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ATT Sirius Project Two (Pty) Ltd

AQUATIC OPINION – PROPOSED AMENDEMENT OF SIRIUS SOLAR PV PROJECT TWO PART 2 AMENDMENT

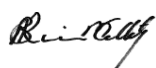
EnviroSci (Pty) Ltd was appointed to review the proposed amendment of the authorised facility (EIA Ref No: 14/12/16/3/2/2/481) against the previous Aquatic Impact Assessment (November, 2013) compiled and submitted by the same lead author as the undersigned. The initial Aquatic Impact assessment was undertaken to inform the EIA that was conducted on behalf of Sirius Solar PV Project Two RF (Pty) Ltd, who have proposed to now include a Battery Energy Storage System (BESS) within the approved site as well as increase the contracted capacity of the solar PV facility by 75MW.

Based on the description of the amendments (see attached statement from EAP), when compared to the original impact assessment, the overall risk, with mitigation were already low, and would remain LOW. This even with the inclusion of the BESS, as the current technologies and installations systems, allow for the containment of spills (unlikely).

Therefore, the significance of the impact on the aquatic environment would remain LOW after mitigation during the construction, operation and decommissioning phases with the inclusion of the BESS as well as the proposed generation increase. This is based on the fact that the aquatic systems are ephemeral and only carries flows after heavy rainfalls, while those areas that were earmarked as having a High Sensitivity would still be avoided. This would therefore be in alignment with the amended Biodiversity Assessment Protocols – Aquatic Theme, where any habitats that are seen as sensitive must be avoided by the project footprint as per the requirements of 20 March 2020, i.e. the proposed layout changes still take cognisance of the proposed buffers / no-go areas.

In conclusion, the final impact of the proposed amendment on the aquatic environment with mitigation (as recommended in the Aquatic Impact Assessment) will remain unchanged from the original impact assessment, i.e. it will remain of low significance. Therefore, based on the findings of this study, the specialist has no objection to the approval of the proposed amendment. Similarly, in the assessment of potential cumulative impacts, no additional impacts or changes to the previously assessed impacts would be required due to the proposed amendment. Further, no changes to the original mitigations or EMPr considerations are required.

Yours Sincerely



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PROPOSED PROJECT AMENDMENTS AS SUPPLIED BY THE EAP AND USED IN THIS OPINION

Sirius Solar PV Project Two (Pty) Ltd is proposing the construction and operation of a Battery Energy Storage System (BESS) of up to 4.5MWh, as well as an increase of the contracted capacity of the authorised Sirius Solar PV Project Two by 75MW within the authorised footprint, on a site located 21km south-west of Upington in the Northern Cape Province. The project is located within the Upington Renewable Energy Development Zone (REDZ), within the Kai !Garib Local Municipality and the ZF Mgcawu District Municipality in the Northern Cape Province. The general purpose and utilisation of a Battery Energy Storage System (BESS) is to save and store excess electrical output as it is generated, allowing for a timed release when the capacity is required. BESS systems therefore provide flexibility in the efficient operation of the electric grid through decoupling of the energy supply and demand.

The development area for the battery energy storage area is ~ 18ha and is proposed within the area assessed and approved for the solar PV facility. The extent of the development footprint of the battery energy storage will be up to 6.5ha and will be located within the development area. The development footprint as well as the development area identified for the construction and operation of the BESS is located adjacent the authorised on-site facility substation of the solar PV facility. The following infrastructure is associated with the BESS:

- » Lithium-ion, Lithium Iron Phosphate, Sodium Sulphur, or Vanadium Redox batteries in a container with a footprint of 6.5ha and a maximum height of up to 2.8m; and
- » Multi-core, 33kV underground cables to connect the battery energy storage to the authorised on-site facility substation of Sirius Solar PV Project Two.

It is the Developer's intention to bid the solar PV facility and the battery energy storage under the Risk Mitigation Independent Power Producer (IPP) Procurement Programme of the Department of Mineral Resources and Energy. Ultimately, the development of the solar PV facility as well as the battery energy storage is intended to be part of the renewable energy projects portfolio for South Africa, as contemplated in the Integrated Resources Plan (IRP).