

**Supplementary  
Submission  
No 106c**

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

**Organisation:** HumeLink Alliance Incorporated

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HumeLink Alliance Incorporated  
Andrea Strong

The Hon Emily Suvaal,  
Committee Chair,  
Standing Committee on State Development  
Parliament House  
6 Macquarie Street  
SYDNEY NSW 2000

10 August 2023

Dear Standing Committee Members,

**Second supplementary submission to the Parliamentary Inquiry into the Feasibility of undergrounding the transmission infrastructure for renewable energy projects**

Following the hearings of the Standing Committee for the *Feasibility of undergrounding the transmission infrastructure for renewable energy projects* (the Inquiry), we have comments and questions as follows:

**A. Consultation**

A number of questions were asked in the hearings of the Inquiry about the consultation that Transgrid has undertaken with communities.

In response Jim Cox, the Acting Chair, Board of Directors, Australian Energy Regulator stated:

*'the most important thing, in my view, is that the consultation must be entered into genuinely...'*

While Transgrid states in their submission:

*Transgrid recognises the significance of meaningful community engagement. Transgrid involves local communities in the decision-making process, allowing their concerns to be raised and addressed.*

The Kyeamba Valley Concerned Landowners Manifesto in July 2021, documents the utter rage and frustration of communities with the HumeLink "consultation" process.



One would expect that consultation would be about informing, listening, responding, and working with the community in meaningful engagement, but rather it seems to be about managing community opposition to a project. It comes across as 'let's not tell them what we're doing, and hope they don't catch on until it's too late'.

In the case of HumeLink, the first brochure that was sent to landowners to let them know about the proposed HumeLink project had not one image of the proposed transmission line. Instead, it had an image of a town at night, nestled in a valley. The next two brochures sent by Transgrid had images of towers, but not the 500kV towers proposed for HumeLink – rather smaller towers, for a smaller line. The community is of the view that by not providing an image and/or providing wrong images of what was proposed, the brochures were deceptive and misleading.

In 2022, the Yass/Bookham landowners became aware that Transgrid was reviewing the HumeLink route in other regions. There was a request that the route in the Yass/Bookham region also be reviewed. Although the landowners had not been told that a review was possible, Transgrid said, after initially agreeing to consider a review, that it was too late to review the route in the Yass/Bookham region. Not informing the Yass/Bookham community about the route review process, and not undertaking the review, is considered a major failure of the consultation.

Transgrid has also delayed informing indirectly impacted landowners, about HumeLink. These landowners will receive no compensation despite their properties being significantly devalued. At the very first Community Consultative Group (CCG) meeting (October 2021), Transgrid stated that it was looking to notify people indirectly impacted by HumeLink. However, it wasn't until the May 2023 CCG meeting that Transgrid said they were finally contacting the 4,322 indirectly impacted households (with potentially an additional 11,000 people impacted<sup>1</sup>).

If Transgrid was genuine in their consultation, all these people would have been contacted at the outset of the project, rather than leaving it until May 2023, when it's too late for them to have input into route refinement. Notifying indirectly impacted landowners in May 2023, more than three years after those directly impacted, is again a major failure of the consultation process.

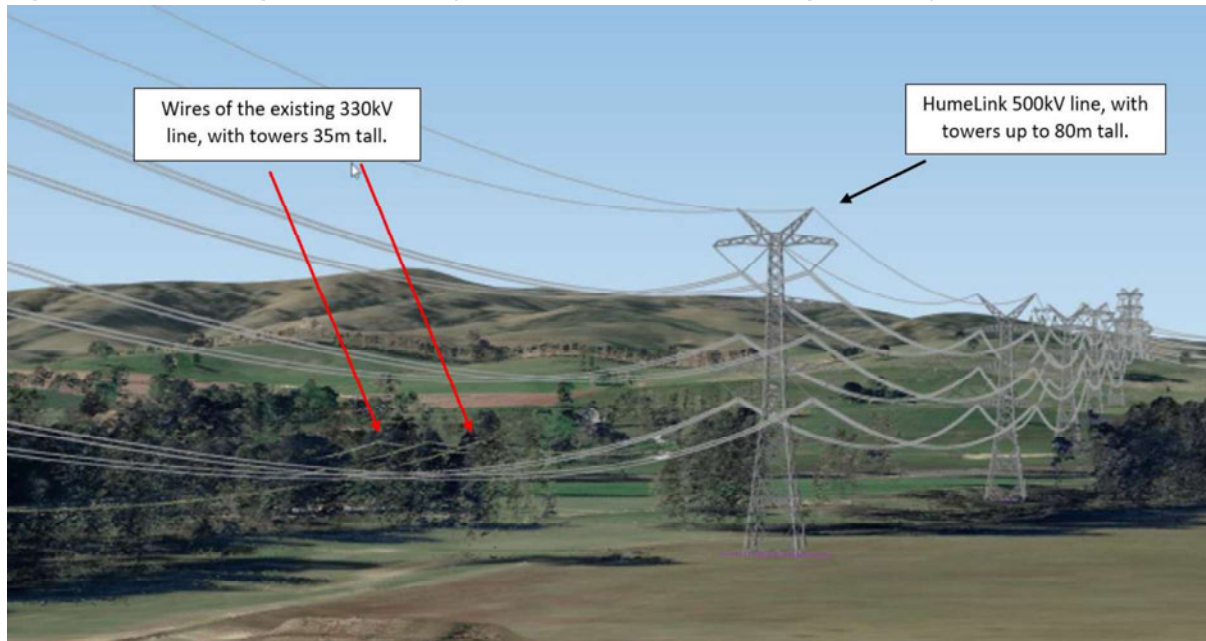
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<sup>1</sup> The average number of people in each household in NSW is 2.6 <https://www.abs.gov.au/articles/snapshot-nsw-2021#:~:text=Households%20are%20getting%20smaller%20in,of%20households%20were%20family%20households.>

Transgrid has also withheld important visual and landscape character impact images from communities.

In February 2023 Transgrid provided NEARA 3D visualisation tool images to the CCGs. See image Figure 1 below:

**Figure 1: NEARA image of HumeLink presented at the CCG meeting, February 2023**



Members of the CCG stated that it was critical that these images be provided to communities at the upcoming 'community information sessions' on the 'visual and landscape character impacts' of the project. Transgrid failed to show any of these images at the community information sessions.

Transgrid had pitched the recently acquired NEARA tool as a means of providing landholders and the community with more 'accurate' and 'quick turnaround' images. Previously Transgrid had mocked up photomontages for only a very few landholders.

Soon after the CCGs were shown the images possible with the new NEARA technology, it was taken off the table for use with the community. Rather it was announced that it would now only be used by engineers.

As a result, important information about the visual and landscape character impacts of the HumeLink project have been withheld from communities. As the visual impact of transmission lines is a principal impact of concern, not providing communities with all available images of what the project will look like, means communities have been kept in the dark about the visual and landscape character impact of the project.

We consider this yet another major failure in Transgrid's obligation to consult.

## Question

1. If Transgrid 'recognises the significance of meaningful community engagement' and 'involves local communities in the decision-making process, allowing their concerns to be raised and addressed' why have/has:

- Landowners been misled about what they are building in the HumeLink brochures;
- The 4,322 indirectly impacted not been told about the project for three long years;
- Landowners in the Yass/Bookham region not been told that alternative route options were being assessed in other regions;
- Communities not been shown the images of HumeLink 500kV towers showing the visual and landscape character impacts;
- The cost of undergrounding been misrepresented to government, given that two independent cables expert stated they considered the undergrounding costs were exaggerated;
- The relative cost of undergrounding been misrepresented by Transgrid comparing 2020 overhead costs with 2022 underground costs;
- The time to construct HumeLink underground been significantly exaggerated; and
- The tee-in constraint with HumeLink as HVDC been distorted when HumeLink as a 500kV AC overhead line is also a major constraint to renewables teeing-in?
- Landowners, community members, RFS volunteer personnel, Landcare and Environmental groups, Councils, Tourism operators, and the like, who have raised concerns, been ignored, and dismissed as NOT important.

## B. Health impacts of overhead lines

A question was put to Mr Jim Cox, Acting Chair, Board of Directors, Australian Energy Regulator (AER), about the potential human health impacts from overhead transmissions compared to underground transmissions with a submissions saying that overhead transmission lines can result in adverse electromagnetic exposure.

Mr Cox responded:

*Not, I think, to our knowledge.*

However, the Standing Committee should know other countries adopt precautionary policies on magnetic fields from power lines. The report *National precautionary policies on magnetic fields from power lines in Belgium, France, Germany, the Netherlands and the United Kingdom*, states:

*'Scientific research points to a possibly increased risk of childhood leukaemia in children who live near overhead power lines. Because of statistical uncertainties and the fact that the disease mechanism is not known, it is not clear whether the magnetic fields of the power lines are the cause. Out of precaution, the Netherlands and several other European countries have developed policies several years ago that aim to reduce the exposure to magnetic fields from new power lines. Different countries deal in different ways with the uncertainties in the available knowledge and strike a different balance between scientific evidence and social,*

*economic and political arguments'* National Institute for Public Health and the Environment, *National precautionary policies on magnetic fields from power lines in Belgium, France, Germany, the Netherlands and the United Kingdom*, RIVM Report 2017-0118.

In Germany transmission lines are not to be closer than 400m to dwellings in urban areas. There are a number of cases where HumeLink will be within 100m of homes.

Transgrid states that 93 residences are within 500m of HumeLink.

Proximity to residences

40 residences <300 m,  
53 residences 300-500 m

Source: Transgrid, HumeLink Fact Sheet Tumut Area Route Refinement Decision March 2022.

Also many community members have commented that Transgrid's dwelling database is seriously deficient, omitting both new and old dwellings. Many, many dwellings are not recorded. Our own dwelling, close to HumeLink, is not recorded on Transgrid's database.

#### Question

2. Will the executive of Transgrid/AEMO/AER/AEIC/AEMC/government with young families, commit to moving their own families to the dwellings closest to HumeLink?

#### C. Material change in circumstance for the HumeLink project

A material change in circumstance for a project can change the net benefit of the project, that has been previously determined in the RIT-T cost-benefit analysis. Where there has been a material change in circumstance for a project, it is important that government is (and the people of NSW are) confident that a project still has a net benefit and NOT a net cost to the State.

There are a number of material changes in circumstance for the HumeLink project, as follows:

- HumeLink was costing \$3.3 billion (originally \$1.35 billion (PADR)) – now \$4.892 billion;
- Snowy 2.0 was included from July 1, 2025 – now delayed four-and-a-half years to December 2029, at the earliest;
- Opex 0.5% of Capex – when AEMO assumes Opex is 1% of Capex, and VNI West assumed Opex is 1% of Capex; and
- No Kurri Kurri/Tallawarra B gas fired power stations – a commitment has been made to build Kurri Kurri/Tallawarra B gas fired power stations.

When asked if the AER would require Transgrid to reapply the RIT-T, given the material changes in circumstance for the HumeLink project, the response was:

*JIM COX: We have no power. I think's it is the proponent's responsibility.*

There is a major failure in the Rules of the national electricity market (NEM) if only the proponent can decide if there has been a material change in circumstance for a project. The proponent has a conflict of interest in deciding if the RIT-T should be reapplied for a material change in circumstance, as there is a risk that the determination on the project will be changed if the RIT-T is reapplied.

The Key Economic Issue with the Planning Secretary's Environmental Assessment Requirements (SEARs) for the HumeLink project is:

*'an assessment of the benefits of the project for the region and the State as a whole'*

Therefore, it is critical that the RIT-T be reapplied to fulfil the Planning Secretary's requirements.

**Question:**

3. How can the SEARS requirement of:

*'an assessment of the benefits of the project for the region and the State as a whole'*

be met if impacts on the cost-benefit of the HumeLink project of:

- a 48% increase in cost for the project;
- a 'four-and-a-half-year delay to Snowy 2.0';
- Opex 1% of capex; and
- Kurri Kurri/Tallawarra B going ahead

are not assessed?

**D. Extra time to construct HumeLink underground**

Transgrid states in their submission in reference to the GHD/Transgrid undergrounding study...

*'the findings of the Study also found that undergrounding increased the cost and significantly delayed completion, up to five years.'*

Also Brett Redman says...

*'if we underground, it will be a five-year delay'*

However the GHD/Transgrid undergrounding study said for the fully underground HVDC option it could take only a year and three quarters more.

The community believes that undergrounding HumeLink will be the quickest way to build the project as communities will work with Transgrid to deliver the project on time.

**Question**

3. What are the delays likely with increasing opposition to HumeLink as an overhead line as Transgrid continues to misrepresent the feasibility of world best practice undergrounding to government?

## D. Obligation in the legislation to mitigate and avoid impacts

Transgrid says in its response to the Manifesto of Kyeamba Valley Concerned Landowners that:

*'The Department of Planning, Industry and Environment (DPIE) requires projects to avoid, minimise or offset environmental impacts and Transgrid is required to demonstrate that no other feasible options with lesser impact are available as part of the environmental planning approvals.'*

This follows from the Environmental Planning and Assessment Regulation 2000 under the Environmental Planning and Assessment Act 1979 which states (emphasis added):

### **'3 Analysis of alternatives**

*An analysis of any feasible alternatives to the carrying out of the development or activity, having regard to its objectives, including the consequences of not carrying out the development or activity.*

### **4 Environmental assessment**

*An analysis of the development or activity, including:*

*.....*

*(b) a general description of the environment likely to be affected by the development or activity, together with a detailed description of those aspects of the environment that are likely to be significantly affected, and*

*(c) the likely impact on the environment of the development or activity, and*

*(d) a full description of the measures proposed to mitigate any adverse effects of the development or activity on the environment, and*

*.....*

### **5 Compilation of measures to mitigate adverse effects**

*A compilation (in a single section of the environmental impact statement) of the measures referred to in item 4 (d).*

### **6 Justification of development**

*(1) The reasons justifying the carrying out of the development or activity in the manner proposed, having regard to biophysical, economic and social considerations, including the following principles of ecologically sustainable development:*

*(a) the **precautionary principle**, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.*

*In the application of the precautionary principle, public and private decisions should be guided by:*

*(i) **careful evaluation to avoid, wherever practicable**, serious or irreversible damage to the environment, and*

*(ii) an assessment of the risk-weighted consequences of various options,*



(b) **inter-generational equity**, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,

(c) **conservation of biological diversity and ecological integrity**, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

(d) **improved valuation, pricing and incentive mechanisms**, namely, that environmental factors should be included in the valuation of assets and services, such as:

(i) *polluter pays*, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems'.

Clearly undergrounding:

- is a “practicable” means to avoid.... serious or irreversible damage to the environment;
- preserves **inter-generational equity** by ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations; and
- conserves **biological diversity and ecological integrity**.

This is because undergrounding:

- eliminates the visual pollution of landscapes of great natural beauty by approximately 900 transmission towers, up to 80m high;
- reduces the risk with bushfires and associated catastrophic impacts on biodiversity; and
- has an easement a quarter of the size of overhead lines and the ability to horizontal directional drill sections, with commensurate reductions in biodiversity impacts.

#### Question

4. Why is Transgrid forging ahead with an overhead option when clearly the planning approval process requires Transgrid to build HumeLink underground, as undergrounding is a means to avoid damage to the environment?
5. Will Transgrid be required to build HumeLink underground as the ‘lesser impact’ option as required under *the environmental planning approval process*?

#### E. Forward orders prior to environmental approval

In March 2023 Transgrid [announced the federal government agreed to underwrite a planned \\$385 million spend to orders for supplies to build transmission lines](#), with \$150 million for projects including HumeLink in southern NSW.

The underwriting of forward orders for HumeLink when the Environmental impact Statement for the project was not even lodged with NSW Planning and Environment brings into question the validity and integrity of the environmental approval process.

In Transgrid's own words: *Transgrid is required to demonstrate that no other feasible options with lesser impact are available as part of the environmental planning approvals.*

A press release by Stop Rethink HumeLink, *Community demands Government immediately cease underwriting millions of taxpayer dollars for foreign-owned company to build unapproved Humelink project - NSW Planning Minister must speak up to show EIS process is not a sham, says:*

*"With the latest State of the Environment report highlighting the devastating loss of native flora and fauna through clearing, the last thing Australia should be doing is clearing a 360km x 70m path through the homes of many endangered, threatened and vulnerable species. Particularly in the name of sustainability and renewable energy!*

....

*By supporting this massive commitment of public money to an unapproved project, governments are essentially saying that the Environmental Impact Assessment process in NSW has no standing in Canberra, despite the huge impact this project will have on wildlife, habitats, bushfires, agriculture and local communities. Why is this indecent haste persisting despite ongoing reports of lengthy delays to Snowy 2.0, which is what HumeLink is supposed to service sometime in the future?" ....*

#### **Question**

6. Why are forward orders for HumeLink as an overhead line being underwritten by government prior to the environmental assessment of the project?
7. Has a decision been made to approve HumeLink as an overhead line ignoring the environmental assessment of the project?
8. The community have been assured by Transgrid that if they want to change the HumeLink project, they need to make a submission to the EIS. Is the EIS merely a box ticking exercise? Will HumeLink to be approved as an overhead line, regardless of merit and environmental consequences?

#### **F. Security**

The Department of Home affairs says: 'The Security Legislation Amendment (Critical Infrastructure Protection) Act 2022 (SLACIP Act) came into effect on 2 April 2022..... [T]he SLACIP Act seeks to make risk management, preparedness, prevention and resilience, business as usual for the owners and operators of critical infrastructure assets'.

There are significant security risks for the grid with HumeLink as a 500kV double circuit overhead line, paralleling existing 330kV overhead lines. Undergrounding HumeLink will eliminate 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](#);

**Question**

9. What security issues are there with paralleling two important (critical) overhead transmission lines?
  
10. What security benefits are there from undergrounding HumeLink?

**G. Overseas undergrounding transmission policies and practices**

In early 2022 Transgrid commissioned consultant WSP to undertake a study of policies and practices of governments overseas for undergrounding transmission. The community has asked for this document many times in 2023, and have recently been told that the study was superseded by consultation between Transgrid and Energy Networks Australia (ENA).

Transgrid has said of their consultation with ENA:

*‘The purpose of this consultation [is] to identify further technical guidance documentation that could assist in the decision criteria used by the transmission owners and provide a technical document to demonstrate the associated challenges of overhead and undergrounding transmission infrastructure. It was confirmed in May 2023 that The Energy Charter (on behalf of the ENA) would be best placed to lead and create this documentation in their series of Better Practice guidelines’.*

It is noted that The Energy Charter is described as ‘a national CEO-led collaboration that supports the energy sector towards a customer-centric future’.

Transgrid needs to be engaging with an organisation that is ‘environment and community centric’ to properly assess the non-market benefits of undergrounding transmission – not a customer-centric organisation.

**Question**

11. If there is an early draft of the WSP paper on policies and practices of governments overseas for undergrounding transmission, can the Standing Committee and the community see the draft report?
  
12. How will engaging with a customer-centric organisation, such as The Energy Charter, on the question of undergrounding, possibly help with the problem of neglected community and environmental costs, in cost-benefit analysis of transmission projects, and social licence?

We hope these comments and questions provide important additional information for the Inquiry.

Yours sincerely,

Andrea Strong  
HumeLink Alliance Inc.