BIZCOMMUNITY

Portable renewables offer a solution for mining exploration

Due to the remote locations, power generation for mineral exploration camps is particularly expensive. Typically, power is supplied by gensets, and the diesel fuel needs to be transported over long distances by truck or sometimes even by helicopter.

The cost of solar and wind energy has declined dramatically over the last decade. Renewable energy could potentially contribute substantial cost savings in comparison to diesel power.



The new study, <u>Mobile solar and wind diesel hybrid solutions for mineral exploration</u>, presents an analysis of the power generation requirements of the mineral exploration sector and identifies fields of application for renewable energy solutions.

One of the main challenges consists of dealing with the relatively long lifetime of traditional renewable energy power plants. They are normally laid out for operations of 25 years or more. Mineral exploration camps typically cover only a relatively short part of the mining value chain. Power requirements are still low in comparison to the consequent extraction operations. Often, mineral exploration is performed by specialised exploration companies. Finally, at the exploration stage, there is no guarantee of finding enough mineral deposits to justify setting up a mining infrastructure.

dismantling them and rebuilding them at a new location.

Pfisterer has developed a containerised microgrid solution tailored to the needs of the exploration sector. "Exploration companies want power solutions that they can be redeployed easily and that are reliable," says Martin Schuster, Senior Advisor at Pfisterer. "For military applications, the requirements are similar. Our system has won a very competitive NATO tender and has been already applied successfully for the NATO Energy Security Centre of Excellence."

An integrated storage component ensures the reliability of the system. It improves the power quality, allowing the shift of energy during periods with insufficient wind or solar irradiation. In the end, that allows the diesel gensets to be completely switched off for longer periods, increasing the share of renewable energy in the system.

"The advantages of renewable energy use go well beyond pure cost factors. Exploration companies send a strong signal to the regulator which could be very useful for obtaining mining licenses," Dr Thomas Hillig, CEO of the microgrid consultancy, THEnergy, pointed out. "In some cases, solar and wind energy in the exploration phase might also lay the foundation for renewable energy use in the consequent extraction phase."

For more, visit: https://www.bizcommunity.com