



Hon Geoff Wilson MP
Member for Ferny Grove



**Queensland
Government**

Minister for Mines and Energy

Your Ref: 861-07
Our Ref: ME/07/2382

24 SEP 2007

Mr Neil Laurie
The Clerk of Parliament
Parliament House
Cnr Alice and George Streets
BRISBANE QLD 4000

Dear Mr Laurie

Thank you for your letter of 13 August 2007 concerning petition No 861-07 received by the Queensland Legislation Assembly requesting the proposed Powerlink Queensland (Powerlink) high voltage transmission lines between Algester and Larapinta Substations be placed underground.

I am advised due to forecast high growth in electricity demand Powerlink needs to construct a new high voltage substation at Larapinta, and a new transmission line between Larapinta and Algester by the summer of 2010-11 to reinforce the electricity supply to the Brisbane South area.

To assist Powerlink better understand the potential social, economic and environmental impacts of a proposed new transmission line before any final decision on the route is made, it has to consult with local landholders and stakeholders and carry out an Environmental Impact Assessment (EIS). Powerlink advises from its consultations with the community to date the main concerns have been the visual amenity of overhead transmission lines and health concerns related to electric and magnetic fields (EMFs).

I understand Powerlink has engaged environmental consultants Natural Solutions to undertake the EIS to determine the best location for the new easement for the line. Natural Solutions has identified a study corridor and preliminary studies have identified a small section of the new transmission line (about 1.2 kilometres) in the area immediately south of the Algester Substation will need to be placed underground. This is because there is not enough space for an overhead transmission line between the newly developed industrial estate on the eastern side of Paradise Road and existing residential development on the western side.

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I am advised as a result of its initial investigations and consultation with the community Powerlink has widened the study corridor over the southern half of the route to consider increasing the distance between the powerline and residences. Also to improve visual amenity Powerlink is considering the use of steel poles instead of lattice towers in some areas.

It is not feasible for Powerlink to underground the whole length of the new transmission line because of the prohibitively high cost. Underground transmission lines at this voltage cost up to 10 times as much as overhead lines. Powerlink operates under the rules of the National Electricity Market which require that Powerlink's developments meet all environmental laws and reliability criteria at the lowest cost to electricity customers.

When Powerlink has finished its investigations and consultations it will request the proposed development be designated as Community Infrastructure under the *Integrated Planning Act 1997*. As the Minister responsible I must consider the matters specified in the *Integrated Planning Act 1997*, which includes considering the impacts on communities near the development and the broader communities which are the beneficiaries of the development. I also consider issues raised in submissions to Powerlink during the consultation process and the account taken of those issues. Should Powerlink request me to designate the land for this project, all submissions will be given due consideration by me when deciding whether or not to make the designation.

With regard to concerns about EMFs Powerlink operates all its transmission lines within current guidelines set by the Australian National Health and Medical Research Council.

Powerlink recognises there is community concern regarding EMFs and health, constantly monitors relevant research, and is a member of the National EMF Committee of the Energy Networks Association. Powerlink also relies on expert advice from health authorities in Australia and from around the world regarding electric and magnetic fields.

EMFs are found everywhere electricity or electrical equipment is used, including domestic electrical appliances such as televisions, or workplace equipment such as photocopiers and computers.

Since the 1970s most of the health research has focussed on whether exposure to power frequency magnetic fields can constitute a health risk. The strength of the magnetic field at the edge of a typical Powerlink easement is generally similar to those encountered by people in their daily activities at home or at work.

Both electric and magnetic fields decrease rapidly as the distance from the powerline increases. By way of example, magnetic field levels at the edge of the easement for a 110 kilovolt double circuit overhead line, would typically be similar to the field experienced standing in front of an electric stove. At about 100 metres, one would not be able to measure any EMF from the transmission line.

Undergrounding a transmission line eliminates the electric field, but it does not eliminate magnetic fields. In fact, with underground cables, magnetic fields are higher than directly below an equivalent overhead powerline, because the cables are closer to areas which people can access.

Thank you for bringing this matter to my attention and I trust this information is of assistance. Should you have any further enquiries, please contact Mr Murray Daniel, Senior Policy Advisor of my office on telephone 3225 1861.

Yours sincerely

GEOFF WILSON MP
Minister for Mines and Energy