

Yaloak South Wind Farm:

Comments on some of the assessment documents by Stephen Debus (raptor specialist, PhD in zoology, University of New England)

Pacific Hydro report (2009), Chapter 8: Wedge-tailed Eagle Collision Risk Assessment, by Biosis Research Pty Ltd.

I have some concerns about a few aspects of this report, as follow.

Page 2, para 2, re a 'vital feedback loop'. There is no mention of the Tasmanian data to hand, to refine and improve the model, in the light of the Woolnorth experience. Smales & Muir (2005) 'Modelled Cumulative Impacts on the Tasmanian Wedge-tailed Eagle of Wind Farms across the Species' Range' (Biosis & SymboliX report) predicted about one Wedge-tailed Eagle death per year across all of Tasmania (= seven wind farms), from collisions with wind turbines, on the basis that there was likely to be a 99% or greater avoidance rate. In practice there have been 12 eagle deaths in two years, and 20 in four years (i.e. an average of 5 per year), at the Woolnorth wind farm alone. Obviously something is wrong with the models or their inputs (e.g. the 99% avoidance assumption) if the reality is an order of magnitude above predictions. That is, there might be tens of eagle deaths per year in Tasmania, not between one and ten, if the Woolnorth mortality rate is repeated across the other six wind farms. Modelling for Yaloak should factor in the Woolnorth data.

Section 8.3, Methodology, pp. 3-4: I would question whether 20 minutes is enough time for a count, as soaring by one eagle (or raptor) can stimulate soaring by others, but it may take more than 20 minutes for all the eagles or other raptors in the area to become airborne or visible.

Risk Model, p. 4: as above, there appears to have been no incorporation of the new data and knowledge deriving from Woolnorth.

P. 6, para 4: how do we know what avoidance rate is realistic for moving rotor blades if the eagles can't see them at high rotation speeds? The Woolnorth experience suggests that the avoidance rate is less than 99%. There may also be a social interaction factor involved, once a territorial adult is killed, if there is competition among 'floaters' for the vacancy. That is, distracted birds may be more prone to collisions, and one death may precipitate a chain-reaction of further deaths.

Survey results, p. 8: what is the age and sex profile of eagles, so the true number of individuals may be estimated? Adult females will be effectively 'absent' for 2-3 months in winter-early spring while attending eggs and chicks, whereas there may be a wave of dispersing juveniles along ridgelines in autumn (not just the same individual(s) being seen repeatedly). Thus, there may be more eagles passing through than is realised, and the area could become a population sink (like Woolnorth) if a succession of inexperienced and less manoeuvrable juveniles encounters the turbines.

Potential risks, p. 10: how do we know that Wedge-tailed Eagles have a capacity for avoidance of 95% or higher? The Woolnorth experience suggests otherwise.

Section 8.7.1, p. 10, para 3: monthly searches for dead birds is probably too infrequent because scavengers will remove carcasses. It is claimed that trials were conducted, but what did they establish? We need the data here, on the average time that a carcass remains, to judge whether monthly is adequate.

P. 11, para 3: the high number of juveniles is considered 'unusual' for Victoria. This number would not be unusual if dispersing juveniles use ridgelines (which they do).

P. 13, para 3: mortalities at Yaloak need to be seen in the context of the cumulative impact from all the other wind farms too.

P. 13, para 4: if adults are killed, the competition for vacancies may precipitate many interactions among the sub-adult birds, thus distracting them from the blades and lowering the avoidance rate, leading to a possible spiral in the collision rate as vacancies keep occurring. This may be what's happening at Woolnorth.

Section 8.7.5, p. 13 (bottom): the 'context of many other sources of eagle mortality' should include the mortalities from other wind farms, as Yaloak is not an isolated case.

P. 14, para 2: in the light of the Woolnorth case (Tasmania), Biosis & SymboliX (2005) got it wrong. Therefore, their modeling of risk to eagles loses some credibility. They should respond, explain the discrepancy in predicted versus actual mortality rates in Tasmania, and appropriately modify the models for other wind farms.

Pacific Hydro, Yaloak South EPBC Act Referral, Chapter 7: Flora and Fauna Assessment, by Brett Lane and Associates

My comment here is that, on p. 15 re Black Falcon (Vulnerable DSE), its absence during the assessments could equally mean that the surveys missed it and that it does occasionally occur (being a rare species in Victoria that is apparently declining in south-eastern Australia). It is known to collide with power infrastructure (high-voltage powerlines).



10.3.10