

Submission
No 277

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

Name: Name suppressed
Date Received: 14 July 2023

Partially
Confidential

Internationally, governments are increasingly opting for undergrounding as the most cost-effective long-term solution, considering all costs, including environmental and social impacts. The proposed underground transmission for HumeLink, known as HVDC, exhibits lower transmission losses compared to AC overhead lines, resulting in energy efficiency benefits throughout the project's lifespan. Undergrounding is preferred due to several advantages, including:

- Elimination of fire risks associated with undergrounding.
- Absence of restrictions or hazards to safe firefighting.
- Protection of infrastructure from severe weather and fire incidents.
- Uninterrupted agricultural operations.
- Minimal impact on landscape, amenity, and biodiversity due to the requirement of a smaller easement.

Our government emphasizes the cost reduction in electricity through renewable energy sources like solar and wind. In light of this, it is crucial not to dismiss a more environmentally friendly electricity transportation option, such as undergrounding, solely based on costs. The benefits to communities and the environment will extend across generations. Furthermore, undergrounding will grant TransGrid a social license, eliminating community opposition as concerns are addressed through an underground solution. The community is eager to collaborate with the government and TransGrid to ensure timely implementation. Compared to overhead lines, undergrounding significantly reduces environmental impacts:

- Undergrounding requires a 15 m easement, compared to a 70 m easement for overhead lines.
- Drastic reduction in tree and plant removal.
- Decreased harm to endangered species (82 species impacted by HumeLink).
- Restoration of land above underground cables post-construction.
- Absence of towers and wires interfering with bird flight or climbing animals.
- Elimination of fire risks associated with overhead lines (e.g., California 2018, where power lines caused a fire resulting in 84 fatalities and the destruction of the town of Paradise).
- Elimination of air and ground fire control hazards.
- Prevention of power transmission interruptions during severe weather or bushfires, improving transmission security and resilience.
- Minimal impact on public or private land after construction completion.
- No hindrance to agricultural operations, machinery use, irrigation, drones, or aircraft operations due to the absence of overhead lines.
- No visual impact from transmission lines, preserving visual and rural landscape character.
- Minimal electromagnetic field impacts, reducing the risk of health issues and allowing uninterrupted implementation of new technologies like precision agriculture, improving agricultural efficiency.

To the average person, it is evident that the cheapest option may not necessarily be the best one. To fully benefit from this project, it is imperative that we commit to implementing the best practices worldwide and choose to bury the power lines underground.