

BEZUIDENHOUT ONTWIKKELINGS BK (CK92/05910/23)

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Longyuan Mullilo De Aar 2 North Wind Energy Facility 132kV line

Planning of a new overhead power line route

The following criteria will be used

- 1 Geographical
 - 1a we will normally try to look at the terrain and try to stay away from crossing over hills and mountains.
 - 1b Try to stay away from rivers, flood planes and marshy areas.
 - 1c Existing farm boundaries.
 - 1d Existing infrastructure (Buildings, lands, graveyards, irrigation systems and roads)
- 2 Visual impact
- 3 Property owner's preference.
- 4 Visual impact
- 5 Property owner's preference.
- 6 Existing transmission lines, access and servitudes; and
- 7 Safety considerations and maintenance.

In the case of the 132kV power line from De Aar Plateau substation to Hydra substation we investigated options by using Arial photo's to find all the possible routes between the 2 subs.

All the options will then be discussed with the property owners to get their input and find an acceptable preferred route.

From the Plateau sub we looked at 2 options the one in a Southerly direction which will follow the 400kV line down the mountain and then follow the 132kV wood pole line towards the Hydra 132kV substation.

The other option was in a Southerly direction down the mountain and the South-East towards the 220kV line and the parallel with the 220kV line to Hydra substation.

We accepted the second option as our preferred option.

CV

I have been active in route selection and negotiation with Eskom for 18 years from 1982 -2000 and then left to work privately up to 2012.

My experience in line route selection in Eskom and private was about 1000km of 11/22kV lines, ± 300km 66kV lines, ±150km 132/400kV lines.

I did projects where all different types of structures were used. (Wood poles, Steel mono poles and lattice towers).

In the planning of a new power line we try to design a line that has the least visual impact. We try to use more intermediate structures which have less visual impact than the bends/strain poles.

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