Powerlines Action Group Eumundi Inc
PO Box 950,
Cooroy,
Queensland 4563

Referral Business Entry Point, EIA Policy Section (EPBC Act)
Approvals and Wildlife Division
Department of the Environment, Heritage and Water
GPO Box 787
**CANBERRA ACT 2601**

**Fax:** 02 6274 1789
**Email:** epbc.referrals@environment.gov.au

24th April, 2008

Dear Sir/Madam,

**RE: EPBC Act referral. Reference Number 2008/4840, 8TH April, 2009**

Powerlink Queensland/Energy generation and supply (non-renewable)/Within Wide Bay and Sunshine Coast districts/QLD/275 kV double-circuit transmission line between Woolooga Substation & new substation at Eumundi.

Powerlines Action Group Eumundi (PAGE) is a community based group who are keen to see our environment protected and insisting that the Queensland State Government and its agencies (like Powerlink) consider viable alternatives rather than the business as usual approach to electricity generation and transmission. Improving energy management strategies and using the rapidly advancing technology of sources such as household PV and solar thermal generation are amongst the 21st Century solutions to responsibly match energy needs with environmental issues. Powerlink's bulldozing through the Noosa Biosphere will result in the destruction of important natural wildlife and flora habitat, including prime koala habitat. It will also destroy the visual amenity of one of the Sunshine Coast's tourist destinations, with resultant economic loss to the Sunshine Coast already under severe stress from the current economic crisis. Please consider our submission relating to the above referral.

## 1. Introduction

We refer to Powerlink's referral to the Minister under the *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**) for approval to construct a high voltage 275 kV double-circuit transmission line between Woolooga Substation & new substation at Cooroy South.

We submit that this action should be declared to be a controlled action for the purposes of the EPBC Act and that the following controlling provisions for this action should be declared:

- A listed threatened species or listed threatened ecological community, are ss 18 and 18A
- A migratory species, are SS 20 and 20A

On the grounds the action is likely to have a significant impact on the following matters of national environmental significance (but not be limited to):

## 1. Nationally threatened species

1) *Archidendron lovelliae* (Bacon Wood) - Vulnerable
2) *Baloghia marmorata* (Jointed Baloghia) – Vulnerable
3) *Boronia keysii* (Keys Boronia) – Vulnerable
4) *Bosistaoe selwynii* – Vulnerable
5) *Bosistoa transversa* – (Heart-leaved Bosistoa) – Vulnerable
6) *Bulbophyllum globuliforme* - Vulnerable
7) *Cossinia australiana* – Endangered
8) *Cryptocarya foetida* (Stinking Cryptocarya) – Vulnerable
9) *Cupaniopsis shirleyana* (Wedge-Leaved Tuckeroo) – Vulnerable
10) *Eucalyptus conglomerata* (Swamp Stringybark) – Endangered
11) *Floydia praealta* (Ball Nut) – Vulnerable
12) *Fontainea rostrata* (Deep Creek Fontainea) - Vulnerable
13) *Fontainea venosa* (Veiny Fontainea) – Vulnerable
14) *Macadamia integrifolia* (Macadamia) – Vulnerable
15) *Macadamia ternifolia* (Gympie Nut) – Vulnerable
16) *Macrozamia pauli-guilielmi* (Zamia Palm) – Endangered
17) *Marsdenia coronate* (Slender milkvine) – Vulnerable
18) *Phaius australis* (Swamp Orchid) – Endangered
19) *Plectranthus omissus* - Endangered
20) *Plectranthus torrenticola* – Endangered
21) *Pouteria Eerwah* (Shiny-Leaved Coondoo) – Endangered
22) *Prostanthera palustris* (A Mint Bush) – Vulnerable
23) *Quassia bidwillii* - Vulnerable
24) *Romnalda strobilacea* (Romnalda) - Vulnerable
25) *Sophora fraseri* – Vulnerable
26) *Rhaponticum austral* – Vulnerable
27) *Syzygium hodgkinsoniae* (Red Lillipilli) – Vulnerable
28) *Thesium australe* (Austral Toadflax) – Vulnerable
29) *Triunia robusta* – Endangered
30) *Xanthostemon oppositifolius* (Southern Penda) – Vulnerable
31) *Delma torquata* – Vulnerable
32) *Coeranoscincus reticulates* – Vulnerable
33) *Mixophyes iterates* (Giant Barred Frog) – Endangered
34) *Litoria olongburensis* (Sharp-snouted Reed Frog) – Vulnerable
35) *Rostratula australis* (Australian Painted Snipe) – Vulnerable
36) *Turnix melanogaster* (Black Breasted Button Quail) – Vulnerable
37) *Cyclopsitta diophthalma coxeni* (Coxen's Fig Parrot) – Endangered
38) *Erythrotriorchis radiates* (Red Goshawk) – Vulnerable
39) *Xanthomyza Phrygia* (Regent Honey Eater) – Endangered
40) *Lathamus discolor* (Swift Parrot) – Endangered Migratory
41) *Petrogale penicillata* (Brush-tailed Rock Wallaby) – Vulnerable
42) *Pteropus poliocephlus* (Grey Headed Flying Fox) – Vulnerable
43) *Chalinolobus dwyeri* (Large-eared Pied Bat) – Vulnerable

44) *Potorous tridactylus* (Long-nosed Potoroo) – Vulnerable
45) *Dasyurus hallucatus* (Northern Quoll) – Vulnerable
46) *Dasyurus maculates* (Spotted-tailed Quoll) - Endangered
47) *Maccullochella peelii mariensis* (Mary River Cod) - Endangered
48) *Neoceratodus fosteri* (Australian Lungfish; Queensland Lungfish) -Vulnerable
49) *Elusor macrurus* (Mary River Turtle) - Endangered
50) *Pyllodes imperialis* (Southern Pink under-wing moth) - Endangered

## 2. Migratory species protected under international agreements

### Terrestrial

a. *Monarcha trivirgatus* (Spectacled Monarch)
b. *Monarcha melanopsis* (Black faced Monarch)
c. *Rhipidura rufifrons* (Rufous Fantail)
d. *Myagra cyanoleuca* (Satin Flycatcher)
e. *Merops ornatus* (Rainbow Bee-eater)
f. *Haliaeetus leucogaster* (White-bellied Sea-Eagle)
g. *Hirundapus caudacutus* (White-throated Needletail)
h. *Myiagra cyanoleuca* (Satin Flycatcher)
i. *Ardea alba* (Great Egret)
j. *Ardea ibis* (Cattle Egret)
k. *Gallinago hardwickii* (Latham's Snipe)
l. *Apus pacificus* (Fork-tailed Swift)

**2. Summary**

This proposal intersects 18 Regional Ecosystems which highlights the significant ecological conservation values. It traverses 4 State Forests as well as wetlands and 25 water courses. It is situated in a biogeographical transition zone between tropical and temperate environments, and supports a large number of plant and animal species of high conservation significance. This includes species that are endemic to the Mary River Catchment and the Maroochy River Catchment (Mary River Cod, Mary River Turtle – both listed as endangered under the EPBC) and have restricted geographical ranges like the Australian Lungfish, Grey headed Flying Fox (listed as vulnerable under the EPBC) Giant Barred Frog, Spotted-tailed Quoll, Regent Honey Eater, Swift Parrot and Pink Underwing Moth (all listed as endangered under the EPBC).

The proposed action should be declared to be a controlled action because of clearing (including cumulative effects from designation for community infrastructure in the future) which will:

- Decreasing habitat for occupancy
- Decreasing breeding areas
- Decreasing population levels
- Isolating the population leading to reduced genetic integrity and possible genetic depression
- Increase predation and weed infestation.

**3. Description of proposed action**

Powerlink's referral describes the proposed action in the following terms.

- Powerlink proposes to establish a 275 kV double circuit transmission line

- The transmission line will extend approximately 64 km from Woolooga to Cooroy West then T off and traverse east with a new 60 m wide easement to the town of Eumundi for a further 8.5 km terminating at a new substation
- The towers will be varying heights and design
- Each tower will sit on a pad 10m x 10m
- Additional clearing will be needed for access tracks, erection of structures and mobilization, requiring an area of 50m x 50m for each tower

## Inadequacies in the referral form:

While Powerlink have provided 2 network Options, PAGE are concerned about the decision making process and lack of justification of the need for the project. No documentation about decision making or least cost planning studies comparing other alternatives to building this powerline have been provided despite public requests.

Given the social impact, the number of Matters of National Environmental Significance and considering the precautionary principle, there are other alternatives that should be considered. In addition to the environmental issues associated with vegetation clearing, 'modifications' to the landscape will have a devastating impact on things like visual amenity, land values, land use, commercial activity and future development which would be considered as social impacts. Under the current EPBC legislation it is unclear how the social and economic impacts of a project are included in the assessment.

As highlighted in the Garnaut Report, Ross Garnaut refers to the danger of inefficient investment decision-making resulting from "overinvestment in network infrastructure and centralised generation, and underinvestment in embedded generation like solar photovoltaic and cogeneration". He notes the "current processes for extending the electricity network are likely to be suboptimal from a societal perspective" and states explicitly that: "… it will usually be better NOT to install … additional capacity until there is concrete proof of need."

Ross Garnaut further says that "this onerous burden of proof is necessary to ensure that only **essential** infrastructure extensions are undertaken (e.g. Woolooga to Gympie) and to avoid the possibility of multiple underused extensions to the grid". And again he said in this regard, and quoting the Australian Energy Market Commission, that electricity transmission infrastructure planning will need to have regard to the "the most efficient combination of transmission, generation, distribution and non-network options that will deliver reliable energy supply at minimum efficient cost to consumers under a range of credible future scenarios". It would also take into account demand side, embedded generation and fuel substitution alternatives.

He goes on further to discuss a number of emerging factors that will impact on the economic justification for large transmission projects such as that proposed by Powerlink, such as the fact that energy losses from electrical resistance in transmission cables are significant when electricity is transported over long distances; the cost of network augmentation is driven solely by the extent of peak demand (3-4 days each year) and that embedded generation at peak periods helps to avoid or defer the high costs of network augmentation; and the fact that distributed generation that provides

energy during high demand periods is significantly under compensated for its lower levels of losses, network benefits and timing of supply.

## Network Limitations:

The initial network limitation is forecast to occur in 2014/2015 (ref: draft EIS section 2.2.1) and only between Woolooga and Gympie - some 40 kilometres north of the proposed newly acquired easements and the affected area.

The next network limitation is forecast in 2030 (ref: draft EIS section 2.2.1) for the rest of the Sunshine Coast and Gympie region - that is in 21 years.

This is specifically what Ross Garnaut is talking about. A better alternative is to addressing the problems when they arise i.e. Woolooga to Gympie, and plan for mitigation using embedded generation, demand management, and fuel substitution alternatives.

## Alternatives:

1. An alternative suggested by Parsons Brinkerhoff to address just the initial limitation (Woolooga to Gympie) has been dismissed by Powerlink on the pretext that they need to look at longer term solutions - in the case of the draft EIS - 40 + years.

2 A workable alternative network solution suggested by PAGE in May 2008, has been left undeveloped – not even considered.

3 PAGE facilitated a viable non-network alternative, which includes significant 'bankable' demand management initiatives and scalable renewable, Sunshine Coast-based solar-thermal generation with storage capacity. The solar thermal local generation project has been dismissed summarily in the draft EIS. This is premature as Sanctuary Energy is working toward meeting both the regulatory timeframes, and developing a 'bankable' solar solution to the predicted network issue. Distributed energy solutions in other countries are proving to be up to 10% cheaper than centralised grid-supplied energy

**4. EPBC Act requirements**

It is evident that the proposed action will have a significant impact on Matters of National Environmental Significance. The EPBC Act requires that the approval be obtained for any such action. In this instance clearing is a threatening process for most of these EPBC listed species.:

- There is potential for likely impact on matters of national significance especially through culmulative impacts from the number of infrastructure projects proposed in the Mary and Maroochy River catchments.
- The proposed methods of reducing the impact of the proposed action are unlikely to significantly reduce the impacts.

## *4.1 Not following the principles of Ecologically Sustainable Development (ESD):*

Public statements issued by the Queensland government indicate a determination to build this powerline under any circumstances, based on an incorrect assessment that there are no alternatives to building the powerline.

This does not follow the principles of ecologically sustainable development, which are defined by the EPBC Act that "decision making processes should effectively integrate both long term and short term economic, environmental, social and equitable considerations".

Similarly, the conservation of biological diversity and ecological integrity should be fundamental considerations in decision- making. In fact, environmental baseline studies are limited and the draft EIS has only just been released to the public before this referral. This is a clear indication that these principles are not being followed.

## *4.2 Lack of Community Consultation*

The SDPWOA process requires public comment on the EIS, however, we are concerned that appropriate levels of information to enable informed submissions has not been provided. To date, there is local community outrage at the lack of public consultation regarding this project. Powerlink and the State Government have made a mockery of the concept of "transparent process" and the Freedom of Information laws, denying public access to a wide range of relevant information, especially regarding costings and alternatives. Although there has been public consultation meetings in relation to the powerline proposal, very little specific technical information concerning species populations and environmental impacts have been made available.

While Powerlink claim they have provided the community with specific information on the project it is important to note that specific requests for information have not been provided to the community. Of particular note is the Powerlink standard reply "that information will be provided in the Draft EIS and not before hand". There has been no opportunity for the community to be involved in planning prior to the release of the Draft EIS.

Once the Draft EIS was released, the community have only 6 weeks to prepare a response to a 1900 page document, which is considered by the community to be too short and an extension was been denied.

An example of the type of information the community have requested is the costings and detail of NPV calculations and assumptions made in the various Options considered. Only when this information is made public can the community make an informed decision on what is being proposed for them. As of the date of this submission, 4 weeks into the submission period, this information still has not been provided.

## 5. Likely significant impacts on Matters of National Environmental Significance

It is stated on p15 of the referral, "Impacts on listed threatened species included the removal or modification of habitat (mainly dry forest habitat), increasing movement opportunities for exotic flora and fauna, edge effects, mortality through the construction phase and increased fragmentation and isolation of habitats".

Then in Table 3.3 a subjective summary is presented of an assessment of significant impact under the EPBC act Significant Impact Policy Guidelines 1.1. However there is **no standard methodology in assessing impacts on species and risk of extinction.** With an appalling lack of data about the listed threatened flora and fauna, there is no basic population and life history information for most species eg 6 hours allocated to surveying Giant Barred Frog. This is particularly important when considering the culmulative impacts of the numerous infrastructure projects being proposed for the Mary and Maroochy river catchments. In particular:

- **Presence/absence of data provides no basis for assessing impacts on population numbers**. There is no quantitative methodology specified for assessing the risks that the project poses to populations of threatened species and their habitats. The impact on threatened species must consider loss of habitat, connectivity and fragmentation.

- No formal Population Viability Analyses or Population and Habitat Viability Assessment studies were conducted on baseline data. These are "*industry-standard*" analyses, ideally suited to assess impacts and risk of extinction.

- Likelihood of future population viability and increase in risks of extinction of nationally listed threatened species has not been considered;

- Likelihood of significant increase in risks of habitat damage not assessed.

"*Population viability analysis*"(**PVA**) and "*Population and Habitat Viability Analysis or Assessment*" (**PHVA**) **are very useful tools** (indeed the only widely-used such analytical tools (Burgman, M. & Possingham, H. P. 2000 and Possingham et al. 2002) **in evaluating risks, particularly to small populations and threatened species.**

- PVA is a modelling tool that estimates the future size and risk of extinction for populations of organisms. It can be used to estimate the probability of a population going extinct over a given time under different scenarios. A PVA is often only one step of a PHVA.

- PVHA is a tool to compile, evaluate, and synthesize data and build a framework for conservation actions. It provides an in-depth examination and synthesis of what is known of a species" life history, ecology, management, and other factors to determine courses of action to manage for viable populations. Assessments include consideration of model analysis, habitat management, captive breeding (if appropriate), genetic factors (if appropriate), life history, status, threats, geographic distribution, education and information, other conservation efforts, human demography, research and any other component deemed necessary.

In any event, without such analyses (PVA or PVHA), reviewers of the draft EIS are left with a totally unsatisfactory approach to assessment of risks to MNES, and are thence reliant on the EIS report's "*trust me I'm a scientist*" approach and "*wishful thinking*" in respect of recommended mitigation measures.

Similarly the mitigation strategies proposed in the draft EIS are largely untried , unproven or unsuccessful with little documentation of prior success for these listed species.

**Lack of assessment for climate change implications and greenhouse gas emissions:** Under the current EPBC legislation there is no requirement to consider impacts from climate change or greenhouse gas emissions with project proposals. However under the current review of the EPBC Act, this may become a consideration both direct and indirect impacts which should be considered when comparing alternatives to powerlines.

**The following are impacts of the action on the relevant matter protected under Part 3.**

Likely significant impacts of the proposed action on relevant matters protected under the EPBC Act on terrestrial ecosystems and biodiversity.

## *5.1. Impacts on Mixophyes ieratus (Giant Barred Frog) Endangered:*

The majority of known populations of *Mixophyes iteratus* in the Mary River catchment are known from lowland tributaries of the Mary River comprising the lower altitudinal limit of their range. This strong-hold is also the northern limit of the core Giant-barred Frog population in Australia. Here they inhabit stretches of creek that are characterised by slow pools and stable creek banks with under-cuts for egg laying. Healthy riparian vegetation is essential for providing leaf litter, bank stability and detritus for tadpoles. Canopy closure is normally a feature of this frog's habitat as it provides cool temperatures, cover and abundant leaf-litter.

Significant populations have been recorded in recent years at Belli, Blackfellow, Happy Jack and Coonoongibber Creeks. These records contribute significantly to the core lowland populations of *Mixophyes iteratus* and constitute the lower limit of the frog's altitudinal range and also the North-easterly limit of its range (one record is known from the Burrum River catchment above Lenthalls Dam about 150 km to the north; its connectivity with southern populations is unknown but unlikely).

Construction of the powerline will likely have significant impacts on the habitat and populations of *Mixophyes iteratus* by:

- Decreasing breeding areas
- Decreasing habitat areas for occupancy
- Decreasing population levels and
- Isolating the population leading to reduced genetic integrity and possible genetic depression
- Disrupt the breeding cycle of the population
- Introduce disease that may cause the species to decline
- Interfere with the recovery of the species

A Recovery Plan has been developed for the Stream frogs of SE Queensland (Hines et al, 2002). Recovery of *Mixophyes iteratus* is addressed in section 4.4 of the plan and reads as follows:

'**Manage populations of the Giant Barred-Frog on private land**

*The vast majority of known populations of the Giant barred-frog in South-east Queensland occur along narrow remnant riparian vegetation on private lands. Long-term conservation of the Giant barred-frog in Queensland is dependant upon the maintenance of water quality and flow regimes, and on the protection and enhancement of riparian vegetation on these lands'*

Disturbance of riparian vegetation equates to land clearing which is a key threatening process and is contrary to the recovery actions in the Recovery Plan (Hinds et al 2002)

## *5.2 Impacts on Phyllodes imperialis (Southern Pink-underwing moth)*

The southern subspecies of Phyllodes imperialis is found in the thick primary lower montane rainforests from southeastern Queensland to northern NSW. The Corronia multisepalea which is the food plant fo the larvae is found in southeastern Queensland in dark sheltered rainforest. The major threat to the species is loss of habitat (Clarke, G.M. & Spier-Ashcroft, F.) . Dr Don Sands, CSIRO Fellow Entomologist, Brisbane has stated that he believes the moth and food plant to be in the easement for the proposed powerline. No surveys have been conducted at all to determine invertebrate populations. This is an appalling lack of data even though this species is listed as endangered.

## *5.3 Threatened plants listed under the EPBC Act*

Thirty EPBC Act threatened plant species were identified as occurring, or potentially occurring within the Study Alignment of which 22 were listed as vulnerable and 8 as endangered. The identified plants unless protected would:

- lead to a long-term decrease in the size of a population by fragmentation.
- reduce the area of occupancy of the species through land clearing;
- fragment an existing population into two or more populations due to the size of impact;
- adversely affect habitat critical to the survival of a species;
- disrupt the breeding cycle of a population;
- modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to
- interfere with the recovery of the species

## *5.4 Impacts on Pteropus poliocephalus (Grey Headed Flying Fox) -vulnerable:*

Several maternal colonies of *Pteropus poliocephalus* (Grey Headed Flying Fox) occur in the vicinity of the proposed powerline and feed within a 50km radius. High protein food (36-48%) is critical for feeding young during Oct-Dec period and forages within the endangered Regional Ecosystem 12.3.1, and of concern Regional Ecosystems 12.3.11

and 12.11.14. (per comment Dr Les Hall 2006). All the following significant impacts are likely to occur due to clearing:

- lead to a long-term decrease in the size of a population by loss of critical food source;
- reduce the area of occupancy of the species through land clearing ;
- fragment an existing population into two or more populations due to the size of impact;
- adversely affect habitat critical to the survival of a species;
- disrupt the breeding cycle of a population due to insufficient food for the young ;
- modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline;
- interfere with the recovery of the species.

## *5.5 Impacts on Migratory Birds*

Terrestrial migratory species such as *Monarcha melanopsis* (Black-faced Monarch), *Monarcha trivirgatus* (Spectacled Monarch), *Myagra cyanoleuca* (Satin Flycatcher), *Rhipidura rufifrons* (Rufous Fantail) are all known to require damp gullies in rainforest for breeding (Pizzey 1988). The main channel of the Mary River and Yabba, Amamoor and Kandanga Creeks are recognised as significant riparian corridors (Cooloola Shire Council, 1995). Clearing of vegetation corridors is likely to significantly impact on these migratory species which rely on forest vegetation to provide protection and food along their migratory path and also likely to :

- lead to a long-term decrease in the size of a population through loss of habitat and migration corridor protection.
- reduce the area of occupancy of the species through loss of habitat;
- fragment an existing population into two or more populations.
- adversely affect habitat critical to the survival of a species – migratory species particularly these small birds need habitat protection;
- disrupt the breeding cycle of a population;
- modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; and
- interfere with the recovery of the species

## *5.6 Impacts on the Dasyurus maculatus (Spotted tail Quoll and Northern Quoll):*

There is anecdotal evidence of a population of *Dasyurus maculatus* (Spotted-tail Quoll) and a skull of a northern quoll was found in the Eerwahvale easement which was identified by Dr Scott Burnet who can verify the sighting. Quolls live in a wide range of habitats from rainforest to open woodland areas which is within or adjacent to the proposed powerline area. The biggest threat to the quoll is loss of habitat, fragmentation, human persecution, competition from introduced predators and cane toad poisioning (Van Dyk & Strahan, 2008). The proposed powerline will result in the removal/modification of approximately 20.5 ha of potential habitat.

Appendix N – 5.3.6 states that there are no specific mitigation measures adopted for this species because none were found during the survey time. Hair tubing was carried out. 10 tubes were put out for 20 nights at sites 1-8 then for 10 days at sites 9-12. This is an

appalling lack of data and certainly does not provide conclusive proof that the quoll do not exist along the 86 kms of existing easement and proposed new easement.

Reducing the habitat by 20.5 ha is likely to:

- lead to a long-term decrease in the size of a population;
- reduce the area of occupancy of the species;
- fragment an existing population into two or more populations – unclear of extent of population.
- adversely affect habitat critical to the survival of a species;
- disrupt the breeding cycle of a population;
- modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; and
- interfere with the recovery of the species

Based on this evidence, we recommend that this proposal be a controlled action under the EPBC Act. We request the opportunity to provide comments on any further information that is provided to the Minister under s76 of the Act.

If you wish to discuss any of the issues raised in this submission, please contact me on ph 54470310 or email a.house@skymesh.com.au.

Yours sincerely,

Annette House
Environmental researcher
PAGE