Thermal energy storage mauritania

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New Energy Technology and Thermofluid Systems, University of Nouakchott Al Aasriya, BP 880- Route Nouadhibou-Nouakchott, Mauritania and Aix Marseille University, Universit? de Toulon, CNRS, IM2NP, Marseille, France.

This project, which is comprised of a 40kW solar system, 415kVA diesel generator system and 320 kWh energy storage system, is developed and operated by Damane Assurances Company. Once completed by the end of 2016, it will be one of the largest microgrid energy storage projects in Mauritania.

The PV power generated from the project is expected to generate approximately 84,096 kWh of electricity, which will save approximately US$56,000 annually. The clean energy source will also offset approximately 2,095 tonnes of CO2 over a 25-year period.

Frank Qi, General Manager of TrinaBEST, said: "We are excited to be selected to design and construct this integrated energy solutions project in Mauritania. More than half of the population in Mauritania lives without access to electricity, mostly due to the lack of grid access. Frequent voluntary blackouts are instated to conserve the country's scarce resources.

& ldquo;We're honored to be selected to offer our solution to help resolve the electricity shortages subjects in this region. This project can generate reliable electricity 24 hours a day targeting critical loads to help to solve the grid issues brought on to owner. This project demonstrates another step forward in TrinaBEST's mission to deploy cost efficient and energy efficient solutions for a cleaner future."

Advances in thermal energy storage would lead to increased energy savings, higher performing and more affordable heat pumps, flexibility for shedding and shifting building loads, and improved thermal comfort of occupants. Improvements in the temporal and spatial control of heat flows can further optimize the utilization of storage capacity and reduce overall system costs.

The objective of the TES subprogram is to enable shifting of 50% of thermal loads over four hours with a three-year installed cost payback. The system targets for the TES subprogram:

Mauritania has high-quality wind and solar resources whose large-scale development could have catalytic effects in supporting the country to deliver universal electricity access to its citizens and achieve its vision for sustainable economic development.

Renewables deployment would benefit mining - the largest industry in the country - which is currently reliant on diesel and heavy fuel oil for its operations. A switch to renewable energy in the sector could lower costs, reduce emissions, increase efficiency and improve energy security in the country. There is also potential to

further electrify energy uses in mining.

The government has announced various export-oriented projects to produce renewable hydrogen, ammonia and/or hydrogen-reduced iron. Anchoring demand on foreign offtakers would contribute significantly to de-risk these projects and generate the stable revenue stream needed to mobilise investors at the necessary scale. By attracting significant amounts of capital, such large-scale projects could enable a transformation of the power sector and spur sustainable economic development and growth, but robust and transparent policies and regulatory frameworks are needed.