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Mr Stuart Dodds
Asset Manager – Murraylink
APA
121 Wharf St
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Dear Stuart,

The future role of Murraylink in the NEM

AEMO produces the Integrated System Plan (ISP) pursuant to section 49(2) of the National Electricity Law, which defines AEMO's functions as the National Transmission Planner. On 30 June 2022, we published the 2022 ISP, which is a plan for a true transformation of the National Electricity Market (NEM) from fossil fuels to firmed renewables. It calls for investment in generation, storage, transmission and system services that exceed all previous efforts combined. Underpinning this plan is the need for the continued operation and maintenance of the existing NEM interconnectors – including Murraylink.

Based on our studies for the 2022 ISP, we have observed an important and ongoing need to maintain the Murraylink interconnector, including:

- **Resource firming** – As the proportion of variable renewable energy (VRE) increases across the NEM, Murraylink will play a role in sharing firm generation and surplus resources between regions. Following the commissioning of Project EnergyConnect (PEC), total utilisation of Murraylink is projected to decline, but the full capacity is projected to be utilised in both directions.
- **Supporting peak demand** – At times of peak demand, particularly in South Australia, our modelling shows that Murraylink improves the capability to deliver a reliable supply of electricity to consumers. This role is particularly clear during periods of high demand, low VRE, network outages or generator outages, and continues following the commissioning of PEC. Without Murraylink, additional capital investment (e.g. battery storage) would likely be required to meet the NEM reliability standard.
- **Network controllability** – The dispatchability of Murraylink is projected to improve network utilisation and reduce congestion by actively controlling flows parallel to PEC and Heywood. While PEC is expected to have some degree of controllability, through the use of phase-shifting transformers, Murraylink can much more actively follow a precise dispatch target. Murraylink's dispatchability will help balance flows on the network between South Australia, New South Wales and Victoria. This capability is particularly valuable in the event of high coal and gas prices.
- **Outage management** – During both planned and unplanned outages, Murraylink improves the capability of the grid to provide consumers with reliable and secure electricity supply. Importantly, the presence of Murraylink is expected to increase the duration of outage windows that are critically needed to maintain the surrounding network – including Heywood and PEC.

- **Voltage management** – The STATCOMs at both ends of Murraylink improve voltage management at Red Cliffs and Monash by providing dynamic voltage support. This improves the resilience of the grid in these areas.

Importantly, our studies have found that PEC and Murraylink will be able to simultaneously import or export at their combined maximum transfer levels during some conditions. Amongst other factors, the actual dispatch of Murraylink and PEC will be optimised in combination with bids from local generation and storage.

If you have any questions, please don't hesitate to contact me at Eli.Pack@aemo.com.au.

Yours sincerely,

Eli Pack

Group Manager Integrated System Planning (Interim)