

**Submission
No 34**

**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

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 am a resident of the Snowy Valleys town of Batlow.
I lost my home, farm and farmstay business in the Black Summer bushfires of 2019-2020.

I write this submission to implore those considering the feasibility of undergrounding the transmission infrastructure for HumeLink to see it as a long-term solution to a lifetime requirement of critical energy supply to Australians.

If the transmission lines go above ground they will directly impact my farmstay business as I am located 2 kilometres from the existing powerlines on the eastern side of Stony Ridge, outside Batlow and my view looks straight out onto them. Nobody wishes to holiday near or look out onto powerlines of the proposed magnitude of HumeLink. Furthermore, many people express concerns being so close to electromagnetic fields.

There is evidence to prove that based on an analysis of all costs including environmental and social that undergrounding transmission is the cheapest viable long-term solution.

It has also been proven that HVDC underground transmission, proposed for undergrounding HumeLink, has less transmission losses than AC overhead lines, and therefore 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

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

As I understand it there are current domestic and international projects where private companies are putting transmission underground and these include;

- MurrayLink, 180km
- Directlink
- Powering Sydney's Future Project - Transgrid 330kv underground 20km (Potts Hill to Alexandria)
- Marinus Link, 90km
- Star of the South, 60-80km

International Projects include;

- SuedLink, 750km 525kV – renewables Germany
- SuedOstLink, 500km 525kV
- California burying 10,000 miles of powerlines to reduce wildfire risk
- Champlain Hudson Power Express (CHPE), renewables Canada - New York

Undergrounding would greatly reduce environmental impacts comparative to overhead infrastructure;

- Undergrounding will result in at an estimate 15m easement in comparison to a 70m easement with overhead lines;
- Much less removal of trees and plant flora required;
- Reduction in endangered species types being killed, it is estimated there are 82 threatened species 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 such as 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.

All of the above outlines why undergrounding must be regarded as **the only option** for this major infrastructure project for Australia.

I therefore 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

Anne Hallard