

Submission
No 271

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

Organisation: Victorian Farmers Federation

Date Received: 14 July 2023

The Hon. Emily Suuval MLC
Chair
Legislative Council Standing Committee on State Development
Parliament of New South Wales



14 July 2023

RE: Submission - Inquiry into feasibility of undergrounding the transmission infrastructure for renewable energy projects

The Victorian Farmers Federation (VFF) is pleased to submit to this inquiry based on our experience with the federal and state regulatory approaches that are not based on a full cost benefit analysis with respect to transmission infrastructure.

The VFF believes that all transmission projects need to be developed on the basis of commercial consent with route selection focused on the predominant use of existing linear road and rail alignments. This will reduce the environmental impacts, make best use of existing transport corridors and minimise the need to blight productive agricultural land with significant constraints on their land use practices.

For many years the VFF has been advocating for a better understanding of agricultural impacts in the planning system and in renewable energy transition. We have called for mapping of state and regionally significant agricultural land like that recommended by the NSW Agriculture Commissioner. We have called for this process to be consultative so that farmers can demonstrate the productive value of their land. Better mapping of how agricultural land is used would allow for infrastructure plans that are located and designed to minimise impact on production as they understand what the key issues are.

The NSW Agriculture Commissioner in [*Renewable energy generation and agriculture in NSW's rural landscape and economy – growth sectors on a complementary path*](#) made a similar land use area assumption that is often used by energy companies to say that their proposals will not have an overall impact on agriculture. It recognised that there can be areas where land use change impacts will be evident.

It has been disappointing to see that despite the energy system having access to the power to compel landholders to host transmission they have no understanding of the consequences of the execution of these powers on individual lives and livelihoods or regional economies.

The Australian Energy Infrastructure Commissioner in his [*2022 Annual Report*](#) identified some key issues relating to transmission that needs to be considered in route and technology design. We believe that agriculture issues need greater attention and understanding as the Commissioners experience to date has been predominantly with wind and solar developments where the landowners retain commercial consent over proposed developments.

There needs to be an overhaul in the approach to these projects that considers all issues and impacts fairly. We need state and federal governments to understand that renewable energy development and transmission is primarily on farming land that has unique impacts and considerations that make it difficult to produce elsewhere and where land value impacts are dwarfed by ongoing impacts on production.

We need the investment decisions to be made based on a full cost benefit analysis and a commitment to commercial consent as the basis for transmission projects. Due to significant weaknesses in compensation statutes that use land value as the measure of impact, it is the only method that ensures a landholder a fair say in determining if the project can occur without significant impact to their business.

The VFF supports the position of Moorabool Shire Council's Western Victoria Transmission Network Local Impact assessment Report- February 2021 that:

The RIT-T does not appear to consider costs or benefits outside the electricity market.

The RIT-T process selects a preferred option on the basis of net direct electricity market benefit and does not take into account any local, indirect or non-market impacts (positive or negative).

The capital costs considered include construction, operation, maintenance, regulatory costs and easements. It is apparent that no other costs are considered such as non-market economic, social and environmental impacts.

The benefits assessed include price benefits to electricity consumers and the profitability of energy production and subsequent flow to business. It is apparent that no other benefits are considered, including non-market economic impacts.

The VFF has been calling for a state-wide strategic assessment of the transition to renewable energy since February 2019. This would consider significant agricultural areas where generation or transmission would be discouraged; the future distribution and transmission needs and how to plan for these; and the need for work regarding on and off site impacts, social license, land access rules to ensure biosecurity, safety and rehabilitation of impacts.

Through the Western Renewable Link project and Victoria New South Wales Interconnector West Project the VFF has interacted with a range of stakeholder, including the Energy Grid Alliance (EGA). We note that the EGA also shares our concerns that transmission planners have not properly considered the true costs and benefits of transmission above or below ground.

To realise the true net benefit of underground HVDC over the life of a project, a Triple Bottom Line (TBL) analysis is required for each transmission project to consider profit, people, and the planet.

Understanding External Costs of Overhead Electricity Transmission External costs should be considered in transmission planning to rebalance the true benefits, this will lead to greater market efficiency and environmental sustainability.

Response to the Built Environment Climate Change Adaptation Action Plan 2022-2026 Increasing frequency of dangerous fire weather poses a threat to most assets, with a particularly high operational

risk to transmission lines due to heat and smoke. ... underground HVDC Transmission Interconnectors or Transmission lines solve at least two problems for NEM Transmission and Distribution Participants in the event of bushfires and in planning the Risk Management of their Assets during bushfires.

Underground HVDC Interconnectors or Transmission Lines do not need to be turned off if they are in the path, or in the vicinity of a Bushfire.

Underground transmission, which require a higher upfront outlay than above-ground systems, can significantly reduce potential damage from climate impacts and save recovery costs. Transmission lines above ground tend to be more vulnerable to climate hazards such as high-speed winds, wildfires, floods, and landslides, than underground systems. ... When impacts of extreme weather events interrupt electricity supply and lead to large socio-economic costs, network operators are only expected to bear a fraction of the repair and social costs, with most of the costs often being passed through to energy consumers.

Policy makers need to fulfil a critical role in building resilient electricity systems by adopting effective policy measures that can prevent a potential 'market failure'. ..Increasingly, utilities in other countries are routing power underground, despite the added expense. Denmark was among the first to mandate it in 2008, requiring most new AC and HVDC transmission to be routed underground. In 2015, Germany mandated underground transmission for HVDC systems.