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Submission on Reference Number: 2008/4480 Port Phillip Bay Offshore

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Tenax Energy Pty Ltd/Energy generation and supply (renewable)/Within the Entrance of Port Phillip Bay/VIC/Offshore Tidal Energy Facility and Submarine Cable

Summary

The proposal has potential to have a significance footprint with the establishment of 45 tidal turbines and 2 km of marine cable over an area of 169 ha. The cable will connect the turbines to the Pt Lonsdale electricity grid. Victorian National Parks Association (VNPA) believes this project is likely to have a significant impact on the immediate and surrounding marine ecosystem.

Several national and state threatened species are in, or potentially in the area identified. The company has to date undertaken no environmental impact assessment but rather purports to have consulted with a variety of State and Federal departments.

The referral makes the rather glib statement that while there is a risk of encounters with marine biota and turbines that these

“only lead to collisions when the animal does not take appropriate evasive action.”

The company appears to be proposing that if a marine animal is unable to avoid the 45 turbines - with approximate dimension of 18 m in height (equivalent to a six story building), 27 metres in length and 21 metres in width – it is somehow their fault. Small sygnathids (seahorses/pipefish) swimming past and small migratory fish and their larvae (including Australian Grayling and Mudfish) will find it quite difficult to avoid something of this proportion. While there is a gap in the centre there appear to be no research outlining the impact on such species.

The ongoing impact as a result of the removal of smaller fish sucked into the turbines may have an ongoing and cumulative impact on the surrounding marine environment

While the proposal states there will be no significant impact, VNPA believes many questions require answers above and beyond what is presently provided by the referring party. VNPA is calling for the project to be a controlled action under the Federal EPBC legislation as we believe the proposed 169 ha project at the entrance of the Port Phillip Heads will potentially have a significant impact on listed species and the marine environment as a whole.

Further if the proposed project is seen to have a significant impact it could taint the green energy pool.

Importance of area

The section of Port Phillip Bay where the project is proposed experiences strong currents which are often closely related to high diversity. The site is also within the proximity of the sponge gardens presently being considered for listing under FFG 1998 State legislation.

The site is known to exhibit the following criteria:

16 EPBC listed Marine Species
11 Listed Cetaceans

The proposed site is within 10km or two Ramsar listed areas:

- Port Phillip Bay (western shoreline)
- Bellarine

The nearby Natural State and Territory reserves include:

- Harold Holt – Mud Island Fisheries Reserve
- Mud Island Nature Conservation Reserve

FFG listed species included the following

Critically Endangered
Blue Whale <i>Balaenoptera musculus</i> EN L
Endangered
Bottlenose Dolphin (Port Phillip genotype) <i>Tursiops</i> sp I
Vulnerable
Humpback Whale <i>Megaptera novaeangliae</i> VU L
Critically Endangered
Australian Mudfish <i>Neochanna cleaveri</i> L
Vulnerable
Australian Grayling <i>Prototroctes maraena</i> VU L
Great White Shark <i>Carcharodon carcharias</i> VU L
Data Deficient
Grey Nurse Shark <i>Carcharias taurus</i> CR L

Impacts of the proposal

The establishment of the infrastructure including 45 turbines and the laying of 2 km marine cable may have a significant impact on benthic habitat as species will either be dug up for the cable or squashed under one of the substantial turbine bases.

However, far more serious is the potential long-term and permanent impact of the ongoing death of marine species unable to avoid the six storey turbines. The continual extraction of species from the marine environment is likely to impact on the overall ecology of the environment.

VNPA is concerned that marine animals moving in and out of the bay may be significantly affected. A barrier created by turbines may stop large animals entering or leaving the bay.

The referral states that turbines base will take up an area of 7m². They will be placed at least 12 metres below sea level and 17 metres below sea level in shipping channels. The referral states that canyons exist in the proposed area. Many of these rocky bottomed canyons contain species that would be significantly impacted by the placement of such large permanent objects on the sea floor. Many species found in canyons in this location are highly endemic as noted in the Channel Dredging SEES which found 112 sponges and 2 hydroids species to be endemic to the location. This aspect of the proposed project requires further investigation before such claims of minimal impact can be made.

The referral states that Ramsar wetlands are unlikely to be impacted as turbines have been designed in such a way as to allow marine species to pass through. However, in another part of the document it states that further research is required to identify the likelihood of encounters with whales and dolphins and more research is required and that encounters will only “*only lead to collisions when the animal does not take appropriate evasive action.*” Many important species while not federally listed migrate through the heads such as snapper and penguins.

If the turbines make a significant amount of noise this will have an impact. While the referral states the turbines are quieter than a boat propeller the statement is not backed up by research. The referral goes on to say that turbines are probably quieter than the ambient noise due to the strong tidal flows experienced at this location which again is not accompanied by research.

Questions need to be answered around whether fish & sharks that use electrical signals will be affected when they try to locate prey. While the referral states if sufficient insulation is used this can be prevented or if twin DC cables which carry electrical current in opposite directions are used this can be eliminated. However if the cables are not placed sufficiently close to one another this will not be the case.

Other aspects not adequately covered by the referral

The referral (p 14-18) gives a long list of Potentially Threatening Processes listed under the EPBC Act that may be aggravated by the proposal. These deserve much fuller discussion and backed up by research, rather than the present process which has merely discussed the project with various State and Federal departments.

Why more public consultation is necessary

The proposal is likely to have a significant impact on the marine environment as a result of the area it covers. The benefit of providing 15,000 homes with energy is relatively insignificant in comparison to the impact this project is likely to have. VNPA believes there are many questions that need to be answered and that the referrals claims are not backed up by any research. VNPA believe the project needs to be deemed a controlled action.

While the referral tries to argue that the power coefficient is higher for marine than wind turbines this point is not clearly explained. It states in the referring document that technologies are increasing so that wind power coefficients are now running at 59% while existing marine turbines

are running at between 45 -60% making it appear as though the difference between the two insignificant in terms of energy benefit.