

PFISTERER/THEnergy study: Mobile solar/wind and storage solutions for reducing diesel consumption in the mining industry

The expert interview-based study shows how solar and wind microgrids meet the power generation requirements of the mineral exploration sector.

Winterbach/Munich, October 2016 – Mining or mineral exploration is the mining process of finding ores. Due to the remote locations, power generation for mineral exploration camps is particularly expensive. Typically, power is generated 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 “Mobile Solar and Wind Diesel Hybrid Solutions for Mineral Exploration” presents the 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 specialized exploration companies. Finally, at the exploration stage, there is no guarantee of finding enough mineral deposits to justify setting up a mining infrastructure. All the factors demonstrate that exploration companies have no interest in committing to 25 or more years of electricity supply at specific sites. Exploration companies require semi-portable, flexible solutions that minimize the effort of dismantling them and rebuilding them at a new location.



PFISTERER has developed a containerized 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.” The study can be downloaded at <http://www.th-energy.net/english/platform-renewable-energy-and-mining/reports-and-white-papers/>.

About PFISTERER

PFISTERER is a leading independent manufacturer of cable and overhead line accessories for sensitive interfaces in energy networks. The Group is headquartered in Winterbach, near Stuttgart in southern Germany. PFISTERER develops, produces, and sells internationally successful solutions for 110 V to 850 kV voltage levels. With its end-to-end range of products for application in energy networks, consulting, installation, and training, the manufacturer is a valued partner to companies specializing in power supply, plant construction, and electrified rail transport around the world. PFISTERER operates production plants in Europe, South America, and South Africa, as well as sales offices in 18 countries across Europe, Asia, Africa, South America, and the USA. The Group employs around 2,700 employees following the recent acquisition of LAPP Insulators Holding. You find additional information regarding PFISTERER's containerized renewable energy solution at: <http://www.pfisterer.com/crosspower/>

About Dr. Thomas Hillig Energy Consulting (“THEnergy”)

THEnergy assists companies in dealing with energy-related challenges. Renewable energy companies are offered strategy, marketing and sales consulting services. For industrial companies THEnergy develops energy concepts and shows how they can become more sustainable. It combines experience from conventional and renewable energy with industry knowledge in consulting. In addition to business consulting, THEnergy advises investors regarding renewable energy investments in changing markets. It is also active in marketing intelligence and as an information provider in select fields, such as renewables and mining, through the platform th-energy.net/mining or renewables on islands through the new platform th-energy.net/islands. For more information, have a look at www.th-energy.net.

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