

**Submission  
No 261**

**INQUIRY INTO FEASIBILITY OF UNDERGROUNDING  
THE TRANSMISSION INFRASTRUCTURE FOR  
RENEWABLE ENERGY PROJECTS**

**Name:** The Hon Thomas Hughes AO KC and Mrs Christine Hughes  
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8 July 2023]

The Hon Emily Suvaal, Committee Chair,  
Inquiry - Feasibility of undergrounding the  
transmission infrastructure for renewable energy projects  
Standing committee on State Development  
Parliament House  
6 Macquarie Street  
SYDNEY NSW 2000

Dear The Hon Emily Suvaal MLC,

**Re: Feasibility of undergrounding the transmission infrastructure for renewable energy projects**

Internationally, Governments are choosing undergrounding on the basis that all costs, including environmental and social costs conclude that underground transmission is the cheapest long term solution.

HVDC underground transmission, proposed for undergrounding HumeLink, has less transmission losses than AC overhead lines and so has offsetting energy efficiency benefits over the life of the project.

Undergrounding is also chosen due to its benefits including

- No risk of undergrounding causing a fire

- No restriction or hazard on safe firefighting

- Protection of the infrastructure from severe weather and fire events

- Will not impede agricultural operations

- No impact on landscape and amenity and

- Significantly reduced impact on biodiversity as a much smaller easement is required

Our government are telling us that that renewable energy, like solar and wind will reduce the cost of electricity. Given this, it's critical that a better environmental option for transporting electricity, like undergrounding, isn't rejected on the basis of cost.

The benefits to the communities and the environment will last for generations.

Undergrounding will grant Transgrid Social licence, there will no longer be community opposition as concerns will be resolved with an underground solution. The community will work with the Government and TransGrid to assist in anyway possible to ensure the timetable is met.

There are greatly reduced environmental impacts with UG compared with the overhead lines.

Undergrounding requires a 15 m easement compared with a 70m easement OH  
Much reduced removal of trees and plants  
Reduction in endangered species types being killed (82 species impacted by HumeLink)  
Land above UG cable can be rejuvenated after construction  
No towers and wires interfering with bird flight or climbing animals  
Eliminates the risk of OH lines causing fires (see California 2018.....84 dead and the town of Paradise destroyed. Fire started by power lines)  
Eliminates air and ground fire control hazards  
Eliminates the risk of interruption to power transmission in severe weather and/or bushfires and improves transmission security and resilience  
Minimal impact on public or private land after construction is complete  
No OH lines impeding agricultural operations, machinery use, irrigation, drones or aircraft operation.  
No visual impact from the transmission lines and so no loss of of visual and rural landscape character.  
Little of no electromagnetic field impacts, therefore less risk of serious health impacts plus no interruption to new technologies like precision agriculture that improve the productive efficiency of agriculture.  
It would seem to the ordinary person that there is no doubt that the cheapest option is not the best option, that to get the full benefit we must commit to Worlds Best Practice and choose to put the power lines Underground.

Yours sincerely,

*The Hon Thomas Hughes AO KC and Mrs Christine Hughes*