

Submission
No 36

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

Organisation: Strathvale Pastoral Company

Date Received: 10 July 2023

Strathvale Pastoral Company

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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'm the appointed representative for the Purcell Family Company and wish to express my support for undergrounding the transmission infrastructure associated with the HumeLink project.

The Purcell family has held the property at _____ for four generations and the property supports all our families. Our main income is cattle breeding, and we make all our own fodder.

We were badly affected in the Black Summer bushfires of 2019-2020 losing a lot of our cattle, all our fodder and a substantial amount of our farm machinery. All our family stayed on the property and fought the fires with the resulting devastating effects being ongoing mental health issues.

In the short period since the fires, we have been confronted with the next threat to our property, income, and family, that being the prospect of HumeLink destroying our property with power lines that will devalue our generations of hard work, property improvements and future livelihood.

We already have 11 towers of 330KV running across the property and the proposal for the new infrastructure will see **our property used as the junction** of the 500KV towers running to Bannaby, Wagga and Maragle.

I write this submission to implore those considering the feasibility of undergrounding the transmission infrastructure for HumeLink to see it from the perspective of impact on families who are already suffering. We as a family are devastated at the **prospect of our lives being massively impacted by the transmission lines if they are installed above ground**. The impact includes the

inability to crop dust and use our air strip for this purpose, the prospect of arching causing bushfires as well as the identified health risks from the 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.

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 based on cost.

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

If undergrounding is approved, our family will work with the Government and Transgrid to assist in any way possible to ensure the delivery timetable is met.

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.

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

Mrs Louise Purcell

On behalf of;
David Purcell, Geoff Purcell and Andy Purcell and families