

PRESS RELEASE

Oil-price Temporarily Slows Diffusion of Solar-Diesel-Hybrid Systems in the Mining Industry

Expert interviews have confirmed that influence of oil-prices is only short-term and that for the vast majority there is still an excellent business case for PV at off-grid mines

Munich, January 2015 – Many mining operations in remote locations are not connected to the grid and rely on electricity from diesel gensets. Electricity generation from diesel is traditionally exceptionally expensive, while wind and solar are competitive and can reduce the energy costs of mining companies considerably. In hybrid-solutions, diesel gensets are still a viable power source for balancing load shifts and for generating additional electricity at night or when clouds decrease the solar output. The equation used to be that cheap renewable energy replaces expensive electricity from diesel.

With today's oil-prices it is legitimate to ask whether this is still valid. *THEnergy* has conducted 14 expert interviews with specialists from the mining and solar industry in order to reevaluate the business case for solar-diesel-hybrid systems in the mining sector. A closer look at the diesel-prices reveals that there is – as expected – a very strong correlation between oil and diesel retail prices. However, the retail diesel price only accounts for a fraction of the effective diesel price at site. Three other factors enter the equation: transport, theft, and taxes. Transport and theft during transportation are the most important of these aspects. In many cases the retail diesel price makes up for less than 50% of the total fuel price.

The vast majority of solar (and wind) plants at remote off-grid mining locations are still extremely profitable; even with today's oil prices, costs from PV are regularly 50-60% lower than diesel electricity at remote locations.

Nevertheless, despite the still favorable business case, the following developments can be observed:

- (1) For psychological reasons, decision makers still long for the even more positive business case of the past
- (2) On the priority list of mining companies electricity costs have become less important
- (3) The assumption of constantly increasing diesel prices that is incorporated in many hybrid business cases will be difficult to defend even when oil prices recover.

These factors will take some momentum from the diffusion of solar-diesel-hybrid power plants in the mining industry. However, expectations are that basically all already planned projects will be realized. "Their successful deployment will create confidence in solar solutions at mining sites in the near future. This development creates new momentum that triggers many follow-up projects with a focus on remote locations and on mines that have a long remaining lifetime", expects Dr. Thomas Hillig, founder of *THEnergy*. In addition, a *THEnergy*-study shows the influence of external investors on the success of solar-diesel-hybrid systems in mining (<http://www.th-energy.net/english/platform-renewable-energy-and-mining/reports-and-white-papers/>).



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. THEnergy combines experience from conventional and renewable energy with industry knowledge in consulting. In addition to business consulting, THEnergy is active in marketing intelligence and as an information provider in select fields such as renewables and mining through the platform www.th-energy.net/mining.

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