

Comments on:

Avian impacts and proposed 765 kV transmission line linking the Aries or Helios substations, Northern Cape.

I am an avian consultant (Birds & Bats Unlimited) and avian ecologist at the FitzPatrick Institute, University of Cape Town, with 30 years' experience.

I understand that a new 765kV line is planned by Eskom Holdings Ltd between the Aries and Helios substations in the Northern Cape, as part of a grid strengthening project.

I have not read the avian impact assessments that will be necessary for this line to gain environmental authorization, but I would like to state that the existing line in this area is known to *kill hundreds of threatened bustards* every year. The Bustards are:

- Ludwig's Bustard *Neotis ludwigii* (Endangered)
- Kori Bustard *Ardeotis kori* (Vulnerable)

The existing reports for the area in question may not be in the public domain as they are Jessica Shaw's PhD thesis (2013) and Birds & Bats Unlimited's 2014 presentation (Simmons & Martins 2014) to the Birds and Wind Energy Forum (BAWEF). However, published papers on these issues are available from Jenkins et al. (2010) and Shaw et al. (2015).

The bustard mortality data indicates:

- Along the current Aries-Helios 400kV power line 4 bustards are killed for every 10 km of line per year (Birds & Bats Unlimited, Sept 2014 data);
http://media.wix.com/ugd/f81e75_d552d30f7427451e8bbea7a3a70cfbb0.pdf
- We also found dead Martial Eagles, goshawks, kestrels and korhaans;
- Shaw (2013), with repeat surveys, estimated 4.8 bustards/10 km of line;
- Correcting for scavenger removal and human search bias **gave 10.5 bustards/10 km of line** (Shaw 2013);
- Extrapolation to South Africa's power line network gave a total 46 900 bustards/y killed on all power lines – an unsustainable level for this species;
- Mitigation in the form of bird diverters is, therefore, imperative for this line.

Mitigation measures:

- Bird diverters in the form of spirals are being tested by the EWT-Eskom partnership in the Karoo. Unpublished results indicate an 80% reduction in avian mortalities under the marked line (C Hoogstadt, L. Leeuwner pers. comm.);
- The proposed 765 kV line is best set alongside the existing 400 kV line (or replace it); and
- All new lines must be erected with bird diverters already in place on the earth wire.



Conclusions and Recommendations:

- Surveys of the lines must be undertaken to determine the current bustard mortality rate;
- Surveys must also determine mortality of other threatened birds such as Martial Eagles;
- Mitigation measures must include: (i) diverters on the earth wire of all new lines (ii) new line to run alongside the existing one – or replace it.

References

Jenkins AR, Smallie JJ, Diamond M. 2010. Avian collisions with power lines: a global review of causes and mitigation with a South African perspective. *Bird Conservation International* 20: 263 – 278.

Shaw, J., Jenkins, A.R. Allan D & Ryan, P.G. 2015. Population size and trends of Ludwig's Bustard/*Neotis ludwigii* and other large terrestrial birds. in the Karoo, South Africa. *Bird Conservation International*, page 1 of 18.

Shaw J. 2013. Collisions of birds with power lines: conserving the Ludwig's Bustard. PhD thesis University of Cape Town.

Simmons RE, Martins M 2014. Bustard or Bustdead: are we under-stating the threat from power lines? Presentation to the Birds and Wind Energy Forum. Kirstenbosch, Cape Town
http://media.wix.com/ugd/f81e75_d552d30f7427451e8bbea7a3a70cfbb0.pdf

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