TransGrid's Response to AER Request for Information- HumeLink

Date received:	25 October 2021
Date responded	9 November 2021
Topic	HumeLink RIT-T – further assessment of 100% double circuit Option 1C and timing of early works costs
RFI	5.0

Questions

This response provides further information to the AER on the analysis of a 100% double-circuit configuration of Option 1C presented in the PACR (i.e., 'Option 1C-new'). It also responds to two further questions raised by the AER during our meeting on 25 October 2021 relating to the NPV analysis presented in the HumeLink PACR.

The further questions raised by the AER were:

1. Have the costs of 'early works' been incorporated in the NPV analysis in the PACR?
2. If so, why are there no costs shown in the NPV analysis prior to FY2024/25? What would be the impact on the NPV analysis and the PACR conclusions if the timing of early works prior to FY2024/25 were taken into the account?

1. Further assessment of 100% configuration of Option 1C ('Option 1C-new')

We have undertaken further assessment that demonstrates that a 100% double circuit variant of Option 1C would not have been the preferred option under the RIT-T.

The AER has asked us a number of questions relating to our consideration of a 100% double circuit variant of Option 1C as part of the RIT-T assessment.

We presented analysis in our earlier response (RFI 4.0) that showed that a 100% double-circuit version of Option 1C (which we have termed 'Option 1C-new' for the purposes of our responses to the AER), would still have been ranked third in the 'positioning analysis' we conducted as part of the HumeLink PACR. This analysis was based on Class 5 cost estimates for Option 1C-new.

The positioning analysis in the PACR considered seven options and included all market benefits with the exception of competition benefits. The PACR then presented the RIT-T analysis (including competition benefits) for the two options that ranked most highly in the positioning analysis. This approach was taken due to the time required to estimate competition benefits and was a proportionate approach in balancing the detailed analysis and the timeliness of the overall process.

We have now undertaken further analysis of Option 1C-new, consistent with the analysis that we would have undertaken if we had included the 100% double circuit Option 1C in the RIT-T analysis in the PACR. In particular, our further assessment of Option 1C-new includes:

> a refined cost estimate for Option 1C-new, based on class 4 cost estimates (consistent with the class 4 estimates presented for Options 2C and 3C in the PACR), and

> an estimate of competition benefits for Option 1C-new, which has been calculated by EY adopting the same methodology as used for Options 2C and 3C in the HumeLink PACR.

The results of this analysis are set out in Tables 1 and 2 below, for the positioning analysis and RIT-T analysis, respectively. We have also provided the spreadsheets setting out the NPV analysis together with this response.

Table 1: Positioning analysis including Option 1C-new (100% double circuit variant): net market benefit excluding competition benefits ($m, PV)

Route	Option	Central	Step	Slow	Fast	Weighted	Rank
Route 1	Option 1A	-333	-178	-1,011	-306	-362	6
	Option 1B	-371	-175	-1,389	-331	-422	7
	Option 1C	-182	7	-1,206	-136	-233	4
	Option 1C-new	**40**	**229**	**-985**	**86**	**-11**	**2**
Route 2	Option 2B	-639	-62	-2,015	-599	-649	8
	Option 2C	-33	537	-1,413	9	-44	3
Route 3	Option 3B	-287	309	-1,660	-248	-293	5
	Option 3C	49	634	-1,340	91	39	1

Table 2: RIT-T analysis including Option 1C-new (100% double circuit variant): net market benefit including competition benefits ($m, PV)

Route	Option	Central	Step	Slow	Fast	Weighted	Rank
Route 1	**Option 1C-new**	**375**	**735**	**-829**	**404**	**335**	**3**
Route 2	Option 2C	431	1,168	-1,253	394	399	2
Route 3	Option 3C	520	1,271	-1,177	487	491	1

The further analysis demonstrates that:

> for the positioning analysis, using the more accurate class 4 cost estimates results in Option 1C-new becoming ranked second overall, however

> if Option 1C-new had been included in the RIT-T analysis (including competition benefits), it would have been ranked third overall, materially behind the preferred option (Option 3C) and Option 2C.

The competition benefit analysis undertaken by EY has confirmed that the competition benefits associated with Option 1C-new are materially below those for Options 2C and 3C. This reflects the different topology of Option 1C-new, which does not involve a transmission line going via Wagga. Options 2C and 3C, which do go via Wagga, are able to access additional capacity from renewable generation in South West NSW and allow additional transfer capacity between South Australia and Victoria via Wagga into NSW major load centres. The lower competition benefits for Option 1C-new outweigh the lower costs for Option 1C-new and result in a lower overall net market benefit.

2. Have the costs of 'early works' been incorporated in the NPV analysis in the PACR?

The costs of early works are included as part of the overall total cost estimates for the options in the HumeLink PACR assessment.

The HumeLink project will be the first investment to use the new 'staged' Contingent Project Application (CPA) provisions in the National Electricity Rules. Transgrid and the AER have agreed that cost recovery for the 'early works' associated with the detailed planning and design stages of the project will be sought through an initial CPA ('CPA 1'), which Transgrid intends to lodge following completion of the current RIT-T dispute resolution process. Progressing these stages of the project ahead of seeking cost recovery for the main construction components will enable Transgrid to develop a more accurate estimate for the costs of the later construction phases, whilst ensuring that the overall timeframe for delivery of the project as set out in the Integrated System Plan (ISP) can still be achieved.

The costs of all of the options in the PACR include an estimate of the costs associated with the planning and detailed design works associated with project delivery (ie, 'early works' costs). In particular, the estimates of the total cost for the options presented in the PACR include the costs of design, development, contracting, stakeholder engagement and regulatory and environmental approvals for the project.

3. What would be the impact on the NPV analysis and the PACR conclusions if the timing of early works prior to FY2024/25 were taken into the account?

Bringing forward the 'early works' costs in the NPV analysis does not impact the ranking of the options under the RIT-T analysis, including if Option 1C-new is also included in the RIT-T analysis.

The AER has queried why there are no costs shown in the NPV analysis prior to FY2024/25.

The NPV analysis in the PACR apportioned the total cost estimate for each of the options considered across the construction period associated with each option. This approach is consistent with the capitalisation of planning and design costs (which precede project construction) as part of the project costs at the time that the project ultimately proceeds.

Notwithstanding, the AER has questioned whether the outcome of the RIT-T assessment would be affected if a profile of costs that explicitly recognises the timing of the early works stage was adopted. Transgrid has therefore re-run the NPV analysis for Options 1C-new, 2C and 3C based on a refined cost profile for each option that reflects costs being incurred from the start of the early works stage.

The results of the re-run NPV analysis are shown in Table 3 below. We have also provided the spreadsheets setting out the NPV analysis together with this response.

Table 3 shows that Option 3C remains the preferred option under the RIT-T:

- the overall net benefits of Option 3C decrease by approximately $35 million, however Option 3C continues to have materially positive net benefits that are significantly higher than either Option 1C-new or Option 2C; and
- the ranking outcomes for Option 3C in the PACR RIT-T NPV assessment would not have been affected with the different cost profile.

The outcome of the RIT-T would therefore not have been affected if this cost profile had been adopted in the PACR.

Table 3: RIT-T analysis adopting alternative profiling of option cost timing, to reflect timing of early works

Route	Option	Central	Step	Slow	Fast	Weighted	Rank
Route 1	Option 1C-new	347	707	-857	376	307	3
Route 2	Option 2C	396	1,133	-1,288	358	363	2
Route 3	Option 3C	485	1,236	-1,211	452	456	1