

Submission
No 93

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

Name: Name suppressed
Date Received: 13 July 2023

Partially
Confidential

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

13 July 2023

Dear The Hon Emily Suvaal MLC,

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

Ensuring the health and safety of everyone / Underground powerlines are safely out of reach

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 recognise the importance of renewable energy and the need for infrastructure to support this transmission, however, I do not believe we should be continuing to put the health and safety of workers and community members at risk with outdated and high risk above ground powerlines (AGPs).

I am writing to you as a farm worker, volunteer for the Rural Fire Service and safety specialist in NSW. I have visited over 1000 businesses and those that succeed are those that prioritise the health and safety of their people.

The infrastructure landscape is changing and so to it should the businesses and government behind project planning to enable the people of NSW to prosper. The benefits of undergrounding far outweigh the short term costs of construction and establishment and it is pertinent the government start listening to the experts, the people impacted.

The healthy and safety of workers and communities impacted by infrastructure should be a top priority for the NSW Government, which includes reviewing new technology that could eliminate and reduce harm, so far as is reasonably practicable¹.

The government and businesses associated with renewable projects have work, health and safety (WHS) obligations under NSW laws². Every business throughout the contractor management process such as designers, builders and procurers, including the NSW Government, have responsibilities that cannot be transferred out³. WHS laws state you must design with safety in mind and *'must ensure, so far as is reasonably practicable, that fixtures, fittings and plant are without risks to the health and safety of any person'*⁴

¹ [Section 18 Work, Health and Safety Act 2011](#)

² <https://www.safework.nsw.gov.au/legal-obligations/employer-business-obligations>

³ [Section 14 Work, Health and Safety Act 2011](#)

⁴ [Section 21 Work, Health and Safety Act 2011](#)

Underground powerlines (UGPs) have shown to have significant benefits over their AGP counterparts even when taking into consideration the construction costs as these are offset by the social, safety and environmental benefits. These benefits from a WHS perspective include:

- **Eliminating the risk** of death and serious injury for contracted arborists who are needed to manage the already extensive easements of existing AGPs in NSW on behalf of TransGrid. Case example:
 - Worker sustained life threatening head/spinal injuries in 2020 while felling a tree under AGPs⁵
- **Eliminating the risk** of mobile plant coming into contact with energised AGPs, which is one of the biggest workplace killers. For the agriculture sector this is a huge concern with the ever increasing size of machinery and pushed time constraints to get food from paddock to plate. Case examples:
 - worker killed by electrocution when spray boom tip of the tractor came into contact with AGPs⁶ and another seriously injured when moving a drilling rig which struck AGPs⁷
 - 55 incidents of mobile plant (cranes, farm machinery) hitting AGPs between July 2011 and February 2013⁸,
 - with these numbers continuing today, with Essential Energy reporting 43 incidents per month, with 14 of these attributed to the agriculture industry in 2022.⁹
- **Eliminating the risk** to our pilots in the sky who unfortunately regularly come into contact with AGPs either as members of the public, workers on farms (aerial spraying) or workers inspecting AGPs. Case examples:
 - Pilot, 52, killed in fiery crash after plane hits power lines (2023)¹⁰
 - Two men dead after light plane crashes in paddock near Sutton, NSW, whilst performing aerial inspection of AGPs for Essential Energy¹¹
- **Eliminates the risk of fire** which causes potential for injury and death from arcing lines (flashovers) during windy conditions, arcing events during fires, and powerline faults starting fires. Case example:
 - Western Australia (WA) regional electrical network is replacing AGPs in fire prone regions with off-grid solar and battery systems following AGPs starting two of the four emergency-level fires in February 2022¹². Luckily no one was killed in these events however highlights if WA is finding safer alternatives, why isn't NSW?
 - Case law: *Matthews v AusNet Electricity Services Pty Ltd* [2014] VSC 663 highlights the Black Saturday bushfires in Victoria, which killed 119 people and was caused by an ageing SP Ausnet powerline. It resulted in victims receiving a settlement of \$494 million¹³. How will the energy companies manage more easements and lines effectively to ensure the decreased risk to communities when current lines are mismanaged?
- **Eliminate risks of falls** that may result in injury or death to energy provider workers who daily work at heights to undertake repairs. Falls from heights is one of the biggest killers in NSW.

The bushfire risk is a high concern for anyone in the path of future AGPs.

After the devastation of the Black Summer 2019-20 bushfires further deficiencies in our planning and development of infrastructure has been highlighted. From stories of arcing powerlines causing further catastrophic conditions for front line responders to reports of denied requests for AGPs to be

⁵ [SafeWork NSW Incident Information Release Kosciuszko National Park](#)

⁶ [SafeWork NSW Incident Information Release Overhead Powerline Contact Fatality](#) 2022

⁷ [SafeWork NSW Incident Information Release Contact with overhead powerlines](#) 2021

⁸ [SafeWork NSW Safety Alert Mobile Plant operating near overhead powerlines](#)

⁹ Essential Energy/SafeWork NSW Women in Agriculture Lunch and Learn Session 2022 (PowerPoint presentation)

¹⁰ News.com, [Pilot 52 killed in fiery crash after plane hits powerlines](#)

¹¹ <https://www.abc.net.au/news/2021-04-13/reports-of-light-plane-crash-near-canberra/100066868>

¹² Macintosh, A, [Powerline fires wreak havoc but a renewable microgrid alternative is rolling out](#), 2022

¹³ TimeBase, [Judge approves Black Saturday Settlement \(2014\) VSC 663](#)

turned off for the safety of responders - why do we continue to place front line responders at huge risk when there is a safer solution?

It is estimated the Black Summer fires cost the nation \$230 billion. Burying transmission lines would cost a fraction of this. We should be future proofing NSW to ensure hazards that increase the risk of catastrophic fires are eliminated.

Internationally governments are taking into account ALL costs of infrastructure and transmission lines, including safety, environmental and social costs and have moved forward with the notion that underground is the cheapest long-term solution. In California, they are putting 10,000 miles, (equivalent to over 16,000 kilometres) of powerlines underground, for the sole purpose of protecting people, homes and communities in the next wildfire event. In a statement made by the energy company at the head of the project, CEO Patricia Poppe, *'It's too expensive not to do it. Lives are on the line!'*¹⁴

We shouldn't, as community members, be put at further risk in the next fire event. There are significant benefits to a full underground solution:

- Eliminates risk of infrastructure causing fires
- Eliminates fire control hazard in the next fire event, by air and by ground.
- Eliminates risk of interruption to power transmission in severe weather events and bushfires, with the Black Summer fires seeing prolonged outages, further putting people at risk with no telecommunication sources for emergency situations.
- Minimises the psychological risk to WHS, for example psychosocial risk TransGrid workers are currently exposed to from community backlash on the Humelink project, and the safety of others, which was outlined in a survey undertaken by MP Dr Joe McGirr in 2021. This revealed 93 per cent of landowners were not satisfied with consultation processes, and the majority of those who did provide feedback through consultation advised this negatively impacted their mental health. For some members of our community, the HumeLink proposal has prompted thoughts of suicide as they fear destruction to their family homes and properties that have been held dearly in their hearts for generations.

The Royal Commission into National Natural Disaster Arrangements published a report¹⁵ with 80 recommendations to make the nation safer, and what should also be highlighted is the ongoing risk to the nation if we DO NOT develop a future proofed infrastructure framework and consider the long term costs of not investing in safer infrastructure and technology.

Australia's electricity network is massive, expensive to maintain and vulnerable to natural hazards. As costs do play a part when considering what is 'reasonably practicable' under the WHS laws of NSW it is important to see the big picture, the long term costs to workers, communities and the environment and not just the short term gain which will result in ongoing high long term costs for easement management, outages and cost to lives. Why are we putting a cost on lives!

From the Royal Commission report into the 2019/20 bushfires they found:

- over 280,000 customers experienced a bushfire-related power outage
- over 10,000 power poles were burnt resulting in outages and significant delays
- these mains power outages caused major disruption to telecommunications services (88 per cent) compared to only one per cent of outages relating to fire damage (perhaps because a lot of these services are underground?).

Telecommunications is an important aspect to also consider as people were left stranded and some of the lives lost during this fire could be put down to the inability to seek emergency assistance or receive fire emergency alerts in time to leave.

¹⁴ The Guardian, [California Prepares to Bury 10,000 miles of powerlines as wild fires force new evacuations](#), July 2021

¹⁵ The Royal Commission into [National Natural Disaster Arrangements Report](#)

It is also pertinent to note the current Humelink project route has been altered an unusually concerning number of times and at this stage appears modelling is no longer following a safe modelling system. TransGrid had outlined in their early planning the Tier one and Tier two constraints to AGP placement, to which they are now running through several Tier two constraint areas (bushfire prone). TransGrid have also now removed the mapping of Tier one and two constraints from their website¹⁶ further leaving communities with mistrust and a deepened anxiety of the unknown.

NSW should be a state challenging our international competitiveness, remaining on the forefront of safer and more technologically sound systems of building infrastructure that will not just last 50 years, but hundreds. We should be leaving a permanent boost to the economy not outdated infrastructure that will continue to see energy prices increase.

The government need to start listening to the undergrounding experts and ensure they are considering the benefits and long term costs, not just the quick cheap fix for the now.

Electrical companies continue to train workers in old technology, but we should be investing in new jobs in new tech to keep the state powering into the future.

What seems to be forgotten in the scope of the development of our renewable planning is keeping safety and the NSW community at the heart of decisions that impact their health and safety.

I urge the Standing committee to build a better tomorrow and start with putting the safety of NSW workers and communities at the forefront of renewable energy transmission in NSW.

Yours sincerely,

Farm Worker, Safety Specialist, Volunteer Firefighter

GradCert OH&S

Submission approved for publishing however name to be withheld.

¹⁶ TransGrid, [Humelink - Map](#)