26 April 26 2002

Mr Michael Seery Program Manager Electricity INDEPENDENT PRICING AND REGULATORY TRIBUNAL OF NEW SOUTH WALES

Michael

Re **IPART Review of the Costs, Benefits and Funding for Undergrounding Electricity Cables** – Submission to draft report:

I have the following points which I would like tabled as a result of questions I raised at the public meeting at the Wesley Centre earlier this month:

- 1. I would like a response on the reason that High Voltage 132kV overhead lines have not been included in the scope of this review. In particular, the reliability of electricity supply to consumers is significantly affected via failure of the 132kV transmission sections of the grid, rather than lesser voltage cabling.
- 2. Also in relation to 132kV overhead lines, clearly the potential for reduction of electric and magnetic field radiation is greater than with undergrounding lesser voltage cabling. Whilst there is no scientific evidence linking EMF to health issues at this point in time, neither has any linkage been disproved. This scenario is akin to the tobacco companies whose officials denied health issues were linked to usage of their products. A government that knowingly allows high voltage cables to continue to emit EMF radiation in close proximity to urban dwellings will have a liability if any such link to cancer is proven in the future. No doubt this liability could bring government officials of the day into the courtroom in future.
- 3. Given points 1 and 2 above, it is therefore imperative that high voltage lines in built-up residential areas receive priority of undergrounding over low voltage lines given the risk and visual impact.
- 4. The avoided costs associated with reductions in lost revenue to DNSPs over a 40 year period appear to have been grossly understated on page 23 of the draft IPART report. The losses are made up of
 - a) lost revenue during outages; and
 - b) electrical resistance heat losses.

The revenue losses due to outage alone over 40 years would amount to the \$500,000 - \$700,000 quoted. However a much greater cost of losses in electrical heat loss is evident.

The report acknowledges that electrical costs due to heat losses would reduce by 1.5% of the total cost of energy <u>input to the electrical network</u>. Therefore even if it was assumed the revenue losses in a) above are zero, and that a median figure of \$600,000 is attributed to b) above, then this would imply that the cost of energy input into the electrical network over 40 years in net present value terms is

= (100 / 1.5) * 600,000 i.e. \$40,000,000.

This figure would appear to be underestimated by 1 or 2 orders of magnitude. If this is the case, then the cost/benefit case is significantly enhanced.

I would also like the additional costs and benefits/avoided costs of undergrounding 132kV high voltage overhead cables included in an appendix of the report so that a comparison can be made with the rest of the proposal.

Can you please acknowledge receipt of my email, either by return email to rob.downing@pil.com.au, or to my postal address as listed above.

Regards

Rob Downing