

25th March 2003

Mr. Sebastian Roberts
Acting General Manager
Regulatory Affairs – Electricity
ACCC
Po Box 1199
Dickson ACT 2602

Dear Sir,

RE REVIEW OF THE REGULATORY TEST

We want to express to you our very genuine concerns that the Regulatory Test, as it is currently applied, is failing to promote a true cost/benefit analysis of all viable alternatives – most particularly in relation to the alternative of underground transmission.

There exists intense resistance by power utilities, in general, to provide the public community with **any current** information re the true costs and technological advancements of the underground cabling industry. This statement is supported by Saha Energy International who in their report, commissioned by the ACCC to review Murraylink's application for regulated status, noted on page 59; **“most of the sources of the costs of laying underground cable appear to be confidential.”** If this is so for an International participant within the industry it is especially so for the general community. The Coomera Community in the Gold Coast Hinterland has evidenced this in all discussions with and information provided by Powerlink Qld in relation to the planning of the **new** Maudsland to Molendinar 275 KV Transmission Line proposed through the Hinterland and State Forest.

Because these issues are relevant to the ACCC's Review we are attaching as **Appendix A**, a letter already composed to the ACCC in which we outline and evidence many of ours, and the general public's, real concerns and misinformation regarding these important considerations.

Powerlink Qld first met with the public in 2000 at a community meeting organized by them. When the community asked about the underground alternative they were informed “it was **too** expensive” and no information would be provided. When the EIS was released under grounding was stated to be ‘approximately 10-16 times the cost of normal overhead construction’, therefore it

was rejected and remained unassessed as an alternative. When finally in 2002, at the community's insistence, we were reluctantly provided with written costs by Powerlink to underground 2km the figure provided was \$8.1M extra. The community representatives met with Powerlink and offered \$4M to facilitate the additional expense but Powerlink refused to proceed with these negotiations.

Subsequently the Community has ascertained that it is in fact an extra \$8.14M to underground the entire 12km of new transmission line. These realistic costs were deemed by Powerlink to be "irrelevant" even though the community had paid \$18,500 to ascertain them. Powerlink states this project; "to be the first major upgrade of the Coast's transmission network for more than 20 years". A rational decision making process should determine that new developments of the ensuing years; incorporated with the knowledge by the industry, though denied, that overhead transmission is harmful to health and environment and is also visual pollution, should be incorporated with the assessment of alternatives.

We find it deplorable that realistic costs of new technology are denied under the premise, as stated by Powerlink, **"Powerlink as a regulated monopoly is bound by the rules of the national electricity market. This requires Powerlink to select the option that delivers the lowest cost to electricity consumers while meeting reliability requirements and environmental standards and regulations. The overhead option proposed by Powerlink is the only option that meets all these criteria."** We strongly challenge this claim by Powerlink. Firstly, as just evidenced, true cost of undergrounding has never been acknowledged. Secondly, undergrounding can meet all of the reliability requirements. Thirdly, environmental standards are more advantaged by undergrounding. Fourthly, **no regulations exist at this current time in Australia** in relation to human exposure to emf's and human health. See **Attachment 1**, for ARPANSA and NHMRC guidelines.

In his recent submission to the ACCC, dated 28th February 2003, Mr. Gordon Jardine CEO Powerlink states, *"Thirdly, we have a number of active line projects which have generated actual (rather than possible) community agitation for undergrounding. An ACCC decision in favour of tactical undergrounding would change our approach to those projects, which is presently based on overhead lines only."* The communities concerned strongly object to being so called agitators. We are mothers and fathers [justifiably concerned for the health and safety of our loved little ones] who have repeatedly requested, through proper public consultation, that Powerlink provide us with true costs of undergrounding. The fact that Powerlink has steadfastly refused to conduct proper investigation of the underground option in relation to these projects and proceed with overhead lines

only has been against the expressed interests of the communities concerned and the public in general.

“Tactical” undergrounding is an investment in our Nation’s future; it must be incorporated into the Regulatory Test to facilitate a true cost/benefit analysis of the best alternatives. The alternative of continuing to deny it is preventing promotion of technological advancements for the greater benefit of society. Such decision making leaves us entrenched in the mistakes of the past and promotes misuse of public monies by facilitating construction methods, which are outdated and will require replacement.

We note that the ACCC states, “The regulatory test is essentially an economic cost/benefit analysis of a proposed interconnector or network augmentation.” Yet, as we have determined, the true cost of the underground alternative remain unassessed and the true benefits to society and environment achieved by this alternative remain unacknowledged.

A major contributing fact in this situation persisting is **the power industries denial of the real health risks proven to exist in relation to high voltage overhead power transmission**. This has been an historical development that can no longer persist in 2003 when recent EMF research studies carried out by prestigious international scientific groups have now conclusively found that **there does exist health effects from exposure to EMF**. Please refer to attached report, **Attachment 2**, by Vincent DelPizzo, Ph.D., who is co-author of the 2002 California EMF report (www.dhs.ca.gov/ehib/emf/) and a member of the IARC (International Agency Research Cancer) working group that in 2001 classified magnetic fields as a “possible human carcinogen”.

It appears to us that to achieve the current situation where power utilities in general continue to deny that increased emf exposure is harmful to ones health they are relying on their “statute of immunity”.

However, The Workplace Health & Safety Act (WH&S) clearly defines the responsibilities of members of a corporation. An extract is included as **Attachment 3**.

A brief outline is as follows:

“**representative**” means-

- (a) of a corporation- an executive officer employee or agent of the corporation; or
- (b) of an individual- an employee or agent of the individual.

If a corporation commits an offence against a provision of this Act, each of the corporation's executive officers also commits an offence, namely, the offence of failing to ensure that the corporation complies with the provision.

We now refer to the Hazle Hurst report for EARC which clearly sets out advice by the Crown Solicitor to the Director of the Premiers Department as of February 1989 that:

The statutory immunity is lost if the grantee fails in his/her duty of care to avoid all necessary harm.

The findings of the Senate Report by the Senate Economics References Committee, Dec 1995, titled "Eastlink: The Innterconnector of NSW and Queensland Electricity Grids with a High Voltage Powerline", took a similar stand to that of the Gibbs report, which is referred to in Appendix A., and stated on page 27,

"The Committee agrees that, as a minimum policy or until evidence suggests otherwise, the concept of 'prudent avoidance' should continue to be practiced by government and power authorities."

It was also noted that "*there are currently no guidelines for what 'prudent avoidance' means.*" This situation continues 8 years on. And "*there are safety standards for exposure to EMFs but these do not readily translate to people living or working near high voltage power lines.*" There are now no current regulations re human exposure levels- see Appendix A.

Further, in relation to the issue of potential health effects of EMFs the Committee conclude that, "*In attempting to resolve this issue from a scientific point of view, it became clear to the Committee that reputable scientists have taken strong stands both in support of and against the proposition that high voltage power lines may cause health effects in people living near them..... ..Broad reviews of the literature can be biased, intentionally or unintentionally, by the availability of information, choice of scientific papers used, and inherent opinions of the reviewer.*"

This has been an historical development funded and promoted by power utilities. “*The source of funding of a scientific experiment is not a factor in the peer review of a manuscript because the review process is limited to scientific considerations. Nevertheless, the nature of the privity between the author of a scientific study and a party that fund the work is an important issue that affects the believability of the study.*” States Andrew A. Marino, Ph.D.; who is Professor, Department of Orthopaedic Surgery and Department of Cellular Biology and Anatomy Louisiana State University of Health Sciences Center Shreveport, Louisiana, USA; and Professor, Department of Biomedical Engineering Louisiana Tech University Ruston, Louisiana, USA in a report, **Attachment 4**, dated January 2003 (page26).

He further states that, “*It is an empirical fact that for industry-controlled research the percentage of **negative** reports (the investigator did not find the EMF studied caused a biological effect) is vastly greater than the percentage of **positive** reports (the investigator reported that some biological endpoint in the laboratory system [or group of diseased subjects] under study was affected by the applied EMF).* “***But that for research that was not controlled by the power industry the percentage of positive reports is vastly greater than the percentage of negative reports.***” (Page 29). In addition “*The difficulties posed by an uncritical reliance on the bare opinion of the expert committees goes far beyond the problem that such committees were largely composed of experts from the power industry having clear or apparent conflicts of interest.*”(page32)

The health hazards of overhead power lines are an assault, which families in close proximity cannot avoid, nor defend against. Professor Marino observes (page 11) “**the Benson’s interest in avoiding disease is surely greater than Powerlink’s interest that they should do so. Were it otherwise, Powerlink could bury the powerline, thereby erring on the side of safety and completely obviating the basic issue regarding risk at the Benson property, which arises as a consequence of an economic decision to build an overhead powerline.**”

In Australia there is broad consensus that a *prudent* approach should be taken in the design and siting of new transmission facilities. Although there is no precise definition of **prudent avoidance**, most references refer to the assessment of the cost factor involved. Undergrounding is not being assessed

for its benefit of prudent avoidance, because the cost factor is misquoted in the light of current technological developments.

At present overhead power line easements are 60meters wide, a true policy of prudent avoidance would see them being a minimum of 300meters. This is a huge cost factor which needs to be assessed in comparison to an easement for underground power which needs to be 10meters wide, which is a huge cost saving.

In 1995, in relation to Eastlink, the Federal Government acknowledged **“that the appropriateness of prudent avoidance as a national public health policy needs to be assessed on the basis of the understanding of potential health effects at any given time.”** For up-to-date information please refer to Attachment2, by Professor DelPizzo in January 2003. This is the viewpoint supported by the worlds leading **independent researchers**.

As Australians we are taught that protection from threat of death, assault, harm and injury are our democratic rights and that Government Policy, Regulation and Practice will be formulated in the public’s best interest that this is achieved. Yet as a family of seven (youngest 4) living on our 8 acre Coomera River property, which is a place of Australian Paradise, we search and seek and find that in the year **2003** there exist no Current Regulations which will ensure this is so, or even facilitate any decision making process which is rational in its intention to protect us.

Please begin now by Regulating towards a better future and incorporating fully the underground alternative in the planning of new transmission lines.

Please facilitate the assessment of under grounding as an alternative in keeping with modern development, technological advancement, realistic costs (approx 1/3rd more, and reducing), less degradation and human and environmental protection.

Please facilitate true assessment of the cost/benefit of under grounding within your Regulatory Test.

Please recognize completely the undisputable proven health risks, harm to wildlife, environmental pollution and visual nightmare which are generated and spread by overhead high voltage transmission lines.

Please take the time to read all we have submitted, and we will trust that you will appreciate the truth of our documented facts and regulate accordingly.

Endangerment of life is the greatest “cost” of all.

Yours Faithfully,

Margaret, Geoff, Carmen, Lewis, Sophie, Tyler and Mitchell Benson.

“Riverwood”
27 Equestrian Drive,
Maudsland, 4210
Gold Coast, Qld.

APPENDIX A

10th February 2003

Dear Sir/Madam,

We are writing to inform you of our very grave concerns about the misinformation being provided to the public and the Government by power companies in relation to the REAL costs associated with constructing new high voltage transmission lines underground.

Our first reference is The Environmental Impact Assessment Review for the Greenbank To Molendinar 275kv transmission line, which was provided by Powerlink QLD September 2001. The executive summary states “**Underground Transmission Lines: Undergrounding was also considered. It was rejected for a number of reasons, including cost (it is approximately 10-16 times the cost of normal overhead construction).**” (www.powerlink.com.au) This is Powerlink’s current public statement and we have available many newspaper articles and television news reports in which their company representatives restate this as Fact to the public.

Secondly, we refer to a letter to us dated 23rd July 2002 from Powerlink which states.. *“Powerlink confirms its verbal advice that the additional cost to place the transmission line underground between Abbot Court and the edge of the Nerang forest, a distance of 2km, is estimated as a budget figure of \$8.1M. This additional cost is in excess of that estimated for the same section of the route constructed as an overhead transmission line. This additional cost excludes allowance for any form of river crossing of the Coomera River...”*

After this letter a meeting was organized between Powerlink’s representatives and their Solicitors and representatives of the community and their Solicitors. At this meeting it was determined that the community was prepared to pay \$4M towards the cost of undergrounding the power across the Coomera Valley. Powerlink’s major concern appeared to be that this would set precedence. Surely though this would be a fantastic precedence where the community was privately funding what we see as an investment for the future. Powerlink did not proceed any further with this offer and refused to provide any real costing as requested, instead they have continued with their plans to establish the Maudsland to Molendinar Transmission Line aboveground as speedily as possible, even though (as we have now determined) this offer could possibly have created a profit of \$2.5M.

We now refer to a report (see **Attachment 5**) (to be forwarded separately) commissioned by us (paid for by our community at a cost of \$18,500) from TransEnergie Australia Pty Ltd (A subsidiary of Hydro-Quebec) dated 24 January 2003. TEA is a subsidiary of the world’s leading underground power company and is responsible for Murraylink and Directlink that are Australia’s two most major underground power projects. Please read chap 5.1 which states that to underground cable connection for the 12km route between Maudsland and Molendinar **“The total NVP for option 2A (replacing the overhead transmission line cost in Powerlink’s Option 2 with an underground cable) was determined to be \$33.79M. As opposed to Option 2 (aboveground) \$25.65M.”**

This difference of \$8.14M for 12km is approximately an extra \$680,000 per kilometer. This cost difference is so verily in contradiction with Powerlink’s information through their EIAS reports (not only the Greenbank to Molendinar Line but with every report submitted to every community from Tully and Cairns in the North to Texas in the South;{ copies available}) , their correspondence, their public information leaflets,

their statements to the media and their representations to the Government ; as to be arguably misrepresentation in the extreme.

Now that we have brought this to your attention we ask for clarification as to which Government agency this misrepresentation should be investigated by? The Hon. Terry Mackenroth wrote in a letter to us dated 25th July 2002, “ *The obligation to implement the least-cost solution is a requirement of the Australian Competition and Consumer Commission’s (ACCC) Regulatory Test. The ACCC is the body responsible for the regulation of Powerlink’s transmission pricing.*”

We understand that the ACCC is responsible for monitoring compliance with the Code, but does this only relate to anti-competitive detriment issues and compliance with technical standards or does it also have responsibility for the safe supply of electricity and protection for very concerned communities through out Australia?. We note that the ACCC in its Determination dated 27th November 2002, “Applications for Authorisation; Amendments to the National Electricity Code; Queensland Technical Derogations” in Chap 4, ‘The Commission’s assessment’ page 8, states “*Therefore, the Commission recognizes the concerns regarding adverse health effects as raised by RAGAT and the Bensons.*” For this recognition we thank you. Further “*The Commission also notes that the matter of undergrounding power lines is not relevant for the Commission’s authorization of this application.*” As the application was for the extension of existing technical derogations this is not disputed, however we would point out that a power utility which is forward thinking and wants to invest in the future on behalf of the citizens and the environment by undergrounding new transmission lines, would in fact suffer anti-competitive detriment due to the slightly higher costs such a decision would incur. This would be offset over time due to the lower ongoing maintenance costs incurred by underground lines as opposed to above ground.

However please consider the point that the ACCC’s own focus on anti-competitive behavior is acting against the best interests of the community and public benefit by failing to promote the proper consideration of the underground alternative. In fact power utilities rely on this when rejecting the underground alternative.

We refer to Powerlink's EIAR Sept 2001, www.powerlink.com.au, Greenbank to Molendinar Transmission Line Project, page34, "*In deciding on reinforcement options, Powerlink as a regulated monopoly, is bound by the rules of the national electricity market. This requires Powerlink to select the option that delivers the lowest cost to electricity consumers while meeting reliability requirements and environmental standards and regulations. The overhead option proposed by Powerlink is the only option that meets all these criteria.*" This is based on their assertion that undergrounding is 10 to 16 times more expensive (some \$18+M extra per km) This claim is disputed therefore their decision making process is biased and flawed! Further it does not allow for the assessment of the environmental benefits of the underground alternative nor does it promote the wisest investment for the future. For every New Transmission Line built above ground now is one, which will have to be dismantled and undergrounded in the near future. This situation is an abuse of the taxpayer's money.

It is our information that the public has relatively few objections to high voltage transmission of power through their properties and communities if such transmission was to be undergrounded. This is based on discussion with community groups throughout Australia who are so very justifiably concerned about the real health risks and environmental concerns associated (and proven) in relation to high voltage above ground transmission lines. With the current situation in Australia where the National Electricity Market is being established for our countries future, the climate is one of misrepresentation of up to date underground pricing and technology information. Powerlink's reference opposing underground power is a Report dated May 30th 1988 to Hon. R Fordham, Minister for Energy, Government of Victoria titled "Electromagnetic Fields from Overhead Transmission Lines and Underground Cables" is outdated. It is 15 years old and Underground power technology has progressed a long way in the ensuing years. This current information on the development of cable technology is not readily available to the public.

Furthermore it is of great concern that the establishment of new transmission lines and the formation of the NEM (National Electricity Market) throughout Australia is currently happening and being planned for at a time when there exists NO regulations in Australia in relation to human exposure and emfs. ARPANSA (Australian Radiation Protection and Nuclear Safety Agency) the Federal Government agency charged with responsibility of protecting the health and safety of people and the environment from the

harmful effects of radiation, have NO guidelines or standards regulating exposure to electromagnetic fields and defer to the NHMRC's (National Health and Research Council) Interim Guidelines. (www.arpansa.gov.au/is_emf.htm)

These guidelines only ever related to the thermal effects on the body and had no consideration for the athermal effects of electromagnetic radiation on the body. Please refer to **Attachment 1** "Re response to questions" which are several emails from the NHMRC, which make a clear statement that the NHMRC has NO current guidelines or indeed interim guidelines in relation to emf exposure. We ask Who is protecting the health and safety of the public when the NEM is being established aboveground close to families? The fact that new aboveground transmission lines are being built whilst there exists no regulations/guidelines is VERY WRONG.

Such Government spending is a big waste of the taxpayer's money when these lines are being built, only to be pulled down and undergrounded in the next few years. The planning should be happening now so that for a little extra money these new lines are undergrounded in the first instance. The decision making process is flawed if it relies upon misrepresented facts. It is time now for all planning of aboveground lines to be stopped while the REAL costs for undergrounding are properly investigated and assessed as to the future benefits for communities and the environment.

In relation to the proposed Maudsland to Molindinar Line, Powerlink now claims it is out of time to correctly assess and plan for undergrounding the line, as the Gold Coast is approaching critical power shortage supply problems. We refer you again to the attached report from Transenergie Australia (TEA) page 24, which states that "*Directlink has the potential to supply a portion of the Gold Coast/Tweed Heads area load (to a maximum of 180 MW) with power transfers from the New South Wales region*". A connection to Directlink would allow Gold Coast power supplies to be maintained whilst the planning and execution of undergrounding the new Maudsland to Molindinar power supply line was established. We are not saying don't bring your power through we are saying bring it through as safely as possible (i.e. underground) and plan and invest in the future.

The Coomera Valley which will be traversed by this high voltage power line is promoted as "the Green behind the Gold" and supports three hot air balloon companies (contacts available) who will be unable to operate when an

aboveground line is established as they land meters to the north of the proposed line after flying in from the south several days a week. The new development "Tuxedo Junction" which has Local Government building approval (and is currently being marketed) is also traversed by this line, and is one of many new park residential subdivisions in close proximity to this line and will see 100 new families in this estate alone. None of which were considered by the EIS. The development's approvals have the transmission easement, under this 275KV line, designated as children's playground and park. As EMF's are now proven to cause increased incidence of leukemia in children (International Agency for Research into Cancer [IARC] June 2001 category 2B possible carcinogenic) this planning is deplorable. Councils cannot make the correct decisions in relation to planning if no guidelines exist, further they too are being misinformed as to the true costs of undergrounding.

This Transmission Line travels through the Nerang State Forest (which is the only State Forest in close proximity to the Gold Coast) .We would like to bring to your attention the fact that when numerous species of endangered bugs were identified in the Forrest the Department of Environment Qld demanded that the line was relocated away from the bugs and in fact to within much closer proximity to residential families instead. May we beseech you that our children's lives be so valued and alternative solutions, specifically that of undergrounding , be facilitated and not remain unassessed by genuine cost/benefit analysis.

We now refer to the Senate Enquiry of 2001: 'Enquiry into Electromagnetic Radiation- Report of the Senate Environment Communication Information Technology and the Arts Reference Committee. May 2001' and ask you to note their Recommendation 2.2. Which was, **The committee chair recommends that precautionary measures for the placement of power lines be upgraded to include wide buffer zones and undergrounding and shielding cables where practicable.** We ask that the ACCC address this recommendation and promote these precautionary measures in the public interest. In its planning of construction of the Greenbank to Molendinar Line, Powerlink have taken none of these measures and there are several residences which will be 50 to 60 meters from this new line and many more that are under one hundred meters from it. This is not safe planning and places many families at great health risk. Where is our protection? We cannot protect our children from assault by EMF's . We do indeed feel helpless while we watch the incidence of leukemia and cancer, associated with

proximity to high voltage powerlines, escalate.

What value is one human life? Perhaps the most recent world recognized review, which has attempted to answer this question, was the California Department of Health Services. Electric and Magnetic Field Risk Evaluation, which commenced in 1993 and was formally transmitted to the California Public Utilities Commission in November 2002. The report's attached Policy Option Document states, **“judging by other protective measures taken, economists have determined that society seems willing to pay five million dollars per death avoided.”** (www.dhs.ca.gov/ehib/emf).

We thank you for your time in reading this letter and ask that you study the attached report by TEA, please address our concerns and inform us as to who should investigate Powerlink's misrepresentations as to the costs of undergrounding and their discrepancies in their evaluation of alternatives. We urge you halt construction of the Maudsland to Molendinar aboveground line and prevent further misuse of government money. It should be the Government and its Agencies that protect the health and safety of families throughout Australia. It appears this is not so and the only explanation we can find relates to utilities/ governments protecting their profit margins and generating new profit at great risk to human health in a climate of no regulation and misinformation.

It is no longer possible to say a risk to health does not exist, as there is International Agreement that risks do exist.

If you can't address ALL our concerns could you please direct us to the Government Department/Agency that really can. We need help!!!, no one wants to address these matters with the gravity they deserve. It has to begin NOW as it is Powerlink's intention for construction to commence Mid March on the Maudsland to Molendinar Line and these works need to be halted whilst a review of the alternatives is conducted and costed.

To spend \$33.79M to underground this 12km line through residential areas, environmentally unique State Forrest, eco-tourism promoted hinterland, new park residential estates and our beautiful Coomera Valley cannot be denied evaluation.

To spend \$25.65M to aboveground this 12km line on 43m to 50m towers with 12 wires spreading electromagnetic radiation hazards for kilometers and being a

monolithic monster visible to the entire Gold Coast (for all time??) needs to be reevaluated.

To not do this, it is the communities opinion, identifies a defective decision making process which is not rational in principle because it fails to formally evaluate the best alternative.

Several years ago Sir Harry Gibbs a former Chief Justice of the High Court of Australia suggested electric utilities building new high voltage power lines “do whatever can be done without undue inconvenience and at modest expense to avert the possible risk.”

What value is one human life saved?

Yours Sincerely,
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Gold Coast, Qld.

