

# Inete Case Study:

# Peak Downs Mine

# Water Release

# Penstock

## The Project

Peak Downs Mine required an environmental water release point to be installed on their newly constructed environmental dam. The release point needed to be completely powered by solar, have remote operation capabilities and be able to perform several open / close cycles from the battery system without being recharged.

Because of the strict legislative requirements governing the release of mine water, the system had to be robust and reliable. The solution as installed has in-built redundancy, from dual radio communication services to excess capacity in the battery banks.

Each of the three major component areas (control, valve 1 and valve 2) has it's own solar supply and battery. The batteries are able to be disconnected via plug and socket receptacles for ease of maintenance



and for added safety the actuators have lockable isolation points adjacent to the actuators. The system has been designed for local or remote operation. With capability to connect to the site wireless network and secure SMS from the local Telco, redundancy and reliability are built in.

A comms link (using the site standard protocol) connects the actuator to the control station, allowing full remote viewing of the release point and actuator status.

The system is designed with full SCADA interface capability, for display on the site control system if required. With the ability to connect environmental monitoring stations, the system is ready to be semi or fully automated (with manual intervention).

As a Green Energy option the site is completely powered by solar. This is also a bonus when mains power is not available or too expensive to connect. The solar panels and batteries have been sized to give several days of operation, even when the weather turns gloomy.



## Project Overview

### Project

BMA Peak Downs Mine installation of a completely solar powered remotely controllable water release system.

### Location

Peak Downs Mine, approximately 40km south west of Moranbah.

### Infrastructure

- 2 x 900mm water release penstocks with electrically operated valve actuators, control / communication systems and solar panels with battery storage and charging control.

### Project Scope

- Install a full solar powered solution to allow the minesite to remotely control water release from the storage dam on site.

## Want More Information?

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