

RED SEA HOUSING SERVICES

A global modular building manufacturer thrives in Ghana



Red Sea Housing Services (RSHS) is a global leader that provides high-quality modular living and working environments for industrial and residential communities. RSHS sets up the infrastructure and facilities required for companies to construct high-quality, reliable, durable, tailored modular buildings and housing units, including hotels, offices, accommodation units, utility services, telecommunications networks, catering and recreation facilities.

The Tema, Ghana plant is the biggest manufacturing facility of Red Sea International Company, RSHS' global parent company. Established in 2004, the facility utilizes innovative technology in order to maintain an annual production capacity of 285,600 square meters, serving the demands of the African continent and South American market. Having in-house architectural and design capabilities using modern computer-based designing systems enables the facility to cater to the housing needs of a diverse customer base with a host of innovative products and solutions.

CHALLENGE

Combining corporate social responsibility with profits

RSHS' factory in Tema has a peak load of 380 kVa; expandable polystyrene, composite panel, steel rolling, roof forming, sandwich panel, and steel coil slitting manufacturing facilities make up the major load components. Due to this load requirement, RSHS wanted a way to stabilize their energy costs. Working in a developing country, there is always the possibility of grid power costs increasing. Finding a more affordable energy source would

serve as an added bonus, allowing RSHS to reduce their operating expenses. In addition, Red Sea International Company emphasizes balancing economic success with environmental stewardship. Its corporate sustainability strategy directs each local office to reduce its environmental footprint. To achieve this goal in Ghana, RSHS searched for a reliable, affordable source of clean energy. The challenge was to keep the up-front capital outlay to a minimum.

Financed by:

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SOLUTION

Modular energy for modular buildings

For modular building provider RSHS, REDAVIA was the obvious choice to provide affordable, reliable, and clean energy. REDAVIA also uses the modular business model to ensure a simple and standardized installation, commissioning and decommissioning process, preserving the performance of the solar farm at all times.

REDAVIA's economic leasing option also kept RSHS' up-front capital outlay to a minimum, making it possible for RSHS to obtain the required energy supply at low risk. In October of 2018, REDAVIA implemented a 336 kWp plant at RSHS' manufacturing facility in the Tema Free Zone. Shortly thereafter, REDAVIA deployed a 59 kWp plant to a second RSHS site, a staff camp in Pram Pram, near Accra, which can house up to 350 RSHS workers.

*minimal
upfront
investment*



More than
546 MWh
per year



BENEFIT

Powering partnership for years to come

Through the 12-year lease agreement, REDAVIA provides regular maintenance and 24/7 monitoring of both RSHS solar plants. This monitoring data shows that from deployment through March 2019, these two plants have generated more than 200 MWh and a CO₂ reduction of 89 tonnes. Over the lease term of both plants, they are projected to generate 6548 MWh while reducing CO₂ emissions by an estimated 2816 tonnes. With these carbon savings, RSHS demonstrates to local Ghanaian stakeholders and corporate stakeholders worldwide that it takes its responsibility towards the environment seriously.

In the future, RSHS aims to not only expand the solar farm, but also to deepen the partnership with REDAVIA. This evolved partnership will leverage existing synergies between both companies whereby RSHS intends to sell a packaged solution of their modular housing coupled with solar power from REDAVIA. Mark Daub, Plant and Operations Manager at RSHS, explains, "A lot of the projects that we do are on very remote locations, where access to a stable grid is just not available. Additionally, all of our clients want to move to a more green footprint, and solar is definitely one of the best options for that."

For REDAVIA and RSHS the possibilities for partnership are almost as endless as the permutations of modular building units.