

**Cape Town**  
Aurecon Centre  
1 Century City Drive  
Waterford Precinct  
Century City  
Cape Town 7441  
PO Box 494  
Cape Town 8000  
South Africa

**T** +27 21 526 9400  
**F** +27 21 526 9500  
**E** capetown@aurecongroup.com  
**W** aurecongroup.com



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Dale Holder  
Cape EA Prac  
c/o Michael Johnson  
Atlantic Renewable Energy Partners (Pty) Ltd  
By email

Dear Dale

## **TRAFFIC AND TRANSPORT SPECIALIST OPINION – PROPOSED AMENDMENT OF DYASONSKLIP SOLAR ENERGY FACILITY 1**

In 2014, Cape Environmental Practitioners (Pty) Ltd. was appointed by Dyasonsklip Solar Energy Facility 1 (Pty) Ltd. as independent environmental assessment practitioners (EAP) to conduct the Environmental Impact Assessment (EIA) for the proposed Dyasonsklip Solar Energy Facility 1, a commercial PV energy facility and associated infrastructure near Upington in the Northern Cape Province (EIA Ref No: 14/12/16/3/3/2/705). The project was granted Environmental Authorisation (EA) on 3 September 2015.

Dyasonsklip Solar Energy Facility 1 (Pty) Ltd. now wish to include a Battery Energy Storage System (BESS), which will cover up to approximately 4ha, adjacent to the on-site substation within the approved project footprint (Figure 1). In terms of Regulation 31 and 32 of the 2014 National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations, Dyasonsklip Solar Energy Facility 1 (Pty) Ltd. wishes to apply for an amendment to the EA issued. Cape Environmental Practitioners (Pty) Ltd. have been appointed as the EAP and to conduct the amendment assessment.

One of the potential environmental issues identified during the former EIA process was the potential traffic and transportation impacts caused by the construction and operation activities. A Traffic and Transportation Assessment, conducted by Aurecon in 2014, was therefore, included as one of the specialist studies.

Based on the requirements of Regulation 32 of the EIA Regulations, specialist input regarding the proposed amendments is required to enable the DEA to make an informed decision on whether to grant or reject the amendment application.

### **Traffic Statement**

The original assessment estimated that the total trips would be between 3 000 and 4 000 heavy vehicle trips, which will be made over an estimated period of 9 to 12 months. Choosing the worst case scenario of 4 000 heavy vehicles over this period travelling on an average of 22 working days per month, the resulting daily number of vehicle trips will be in the order of 15-20. The impact of this on the general traffic would therefore be negligible as the additional peak hour traffic would be at most 2 trips.

At the time of the assessment, traffic volumes on N14 were estimated at about 3000 ADT and a maximum hourly flow of about 200 vehicles/hr for this section of road (SANRAL yearbook). It was

therefore concluded that the construction and operation traffic would be low without any significant impact on the existing traffic as well as negligibly pavement structure consumption.

### **Traffic as a result of the BESS**

The exact design of the BESS will depend on the specific manufacturer. It is customary to develop the final detailed design of the facility only once an Independent Power Producer (IPP) is awarded a successful bid under the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), after which major contracts are negotiated and final equipment suppliers identified.

Therefore, at this stage the exact supplier/manufacturer has not yet been identified. However, a BESS typically includes batteries that have been assembled in containerised/modular enclosures. While each manufacturer has slightly different individual battery container/module dimensions, they all typically fall within the following ranges:

- Length: 6m – 12m
- Width: 1.5m – 2.5m
- Height: maximum of 3m

Based on research it is estimated that for BESS with a capacity of up to 400MWh, approximately 160-240 pre-assembled containers/modules would be required. Each one of these pre-assembled containers/modules would be transported to site on a flatbed trailer.

240 heavy vehicles over a 9-12 month construction period travelling on an average of 22 working days per month, results in daily number of vehicle trips in the order of 0.9 -1.2.

Based on the above a BESS system of up to 800MWh, could be expected to add up to 500 additional trips or up to 2.5 additional trips per day over the construction period. The additional impact on general traffic of a BESS system up to 800MWh is deemed negligible.

### **Conclusion**

The above shows that the proposed amendments would not cause a significant change in the number of trips required and thus will not introduce any new traffic impacts, nor significantly alter the impacts considered in the former 2014 Report, for which the original project received Environmental Authorisation.

Yours faithfully



Hermanus Steyn  
Associate