

My grounds for objection to Humelink include

(a) cumulative impacts of other transmission projects being considered for construction by TransGrid in the same area have not been disclosed or considered. These include the following two other projects:

Project 1 a second 500 kV overhead transmission line between Bannaby and Wagga Wagga (Gugga), that TransGrid has identified the need for, and has submitted details of its scope and estimated cost to AEMO to consider in their 2024 Integrated System Plan. Details can be found in AEMO's Transmission Expansion Options Report, dated 28 July 2023. See section 3.8, page 61, options 2, 3 and 4 all being overhead lines between Bannaby and Wagga-Wagga as well as other lines. As explained in the summary, these options are subsequent to Humelink and are required ASAP.

Project 2 Southern Sydney Loop, another overhead 500 kV / 330kV project is being progressed by AEMO and/or Energy Co, running from Bannaby to Sydney West substation, to transmit the power from Humelink (and Project 1) the remaining 130km from Bannaby to Sydney West substation via a new 500 kV/ 330 kV substation near South Creek. Options for this project are described in section 3.7, pages 57 to 60 of the same report, options 2, 2b and 3. This project is an integral part of Humelink and must be considered at the same time as Humelink and Project 1 - not separately. The project has already been approved in the AEMO 2022 ISP as an Actionable Project called Sydney Loop to be completed by 2027 at the same time as Humelink.

(b) the EIS has not considered a viable alternative transmission project, in place of these three separate projects that would have much lower socio-environmental-economic impacts, and deliver far more reliable electricity to Sydney. That project is to use HVDC technology and underground HVDC cables from Wagga-Wagga - Maragle - Sydney West substation, (not connecting to Bannaby) and laid in trenches largely along existing transmission easements. The feasibility, economics, construction, environmental impacts and schedule for this project were described by three independent transmission experts Simon Bartlett (power systems and economics) Les Brand (HVDC) and Ken Barber (cables) to the NSW Undergrounding Inquiry at Cooma and in their subsequent written submissions. That evidence is in direct contrast to TransGrid's evidence and it is noted that TransGrid has never designed, built, operated or maintained HVDC transmission, or underground HVDC cables. This alternative project would be significantly lower cost (both its initial capital cost and ongoing operation and maintenance cost) and could be supplied and installed in less time than an HVAC alternative (due to the

delays caused by the strong community and landowner opposition and lack of social licence for Humelink alone).

(c) The EIS has not considered the serious flaws in the design of Humelink, being that it is supported by 700 single double-circuit transmission towers, each of which is a single-point of failure that could fail along with both 500 kV circuits that each tower supports. This type of failure already occurs in the NEM and will occur for Humelink due to severe lightning, destructive winds, wildfires, flooding and sabotage. The result is bound to be the black-out of greater Sydney, the Hunter Vally smelters and most of NSW. Further details are given in the attached report that was submitted to the Federal Minister for Home Affairs. Undergrounding HVDC along two geographically separated routes (on two existing easements) eliminates all of these risks and thereby avoids the high socio-economic costs of these certain blackouts that will be caused by the Humelink project, as currently proposed by TransGrid. The financial and social costs of these blackouts must be considered when evaluating the overhead 500 kV options for Humelink and the above related projects, against the undergrounding option.

This submission is not confidential. Further supporting details can be provided on request.

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