regarding working conditions, worker's organisations, wages, benefits and conditions of work, and prohibits child and forced labour, and discrimination.

To manage labour and occupational health and safety risks, the Project Company will develop a Human Resource policy prior to construction and operation that meets national requirements and the requirements of the EBRD ESP 2012. All contractors and sub-contractors will be required to implement the requirements of the HR Policy and the Project Company will undertake regular audits to check implementation on site.

Community Health, Safety and Security

Community health, safety and security impacts have been identified as negligible. Nevertheless, a community health and safety management plan will be developed by the Project Company with suitable mitigation measures included to address any risks and impacts to herders, including signage and fencing off of immediate work areas, appropriate traffic safety trainings to the drivers (employees and contractors) and a grievance mechanism

Other plans that will be prepared include an emergency preparedness and response plan and traffic management plan. All these plans will be communicated to the local affected communities through events outlined in the SEP.

Land Acquisition, Physical and Economic Displacement

No physical displacement is expected to occur as a result of the wind farm project activity. The vast majority of land is state-owned and is periodically used for nomadic herding. To minimise economic displacement, the fenced area for the Project will be confined to a small geographical area around the main site compound and office buildings and transects across other land areas will be minimised to the extent practicable. The workers accommodation will be located within the site and be serviced by the existing roads which will require to be upgraded. Project workers will be prohibited from driving off designated access tracks, reducing damage to pasture land.

Whilst it will be inevitable that construction works will cause some interruption to herder's free movement across the land lease area, as well as the potential for the generation of dust during construction, the footprint of the windfarm is located on degraded land which offers poor grazing potential. This, coupled with the fact that only 0.3% of the available land area will be disturbed, should ensure that the impacts on local herders is assessed as minor adverse.

The potential for economic displacement from the transmission line is currently being assessed; however, no physical displacement will occur. This was confirmed by the most recent survey in April 2016. The transmission line corridor is located on government owned which will be leased by the project company. Any compensation required as a result of economic displacement will be defined and addressed in a Land Acquisition Framework setting out detail of the type or method of compensation for lost grazing land

Cultural Heritage

The wind farm and transmission line project areas are not deemed to have an adverse impact on any international or nationally recognised heritage. Consultation with the Archaeological Institute of the Mongolian Academy of Sciences confirmed that there are no significant cultural resources within the Project footprint. However Tsetsii Uul (nearby mountain) does have some cultural significance to local communities.

The ovoos on several hilltops are reported (by nearby residents and at the public consultation meeting) not to have special significance. Nevertheless, no construction will take place on hilltops or ridge lines therefore those features will be left undisturbed and will not experience any direct impact during construction.

No known cultural heritage sites have been identified along the transmission line corridor; however, there is the potential that foundation excavations may result in some archaeological finds.

As a result of the absence of known archaeological, religious and aesthetic sites, the site sensitivity is assessed to be low. Similarly the magnitude of direct impact is assessed as low therefore the overall impact assessed to be not significant.

Given there is the potential to uncover previously buried archaeology (chance finds) during construction works, a Chance Finds procedure is required. Should any finds of potential archaeological significance be identified, steps for stopping work and reporting finds to the appropriate authority for assessment will be put in place, as well as providing training to workers.

Cumulative Impacts

No other confirmed developments, including future wind farms have been identified in the ESIA which would result in cumulative impacts from the project. Existing pressures from the mining operations have been taken into consideration in the baseline and overall impact assessment.

Decommissioning

Prior to decommissioning, procedures will be agreed with relevant stakeholders for traffic management during this phase. Following decommissioning, reinstatement will be important to re-establishing the steppe ecosystem in areas previously occupied by WTGs, site roads and other structures. At the time of decommissioning, the sensitivity of some species, particularly those which are regionally rare, may have increased.

Along with reinstatement work contaminated materials such as oil storage tanks would need to be removed from the site and taken to a suitable disposal site to prevent future contamination of surface and groundwater.

3.2 How will mitigation measures be implemented?

In order to ensure implementation and effective management of the planned mitigation measures during the life of the Project, an Environmental and Social Action Plan (ESAP) will be developed for the Project based on the findings of the environmental impact assessment and consultation with the public and key stakeholders.

The ESAP is supported by more detailed Environmental and Social Management Plans (ESMPs) for the construction and operational phases of the Project. The ESMPs provide a framework for wider environmental management systems (EMS) that will be created during the construction phase by the Engineering, Procurement and Construction (EPC) Contractor and during construction and operation by the future site operator. The EMS will be aligned to international standard ISO 14001.

During construction, a health and safety management system aligned to good international practiceswill be developed and implemented by the Contractor, including an accommodation management plan.

Additionally, a general community grievance mechanism will be developed as part of the SEP which will include provisions for collecting and responding to resettlement (economic) specific grievances and general stakeholder grievances.

The Project Company and the EPC contractor will employ environmental and health and safety professional as well as community liaison officer (CLO) to oversee the implementation of environmental and social management and stakeholder engagement at the site during construction and operation.

4 Additional Information

4.1 How do I find out more about the Project?

Clean Energy Asia LLC has developed a Stakeholder Engagement Plan (SEP) to guide disclosure of its public information and stakeholder engagement in the Project. Key stakeholders have been identified and a programme of information disclosure events have been developed to further inform the public and wider stakeholders regarding the Project. A CLO will be appointed before or at the time of disclosure of the DEIA, ESIA, Environmental and Social Action Plan and SEP by the Project Company. The CLO will manage stakeholder engagement and grievances.

The contact details of the Project Company are currently provisional and will be updated once the CLO has been appointed. However, all requests for further information may be addressed to the contact presented below.

Company contact name:	Byambakhishig Munkh-Ochir
	byambakhishig@newcom.mn
Local address:	To be confirmed once Project Site has been established
Ulaanbaatar address:	Naiman Zovkhis Building, 10th Floor 21 Seoul Street Ulaanbaatar 14251 Mongolia
Telephone number:	+976 313183
Email:	byambakhishig@newcom.mn

4.2 How do I have my say?

All concerns and requests will be submitted by filling a standard Grievance Form given in Appendix A by post or e-mail or to the local office, or by telephoning the company on the number stated above.

Appendices

Appendix A. Community Grievance Form

If you wish to remain anonymous, please do not fill the first three rows below.		
Full Name		
Contact Information *Please include how you wish to be contacted (i.e. mail, telephone or e-mail).* *If you wish to remain anonymous, please do not fill this box.*	Postal Address: Telephone number: E-mail address:	
Preferred language (please tick)	Mongolian ☐ Mandarin ☐ Other ☐	Russian ☐ English ☐
Please start below this line, if you wish to remain anonymous.		
Description of feedback or grievance *(What happened? Where did it happen? Who did it happen to? What is the result of the problem?)*:		
Date of incident / grievance		
One time incident / grievance date…… Happened more than once? How many times? …… Still on-going (i.e. currently experiencing problem) Y / N *(please circle)*		
How would you like to see this problem resolved?		
Signature……Date…….		
Please return this form to: CEA Tsetsii Wind Project or any of the grievance boxes listed below. Location of grievance boxes: [to be determined]		