

COMMENT

on

DRAFT SCOPING REPORT

for

PROPOSED HOUHOEK TRANSMISSION STATION

at

BOTRIVIER

**DEA Ref: 14/12/16/3/3/2/401 also 12/12/20/2541
NEAS: DEA/EIA/0001397/2012**

SUMMARY

As a result of the delayed receipt of information I consider that your decision, communicated on the telephone, to allow me additional time for this submission was justified.

All the missing reports and minutes of stakeholder/focus group meetings need to be submitted to all the registered I&APs in the Issues and Responses Report (IRR), and they should be part of the peer review, which could then be included with the FSR.

The DEA and NEAS references used for and in the DSR should be corrected. It may be helpful to give some clarification for the change in these references.

Additional information is required on the capacities of the substations and transmission lines that are part of the Bacchus network directly affected by Wind Farms currently under assessment.

All estimated costs are required that are specifically associated with integration of the planned 4400 MW (rated) of wind energy into Eskom's grid during the period 2013-2022.

DEA should examine claims for the connectivity status of Houhoek Substation, Bacchus Main Transmission Station and associated network power lines, which relate to several local Wind Farms currently in various stages of approval (see attached letter of 21 January 2013 to Mark Gordon, DEA.)

PROCEDURAL ISSUES

I was informed of availability of the DSR by Email on 27 Nov. I requested information on access to the DSR (link to a website download) on 6 Dec, repeated on 28 Dec and 8 Jan 2013. The link sent to me did not work. I eventually received a CD on 14 Jan (posted 9 Jan). Effectively, the loss of time on this project, together with the consequentially delayed responses to this comment report, will significantly affect the time available for proper consideration of the Langhoogte DEIR, for which the commenting period ends on 7 Feb 2013. On this basis an extension of the commenting period for both these affected projects has been requested, with the additional suggestion that this EIA process is delayed until all current Wind Farm applications connected to or affected by Houhoek Main/Sub station has been finalized.

The DSR is referenced DEA: 12/12/20/2541 and NEAS: DEA/EIA/0000698/2011, although dated Nov 2012. Never having seen the original, I am not able to tell if what I have been sent is the current new DSR for the new application. There is no reference to the changes that were presumably made. It was created electronically on 28 Nov 2012, but in the footer of every page the title is *Houhoek substation upgrade*, although the text relates to a *new Main Transmission Station* and modifications to the existing substation. The DSR second front cover page refers to Report J01887/01, yet every page in the report omits the 01 suffix.

The EAP Declaration of Interest is missing as are all the Appendices supposed to have been issued. Therefore, there are no copies of advertisements or Notices, no record of all I&APs, no records of the open meeting or any stakeholder/focus group meetings.

The decision to have a peer review is welcome, but it should include the requested correction of the woefully inadequate public participation process thus far, which could be included in the FSR.

The quality of many of the maps is inadequate to properly discern many of the details, and does not present all the existing transmission and distribution lines – in particular Figure 3.2. There needs to be more detailed coverage of the area, including Bacchus MTS and the area east of Swellendam containing 4 additional proposed or approved Wind Farms.

The EAP should provide clear written evidence that the I&APs registered with the Caledon and Langhoogte Wind Farms have been contacted as potential I&APs for this application. Normal advertising etc is not considered adequate to meet the NEMA requirements for public participation (see DEA&DP guideline on public participation July 2006.)

OMISSION OF TECHNICAL INFORMATION

In addition to the poor map quality and area coverage there is a major shortage of general information concerning the existing network and substation capacity, in relation to existing planned growth in demand and, in this case, the advent of Wind Farm requirements. The thermal capacity of all the distribution lines from Houhoek substation is required together with the possible connectivity with Wind Farms at:

- | | |
|--------------------------------------|------------------------|
| • Dassiesfontein/Klipheuwel, Caledon | DEA Ref 12/12/20/1746 |
| • Overberg WEF, Swellendam | DEA Ref 12/12/20/1798 |
| • Goereesoe, Swellendam | DEA Ref 12/12/20/2199 |
| • Kluijieskraal, Swellendam | DEA Ref 12/12/20/2201 |
| • Vryheid WEF, Uitkyk | DEA Ref 12/12/20/1815/ |
| • Heidelberg. | DEA Ref 12/12/20/1815/ |

The FEIR for the Caledon Wind Farm (243 MW capacity initially, now limited to 93 MW) states (Executive Summary page 5) that “with the upgraded design of the on-site substation, there is no need for any upgrade of Houhoek substation”. This report was issued in January 2012. The DSR (July 2012) for Langhoogte Wind Farm (140 MW) states that connection would be direct

to Houhoek – no mention of any upgrade. Both these factual comments are totally contradicted in this current report of Houhoek. Such 'errors' are surely reason enough for the above EIAs and this one to be jointly assessed.

Notwithstanding the above, this DSR states that both Caledon and Langhoogte facilities are planning for connection to the grid in 2016 but "there is only capacity for one of them". It is also stated that "Caledon Wind Farm will have to find a route for a double circuit from the north to Houhoek".

As the Caledon Wind project is now awaiting decision, and the Langhoogte one is in the DEIR commenting period, this situation was reported in detail to the Chief Director Integrated Environmental Authorisations, Dept of Environment, Pretoria (Mr Mark Gordon). At the moment, the Caledon Wind Farm report claims that the existing 132 kV power line that passes through the site would be connected direct via the site substation. Eskom claim that this is not possible and that a new route must be found to connect to Houhoek, which must then be assessed for impacts.

THE NEEDS

The Eskom national forecasts in the Transmission Development Plan for 2013-2022 show a growth in demand of 15,800 MW to a total of 57,800 MW in 2022. Included will be 4400 MW of wind energy generation (rated capacity) comprising blocks of 100-200 MW in the Western and Southern Cape. In terms of useful average generated power, this is 1100-1650 MW. The total costs estimate for the period is nearly R175 billion, largely expansion and refurbishment of transmission lines and stations.

It seems that the R8 billion shown for integration of wind power into the grid is by no means the full amount that is additional to that needed for the same total growth over the same period without wind. It is well known that in Europe and UK etc it has been found necessary to construct significant additions to their grids, just to accommodate the variable and unpredictable nature of wind.

It is also not clear if any allowance has been made specifically for gas-fired generating plant to provide fast backup for wind power. There are also the additional costs of running base-load generating plant at reduced power, and therefore decreased efficiency, with consequentially less reductions in CO2 emissions than would be expected.

Only with some idea of all these associated costs, can wind power be realistically compared with other options. Also, clearly this EIA should not be considered in isolation from the likely cumulative capacity of Wind Farms potentially connected to this part of the grid, whether they are approved yet or not.

The basic needs of South Africa can be considered to be a significant reduction in CO2 emissions, said to be too high now because most electricity is generated using coal, whilst improving socio-economic benefits to the community.

ALTERNATIVES

The alternatives considered to be feasible are:

- Mandatory demand management across industry and domestic sectors, including solar water heating and stepped tariffs for all consumers (including municipalities).
- Much wider and more urgent usage of natural gas for base-load generation of electricity (producing only 50% of the CO2 that coal produces for the same power generated).

- Selection of other suitable Wind Farm locations in the Cape to suit the existing grid capacities, with minimum connection and integration costs.
- The No-Go option should cater only for the planned growth in demand on this part of the Bacchus/Houhoek network, excluding wind farms.
- Comparative assessment of connection of the local Wind Farms to all existing nearby lines, including the 400 kV line from Bacchus.

Many of the problems associated with integration of wind energy stem from the apparent absence of any planning based on a regional strategic plan that would have coordinated the Regional methodology for Wind Farm site Selection (DEA&DP, 2006) with "connectivity" to Eskom's network. It is interesting to note that a report as recent as the Transmission Development Plan (2011-2020) considered only the connection of five 100 MW Wind Farms, including Eskom's Sere plant, to four different Main Transmission Stations (Bacchus being one of these.)

It is clear that a Consultant or Specialist, possibly from Eskom, needs to be contracted, in the absence of the relevant technical and commercial experience of the EAP, to participate in the proper assessment of the alternatives.

One of the main questions that must be answered relates to the additional costs to the developer and to Eskom from the connection in particular of Langhoogte and Caledon Wind Farms, including all the necessary upgrading, new Main Station and power lines.

It should not be forgotten that no Wind Farm developer has been coerced into selecting any particular site. Neither Eskom nor the electricity consumer should be forced to pay for the development at the wrong location. In the case of these two Wind Farms specifically, local residents and the tourism industry are also being forced to accept locations that are environmentally unsuitable, which should never have been applied for in the first instance.

OTHER MATTERS

Property Valuation

It is understood that fair market value is negotiated between Eskom and landowners for servitudes which is based on existing land usage, therefore excluding potential developments being planned but not rezoned accordingly. This could apply to private individuals, Companies or the local municipality. Wind Farms have certainly been responsible for significant decreases in property amenity values, sometimes to the point that some have not been saleable at all, because of turbine noise affects if dwellings are too closer. Farmers and other landowners with turbines located on their property get significant annual payments in compensation, although they may lose some of the 75% rate rebate as a result.

These matters should be discussed and assessed in the EIA, possibly with the Community Social Fund that generates a share of the Wind Farm profits for benefit of the local community.

B.P. McMahon

B P McMahon, PO Box 136, Greyton 7233, Western Cape
Registered I&AP
Tel 028 254 9673