Summary of Meeting at Jacobs

Project Overview

* Solar is not the only option can look at hybrid systems including use of diesel generator.
* Telemetry and protection (need to factor these in)
* 900 ML of water is pumped per annum with a 3 ML storage tank.
* Pumps nominally 3 x 30 kW – can change but 3 x 30 kw works for the project at hand
* Type of water source not vital info, all pumps work from same water source.
* MUST work 24 hrs a day 365 days a year
* Bore pumps are 100 m from each other and located 10 km from the nearest power source.
* Location of bore pumps is just outside Newman WA (high temps need to be considered) look at weather conditions on the BOM.
* Essentially a task of off grid vs overhead powerlines
* Assume of piping done. No need to look at the mechanical side of how pumps work.
* No power system there at the moment. Treat the site as a new site that needs to be powered

Stakeholders

* Owners of the bore fields 🡪 the mine site that needs the water
* No communities nearby (ie sufficient space within reason)

Expected Deliverables

* Single line design
* Design of power supply
* Block diagrams
* Generic pricing of equipment (ie approx. this many kW of solar costs $X) no need to look for specific brands just the size of the system needed.
* State assumptions
* 3 options to be considered. Base case is overhead power lines from the mine site (nearest power source)

Expected life time

* TBA but possible 10 years

Limitations

* No set budget
* Most cost-effective options
* Jacobs may provide generic prices of diesel generators, overhead power lines etc.

Time Constraints

* Given that the base case is overhead power lines from the nearest power source any other system to be implemented will have negligible time compared to the base case.

Legal Limitations

* Australian Standards AS3000

Risks

* Environmental conditions look up from BOM or other sources.
* Risk assessment template will be provided by Jacobs

Technical

* Maintenance and down time of pumps already factored into problem.
* Starting method up to us. DOL pumps, soft start, vsd
* Only focus on price more than anything else (ie environmental cost not high on priority)