

Envelope of Criteria

The envelope of criteria includes a consistent dataset across the battery technologies which develops a bulk assessment for the worst-case scenario and impacts thereof with implementation of either technology option.

The envelope of criteria for the Project furthermore involves the delivery of a BESS solution at the Cuprum substation (at the location identified for the most feasible connection and off take requirements), along with the associated infrastructure development and adjustments in order to connect this facility to the existing Eskom energy grid.

This approach will ensure that, regardless of which technology option is implemented in the end (should positive EA be granted for the Project), the environmental impacts assessed as part of this BAR will be for the worst-case scenario in accordance with the envelope of criteria.

Table 1 below indicates a high-level summary of the envelope of criteria used for the Project which informs of the worst-case scenario assessed in this Draft BAR:

| Criteria | Envelope |
|-------------------------------|--|
| Battery Type | <ul style="list-style-type: none"> • Lithium Ion (Li-ion) • Sodium Sulphur (NaS) • Vanadium Redox Flow (VRF) |
| Type of system | <ul style="list-style-type: none"> • Multi-cell modules/ Parallel arrays • |
| Electrode type | <ul style="list-style-type: none"> • Liquid/solid |
| Electrolyte type | <ul style="list-style-type: none"> • Liquid/solid |
| Assembly method | <ul style="list-style-type: none"> • On site |
| Water requirements | <ul style="list-style-type: none"> • Sourced from local municipality |
| Risks | <ul style="list-style-type: none"> • Damage to equipment or containment breach. • Fire • Explosion • Equipment augmentation. |
| Construction timeframe | <ul style="list-style-type: none"> • 12 months |
| Operational timeframe | <ul style="list-style-type: none"> • Lifetime of the BESS infrastructure (10 – 20 years) without the possibility of decommissioning/closure |
| Disposal of batteries | <ul style="list-style-type: none"> • Disposal by a licensed hazardous waste facility |

A detailed version of the envelope of criteria will be included in the Final BAR.