

**Submission
No 145**

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

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Andrew Purcell

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

14 July 2023

Dear The Hon Emily Suvaal MLC,

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

Thank you for the opportunity to make a submission to this important inquiry into the feasibility of undergrounding transmission infrastructure for renewable infrastructure projects.

As an impacted landholder, I have great concerns over the short and long term impacts that this project will have on my land and my business, and those of other impacted landholders. As a husband, a father and a long time community member, I also have concerns over the impact on people's lives, their health and well-being and the health and growth of our businesses and our community.

The fear, anxiety, stress and tension within individuals, families, businesses and communities caused by this proposal is undeniable. There has been a distinct lack of clarity and transparency into the initial planning and feasibility stages, the route selection process and dismissal of alternative solutions throughout the planning stages of this project. Explanations of decisions made behind the scenes have often been poor or delayed and have resulted in a lack of faith and trust with Transgrid.

It is of great concern to landholders and businesses in our community that the environmental destruction and the temporary and permanent interruptions caused by the impacts have not been fully acknowledged, calculated or considered in the planning or progression of this project, which our families and communities will be carrying for multiple generations.

I understand the significance of this project and cannot deny the importance of upgrading such infrastructure for our nation's future and transition to renewable energy sources. However, I feel that there has been a lack of insight and research into the impact of such significant, long term projects. Processes such as environmental impact studies and community consultation should have started long before the route and mode of transmission had been decided. There is an overwhelming sentiment within our community that the consultation process has been flawed, impactless and, at times, seemingly unfair.

We, as a family, a business and a community, as well as local contractors, have very real concerns about repairing and maintaining fences and constructing new fences and other infrastructure in proximity to the proposed transmission lines. This also applies to any other task conducted under overhead transmission lines, such as spraying or other ground maintenance works, handling livestock etc. This is due to the unknown effect of electromagnetic fields created by the transmission lines. This also applies to the unknown effect on livestock that graze within and around the easement.

There is a major concern in our community and every other community faced with this proposal, that the transmission lines will pose a massive fire risk during periods of hot, windy or stormy weather conditions. There are numerous examples of fires having been started by high voltage transmission lines and this is a risk that our community simply can't accept, and would be largely eliminated if the transmission lines were underground.

As well as the increased risk of fires starting, the transmission lines also create a physical barrier which cannot be crossed, or a zone that cannot be accessed by fire crews or anyone else. Where the lines dissect properties or pass by people's houses or cross roads and access routes, this cuts people off from escape paths, access to livestock, access to emergency supplies or services etc. It also enhances the damage caused by the fire as fire management has been hampered. This then takes a larger toll and creates higher recovery costs on landholders and communities. The lines are unlikely to be powered down in such an event due to their significance to the grid. Again, these concerns would be greatly reduced if the transmission lines were underground, giving fire fighting crews a better chance of minimising the impact of future fires.

The easement creates a long, wide corridor of which cannot be accessed by aircraft used for pasture management. Aircraft are used increasingly in agriculture for their precision, financial value, and ease of access to rugged and steep country which can't be easily or accurately accessed by ground vehicles. Without being able to manage pasture improvement and maintenance in these areas, we risk losing productivity and face increased pressure from weeds and pests. In our particular case, we will have an easement cutting our 280ha property into two, making it unavoidable to access 150ha of our property without passing under the lines, often multiple times or for significant distances due to the terrain of the property. We will also have over one kilometre of easement running directly along our boundary on the neighbouring property.

The environmental destruction caused by the installation of the transmission lines is of great concern. The number and significance of trees and other vegetation removed for the easement and for access is a factor which should have a far greater value assigned. There is increasing acknowledgement of the environmental benefits of stands of aged vegetation which can be seen up to a global scale. This can simply be wildlife habitat in aged timber, shade and shelter for larger animals through to the role played in storing and offsetting carbon. There is also an obvious loss of habitat for beneficial wildlife from

insects such as bees, through to birds and mammals, and the Riverina Highlands area, like other areas, is home to some endemic flora and fauna. Many landholders have gone to great lengths to re-establish areas of vegetation on private land, and this effort has increased exponentially following the major destruction caused by the 2019-2020 bushfire. It will be a long time before any new plantations of vegetation are able to match the loss of aged vegetation that occurred in that event. Any further loss, including the physical gap created by the easement, cannot be ignored. It must be acknowledged that the land clearing footprint is significantly smaller for an underground easement. Nor can we ignore the environmental cost of producing the materials used in the transmission equipment and the construction process.

The costs of environmental impacts need to be factored into the analysis when comparing the overhead construction costs versus the costs of underground installation. The disturbance of the easement is significantly reduced when placed underground, particularly if they can be run as DC.

Another aspect of environmental damage is the increased vehicle traffic that will occur during construction and maintenance, including repeated activity by an incredible number of concrete and material deliveries. On top of this, there will be a physical structure left behind which livestock will walk around, rub on etc. leading to increased tracking around these structures which will, in some cases, be located in sensitive areas (wet areas, on slopes, in valuable crops/pastures etc). These areas also require management to prevent infections of pests and weeds.

It was only in our latest on-farm meeting with Transgrid that we were told there will also be two additional concrete pads (80m x 60m each) laid at each tower occupying a corner position in the transmission line. Our property is supposed to be 'hosting' two corners resulting in four additional concrete pads built for the purpose of winching and braking the cables during construction. These pads will then be dug up and disposed of, as will the concrete pad (20m x 20m) built next to each tower to support the crane, resulting in yet another seemingly endless procession of trucks and machinery to add further irreversible compaction to our soil, once the tracks have been removed.

The scars and ongoing impacts of overhead transmission cannot be downplayed, nor can that of underground transmission. However, the physical impacts of all aspects of overhead construction and maintenance need to have a value assigned when being compared to the costs of undergrounding. As well as this, there are certain costs that can't be calculated which will occur as a result of the visual impact of overhead transmission lines. This is a problem that affects many aspects of the whole community, from physical and mental health, house and land values, impacts on businesses who rely on tourism and other impacted industries. To add to this, we are also led to believe that the overhead line will likely be duplicated in years to come, multiplying the impact.

As I've mentioned, there is a large reluctance of people to engage in activities within proximity of the high voltage transmission lines. This is due to fears and concerns caused by or reinforced by a lack of access to clear, concise, well credentialed information around electromagnetic fields created by high voltage transmission lines. We, personally, are likely to relocate our family residence as a result of having HV transmission lines built near our current house (within 300 metres in full view). This is a concern echoed by many families in our community and will likely have an impact on our ability to find future employees and contractors for some jobs/tasks.

I also know of people who are considering selling their families farm as a result of this engagement, despite knowing that their property value and appeal has now been significantly decreased. To feel somewhat forced into this decision is a tremendous shame and something that I do not wish upon anyone, and a decision that we are trying to resist, as are many others. Mental health care is already hard to access in regional areas and additional stressors such as this only add to this problem. I can't help but feel that a different approach to landholders and communities from the start could have lessened this impact, and a genuine consideration of undergrounding would have been something that communities could accept and willingly be part of.

There is a feeling that the draft of this project and the need for this project has been known in the energy industry for a long time, yet the planning and consultation processes have been rushed, resulting in feelings of an incomplete and non-genuine engagement. To add to this, there is a projection of bias focusing too much on time and financial savings at too great a cost to people, businesses, communities and the environment, making it very difficult to believe that the undergrounding process was properly researched or even considered at all.

I urge the Standing Committee to recommend that undergrounding is the best way forward for renewable energy transmission in NSW. As we transition to net zero emissions we need environmentally responsible transmission as well as generation.

Yours sincerely,

Andrew Purcell