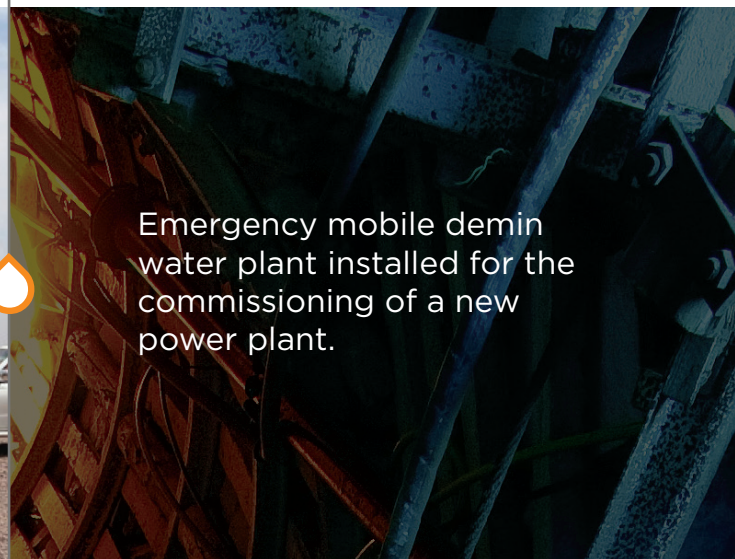


# KUSILE POWER STATION

## HIGH PURITY DEMIN WATER PLANT



Emergency mobile demin water plant installed for the commissioning of a new power plant.

### THE CHALLENGE

The Kusile Power Station needed an emergency mobile high purity demin water plant for the production of feed water suitable for high pressure boilers. The mobile plant was required for the start-up period of the power station until a permanent demin plant was commissioned and installed.

### OUR SOLUTION

After assessing the site-specific requirements, PROXA expanded the project from a supply-only one to include interconnecting infrastructure, installation on-site and commissioning.

### HOW PROXA ADDED VALUE

We delivered the main equipment within 6 weeks. The footprint of the plant was constrained by other permanent installations and the design had to be modified accordingly. What's more, we were able to seamlessly interface with the client's civil works, thereby reducing client project management input.

We opted to install an electro deionisation (EDI) plant as the polishing unit instead of traditional ion exchange (IX) due to advantages on operating cost, footprint and environmental impact.

### FEED WATER

River water.

### PRODUCT WATER

Demineralised water compliant water for use during commissioning of high pressure boilers.

[proxawater.com](http://proxawater.com)

### PERFORMANCE TARGET

- ◇ Product Flow Rate 2500 kl/day
- ◇ Product Conductivity < 0.1  $\mu\text{S}/\text{cm}$
- ◇ Availability 90%

### PROCESS

- ◇ Ultra filtration
- ◇ Reverse Osmosis
- ◇ Electro deionisation

### PROCESS INNOVATIONS & ENVIRONMENTAL PROTECTION

Given that the demin water plant is mobile, coupled with physical constraints at the site, PROXA proposed using EDI technology.

One of the advantages that EDI has over IX technology is that no chemicals are used. This means reduced operating cost and protection of the environment with significantly reduced regeneration waste disposal.

Client: Kusile Power Station

