Comments on Chapter 3 of Western Power's Response to the MWEP NFIT Draft Decision

Clause	Issue	Comment
3.3.1	Whether the line should be designed to 75°C or 85°C conductor temperature.	• Increasing the design to 85°C will increase the ultimate thermal capacity of the line from 1,000 to 1,200 MVA. This is well above thermal capacity requirement for the project. Western Power's high load forecast is for 700 MW (740 MVA) by 2030 and nobody has suggested the project should be designed for loads above this. In any case, if the project proceeds it will provide opportunities for generation to connect in the Mid West and this will tend to reduce the thermal capacity requirement. • There was an error in Section 3.3.3 of my report which stated the 75°C was Western Power's standard conductor design temperature for 330 kV networks. 75°C is nevertheless an industry standard for overhead transmission line design. • We agree that the additional cost on $500,000 for the higher conductor temperature was not material to the total project cost and Section 3.1.3 of our report said this.
3.3.2	Undergrounding of a section of the Pinjar-Cataby 132 kV line.	• The Pinjar-Cataby 132 kV line is elevated at this particular point to cross the "cricket wicket" line that will be removed as part of the MWEP. In its letter of 6 September (Item 19) Western Power indicated that the cost of undergrounding was similar to the cost of rasing the 330 kV line to pass over the elevated line. This seemed reasonable. However, if the cricket wicket line was removed, the additional height of the Pinjar Cateby line would no longer be required and diverting the line onto standard shorter towers appeared an obvious lower cost solution that Western Power did not appear to have considered. • Appendix 2 of the submission provides new information that shows that the crossing is complex due to the fact that the tower on the east side of the crossing is a 45 degree angle tower. The location of this tower significantly increases the complexity and cost of an overhead solution. On this basis we now accept Western Power's position.
3.3.3	Size of transformer at Three Springs	• Western Power's analysis is contingent on the high load forecast. It is misleading to suggest that the ERA considered in the Regulatory Test decision the high load forecast to be most likely. It would be more accurate to state that Western Power's medium forecast provided only for the Karara Stage 1 load and that the ERA considered it highly probable that more mining load (Karara Stage 2 or Extension Hill Stage 1 would want to connect within 20 years. It would be prudent to ensure the MWEP had sufficient capacity to provide for this. It is important to note that this load is likely to connect at 330 kV at Three Springs and not at 132 kV at Geraldton, so will not utilise the Three Springs transformer. • All the block loads around Geraldton that was used to support the 2007 Regulatory Test and NFIT application for the original MEWP are now unlikely to proceed, except Oakajee port, and doubt remains as to whether this will proceed. Apart from Oakajee, no other major block loads around Geraldton have been identified and there is very little evidence to indicate that Geralton growth rates consistent with Western Power's high load forecast are likely. • Western Power's AA3 submission agrees with this. It includes a single circuit 132 kV wood pole line between Mungarra and Geraldton in 2017 – this line would be redundant if the MWEP was to

		proceed (even at 132 kV). The AA3 submission was based on the 2010 APR load forecast (Table 4.2), which shows a total North Country mining load (including 330 kV load at Three Springs) of 327 MW. In the 2011 APR this load has reduced to 270 MW, indicating the Mungarra-Geraldton single circuit line will likely be deferred beyond AA3, possibly for some years. • The use of smaller transformers minimises the cost to consumers under lower growth scenarios while providing the flexibility to address high growth rates in a relatively cost effective manner should they eventuate.
3.3.4	Development costs incurred to date.	• Inclusion of the cost of the Three Springs terminal in this component is new information. The TST component of this $[redacted] should not be added to the RAB until the MWEP is fully complete since, until an incoming 330 kV supply is available, TST will remain a Karara connection asset.
3.4.1	Span of the Eneabba – Three Springs line.	• We accept the fact that this line was built to the standards that existed when it was built by KML. [redacted]
3,.4.2	Timing of KML assets	• Noted. However this should apply to the full Three Springs Terminal Station, not just the transformer as indicated in paragraph 78 of the draft decision. Note also that Western Power is now saying that $[redacted] of development costs that it has incurred to date (and which I understood it previously argued should immediately be included in the RAB consistent with its "capitalise when spent" policy) was for the construction of TST assets that should not be capitalised until the completion of the full project.
3.4.3	Depreciation	• Further investigation is needed to confirm that this is consistent with Western Power's depreciation policy for its regulatory and financial accounts. The depreciation rates used in the analysis are slightly lower than we normally seen in the industry but appear consistent with the actual lives as reflected in the Network Management Plan submitted with AA3. The main exception is secondary systems including SCADA, control and communications equipment where the lives would be substantially shorter than indicated.
3.4.4	IDC	• Noted.