

Rachael Purcell
Braeburn & Cockatoo
188 Cockatoo Road
Killimicat 2722

Correspondence to: braeburnpastoral@outlook.com

Director – Energy Assessments,
Development Assessment,
Department of Planning and Environment,
4 Parramatta Square,
12 Darcy Street,
Parramatta NSW 2150

Dear Sir/Madam,

**SUBMISSION IN RESPONSE TO THE ENVIRONMENTAL IMPACT STATEMENT OF THE
HUMELINK PROJECT – APPLICATION NO SSI-36656827**

I hereby submit this response to the HumeLink Environmental Impact Statement report.

I object to the HumeLink proposal on a number of grounds, as follows:

My husband and I own a property in Killimicat on the Tumut River. We found out from friends that the HumeLink corridor had been moved onto our property just 3 months after we bought it. Transgrid did not contact us, and eventually claimed that they didn't know we owned the land. By this time most of the opportunities to provide feedback to the planning stages had closed. Despite this, we entered into discussion with Transgrid to try and understand the project and the impact on our property and area. We have had a very difficult and trying time dealing with them. Like many people in our area, we have not always been treated with respect and honesty. Our interactions with them have been frustrating and ineffective. The process has not been transparent; it has not been open, and it has not been fair. Not only does this prevent any productive and meaningful interactions, but also erodes social licence with the wider community when they know how landholders are being treated. I have made two complaints to the AEIC throughout this process and one directly to Transgrid via a Community Consultation Group (CCG) member. Transgrid did not attempt to discuss this with me directly.

If HumeLink is built as an overhead project we will lose productivity, income, and our way of life. For many of us, our way of farming cannot continue. We know our land, farms, communities, and environment better than any consulting firm or Transgrid ever will. We deserve for our questions to be answered truthfully and clearly before we are forced into an agreement with a project proponent. We deserve to be able to have effective input into the planning of these projects.

While the impact on agricultural land differs with terrain and enterprise, on our property the main concerns that we don't feel are addressed adequately and cannot simply be compensated for are below:

- We currently use aerial spraying and fertiliser application to manage pasture because the terrain is too steep to work from the ground safely and effectively. Our ability to manage weeds and maintain healthy ground cover are negatively impacted and become too costly or dangerous to maintain to a high standard once the overhead towers are built. We will not be able to use aerial options due to safety of the pilots and proximity to neighbouring properties. This not only impacts our ability to grow productive pastures (our income) but will also lead to weed infestation and erosion areas (the environment).
- Overhead transmission also reduces our ability to manage for environmental benefits. Clearing of old growth trees and remnant vegetation to make way for the easement destroys habitat and negatively impacts biodiversity on farm and in the local area. Again, on our property, areas we had marked for revegetation will not be able to be planted as planned and will possibly be further negatively impacted by the building process (compaction from tracks, winch and crane pads, and the delay in rehabilitation works as we wait until we know where and what we can do).
- The long-term impact of soil compaction from the construction process has the potential to adversely affect pasture growth and soil heath long term. A lot of this work occurs off easement on private property and is just another cost farmers will be forced to carry into the future. Transgrid offer to rehabilitate after construction, but the compaction from repeated use of such heavy machinery goes the full depth of the soil profile. This will not adequately repair soil structure at depth. Healthy soil structure not only benefits pasture growth, but carbon sequestration and biodiversity.
- Land values for property with an easement for overhead transmission have been predicted to fall by up to 40%. This is often assessed by allowing for the drop in property productivity when calculating the value of farmland. Concerns about impacts and stigma of electromagnetic fields on human and animal health and safety, as well as visual amenity are also considered. As a business, any significant drop in property value can have serious consequences. For example, our property is currently part of our security for a bank loan. If the value of our land drops significantly there are potentially further costs associated with that change (higher interest rates or refinancing costs). The compensation offered by Transgrid and more recently the yearly payment from the NSW government does not cover this cost, or the stress that being put in this position causes. Landholders beside the easement are also facing loss of property value. Unlike those with an easement, they are not offered any compensation.
- One of the main reasons that we purchased this property was its picturesque nature. We planned to build our forever home here. During our first meeting with Transgrid, we discussed this and even drew it on a map. We were told everything possible would be done to avoid the site. The final route goes directly over this area. We now know that we will not be able to live safely or comfortably anywhere on the property if this project proceeds in its current form. Below I have outlined some of the reasons, one significant issue being the noise impact on our property. We were also going to explore eco-tourism opportunities for the property, but it would no longer be suitable.

- Large scale clearing of trees throughout the project footprint will have significant impacts on individual properties. We will lose a large amount of our old growth trees within the easement and many off easement due to access tracks. Not all this impact has been included in the EIS or on the proposed clearing maps. Loss of these trees will have a significant impact on farm biodiversity. Stock health also becomes a concern as we will lose many shade trees. Biodiversity offsets or credits purchased somewhere else does not benefit our community or local environment. Old growth trees and the vital habitat they provide are not able to be replaced. Protecting these trees and habitats needs to be a priority. Significant damage to local remnant habitats will have devastating impacts on local flora and fauna, with many endangered species to be impacted. Our community want this impact to be avoided and minimised. This is one of the many reasons our community would like to see this project built underground.
- The bushfire risk presented by this project is not acceptable to our community. Much of HumeLink will be built through high bushfire prone land. The danger to RFS and community from overhead HV transmission infrastructure during a bushfire is not acceptable when the alternative technology of underground transmission can remove this completely. The increased risk and severity of bushfire due to climate change needs to be further considered. Many of our homes, towns and villages will become undefendable in case of a bushfire with HV lines surrounding our area. It will not only further hinder firefighting efforts but cut off evacuation routes. The risk of damage to the infrastructure itself can also be removed by building underground.
- Throughout our discussions with Transgrid one of the main concerns we raised was proximity to our home. We attempted to enter negotiations to have the route realigned within our property to reduce the impact. Firstly, we were told that it was an engineering decision regarding the floodplain and could not be done and that the only way they would consider looking further into this was if we allowed access for the survey assessments. Another conversation suggested it could happen, but the lines would then be closer to a neighbour's house, it was up to us to decide. We were not comfortable allowing that without further discussion. Instead of entering open and honest conversation, we were then told it was too late for any changes to occur. This was obviously untrue, as the line has since been adjusted, including on another part on our property. It also should not be put upon one landholder to decide to increase the impact on another person's home.

We felt that since they had decided on a proposed route without access, they should have been able to consider alternatives without it. Other landholders were able to negotiate this. The mapping in the EIS also suggests that the selected route is also preferred because of the location of a plantation across the river. A plantation that does not exist. Should Transgrid have told us about this, we may have had the opportunity to discuss a real opportunity for a positive change. It also raises the question about what else along the route is incorrect in the mapping used.

The HumeLink EIS suggests that any impacts on farming are acceptable as they only affect a small percentage of farms within the project footprint. We might be a small percentage of NSW but what happens on our land has consequences far beyond our fences. As one of those directly impacted, calculating the changes to our lives and land, these things are significant. They have the potential to drastically reduce our ability to farm and manage our land successfully. Our rural community will be devastated by this project, with no real effort to address the issues. Cheap power in the city is not a good enough reason to destroy large parts of regional areas. We keep being told it's a "once in a generation project," "something we should be proud to be part of," and "best for the consumer." We keep hearing this needs to happen because of climate change. We are the ones living with climate change already, we are the community that was devastated by the 2019/2020 bushfires. We know better than most why we need to reduce carbon emissions. We are also the community asking for change to make this transition without such high impacts on landholders and the environment.

Transgrid have no social licence. Many of my objections below show why our community does not and cannot trust Transgrid to act in good faith, nor have they made enough genuine attempts to engage and consider landholder and community feedback. We know that the full impacts of HumeLink have NOT been clearly explained to our community by Transgrid, nor have they been fairly and fully considered in planning this project.

Transgrid had also failed to notify all adjoining landholders of the EIS exhibition prior to the start of the exhibition period. My neighbours in Killimicat have not received notice, one of whom will have his farming operation severely impacted by the access route through his property. My father-in-law who owns land within the project footprint has not received notification either. As a directly impacted landholder, we received notice of this on September 7, one week after the EIS went on exhibition, and after I spoke to Transgrid representatives about this matter.

The *Undertaking Engagement Guidelines for State Significant Projects* says that:

'For SSD applications, adjoining landowners or occupiers must also be notified.' (Department of Planning, 2021)

This notification was also something promised to community members during the May 2023 CCG meeting earlier in the year and was claimed to have been completed at the CCG in Yass on 2nd August 2023. Transgrid had said that all landholders within the EIS project footprint + 2km would be contacted, particularly those that would possibly be impacted during planning, construction, or operation of HumeLink. This has not happened. This goes to further show why Transgrid lack social licence. This is not consistent with transparent, meaningful, or honest communication with community.

Throughout the EIS and technical reports, the Strategic Benefits Payment from the NSW Government keeps getting mentioned as the thing that will minimise impacts on landholders. How can this be considered part of the solution when it is not actually part of the project? The success or acceptance of a project should not be relying on a payment coming from someone other than the proponent. Without these additional payments, Transgrid are suggesting that their compensation plan and social legacy will fail to do enough to earn the communities trust, support, or acceptance.

1. **I object to this project as Transgrid do not have social licence. I do not believe the social impacts have been fully assessed, nor does the project leave enough positive impacts to communities.** The social impacts chapter has very little mention of the impacts on agriculture, nor does the survey used to inform these statements. In a regional area, impact on agriculture has significant effects. Mental health of communities and landholders has also barely been mentioned, while the community have told Transgrid of the mental toll and even of attempts at suicide because the project. This information is missing from the assessment. We are all struggling with significant anxiety, stress, and worry.

Listed below are my reasons for objecting to the assessment of social impacts.

- a. Livelihoods in table 13-10 *Key potential social impacts during operation of the project* (page 13-21 of the EIS V2) mentions:

‘potential decrease in productivity on some portions of land, which could have an effect on livelihoods’

And on page 13-22 *‘transmission lines may impact on aerial agricultural activities such as spraying of fertilisers’*

We don’t generally spray fertilisers but are concerned about spraying for weed control and aerial spreading of fertilisers. That isn’t mentioned in this report but has been raised by landholders at every opportunity. The impact of the inability to spray becomes a particularly large issue where the potential for weed spread due to the easement and construction movements is increased. The reduced efficacy of spraying and fertilising has a significant reduction in production capabilities on farm. Leaving this out clearly shows they didn’t use much landholder feedback to form this part of the report.

Transgrid claim to be investigating alternative technologies to lessen this impact. The only solution they have suggested to us is to use drones or do it on foot. That’s not a solution where the slopes are not safe to work from the ground or because drones cannot be used on the easement anyway. Any decrease in production has a significant negative impact on farms, farming families and their communities. This impact is not negated by compensation, the impact remains and worsens over the lifetime of the project.

- b. In my opinion, the information gathered for the *Social Impact Assessment EIS Technical Report 7* is not representative of the communities within the project footprint. A survey was used to select some of the stakeholders used to inform this report. The report states that:

‘The survey tool (see Appendix 3) was also made available online to help remove barriers to participation for interested stakeholders, however, as directed, this tool was not widely promoted and as such response levels did not provide meaningful and representative data for analysis. The survey was therefore used primarily to guide the structured interviews.

Transgrid facilitated introductions to stakeholders where appropriate, however all interviews were conducted independently.'

I was one of the landholders that voluntarily completed this survey. The community also became aware of instances of community members being paid \$20 to complete the survey. I am aware of this occurring in Crookwell, see image below, and Wagga Wagga Marketplace during August 2022. This approach would not have garnered meaningful responses, so the results should not have even been used to help choose interested stakeholders. This behaviour is also an example of why the community felt Transgrid were being dishonest and further eroded social licence. The direction not to widely promote the survey also reinforces the view of communities that Transgrid have not engaged transparently or in good faith.

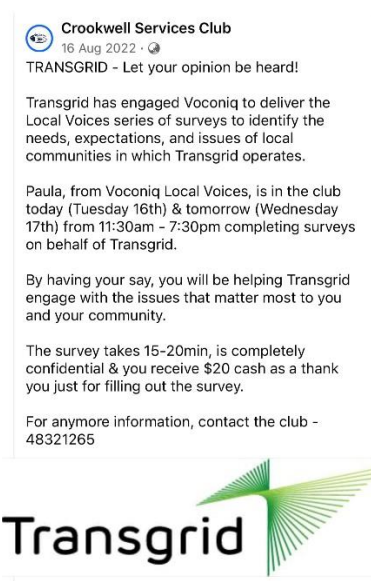


Image: Notice promoting payment for completing the survey from Facebook, August 2022.

I believe that this approach to the survey has influenced why there such a heavy focus is on some areas, Gundagai and Tumbarumba in particular have a strong presence in the report, while neither town will be directly impacted by the transmission infrastructure. I would also argue that this approach to this is in breach of the *Social Impact Assessment Guideline (2023)* (Department of Planning, Industry and Environment, 2003) Section 3.7 *Implement the community participation objectives*, states:

‘• use appropriate engagement techniques.

• make it easy for the community to access information and provide feedback’

- c. I object to this project as it has not been able to show that there will be sufficient positive social legacy from Humelink. According to the report Tumbarumba may benefit in the long term from hosting temporary workers in the accommodation facility.

Other directly impacted landholders and communities closer the transmission infrastructure will only benefit through making new friends and connections. These communities do not appear to be fairly represented in this report. This can be seen in section 5.3.5 *Community Values*. This focusses solely on the community values in Tumberumba. While valid topics, it fails to address other communities along the route. Generating some positive impacts in one town is not sufficient for such a large project.

- d. I also note that the *Social Impact Assessment EIS Technical Report 7* comments on an overall positive community sentiment. Generating results from people paid to complete the survey, people who may otherwise have no interest in the project will not be an accurate finding. Transgrid and HumeLink do not have positive community sentiment or support. I don't think I have spoken to one person that would have something positive to say about Transgrid, their engagement, or the HumeLink proposal.

For ourselves, engagement with Transgrid seems to have largely been a waste of our time. Many of our questions about the impacts of the project were not answered sufficiently or in a timely manner, we were not always treated with respect, and we do not know how or if our feedback was used. In the early stages of our discussions with them, several meetings were cancelled by Transgrid and not rescheduled. In phone calls, I was given names of other landholders that Transgrid were claiming had signed access agreements. We heard the same thing from others. Transgrid were telling people that we had already signed a contract. Aside from this being untrue, we were then expected to negotiate a confidential contract with this person. These interactions were the basis of my complaints to Transgrid and the AEIC. During this time we also regularly attended CCG meetings as observers, where we witnessed Transgrid repeatedly fail to answer community questions, or provide incomplete information, with numerous promises to improve community consultation. This never happened. Many times it was evident that landholders knew more about the project than the Transgrid staff present.

One example of information being provided that is incomplete and not of an acceptable standard is the route selection reports presented to the community. Selection of the final route is addressed in the EIS in Appendix E, Project Options Report. Localised route refinement decisions were made based on GHD reports. Referenced page 33 as GHD, 2022a (appendix E book 4) but not included in the final reference list. The assessment done by GHD using GIS scoring did not count any impacts on agriculture or farmland.

The Tumut area factsheet is linked in the EIS but is highly flawed. Questions have been asked of Transgrid regarding this and the information was never clarified. Given that this is the quality of information used, communities cannot have trust that the route selection and project design decisions made were the best choice or investigated thoroughly. This erodes social licence as we cannot trust that all information was fairly assessed when making this decision.

i. Flaws include:

1. Tumut River is not listed as impacted by the Tumut North Route, however it does cross the river on our property. It is the only route where waterway crossings are not included in the list of key constraints. This is interesting as we were told moving the proposed line on our property was not possible as the distance across the Tumut River floodplain would become too wide and create significant engineering and safety issues.
2. The Tumut Wetlands being listed as potentially impacted by the proposed Kosciuszko Route when it is actually nearer the preferred Tumut North Route.
3. State forests are also left off the key constraints list for the Tumut North Route.

2. **I object to this project because of the noise impacts and because Transgrid have misrepresented the facts around this issue.** Transgrid have failed to be transparent about the impacts of noise from this project on our property. My home is K35. We are marked as being subject to noise levels at the “worst case” level during periods of operation of HumeLink. This noise will exceed noise limits at dwellings enforced by the NSW Environmental Protection Authority.

The HumeLink EIS claims that:

‘It is likely that individual agreements would be the most feasible and reasonable mitigation strategy where operational noise impacts are identified. These agreements may include property treatments to reduce noise ingress. Any agreements would be subject to the outcomes of noise monitoring and further discussions with property owners.’

During discussions with Transgrid about potential impacts of this project, we have been informed that noise will not be an issue for us, that we won’t be able to hear it from our home. These studies show otherwise. Given these statements, I have no confidence that Transgrid would address noise issues in homes, and certainly not to a level that would reinstate our current way of life. Any “*property treatments to reduce noise ingress*” are not going to reduce noise outside; we will no longer be able to enjoy our verandahs and yard to the same extent as currently. Nobody should be forced to live in a house where the noise levels exceed safe limits because of a project that has a viable alternative. Underground is a silent and viable alternative.

3. **I object to this project based on the high visual impact, and do not believe that it has been adequately or accurately assessed.**

- a. I believe that the images used are not representative of the full impact. Many of the images used are with cloudy backgrounds, where understandably, visibility of the towers is lower. Also, the easements are not cleared in any these images. The clearing of vegetation will exacerbate the impact. Transgrid were asked to provide altered images during numerous CCG meetings to show the real impact but failed to do so. Page 14-61 of the EIS shows the viewpoint from Gocup Road, which has our

property in the background. The tower in the foreground is obscured by existing trees, which would have to be cleared. If the trees on the easement were digitally cleared, as would be in reality, the impact would be much more visible and accurate. These images were also not made available to the public until recently, although the community has been asking for a visual representation of the project for years.

- b. The sample picture for the land class for our property is not at all representative of our terrain of rural valleys landscape. Page 14-11 of EIS shows a flat landscape. There is only a small amount of flat land on our property, and not any within the proposed easement areas. We also have some undulating rural hills and ridges landscape character zone, shown on page 14-37 of the EIS. The impact here has been assessed as Moderate.

'The project would introduce large-scale transmission structures in this flat rural landscape. Agricultural land uses would continue under the new transmission lines and around the transmission line structures, within the easement.' PAGE 14-51 of EIS.

I do not believe that the impact has not been adequately assessed in our area. There are no current transmission lines in this area of the project footprint so it will be a drastic change through a picturesque area.

I also object to the above statement that agriculture land uses will continue as they do now. One of the biggest concerns for landholders is the inability to continue farming in the same manner, or to the same standard once the infrastructure is built. These impacts extend beyond the easement in this type of landscape. This is a concern that has been continually raised with Transgrid. On our property, this area will no longer be able to be aerially fertilised or sprayed. The topography severely limits the amount of this that can be done from the ground, as suggested as a solution by Transgrid. While grazing can continue in this area, the quality of pasture will significantly deteriorate as will production levels.

- c. Visual impact on our house and property is classed as high-moderate in the technical report. We will have a corner tension tower less than 300m from our home and be able to see the infrastructure from every room in the house. Visual screening by planting trees has been suggested as a mitigation measure. This is not a realistic solution, nor "appropriate" compensation for such damage. Nothing we plant will grow to screen a 70m+ tower in our lifetime. Also, planting large screening blocks close to dwellings will further increase the fire risk. We chose to live in this house because of the beautiful location, it is heartbreaking to know how much of this will be destroyed by HumeLink.
4. **I object to this project because I don't believe that the issues surrounding electro-magnetic fields have been appropriately addressed.** The community have been asking Transgrid to clearly explain any risks associated with EMF's. We still don't have a clear answer. The Transgrid fact sheet on EMF's doesn't include enough information to address these

questions or allay concerns. Information from medical experts does not fully discount EMF's as having impacts on human health.

One question our community has been asking for the past 3 years is 'How long is it safe to work under the transmission lines when in operation?' We still don't have a clear answer. While Transgrid say the exposure will be within regulations, they have not indicated to landholders how long "prolonged human exposure" is and how this may impact businesses and particularly farming practices. We may unwittingly be exposed to excessive EMF because we don't know what a safe working time is.

The wording from the EIS as follows is the only information I have found about this is relation to HumeLink. It is not clear, or plain English. It still does not answer the communities' questions.

'In all locations, under all conditions, the electric fields directly below the transmission lines will be less than 9.1 kV/m and, hence, would comply with the Basic Restrictions under the ICNIRP Guideline. The 9.1 kV/m value can be shown to meet the ICNIRP general public basic restriction as determined by Transgrid commissioned modelling.'

'At the edge of the transmission line easements, the highest predicted electric fields for 500 kV line operation would range from 0.2 to 0.6 kV/m, or 3 to 12 per cent of the ICNIRP Guideline Reference Level of 5 kV/m.'

Landholders have also been seeking clear information regarding the safety or potential for electrification of fences due to the EMF's. After several months of waiting, I received the easement fencing guidelines from Transgrid. The process and standard of building a fence safely within the easement is not something that the average farmer will have the skills or equipment to do. The information about this has not been widely distributed to landholders by Transgrid.

In regard to the concerns landholders have in regard to EMF impacts on livestock, Transgrid have stated in their EIS 19.5.1.1 page 19-17 that in 1991 it was found by Sir Harry Gibbs that

'No reason exists for concern as to the effect of the fields on animals or plants.'

More recent research has shown that there is a significant negative impact on bee behaviour as a result of exposure to EMFs. In 2019 a research article, Increased aggression and reduced aversive learning in honey bees exposed to extremely low frequency electromagnetic fields (Shepherd S, 2019) found that

'A number of studies have described bee colonies failing that are hived under high-voltage transmission power lines, where EMF levels can reach 100 μ T'

And that

'These effects may not be confined to managed honey bees as there may be much wider implications for wild bees and even other pollinators that require power line strips for critical habitat refuge'

While the 100 μ T tested by Shepard is only short term exposure and higher than the EMF predicted by Transgrid in the EIS, it should not be overlooked.

Also, in section 19.5.1.1 page 19-17, Transgrid have quoted from UK Government policy that

‘There is little evidence that exposure of crops, farm animals or natural ecosystems to transmission line EMFs has any agriculturally-significant consequences.’

Again, they have ignored more recent findings in France that have attributed livestock deaths, disease and behavioural issues to the presence of high voltage transmission lines, wind turbines, solar panels and associated infrastructure (Blot, 2019a) These producers took their concerns to court after they

‘noted significant mortalities and abnormal behaviour within their herd after the installation near their farm of a relay antenna, a high-voltage line, wind turbines’ (Blot, 2019b)

Their claims were backed up by data recorded over years with both on farm technology and veterinarian records. While not all claims relate directly to EMF emitted by the transmission lines directly, the “parasitic electric currents” as a result of the infrastructure was mostly to blame and acknowledged as “a reality” by the former French Minister for Agriculture, Stephane Le Foll later that year (Blot, 2019b). As part of this process, in June 2022, the French courts ordered that a 4G tower be turned off to assess the impacts on agricultural production (Armand, 2022).

To completely dismiss impacts of EMF on agriculture while significant consequences have recently been the subject of court action seems like an incomplete assessment of the situation and again calls into question the quality of some of the research conducted by Transgrid. Landholders are also concerned that EU accreditation can be revoked if high voltage transmission infrastructure is built on their land. This is one of the areas that has led to the lack of social licence as landholders do not feel that our questions have been adequately answered.

5. **I object that a large part of the reasoning for HumeLink seems to be based on proposed REZ sites in Wagga Wagga and Tumut.** For our communities, this raises the question of what determines a project as separate from another.

This EIS list the 2022 ISP as the source for this information but is not referenced. The 2022 ISP has no information about why Tumut may be selected as a REZ, or what developments have been proposed. The 2020 ISP indicates pumped hydro as the energy generation proposed for Tumut REZ (AEMO, 2020). This was a year after the approval for Snowy 2.0 was granted (February 2019), and HumeLink was announced.

The *2023 Transmission Expansion Options Report* suggests that the existing 330kV infrastructure in this area is already congested during peak times, so HumeLink is required to connect Snowy 2.0 (AEMO, 2023).

'The Tumut REZ has been identified due to the potential for additional pumped hydro generation in association with Snowy 2.0 and the proposed actionable ISP HumeLink. The HumeLink project will enable the connection of more than 2,000 MW of pumped hydro generation (Snowy 2.0) in the Tumut REZ area.' (AEMO, 2023)

Also, at this stage, there are no other renewable energy projects proposed in the Tumut area by AEMO, other than pumped hydro from Snowy 2.0. If Snowy 2.0 cannot operate without HumeLink, I would argue that this makes them part of the same project and as such they should be assessed together.

6. I do not agree that the connection benefits to the Rye Park Wind Farm and the Jeremiah Wind Farm are as significant as stated in the EIS.

- a. Connection of the optic fibre to Rye Park Wind Farm (SSD-6693) project would not have a large cost benefit. The wind farm itself connects to 330kV existing lines. As such, the weight of this benefit to HumeLink seems to be overstated.
- b. The Jeremiah Wind Farm will connect to the existing 330kV network, not HumeLink. Any benefit from the proximity of HumeLink to a windfarm would be minimal if anything at all.

7. I object that overhead HVAC transmission is the best project design to deliver a stable and reliable network. I would argue that the safety, reliability, and security of supply are not addressed in the best way. Where upfront cost is the main consideration in project planning, not all available technologies are fairly considered. The use of underground transmission has less environmental and community impacts as well as being able to better address stability and reliability requirements of HumeLink.

Transgrid have showed that they are not willing to be truthful about the facts of undergrounding. They are being deliberately misleading to support their goal of an overhead project. This shows that their arguments against underground are biased, nor can they have been fairly and reliably considered. For example, Transgrid have said the trench for undergrounding would be minimum 40m wide, then it became 15m, when on their own website it shows that they are building the same underground infrastructure with a 3m trench. Our community has been asking for Transgrid to properly consider underground technology, but do not believe that this has happened. Information provided to the community by Transgrid regarding underground transmission has not been in line with independent expert information.

8. I object to this project on the basis that it is not the same project that was originally proposed and assessed throughout the RIT-T process, specifically regarding the Maragle Substation.

My reasons are as follows:

- a. In the original proposal, the HumeLink PACR included installation of transformers at the proposed Maragle substation. Sections in red are the subject of my objection.

'The high level scope of Option 3C includes:

- a new Wagga Wagga 500/330 kV substation and a 330 kV connection to the existing Wagga Wagga substation;*
- construction of three 500 kV transmission lines: – between Maragle and Bannaby 500 kV substation; – between Maragle and Wagga Wagga 500 kV substation; – between Wagga Wagga and Bannaby 500 kV substation;*
- three new 500/330/33 kV 1,500 MVA transformers at the Maragle substation and two new 500/330/33 kV 1,500 MVA transformers at the Wagga Wagga substation;*
- augmenting the Maragle substation to accommodate the additional transmission lines;*
- augmenting the existing substations at Wagga Wagga and Bannaby to accommodate the additional transmission lines/transformers.'* (Transgrid, 2021a)

- b. The Maragle substation was approved as part of the Snowy 2.0 Transmission Connection Project (SSI-9717), and the EIS of that project included the following paragraphs:

'The substation switchyard would comprise a level benched area on which all high voltage and ancillary substation equipment and buildings would be located. This would generally include (but not be limited to):

> Up to three 500/3300 kV three-phase or up to nine single-phase transformers to convert the voltage from 330 kV to 550 kV to support future 500 kV transmission line augmentations to TransGrid's network

> Approximately three ancillary transformers to provide low voltage supplies > Two 500 kV reactors > 330 kV and 500 kV switchbays

> Onsite buildings to house substation controls, secondary systems equipment and amenities

> Oil containment and stormwater system (including bunding and containment tank(s) or a dam)

> Lightning masts

> Steel gantries

> Security fencing.

The indicative substation layout is shown on Figure 5-1.

The transmission connection would connect to Line 64 via the 330 kV switchyard. Whilst not required for the grid connection of Snowy 2.0, the 500 kV yard (as shown in Figure 5-1), which includes the transformers and other equipment, is required to provide the connection point of the southern network reinforcement project (HumeLink). In readiness to support the connection of HumeLink, the 500 kV component of the substation has been included in this CSSI application' (Transgrid, 2021b)

- c. The HumeLink EIS no longer includes the installation of transformers at Maragle substation, only connections. See chapter 3, page 3-1 Project Overview and page 3-2, Table 3-1 HumeLink project summary – infrastructure and operation.

'• connection of the new transmission lines to the future 500/330 kV substation at Maragle, NSW. Note that construction and operation of the future Maragle 500 kV substation will be carried out under the approved Snowy 2.0 Transmission Connection Project (SSI-9717)'

- d. A change as significant as this should require reassessment. It appears that the original cost of \$3.3 billion would have included the transformers at Maragle, while the readvised \$4.892 billion from 2023 would not. This either means that the cost benefit of HumeLink needs to be reassessed, or that the works are part of the same project and should have been assessed together.

.....

- I acknowledge and accept the Department of Planning and Environment's disclaimer and declaration.
- Declaration of political donations: None

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Rachael Purcell', written in a cursive style.

Rachael Purcell

References

AEMO, 2020. *2020 Integrated System Plan*. [Online]

Available at: <https://aemo.com.au/-/media/files/major-publications/isp/2020/final-2020-integrated-system-plan.pdf?la=en>

AEMO, 2023. *2023 Transmission Expansion Options Report*. [Online]

Available at: <https://aemo.com.au/-/media/files/major-publications/isp/2023/2023-transmission-expansion-options-report.pdf?la=en>

Armand, M., 2022. *4G antenna suspected of disturbing cows will be shut down*. [Online]

Available at: https://www.lemonde.fr/en/environment/article/2022/06/08/4g-antenna-suspected-of-disturbing-herd-of-cows-in-haute-loire-to-be-shut-down_5986020_114.html

Blot, A.-S., 2019a. *INVESTIGATION. Electromagnetic fields and waves: the new environmental scandal?*. [Online]

Available at:

https://aus01.safelinks.protection.outlook.com/?url=https%3A%2F%2Factu.fr%2Fenquetes%2Fondes-et-champs-electromagnetiques%2Fenquete-champs-ondes-electromagnetiques-nouveau-scandale-environnemental_28886281.html&data=05%7C01%7C%7C1acefbb73abc4794b07d08dbb5

Blot, A.-S., 2019b. *Waves and electromagnetic fields: farmers take legal action after the death of their animals*. [Online]

Available at: https://actu.fr/enquetes/ondes-et-champs-electromagnetiques/ondes-champs-electromagnetiques-eleveurs-saisissent-justice-apres-mort-leurs-betes_28964331.html

Department of Planning, Industry and Environment, 2003. *Social Impact Assessment Guideline*. [Online]

Available at: <https://www.planning.nsw.gov.au/Policy-and-Legislation/Under-review-and-new-Policy-and-Legislation/Social-Impact-Assessment>

Department of Planning, I. a. E., 2021. *Undertaking Engagement Guidelines for State Significant Projects*. [Online]

Available at: <https://www.planning.nsw.gov.au/sites/default/files/2023-03/undertaking-engagement-guidelines-for-ssp.pdf>

Shepherd S, H. G. G. V. S. S. J. C. N. P., 2019. Increased aggression and reduced aversive learning in honey bees exposed to extremely low frequency electromagnetic fields. *PLoS ONE 14 (10)*: e0223614, p. <https://doi.org/10.1371/journal.pone.0223614>.

Transgrid, 2021a. *Reinforcing the NSW Southern Shared Network to increase transfer capacity to demand centres (HumeLink) - Project Assessment Conclusions Report*. [Online]

Available at: <https://www.transgrid.com.au/media/rxancvmx/transgrid-humelink-pacr.pdf>

Transgrid, 2021b. *Environmental Impact Statement Snowy 2.0 Transmission Connection Project Environmental Impact Assessment*. [Online]

Available at:

<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-9717%2120210217T004031.298%20GMT>

