NSW Upper House Inquiry into Electricity Supply, Demand and Prices in NSW

Question on notice

The CHAIR: What is the droppage of such energy as it moves? If you have transmission lines that are so far away—

The Hon. JOHN GRAHAM: Over distance.

The CHAIR: I was just reflecting on this last night. We have not really asked much about the expanse of such infrastructure and what the loss is.

Mr ITALIANO: The simple answer to that is that there are line losses. It depends on the configuration of the system and the distance over which the energy travels. The energy travels follows the laws of physics, not the laws of economics. So it does not depend on who has bid and who has the load. It depends on who is closest to whom. So it is a little hard to estimate. Direct current lines, which are becoming much more prevalent, have almost negligible line losses. It is the existing infrastructure that incurs line losses. We can get back to you with more detail about line loss over distance.

The CHAIR: I would like that, because it is not something that we have looked at. We have heard that with Snowy Hydro 2 there are issues of transmission and capacity. It would be wise for us to be aware about what "line loss" means and its implications.

Mr ITALIANO: Sure. I am happy to come back to you with that.

TransGrid's response

The annual average level of transmission line losses in NSW over the last 10 years is 2.18%. Using this annual average, it means that in order to meet 10,000MW of actual demand in NSW 10,218MW of actual generation output would be required.