

Integrated System Plan Feedback Loop Notice – HumeLink (Early Works) – 19 May 2023



AEMO publishes this notice pursuant to its function under section 5.16A.5(b) of the National Electricity Rules (NER).

Context

AEMO's *Integrated System Plan* (ISP) establishes a whole-of-system plan for the efficient development of the power system. In June 2022, AEMO published the 2022 ISP¹, which used quantitative assessment and scenario analysis to identify an optimal development path. The optimal development path contains a series of power system investments, some of which are classified as “actionable ISP projects”. The ISP triggers a regulatory approval process for projects with this classification.

While the ISP sets out a whole-of-system plan, transmission network service providers (TNSPs) are required to assess the actionable components of this plan through the Regulatory Investment Test for Transmission (RIT-T)². Following completion of the RIT-T, a TNSP may seek written confirmation from AEMO to confirm that the preferred option from the RIT-T remains aligned with the optimal development path in the most recent ISP. This process is referred to as the “feedback loop”.

The HumeLink project

The HumeLink project is a proposed transmission upgrade connecting the Snowy Mountains Hydroelectric Scheme to Bannaby. The 2022 ISP identified two stages for HumeLink:

- **Early works** – pre-construction activities that can be taken now, while keeping open the option to either continue, defer, or cancel the project as new information becomes available.
- **Implementation** – new 500 kilovolts (kV) transmission lines that link the Greater Sydney load centre with the Snowy Mountains Hydroelectric Scheme and Project EnergyConnect in south west New South Wales.

In December 2021, Transgrid completed a RIT-T to assess the technical and economic viability of the project³. The RIT-T estimated net market benefits for the project of \$491 million.

On 25 January 2022, Transgrid requested a feedback loop assessment (“feedback loop 1”) for the early works stage of the HumeLink project, at a cost of \$327.6 million⁴. On 27 January 2022, AEMO confirmed that the early works stage satisfied the requirements under the feedback loop⁵.

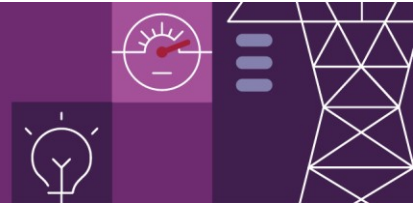
¹ At <https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp>.

² The RIT-T process is a regulatory mechanism that applies an economic cost benefit test on new transmission electricity infrastructure proposed for the National Electricity Market (NEM). It is designed to identify the most economically efficient infrastructure investment option, so the investment meets the long-term needs of consumers.

³ Transgrid, *HumeLink RIT-T*, at <https://www.transgrid.com.au/projects-innovation/humelink#RIT-T-process-and-submissions>.

⁴ Transgrid's feedback loop request of 25 January 2022 provided that the cost estimate for the project is \$3.28 billion, which included \$327.6 million for early works (\$Real 2017-18).

⁵ AEMO, *Integrated System Plan Feedback Loop Notice – HumeLink (Early Works)*, 27 January 2022, at <https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/integrated-system-plan-feedback-loop-notices>.



In April 2022, Transgrid submitted a contingent project application (CPA) to fund the early works stage of the HumeLink project. In December 2022, the Australian Energy Regulator (AER) approved \$321.9 million⁶ in forecast capital expenditure (capex) to undertake early works.

Feedback loop request

On 6 April 2023, Transgrid requested a second feedback loop assessment (“feedback loop 2”) for the early works stage of the HumeLink project. That request includes the following information⁷ relevant to this feedback loop assessment:

- Transgrid worked with the Federal Government to establish the Powering Tomorrow Together (PTT) program, which involves the integrated delivery of Project EnergyConnect, HumeLink and VNI West.
- Through the PTT program, Transgrid seek to secure the lowest risk-adjusted price for long-lead equipment for HumeLink, including substation transformers, reactors, conductors and steel.
- Purchasing this long-lead equipment is intended to form part of the early works activities for HumeLink and will be included in an additional early works CPA to enable Transgrid to recover costs of up to \$209.6 million.
- When added to the \$321.9 million in forecast capex to undertake early works approved by the AER in December 2022, total early works costs for HumeLink are \$531.5 million.
- The resale value of the long-lead equipment is conservatively estimated to be the same as the long-lead equipment forecast capex of \$209.6 million.

- Recovering the cost of long-lead equipment as part of early works activities will reduce forecast capex for the implementation stage of HumeLink, which will include the balance of the project costs, by an equivalent amount. Therefore, the cost estimate for the entire project remains unchanged.

Feedback loop assessment requirements

To be eligible to submit a CPA in relation to an actionable ISP project (or a stage of an actionable ISP project), a RIT-T proponent must obtain written confirmation from AEMO that:

- the preferred option addresses the relevant identified need specified in the most recent ISP and aligns with the optimal development path referred to in the most recent ISP; and
- the cost of the preferred option does not change the status of the actionable ISP project as part of the optimal development path (as amended by ISP update where applicable)⁸.

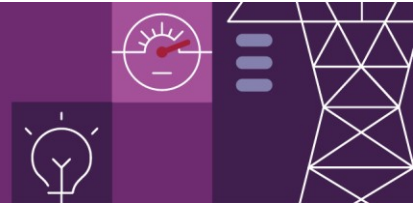
Where project staging is captured within a single actionable ISP project, the RIT-T proponent must obtain feedback loop confirmation from AEMO for each stage before submitting a contingent project application. The cost assessed by AEMO in the feedback loop is the cost of the particular stage. However, AEMO must also have regard to the full cost of the project when confirming that the status of the project remains unchanged⁹.

⁶ \$Real 2017-18.

⁷ All costs referred to in Transgrid’s feedback loop request are Real \$2017-18.

⁸ NER 5.16A.5(b)

⁹ AER, *Cost Benefit Analysis Guidelines* (“CBA Guidelines”), at <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/guidelines-to-make-the-integrated-system-plan-actionable>, p.69.



Notice of AEMO confirmation that feedback loop requirements are satisfied

AEMO has applied the feedback loop assessment to the early works stage of the HumeLink project by reconsidering the selection of the optimal development path in the most recent ISP (that is, the 2022 ISP). This required an update of the cost benefit analysis in the 2022 ISP using the cost estimates provided in Transgrid's latest feedback loop request.

The updated cost benefit analysis and reasoning supporting selection of the optimal development path is contained in the HumeLink Feedback Loop Analysis report published with this notice¹⁰.

AEMO publishes this notice to confirm that:

- the early works stage of the HumeLink project meets the identified need and aligns with the optimal development path specified in the 2022 ISP; and
- the cost of the early works stage (\$558.8 million¹¹) does not change the status of the actionable ISP project as part of the optimal development path specified in the 2022 ISP.

AEMO also had regard to the total cost of the project (\$3.32 billion¹²) and considers that the status of the project as actionable remains unchanged.

¹⁰ At <https://aemo.com.au/-/media/files/major-publications/isp/2023/20230511-humelink-feedback-loop-analysis-report.pdf>.

¹¹ The feedback loop assessed the cost of early works in Real \$2020-21, consistent with the 2022 ISP. This cost is equivalent to \$531.5 million in Real \$2017-18 as provided in Transgrid's request.

¹² The total project cost is presented in Real \$2020-21 and remains unchanged from that considered in the 2022 ISP.