Submission No 146

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

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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

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Dear Committee,

HumeLink fails NSW and regional communities with flawed, short-term economics

Thank you for the opportunity to make a submission to this important inquiry into the feasibility of undergrounding transmission infrastructure for renewable infrastructure projects. This inquiry represents a once-in-lifetime opportunity to ensure better social and economic outcomes for regional communities and the State.

Key facts

- Compared with undergrounding, the proposed HumeLink are inefficient, leak energy, require ongoing maintenance and are prone to blackouts
- The project fails to assess the impact on key local industries such as tourism and agriculture
- The towers represent a real and present danger by increasing the region's risk of bushfire
- The only winner with HumeLink is foreign-owned Transgrid which will see a 40% jump in revenue

Executive Summary

As NSW and Australia move to a renewable energy future, it is critical that we build sustainable, efficient infrastructure based on proper planning, not flawed economic modelling and short-term thinking.

Unfortunately, HumeLink, fails on all counts, as it appears to be driven solely by minimising upfront costs and railroading approvals to expedite profits, with little or no consideration of environmental, community or economic impacts.

In fact, the current proposal for HumeLink, which will be the State's most expensive energy project ever, is a $4billion economic disaster for regional NSW that fails to assess its impact on key regional industries such as tourism and agriculture.

Compared to undergrounding, the outdated tower technology proposed for HumeLink are prone to outages and blackouts, requires regular and ongoing maintenance to remain safe, and significantly increases the risk of bushfire in the community.

The only ones benefiting from Transgrid's proposed 360 kilometre high-voltage overhead transmission lines appear to be its foreign corporate owners who will see a 40% jump in revenue, according to Victoria Energy Policy Centre, Victoria University.

Impacts of tourism, agriculture, and the environment
Tourism is a major growth industry for regional NSW. Revenue from tourism was $14.3 billion in 2019 alone, and visitors increased by 41% from 2014 to 2019.

While the Snowy Mountains and Tablelands have been selected as iconic locations to promote regional Australia, their tourism status was not treated as a serious consideration in Transgrid's Humelink proposal. Instead Transgrid pushed ahead with its plan for a massive eye-sore, with towers as tall as the Harbour Bridge and pylons cutting an ugly 360km long, 70-metre-wide scar through old growth forests, state forests and working farms, from Wagga Wagga to the edge of the beautiful Southern Highlands.

It goes without saying that this impact would be significantly reduced by undergrounding.

Similarly, there has been little consideration about the impact of HumeLink on the region's productive farmlands, which are significant contributors to local employment and the State's food production and economy. *My parent's farm will have significant loss in value and productivity as several power lines are planned for their farm.*

Numerous farms will see operations significantly impacted with HumeLink lines cutting through their land, which could again be significantly reduced by undergrounding.

Environmental impacts and network leakage
In its current form, the HumeLink Tower proposal will devastate habitats for more than 80 threatened or endangered species of flora and fauna, while undergrounding provides are far less destructive alternative at marginal extra cost.

The HumeLink towers project will an impact an area of 5713 hectares of land (based on Transgrid's referral to the EPBC Act), including clear-felling areas of native forests and bushland with serious impacts on habitat, greenhouse gases and global warming.
Transmission towers will also increase the risk of bushfire, as highlighted in several recent bushfire inquiries, which could have devastating impacts on wildlife populations, and create large quantities of greenhouse gases.

Our farm has had recent sightings of the threatened and susceptible species including the Squirrel Gliders, Dusky Woodswallow and Scarlet Robin. We also have remnant native flora. We have been involved in restoring habitat and protecting these animals so apart from the human risk we are very concerned about the flora and fauna.

Transmission towers are inefficient compared to undergrounding in that waste precious renewable energy supplies through leakage. The AEMO says that as electricity flows through the transmission and distribution networks, energy is lost due to electrical resistance and the heating of conductors. The losses are equivalent to approximately 10% of the total electricity transported.

Increased risk of bushfires and outages
HumeLink towers will make fire-prone southern NSW even more susceptible to devastating bushfires.

Our family is living in close proximity to the power lines, on Tarcutta and we are terrified of the bushfire risk.

If the project goes ahead in its current form, it is highly that lives will be lost, properties devasted and countless threatened and endangered wildlife scarified as a direct result of this project over its 80 – 100 year lifespan. These risks will increase dramatically with global warming as has already been seen over recent years.

The Committee must look at the economic cost of bushfires that will potentially and unnecessarily be caused by projects like HumeLink. These costs could run into billions of dollars, well in excess of any additional cost associated with undergrounding, if indeed there is any.

Underground energy transmission is more reliable, safe and efficient and will not be impacted by outages during extreme weather, or increase the risk of catastrophic bushfire.

Transgrid's insistence on building the foundation for our State's renewable future on dangerous 19th century technology instead of undergrounding, ignores the fact that electrical distribution networks are one of the primary sources of major bushfires. When weather conditions elevate fire risk, up to 50% of major fires are ignited by faults in distribution networks.

But the problem with overhead powerlines isn't restricted to the increased threat of starting fires, but the impediment they present in fighting fires. High Voltage powerlines effectively stop the management of bushfires in the vicinity because the space over and under powerlines are no go zones for firefighters. For some landowners who have lower voltage transmission lines on their properties already lost significant parts of their property during the Black Summer bushfires of 2020 as a result of not being able to fight the fires.

The cost of bushfires is significant. Deloitte Access Economics put the tangible and intangible costs of the Victoria Black Saturday bush fires at $7.6 billion. By extrapolation, the cost of the 2019-20 Australian bush fire season, 'Black Summer', has been estimated at $230 billion.

In the US in 2019, to escape the billions of dollars from claims of fire victims, energy company PG&E started undergrounding and has implemented a plan to bury 10,000 miles of power lines and equipment in areas with high fire risk. PG&E's modelling shows burying lines reduces their risk of igniting wildfires by approximately 99 percent.

Good planning pushed aside for short-term thinking and shareholder returns
Transgrid is pushing through the overhead proposal, it appears Transgrid's only consideration has been upfront delivery costs and shareholder returns.

This is in direct contrast to the NSW's general valuation principle that all first round impacts should be valued as changes relative to the base case regardless of whether the impacts are direct or indirect' (NSW Government Guide to Cost-Benefit Analysis, Policy and Guidelines Paper, NSW Treasury, March 2017). The current costing doesn't incorporate the environmental, social or economic costs, of which there are many.

To support its push, the Humelink claims competition benefits – though these are unlikely to be met because the market is changing quickly and eroding any economic argument with new projects. The Australian Energy Market Operator (AEMO) consulted with stakeholders on the inclusion of competition benefits in the Integrated System Plan (ISP) cost benefit analysis in October 2021 and, as a result, concluded, *"AEMO has not included competition benefits in the assessment …due to the significant uncertainty surrounding key assumptions"*.

Humelink's costings also do not properly consider ongoing maintenance of towers to keep them safe over the 80-10 year life of the project, but instead focus only on upfront build costs. Maintenance costs would be significantly reduced by undergrounding.

Humelink threatens health of locals

Apart from the economic considerations, we have the emotional toll this project it taking on residents. For example, my elderly parents have been extremely upset and developed illnesses that may relate to the endured stress of dealing with Transgrid and the thought of power lines on their farm. They have even spoken of about the suicide because their treasured land will be vandalised by the power lines.

Conclusion

The significant social, economic and environmental issues associated with HumeLink can be overcome by taking the transmission underground, as they have in Europe and California and Transgrid has done recently in Sydney's CBD.

While the direct costs may be greater, undergrounding could a cheaper long-term option when you consider the ongoing maintenance costs, potentially higher transmission losses and outages associated with old towers technology, even before you factor in the cost of bushfires, and the environmental and community devastation associated with these huge towers and the clear-felling of forests and habitat.

Recent costings provided by independent consultants and real world experience overseas clearly show that the differential cost between undergrounding and overhead transmission is not as great as Transgrid's inflated estimates, which have already proved to be wildly inaccurate.

I urge the Committee to strongly recommend the case for undergrounding and strive for a better renewable energy solution that not only Southern NSW, but all Australians and our natural environment deserves.

Regards,

Angela Hawke

(Resident within 2Km of Proposed Power Lines)