

**Submission
No 239**

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

Name: Renate Lunardello

Date Received: 14 July 2023

13 July, 2023

The Hon. Emily Suvaal, MLC
Committee Chair,
Standing Committee on State Development,
Parliament House,
6 Macquarie Street,
SYDNEY, NSW 2000

Email: state.development@parliament.nsw.gov.au

Dear The Hon Emily Suvaal, MLC,

RE: INQUIRY INTO THE FEASIBILITY OF UNDERGROUNDING THE TRANSMISSION
INFRASTRUCTURE OF RENEWABLE ENERGY PROJECTS

My submission is in support of undergrounding the HumeLink Transgrid transmission lines and I hereby tend the following supporting information in accordance with the 'terms of reference.'

a) the costs and benefits of undergrounding

The impact of the Trangrid overhead transmission towers and lines running through the centre of my 250 hectare property are so enormous that they will render my sheep and wool production unworkable.

I am already burdened by an existing 330kV and 132kV transmission towers and lines traversing my property.

The area is not large enough to sustain the criss-crossing of three or more overhead transmission lines without having a detrimental effect on my ability to continue in primary production.

Australia produces 25 percent of the greasy wool sold on the world market. In 2021-22 the value of wool exports was \$3.592 billion.

In December, 2022 the UN Biodiversity Conference (COP 15) placed biodiversity firmly on the global agenda due to the emerging global sustainability requirement associated with the fashion industry and the requirement for sustainability and traceability of the products they are buying.

Simply, they want to know that the raw product they are buying have biodiversity measures in place.

This requirement cannot be achieved while Transgrid bulldozes a 70 metre wide easement over 360 kilometres of NSW regional areas.

The primary production industry is an important source of economic growth, employment, tax revenue and export earnings. Without it Australia would be worse off, both economically and in world reputation.

The high risk associated with bushfires being started by transmission lines is well documented throughout Australia. In December, 2021 I had a fire on my property which was caused by a faulty conductor on a power pole.

The probability of bushfires starting by transmission lines increases with the number of lines on a property.

The 2009 Victorian Bushfires Royal Commission highlighted that the 'State has a history of electricity assets causing bushfires. In 1969 and 1977 the failure of electricity assets including the clashing of conductors, conductors contacting trees, and inefficient fuses caused major bushfires. This history was repeated on 7 February, 2009, when five of the 11 major bushfires that began that day were caused by failed electricity assets; among the fires was that at Kilmore East, as a result of which 119 people died.'

Deloitte Access Economics put the tangible and intangible costs of the Victoria 'Black Saturday bushfires at \$7.6 billion. The estimate of the cost of the 2019-20 Black Summer bushfire is \$230 billion.

In addition to causing bushfires there are the problems associated with the ability to fight bushfires where transmission lines are located. Currently, there is a 25 metre exclusion zone which prohibits anyone from going near or under transmission lines while there is smoke or fire present. The reason for this is that the transmission lines produce an electrical arc which can electrocute you.

Fighting bushfires with aircraft is also prohibited where there are overhead transmission lines.

Fifteen neighbouring residences on Zouch Road, Yass range in distance from 342 metres to 953 metres from the proposed HumeLink Transgrid transmission line on my property.

Eleven neighbouring residences on Wargeila Road, Yass range in distance from 684 metres to 1.378 km from the transmission line.

Approximately, thirteen residences on Fairy Hole Road, Yass will also be in close proximity to the transmission line.

Should a bushfire start caused by the Humelink overhead transmission lines in this region which is prone to regular strong winds, these residences would all be in danger of being in a bushfire trap.

Transgrid cannot justify their insistence of building these overhead transmission lines and profess to have a social licence to do so, while there is the possibility of loss of life and property.

b) existing case studies and current projects regarding similar underground of transmission lines in both domestic and international contexts

Domestic underground transmission lines are as follows:

1. Marraylink – 180 km, HVDC 220 mw transmission link between Red Cliffs in Victoria and Berri in South Australia
2. Directlink – Qld to NSW
3. Marinus Link – 80 km, from Tasmania to onshore Gippsland, Victoria
4. Star of the South – 60 -80km combination of underground and overhead lines
5. Powering Sydney's Future Project – 20 km Transgrid 330kV underground transmission, Potts Hill to Alexandria

International underground projects include:

1. Germany – SuedLink 750 km, 525kV underground transmission
- SuedOstLink, 500 km, 525 kV
2. USA – California 10,000 miles underground
3. Champlain Hudson Power Express (CHPE) – 339 miles with 60% in waterways and 40% underground from US Canadian border to Queens, NY

c) any impact on delivery time frames of undergrounding

With the delay in the Snowy Hydro 2.0 development which is expected to be completed by December, 2029 if at all, there is time for Transgrid to reconsider their rejection of the HumeLink transmission line underground solution.

Transgrid have from the outset rushed their implementation of the HumeLink project to meet the completion date of Snowy Hydro 2.0 which was initially forecast as July, 2025. In doing so, I believe they had a flawed plan from the beginning when they didn't effectively consult with the landowners and the community.

Policy from the outset was based on the premise of guaranteed 'Compulsory Acquisition' of the easement without regard for the effect on the landowner and the community.

However, compulsion on people is a bad policy, forcing people to give up their rights to their land which they rely on for income and have an emotional connection to, undermines trust.

Trust is a natural resource when lost it develops into conspiratorial thinking.

That is why Transgrid does not have a 'social licence'.

d) environmental impacts of underground

There is a misconception being amplified that trenches for the underground transmission line will cause more damage to the environment than the construction of the overhead towers and lines. This is not true.

To construct the overhead towers and lines, a 280 tonne crane has to be driven into paddocks which are not able to support the weight of such a heavy piece of machinery.

In addition, approximately seventeen concrete trucks are required for the footings of one tower with a depth of 5.5 metres to 17 metres. Plus the installation of concrete pads measuring 70 x 50 metres at each of the 850 tower sites to support the weight of the crane while erecting the towers, causing significant damage to the environment.

In order to support the movement of the 280 tonne crane, drilling machines and concrete trucks, roads will have to be constructed along the 360 km line, requiring dual four metre wide roads with an additional one metre allowance either side for drainage/batters.

This road construction is a major job. Topsoil will be removed using graders or tracked bulldozers to stockpile the topsoil for future use. Then there is surface levelling using a grader and roller, then topping with crushed granite and compacting it with a roller. Leaving a permanent scar on the environment.

In comparison undergrounding will only require a 15 metre wide easement not 70 metres as required for overhead transmission and will not require separate roads to be constructed. Once the trenches are covered over the land can be restored with vegetation.

Ecology Consulting was engaged to conduct a Biodiversity Site Assessment for my property to ascertain conservation values with the focus on the impact area within the proposed HumeLink Transgrid easement.

The comprehensive thirty page report identified 51.27 hectares impacted by the HumeLink Transgrid transmission line corridor.

An extract from the report states: the Fairy Hole Creek will be directly impacted by the proposed Transgrid easement. The area is mapped as Biodiverse riparian land. This section of the study area also contains the highest condition vegetation, a 2.59 ha patch of Box-Gum Woodland which meets Commonwealth legislation (EPBC Act) requirements. The proposed Transgrid works will potentially have a significant negative impact on this threatened ecological community (TEC) and Biodiversity Value (BV) mapped area.

The large amount of clearing of remnant native woodland and forest for the proposed alignment will result in local loss of biodiversity, habitat and landscape connectivity. Threatened species that are known or predicted to occur in the locality are likely to rely on habitat available in the property and therefore any reduction to its extent is likely to have a detrimental effect on population size and distribution and their ability to disperse through the landscape.

Undergrounding the transmission lines would then allow Transgrid to avoid this area. Transgrid could then adhere to their published Hume Link Fact Sheet statement.

“Assessment criteria, principles to the route selection process including:

- . keeping the transmission line as straight as possible
- . selecting the shortest possible route between two substations; and
- . paralleling existing transmission easements or using public land

In conjunction with these principles, Transgrid uses a constraints mapping process that consider, social consideration, environmental considerations, land use considerations, network resilience and cost.”

Conclusion

The benefits of undergrounding the transmission line far outweigh the minor additional cost and the minimal additional time frame for the construction.

When all the other positive outcomes of undergrounding are calculated into the equation, such as, elimination of starting bushfires, ability to fight bushfires unhindered, biodiversity and protecting the environment, minimal loss in primary production income, biosecurity protection, infrastructure protected from attack in time of war and severe weather conditions and Australia's reputation for a 'fair go', the best option moving forward would be the undergrounding of all the electrical transmission lines.

This proposed HumeLink transmission infrastructure needs to go underground to be on the 'right side' of history!

Yours faithfully,

Renate Lunardello