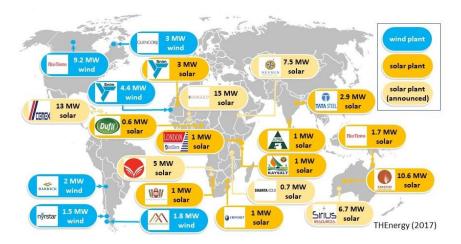


Successful PPAs for Solar-Diesel Hybrid Microgrids in Mining and Other Large-Scale Applications

THEnergy sees efficient power purchase agreements (PPAs) as the key success factor in the current booming market of reducing diesel consumption by renewables.

Munich, August 2017 – For traditional grid-connected applications, PPAs have been stream-lined over the years and are common practice now. Often, the main challenge is to adopt them to specific legislations.

In the last number of years, solar-diesel hybrid plants that aim to reduce the diesel consumption of remote commercial and industrial off-takers have become extremely popular. Mining is a pioneer in large-scale microgrids, but there is also an increasing number of renewable energy-based plants in other industries such as cement, food and beverages, textiles and salt. The technology has become mature; falling battery prices make the business case even more attractive. In the meantime, the first large-scale PPAs have been applied in this segment. However, the standard templates for grid-connected PPAs cannot be used as the framework is far more complicated.



One of the main challenges arises from the synchronization of generation and consumption. In the end, the off-takers often do not think in terms of buying a certain amount of electricity. Electricity is only a means for the purpose of reducing diesel consumption. This topic is normally also linked to measurement issues.

As the solar-diesel hybrid is a rather new field, many potential off-takers are not experienced and fear production losses which also need to be covered in PPAs. Other challenges stem from the fact that in many remote locations no alternative off-takers exist in case that the contract partner does not pay. Contracts cannot eliminate this risk completely, but mitigate it as far as possible. The worst-case scenario involves the off-taker having to file for insolvency. In the end, the renewable energy provider needs to conduct due diligence activities on the off-taker, both at the group level as well as on the specific operations that will be powered by renewables.

For the operation of hybrid plants, clear responsibilities between the parties have to be defined. Finally, many solar-diesel hybrid applications are built in countries with certain legislative risks that must be considered in the PPA. It is obvious that PPAs for solar-diesel hybrid plants are highly complex.

According to Dr. Thomas Hillig, Managing Director of THEnergy: "As a consultancy specializing in microgrids, we have been pushed by our clients to specifically cover the PPA topic. We have conceived workshops for optimizing PPA negotiations and also accompany our clients individually in the process.

PRESS RELEASE



Our offer is aimed at both sides, renewable energy developers as well as commercial and industrial off-takers."

For further information, please have a look at https://www.th-energy.net/english/news/

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 – combining 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. www.th-energy.net

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