SOLAR SOLUTIONS FOR MINES



KEY TERMS & CASE STUDY

Market Leader

Equator Energy is East Africa's market leader in Commercial and Industrial (C&I) solar power. We operate over 120 solar plants totalling over 50 MW of solar capacity in 9 countries. Of these 6.6 MW are installed at gold mines, including a 0.75 MW solar-diesel hybrid plant at a gold mine in Zimbabwe.

Frontier Markets

We have successfully installed and operate solar power plants in remote locations and challenging security environments. We know how to deploy and operate in these markets from years of experience. This means we are able to supply solar power to any suitable mine no matter how remote its location is. See the photos below for examples of these projects.

Mining Industry

Mines, especially mines that process and refine on-site, are ideally suited to achieve significant energy cost savings with solar energy because of their high and continuous electricity consumption. With over 5 years of operating experience and data from mining solar power plants, we can tailor solar power plants to the specific electricity demands of mines.

Risk Free & Zero Investment

Our business model is simple and risk free: we design, build, operate, maintain and insure solar power plants at our own expense. This means, there is no investment required from our customers. We simply charge you an operation fee for the solar electricity that you use on a per kWh basis at substantially lower cost than your grid and or diesel electricity supply. Our cost savings against diesel electricity typically exceed 60 %.







1.1 MW diesel grid, Puntland

0.5 MW gold mine, Zimbabwe

1.2 MW diesel grid, Somaliland

0.4 MW diesel grid, Puntland

Case Study | Venice Gold Mine - Zimbabwe

We operate a 0.7 MW solar-diesel hybrid solar power plant at the Venice Gold Mine near Kadoma, Zimbabwe. Commissioned in 2017, the plant is entering its 6th year of operation. The size of the solar power plant was tailored to the power demand of the mine. During daytime the solar power plant (yellow) supplies close to 100 % of the mine's electricity needs. The solar power plant automatically transitions between grid-parallel and diesel hybrid operation as and when the utility grid (grey) is available.

During the extremely poor grid availability in 2020 the solar power plant reduced daytime diesel electricity costs by over 75 % for the mine.

Key Figures

- ~25 % annual solar supply share
- ~40 % savings against grid electricity (ZESA)
- ~75 % savings against diesel electricity
- 20 years operating, maintenance and monitoring by Equator Energy
- zero investment by Venice Mine
- Ground mounted, ballasted mounting system

- 10 days from delivery of equipment to commissioning by our installation team
- Automatic operating mode shift from diesel-hybrid to gridparallel as and when grid is available
- Remote monitored and controlled by our operations centre 24/7/365
- Intelligent online energy dashboard access custom designed for the customer (see the load curve graph above)