

**Submission  
No 243**

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

**Name:** Ms Bethan David

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## Submission to Inquiry into the Feasibility of Undergrounding the Transmission Infrastructure for Renewable Energy Projects.

Dear Chair and Members of the committee,

I have attached a copy of an excellent submission that has been provided to me by Doug and Berlinde Rand.

You will have already received this submission but I wish to endorse its contents as a resident of Batlow.

The members of our farming community that are directly affected on their farming land by the proposed above ground transmission infrastructure (Humelink) associated with the Snowy 2.0 renewable energy project are an integral part of our community.

The Rands farm and orchard is only 6 km from the centre of Batlow the majority of perspectives they documented affect the Batlow township also.

Currently the farming community is the anchor for Batlow township by providing vegetables and fruit for the eastern states and overseas markets. They have fulfilled this role for the previous 120 years including supplying overseas troops during World War 2 with products from Mountain Maid Cannery. This context may alert the Chair and Committee as to how important Batlow and its farms and orchards are for food security and contributing to Australia's economy.

Installing overhead transmission infrastructure devalues and diminishes the productive lands ability to contribute to our area and Australia's ability to cope with the climate changing rapidly, epidemics and wars disrupting supply of nourishing food.

I purchased a Batlow residential block in mid 2019. The main reasons to invest here was the town having a stable underpinning with employment and economic viability provided by forestry, farming and orchards along with a beautiful vista over the Snubba Range to the Bogong Mountains to the east.

The route for Humelink along the crest line of the Snubba Range using towers and transmission lines will destroy the view from many parts of Batlow including the view from my house. The visual disruption will be forever evident not only in the town but also approaching Batlow from the south.

48% of the Snowy Valley LGA was burnt in the 2019/20 fires resulting in a loss of 38% of primary production land and 56% of bushland and forests. It became obvious that income for the area is drastically reduced for many years to come, in the forestry sector alone it will not be at full production for 20 years.

Tourism has now become an aim for creating economic stimulus in Snowy Valleys LGA. Batlow, not only being the hardest hit by the fires had little infrastructure or assets except a beautiful vista to the east. That asset will be diminished considerably if obliterated by the Humelink above ground infrastructure.

Indeed one tourist venture was on the drawing board pre fires to take advantage of its position on top of the Snubba Range for tourist accommodation which will be unviable with above ground transmission infrastructure cutting through the proposed site.

The table using Humelink EIS categories in the Rand submission, makes the compelling point that the advantages of underground infrastructure far exceeds above ground infrastructure. In only one category of the 19 Humelink EIS categories, the economic category, the above ground infrastructure is valid but only in the short term. Many Australian and overseas similar projects have been constructed underground recognising that the long term benefits are greater than the short term benefits.

Although my submission has been focused on home ground it will hopefully assist in providing understanding of the impacts on a rural community for future projects.

I thank you for the opportunity to contribute my submission on this issue and hope that the outcome of this inquiry is in favour of considering underground transmission infrastructure to be the best approach in many if not all circumstances now and in the future.

Yours sincerely,

Bethan David.

ATT:

*Submission to Inquiry into the Feasibility of Undergrounding the Transmission Infrastructure for Renewable Energy Projects*

*Douglas and Berlinda Rand, Stoney Ridge, 348 Stewarts Road, Batlow NSW 2730*

OPENING STATEMENT

*We wish to convey our sincere thanks to the Parliament of New South Wales for convening this vital inquiry into the feasibility of undergrounding the transmission infrastructure for renewable energy projects.*

*We wish to convey our sincere thanks to the Chair, Ms Suvaal, and Members of this Committee for committing their time and energies to this question which is absolutely vital to the human and natural wellbeing of the land for which we all have stewardship.*

*The question of what to do with new transmission lines goes far beyond being a “critical infrastructure project”. It is a project with profound implications for the interaction between humans, animals, plants and land for at least the next two centuries. It will set boundaries and precedents, checks and balances between the power centres of corporations, governments, planners and people. This question is deserving of the most sober, rational, dispassionate and wide-visioned consideration from this Committee.*

Our submission to the Committee consists of two parts: firstly, a brief account of the impact of HumeLink on us personally if it were to be an overhead line; and secondly, a table comparing the environmental impacts of underground and overhead, based on the Specialist Study Areas of the HumeLink Environmental Impact Statement.

**PART 1: Personal and community impact of HumeLink if it were to be an overhead line.**

**Health & Safety**

We live on a 100 hectare property between Batlow and Tumut overlooking the beautiful Gilmore Valley. We have an organically certified lemon orchard and also run cattle and sheep. A section of our property is a designated biodiversity conservation area registered with the NSW Biodiversity Conservation Trust.

We are impacted by the proposed HumeLink overhead transmission line which would connect Snowy 2.0 to Sydney and other population centres. The company tasked with constructing this line, TransGrid, has informed us that the HumeLink easement for their preferred route will not come onto our property. However, the easement will parallel an existing 330kV line (“O51”) across the only road to access our property, approximately 200 metres from our front gate. TransGrid refuses to deny that there will be an additional one or two 500kV lines constructed in the short to medium term. The former CEO of Snowy Hydro, Mr Paul Broad, has publicly and unambiguously stated that Snowy 2.0 will not be sufficient for renewable energy needs. In his view there must be a Snowy 3.0 and 4.0. At this time we and our neighbours face the immediate prospect of having to cross under 2 high tension lines (1 x 330kV and 1 x 500kV) with a total easement width of around 120 metres, expanding in coming years to 4 high tension lines with a total easement width of almost 300 metres.

This poses an extraordinary threat to us in the very real eventuality of bushfire. Our property and those of our neighbours were catastrophically impacted by the Dunns Road bushfire on the 4<sup>th</sup> January 2020. On this occasion we followed the order to evacuate 2 days before the fire hit. But in the 35 years we have lived here we have witnessed many serious fires near us and we know there is an entirely possible scenario where a fire can quickly start and the smoky conditions would make it life-threatening for us to evacuate or for emergency services to reach us, due to the risk of arcing (“flash-over”). These risks are well-known in firefighting and many safety protocols are in place blocking movement of emergency and other vehicles across high tension easements.

Similarly, extreme weather conditions resulting in the collapse of one or more towers are a known phenomenon, and again we could be trapped for a lengthy period in this scenario. When combined with fire, this eventuality would be life-threatening for us and our employees.

While the line itself would not be on our property, its position virtually over our front gate could present electrical shock dangers to animals and humans in the vicinity, and health risks from the electromagnetic field induced by several million volts of alternating current just overhead. This is a frightening prospect.

### Land Values and Project Costing

We urge the Committee to carefully scrutinise the comparative costings of overhead versus underground methods across the broader view. Many of the environmental and social issues created by overhead lines carry with them a dollar figure. The principal ones in our estimation are:

- *Degradation of land values.* This applies not just to land across which easements travel. Landholders in that situation at least have some access to compensation, even if it may be inadequate. Many others like us will have no legal access to compensation but will nevertheless suffer significant loss of land value because of the proximity and danger of the transmission lines. We also ask the Committee to consider what will happen to the land values of the approximately one thousand properties on the western side of Tumut which face the prospect of a clear view of successive lines of 70-metre towers and cables on the next ridge only 2-3 kilometres away. Other urban areas will be similarly impacted. Compensation in this situation is astronomical and probably unthinkable, but the impact remains. Undergrounding removes all these costs.
- *Impacts on local economies.* Farm and forestry operations will suffer losses to their efficiency and productivity if overhead lines are present nearby. Undergrounding removes these losses. Tourism, which is a significant and growing industry in our region, with major flow-ons to local retail businesses, would suffer a major and permanent setback if the landscape were disfigured by these huge powerlines. Could these businesses ever be compensated? Undergrounding would avoid these impacts.
- *Insurance.* Our advice is that properties traversed by overhead high tension lines will not be able to be covered by public liability insurance because of the restriction to firefighting activity should a fire break out. This puts landholders in an untenable situation. If the Government steps in and underwrites them, this places the Government in a potentially very expensive situation. An underground line has zero fire risk and would remove this insurance anomaly.
- *Environmental offsets.* Our understanding is that of the current \$3.3 billion budget for HumeLink, \$930 million (28%!!) is set aside for purchasing environmental offsets.

It is possible that TransGrid have already begun pre-emptively purchasing these offsets, thus already impacting offset prices. An underground line would slash this figure dramatically and decrease supply and demand distortions in the offset market.

The Committee will find, no doubt, that our experience with HumeLink is frequently echoed across all regions and all transmission infrastructure projects. The negative impacts on communities and natural environments (summarised in Part 2 below) have created a chronically adversarial atmosphere. It is no surprise, therefore, that “loss of social licence” has now become the defining feature of these projects and is recognised by everyone including the Federal Energy Minister, Chris Bowen.

This situation could be reversed and retrieved completely with a straightforward, unequivocal decision to place the transmission lines underground.

For that reason, we are very grateful to this Committee for taking a serious view of the alternative. We are confident that you will plainly see that on almost every metric of impact, as summarised in our table in Part Two of this submission, undergrounding transmission lines wins against overhead by a country mile. Till now, the corporations and regulators have seemed incapable of grasping these realities, probably because they operate on a different paradigm (viz. the cheapest and quickest solution) to that of a democratic government, tasked with the long-term view of investing in the common good for generations to come.

*For emphasis we re-state with full gravity: The overwhelming majority of people in our community see the current proposal to build HumeLink as an overhead transmission line, a plan which has been intransigently adhered to by TransGrid for over 3 years against constant community opposition, and which government authorities and regulators have passively acquiesced to, as an abnegation of responsibility to care for people and environment, and a collapse of moral fortitude in the face of short term financial gain, corporate pressure and political survival.*

*Governments and regulators must not fall back on obsolete technology and narrow-viewed economic and engineering solutions. They must take the long view and employ world-best-practice strategies currently exemplified in Germany (Suedlink) and California.*

The Committee will know that this view is shared passionately by all communities in the path of similar infrastructure projects.

## **PART 2: Table**

The following 19 categories have been identified to receive special investigation in the Environmental Impact Statement for the HumeLink project. When these categories are applied to a comparison between the environmental impacts of underground and overhead lines, we believe the result is starkly in favour of undergrounding.

We list the categories below and show with a tick whether we believe it shows which solution is preferable, with some comments. Please note, we are not engineers, accountants or anthropologists, but we are confident your expert witnesses will broadly agree with our comments as laypeople and “stakeholders”.

## **UNDERGROUND v; OVERHEAD**

### **HUMELINK EIS CATEGORIES**

#### **...and the winner is;**

EIS CATEGORY	U/G	O/H	DRAW	COMMENTS
Aboriginal heritage	✓			Minimal land disturbance by U/G easement. No footprint after construction.
Agricultural land	✓			Zero impact on agricultural practices. O/H restricts agricultural practices.
Air quality			✓	No known significant negative impact from either O/H or U/G.
Aviation safety	✓			O/H is a major hazard, disruptor and restrictor of rural aviation.
Biodiversity	✓			After construction zero impact. Full regeneration of narrow easement.
Bushfire risk	✓			Zero risk of arcing. No restriction of vehicular movement including emergency services.
Economic			✓	O/H is possibly cheaper at construction. Over longer term U/G becomes cheaper.
Electric & Magnetic fields	✓			U/G as DC has minimal EMF.
Greenhouse gas & climate change risk	✓			Mining, refining steel, concrete etc. for towers produces significantly more GHG than U/G cabling.
Historic heritage	✓			U/G has no above-ground footprint after construction. More route flexibility.
Hydrology & flooding			✓	No known significant difference.
Landscape character & visual amenity	✓			O/H towers and cables leave major permanent scar. Economic impact on property values & tourism + flow-on. U/G leaves no footprint after construction other than substations.
Land use & property	✓			Zero impact of U/G on land use. Almost zero impact of easement on property values. O/H significantly degrades rural & urban property values.

Noise & vibration	√			Buzzing and humming a known feature of O/H. U/G is silent.
Social	√			U/G has overwhelmingly positive social licence. O/H creates major ongoing negative social impacts, including mental health.
Soils, geology & contamination	√			Wide O/H easement must be permanently cleared of trees & shrubs – expensive to maintain and risk of soil erosion and weed infestation.
Surface water & groundwater	√			O/H easements, access tracks & tower pads can alter surface water flows – local erosion.
Sustainability	√			Service life of towers and cables significantly shorter than U/G and more vulnerable to damage in extreme weather. Higher service costs of towers, cables & access tracks.
Traffic & transport	√			O/H significant danger of electrocution to traffic in extreme weather (collapse) and thick smoke (arcing). U/G zero danger.

Thank you again for your consideration of our submission.