

**SUBSOLAR ENERGY (PTY) LTD.**

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**To whom it may concern:**

**SPECIALIST INPUT FOR THE PART 2 AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION (EA): AS PART OF THE BOITSHOKO PHOTOVOLTAIC (PV) SOLAR POWER PROJECT NEAR KATHU IN THE NORTHERN CAPE PROVINCE**

1. The cultural heritage assessment as part of the Environmental Impact Assessment (EIA) conducted for the Boitshoko Solar Power Plant (SPP) (DEA Ref: 14/12/16/3/3/2/935) on the Remaining Extent of Portion 1 of the farm Lime Bank No. 471, Registration Division Kuruman, Northern Cape Province situated within the Gamagara Local Municipality area of jurisdiction, refers.
2. The Solar plant is said to be tendered to the Department of Mineral Resources and Energy (DMRE) in the latter half of 2020. However, to improve the desirability and efficiency of the proposed project, the following amendments are applied for in terms of the EIA Regulations, 2014 (as amended in 2017):

- Inclusion of a battery storage system

The capacity of the battery storage facility will be approximately 500 MWh and will be kept in standard shipment containers with an area of approximately 2ha. The battery to be installed will be lithium-ion and no electrolytes will be transported to and handled on site. Battery cells will be assembled at the supplier factory prior to delivery to the sites. The battery storage facility will be located within the already authorized PV plant footprint area. There will be no need for the additional clearance of more than 2 ha of vegetation for the development of a new area for the battery storage facility.

- Increasing capacity of 115MWdc to up to 150MWdc and the height of the panels

Due to new and advanced technology of panels (470W and Bi-facial) the same amount of panels may be used as specified previously but will be able to generate more megawatts on the same area. The DMRE no longer caps projects at 75MW under the RMIPPPP, which means that developers may tender for larger capacity (if the grid can accommodate it). Using new advanced panel technology will result in the increase in the height of the panels, since the height of the panels will range between 3.5 to 4.5 m.

- Increasing the number of inverters

Due to the increase in MWdc capacity, more inverters are needed to convert the increased DC capacity to AC. The minimum number of inverters will be increased from 34 to a minimum of 40.

- The location and coordinates of the connection line

After receiving the Cost Estimate Letter for Grid connection and Supply from Eskom, it is proposed that the Boitshoko SPP will connect to the Ferrum-Fox 132Kv line instead of the Ferrum-Umtu 132Kv distribution line. A new power line route is therefore proposed.

- Increase of Substation footprint and description to accommodate for IPP Step-up Substation and Switching Station

The proposed on site Substation will have a combined footprint of approximately 1.4ha and will consist of an IPP Step-up substation and a Switching Station, the Boitshoko step-up substation will step-up the generated capacity to 132Kv in order to connect and supply at the same Voltage as the existing grid, the Switching Station will be the connection between the Step-up Substation and the Existing Ferrum – Fox 132Kv Line. The proposed connection line will therefore be constructed using Loop-in Loop-out line between the Boitshoko Switching Station and Ferrum – Fox 132Kv Line.

- Amending the location of inverters, buildings and internal roads within the development footprint (revised layout)

Due to the increase of capacity (MW), inclusion of battery storage and the spacing between panels, a new layout had to be designed which changed the citing of the infrastructure as well as the sizes of the demarcated areas for the associated infrastructure (the substation, laydown area, office, staff room and security room).

3. We hereby confirm that the proposed amendments will not result in any additional impacts and will not increase the level or nature of the impact, which was initially assessed and considered when application was made for an EA. The significance ratings will remain unchanged and the proposed mitigation and management measures proposed as part of the EIA process will still suffice.
4. We trust you find the above in order. If there are any uncertainties or additional information required, please feel free to contact the undersigned.

Kind regards

