

MEMORANDUM



To: SKA Siting Group, Richard Schilizzi
From: Brian Boyle, Michelle Storey, ANZSCC Technical Liaisons
Date: October 18, 2011

Re: Question of clarification on Power Provision report

In response to the following question of clarification:

The Consultants on the Provision of Electrical Power have started their assessment of your submission in this area.

In order for them to be able to make assessments of the electrical transmission systems that you have proposed, they need some dimensions with which to work. In your submission "Electrical Power", there are no scales provided on Figures 1 and 2. Also, it is unclear whether Figure 1 is to scale or simply a schematic and how it relates to the site in Figure 2. Could you provide this information including an overall figure, with approximate distances, encompassing the transmission system in Figure 1 and the site location?

Figure 1 of the ANZSCC power provision report illustrates existing and planned transmission line infrastructure on the west coast of Western Australia between Perth and Geraldton. Perth and Geraldton are marked for reference on the diagram, with Geraldton approximately 400km north of Perth.

The Murchison Radio-astronomy Observatory is of order 315 km north-east of Geraldton. In the ANZSCC Power Provision report it is proposed that a new transmission line be constructed from Three Springs to the Operations Centre near the Centre of the Array (OCCA) for the SKA. The OCCA is proposed to be sited in the vicinity of the Boolardy Station homestead. The three cores, as illustrated in Figure 2 of the ANZSCC Power Provision report are sited on the Murchison Radio-astronomy Observatory, 35km north of the OCCA.. The cores are individually of order 5km diameter, which provides a scale for Figure 2 in the report.

The relative orientation of Geraldton, Three Springs and the OCCA is illustrated in Figure A below.

It may also be possible to share transmission line infrastructure with mining projects being developed eighty kilometres to the east of the MRO, at the Weld Range and Jack Hills. Attachment 34 of the ANZSCC response to the Request for Information, which describes the Vision for a carbon neutral Mid West region, illustrates an alternative proposal, where a transmission line is provided for the Jack Hills and Weld Range project and the SKA project is able to take a spur off this transmission line to service the central area of the SKA. This would represent a substantial cost-saving to the SKA project, but, as this proposal is

not currently in place the cost-savings are not included in infrastructure cost estimates provided in the ANZSCC response.

Figure A. Map of a section of Western Australia showing an indicative proposed location for a transmission line from existing power line infrastructure in WA to the Operations Centre near the Centre of the Array (OCCA) for the SKA. The OCCA is proposed to be located in the vicinity of Boolardy Station homestead, and the Murchison Radio-astronomy Observatory is a further 35km north of the OCCA.

