

# 83MW Solar Photovoltaic Power Plants





## 83MW Solar Photovoltaic Power Plants

Kazakhstan has been actively working to develop and expand its renewable energy sector. The country possesses significant potential for renewable energy sources, particularly wind and solar power, due to its vast land area and favourable climatic conditions. Covering an area of 2.724 million square kilometers, the country has the ninth largest territory in the world.

Kazakhstan has now established around 130 renewable energy facilities, and the country's potential for green energy generation is huge. Kazakhstan has set an ambitious goal - to reach carbon neutrality by 2060.

As the largest Central Asian country, Kazakhstan, has a great potential of solar energy. Solar power has a great potential as a renewable energy resource due to sparsely populated large areas and the climatic conditions, especially in southern Kazakhstan with an annual sunshine of 2200 to 3000 hours. During the summer months (June – August), due to its geographical location, the southern part of Kazakhstan receives direct solar radiation for the most of the daylight hours which constitute 83 – 96% of the maximum possible value.

According to plans by the Ministry of Energy of Kazakhstan, in the region RES projects with a total capacity of 2,615 MW will be implemented until 2025 . In 2021, the total installed capacity of RES in Kazakhstan amounted to 2,010 MW, of which 49 were solar power plants.

### Overview

The project aims to construct, operate and maintain a 83 MW photovoltaic power generation plant in Turkestan Region, in the South of Kazakhstan. The power plant will use poly-crystalline photovoltaic modules and occupy a 83.20-hectare site. It will be connected to the KEGOC grid by underground transmission lines linked to an existing MV/HV transformer situated nearby from the site.

The project involves the construction of a cable duct to connect the plant to the electricity transformation station for delivery to the National Energy Transmission Network. Along its entire length, the cable duct will be completely underground.

The connection of the plant will take place via a 220kV antenna on the new 220kV transformation station which will be interconnected to the NTG (National Transmission Grid) by means of an aerial connection to the electrical substation, located approximately 1.5 km away.

### Keypoints

Status: Pending - Ready to Build (Diagram Distribution Power under review)

Denomination: Turkestan I, Kazakhstan

Number of Panels: 132,000

Power MWp: 83,160

Area: 130 Ha approx

Number of Strings: 6,000

Number of panels: 132,000

Rated installed power: 83,20MW

Number of inverters: W 24

Inverters typology: SMA Sunny Central 2.060-EV

DC to AC ratio: 1500V 1.13

### Technical Data

The Connection User system (IUC) will consist of:

### TARGET PRICE

\$10,855,000

### GROSS REVENUE

TBD

### EBITDA

TBD

### BUSINESS TYPE

Renewable Energy

### COUNTRY

Kazakhstan

### BUSINESS ID

L#20230494

- A 30/220 kV electrical transformation station which conveys the energy produced by the plant through 30 kV connections and carries out the transformation at the nominal voltage of 220 kV with 2 transformer uprights equipped with TR 30/220 kV of 45 MVA ;

- A delivery stall at the exit of the 220kV line, for the interconnection in AAT cable towards the electrical station of the NTG, of the transformation station of the planned plant;

- AAT connection in overhead (or, if necessary, underground) cable duct at 220 kV between the new transformer station and the NTG (section of connection - SE in the project).

#### Electromechanical Connection

The station will be built in a "single busbar" configuration (three conductors) at 220 kV, with air insulation. The 220kV busbar system will be characterized as shown below.

- N° 2 stalls available for future expansion;
- N° 2 TR stalls for the transformation of the energy produced by the photovoltaic system;
- No. 1 delivery stall.
- Width of the "HV/MV transformer" type stalls: 14 m;
- Distance between phases for busbars, equipment and conductors: 3.20 m;
- Bus axis height: 9.30 m;
- Height of stall conductors: 5.30 m;

#### Nominal Data

- Rated voltage: 220kV
- Maximum voltage: 245kV
- Insulation level at ia: 1050 kV (to earth)
- Insulation level at fi: 460 kV (to earth)
- Rated Frequency: 50Hz
- Cable Output Stall Current Rating: 2000A
- Transformer Stall Current Rating: 2000A
- Busbar rated current: 3150 A
- Rated voltage volumetric circuits: 100 V
- Rated current of current circuits: 5A
- DC Auxiliary Supply Voltage: 110V
- AC Auxiliary Supply Voltage: 230/400V

*The information contained herein does not constitute an offer to sell or a solicitation of an offer or a recommendation to purchase securities under the securities laws of any jurisdiction, including the United States Securities Act of 1933, as amended, or any US state securities laws, or a solicitation to enter into any other transaction*

*The projected financial information contained in the Memorandum is based on judgmental estimates and assumptions made by the management of the target Company, about circumstances and events that have not yet taken place. Accordingly, there can be no assurance that the projected results will be attained. In particular, but without prejudice to the generality of the foregoing, no representation or warranty whatsoever is given in relation to the reasonableness or achievability of the projections contained in the Memorandum or in relation to the bases and assumptions underlying such projections and you must satisfy yourself in relation to the reasonableness, achievability and accuracy thereof.*

*By delivering this Memorandum, neither MergersUS Inc., nor its authorized agents are making any recommendations regarding the acquisition or strategies outlined herein. Interested parties shall exercise independent judgment in, and have sole responsibility for, determining whether an acquisition of the Company is suitable for them, and neither MergersUS Inc, nor its authorized agents have responsibility to, and will not, monitor the condition of interested parties to determine that an acquisition is or remains suitable for them. Among other things, suitability of an acquisition will depend upon an interested party's investment and business plans and financial situation.*

*This document is prepared for information purposes only. It is made available on the express understanding that it will be used for the sole purpose of assisting the recipients to decide whether they wish to proceed with a further investigation of the Proposed Transaction.*

*The recipients realize and agree that this document is not intended to form the basis of any investment decision or any other appraisal or decision regarding the Proposed Transaction, and does not constitute the basis for the contract which may be concluded in relation to the Proposed Transaction.*

*All information contained in this document may subsequently be updated and adjusted. MergersUS Inc. has not independently verified any of the information contained herein or on which this document is based. Neither the Company, nor its management or shareholders, nor MergersUS Inc. , nor any of their respective directors, partners, officers, employees or affiliates make any representation or warranty (express or implied) or accept or will accept any responsibility or liability regarding or in relation to the accuracy or completeness of the information contained in this document or any other written or oral information made available to any interested party or its advisers. Any liability in respect of any such information or any inaccuracy in or omission from the document is expressly disclaimed.*

www.mergerscorp.com



© 2024 MergersCorp M&A International. All rights reserved.

*© 2024 MergersCorp M&A International. MergersCorp™ M&A International is the collective brand name of independent affiliates of MergersCorp M&A International. For more details on the nature of our affiliation, please visit us on our website <https://www.mergerscorp.com/disclaimer>. MergersCorp M&A International is not a registered broker-dealer under the U.S. securities laws. MergersCorp M&A International does not offer or sell securities or provide investment advice or underwriting services. The articles or publications contained in this presentation are not intended to provide specific business or investment advice. The author or MergersCorp M&A International shall not be liable for any errors or omissions, or for any loss suffered by any person or organization acting or refraining from acting as a result of the content of this website. It is recommended that specific independent advice be sought before making any business or investment decision.*



[WWW.MERGERSCORP.COM](http://WWW.MERGERSCORP.COM)