Submission No 66

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

Name: Mrs Janet Peel

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Janet Peel

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

11 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.

I strongly support undergrounding transmission infrastructure for renewable energy projects, as it is a far less damaging option than the currently proposed HumeLink towers, which will severely impact the health of our local communities, the environment and the economy.

I have lived in Batlow all my life and I am really struggling with the concept of the powerlines being built all across our beautiful Snowy Valleys.

Upon speaking with various community members I know the prospect of these massive overhead powerlines has heightened the level of anxiety in our region because people are:

- deeply offended by the lack of genuine care for their plight, their homes, their connection to the land and their histories in our tight knit communities;
- seeing profound increases in community mental health issues – a problem that, as you would be aware, is of particular concern among our regional communities.
- worried about increased bushfire risks; and
- angered by environmental destruction and other environmental health impacts that will occur in the area.

Our community and its region is such a beautiful and picturesque part of the world and people come from all over to visit Snowy Valleys and to enjoy the beauty and special activities on offer. 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.

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

If the project of the powerlines above ground goes ahead this will significantly affect the health and vitality of our communities. Upon speaking with people also I have noticed that their anxiety levels are heightened, and people are feeling railroaded and quite powerless in the hands of foreign-owned company, Transgrid.

While I am not a farmer, I have had a lot of conversations with farmers and HumeLink will impact third and fourth-generation farmers who have weathered many ups and downs due to their love of the land, only to be defeated by a foreign-owned company forcing massive towers and high-voltage transmission lines to run directly through their productive properties, assisted by government agencies and unfair processes.

Underground energy transmission is best practice around the world and Australian scientific studies support this. It is less susceptible to outages and blackouts because it cannot be impacted by extreme weather, and it lessens the risk of catastrophic bushfires.

Undergrounding has been adopted in Europe, California, and many forward-thinking jurisdictions, and even Transgrid's promotional video claims undergrounding is safer, more reliable and more efficient.

Our district and valley is still recovering from the devastating 2019-2020 bushfires that swept through and destroyed so much in its path. As a very concerned resident I know there is no doubt that Transgrid's current HumeLink proposal for high voltage overhead transmission towers from Wagga Wagga and the Snowy Mountains to the outskirts of the Southern Highlands will make fire-prone southern NSW even more susceptible to devastating bushfires in the future.

In that case, I guarantee you that, based on my own experience and evidence from numerous inquiries, lives will be lost, properties devastated, and countless threatened and endangered wildlife sacrificed as a direct result of this project over its 80 to 100-year lifespan. These risks will increase dramatically with global warming, as seen over recent years.

Underground energy transmission is the best practice worldwide, and Australian scientific studies support this. Underground energy transmission is more reliable, safe and efficient and will not be impacted by extreme weather or increase the risk of catastrophic bushfires.

Our district has a lot of dry lightning strikes all throughout the summer months and these can start fires and cause huge devastation. Our district has enough to contend with against bushfire threat without then the added threat that faults in electrical distribution networks being one of the primary sources of significant bushfires. Power faults cause two to four per cent of all rural fires in Australia. However, when weather conditions elevate fire risk, up to 50 per cent of primary 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 them too.

High voltage powerlines effectively stop the management of bushfires in the vicinity because the space over and under them are no-go zones for firefighters, and many of the dams used to refill aerial firefighting fleet in southern NSW will become no longer accessible to these key emergency services. With arial response to bushfire management a commonly used fire control method, if HumeLink's current proposal is actioned, it will not be an option for many fire-prone areas.

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

The Fire on the Farm report by the World Wide Fund for Nature-Australia and the University of Sydney estimates that the 2019-20 bushfires cost agriculture $4 to 5 billion.

In the US in 2019, to escape the billions of dollars from claims of fire victims, energy company PG&E filed for bankruptcy. After a preliminary report by the state regulators said that its equipment was responsible for several fires that destroyed the town of Paradise and killed 85 people in 2018. Since then, the company has 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 that burying lines reduces their risk of igniting wildfires by approximately 99 per cent.

In addition to considering the likely loss of human life and native animals, the Committee must look at the economic cost of bushfires that projects like HumeLink will potentially and unnecessarily cause.

These costs could run into billions of dollars, well over the cost of undergrounding.

Recent costings provided by independent consultants and real-world experience overseas show that the differential cost between undergrounding and overhead transmission lines is much smaller than Transgrid's inflated estimates, which have proved wildly inaccurate.

The costs and benefits of undergrounding

- Internationally, governments are choosing undergrounding based on analysis of all costs, including environmental and social costs and conclude that undergrounding 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 underground cables 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 the landscape and amenity; and
  - significantly reduced impact on biodiversity as a much smaller easement is required

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

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

Environmental impacts of undergrounding

- Greatly reduced environmental impacts in comparison to Overhead infrastructure.
  - Undergrounding will result in at an estimate 15m easement in comparison to a 70m easement with overhead lines;
  - Much reduced removal of trees and plant flora;
  - Reduction in endangered species types being killed. 82 threatened species are impacted by HumeLink;
  - Land above underground cable infrastructure can be rejuvenated after construction;
  - No towers and wires interfering with flight of birds or movement of climbing animals. No bird or climbing animal deaths will result. Thus eliminating concern for protected birds e.g. Wedge tailed eagles.
  - Eliminates the risk of overhead lines causing bushfire. The black summer cost the nation $230 billion and killed almost 3 billion koala, kangaroos and other animals.
  - Eliminates air and ground fire control hazards;
  - Eliminates the risk of interruption to power transmission in severe weather events and/or bushfires and therefore improves transmission security and resilience as required under the SLACIP Act;
  - Minimal impact to private or public land after construction is complete;
  - No overhead lines impeding agricultural operations, machinery use, irrigation, drones, or aircraft operation;
  - No visual impact from the transmission lines and so no loss of visual and rural landscape character of regions;
  - Little to 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.

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.

Yours sincerely

Janet Peel