

## MENENGAI FARMERS

*Tea production company grows with solar energy*



*Menengai Farmers Limited was incorporated in 1964 and lies on 320 acres of land in Tigoni, approximately 30km from Nairobi, Kenya, East Africa's largest economy. The company, which is a pivotal player for the local economy and community, has specialised in mass farming of tea leaves. After harvesting, raw tea leaves are delivered to Maramba Tea Factory, a subsidiary of Menengai Farmers Ltd., located adjacent to the farm. There, the tea is processed and packaged and then sold in both the local and the export markets. The factory also processes and packs tea leaves from over 200 other farms in the region.*

*Menengai Farmers Ltd. employs over 200 workers, who are all housed on the farm residential complex which also boasts of a social hall, nursery school and a church.*

### CHALLENGE

#### Blending sustainability with cost reduction

For the first 20 years of its operations, Menengai Farmers Ltd. successfully grew tea without any large electrical demands. However, in the mid-80's, weather patterns in Limuru changed, requiring the installation of an irrigation system. As the tea farm and irrigation system have grown, the farm installed a motor pump with a peak electrical load of 44kW to support the irrigation system. With the electrical costs of irrigation driving operating expenses up, Menengai Farmers Ltd. sought a way to reduce their energy bills.

In addition, Menengai Farmers Ltd. had a corporate sustainability strategy of reducing its environmental footprint through reforestation and soil conservation. The farm decided to add renewable energy to this strategy, as an effective method of carbon reduction. The challenge was to find energy that was at the same time sustainable, affordable, and reliable.

Financed by:



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## SOLUTION

### Green energy for black tea

In June of 2020, REDAVIA's on-site engineers deployed an 84 kWp solar farm at the Menengai Farmers Ltd. tea farm in Tigoni. The power plant is installed using a grid-tied, "behind-the-meter" configuration, so that the solar plant reduces the usage of grid electricity. In this way, the solar plant reduces overall power costs and abates the carbon emissions associated with grid power.

REDAVIA ensures operational reliability through 24/7 monitoring and maintenance using a digital, remote monitoring platform and REDAVIA-trained maintenance staff on-site.

REDAVIA provides the installation and monitoring as a fully-financed, full-service offer. This eliminates Menengai Farmers Ltd.'s up-front capital outlay and enables it to focus completely on its core business of tea farming.

*minimal  
upfront  
investment*



More than  
**89 MWh**  
per year



## BENEFIT

### Bold energy choices for better business plans

Over the 12 year lease term of the solar plant, the plant is projected to generate 1012 MWh while reducing CO<sub>2</sub> emissions by an estimated 117 tonnes. In addition, the service provides meaningful financial savings for Menengai Farmers Ltd. Gideon Katiku, Farm Manager of Menengai Farmers Ltd., said, "We are happy to have found a company to manage the electrical costs of our irrigation system. The savings we make with REDAVIA will allow us to continue to grow our farm."

With REDAVIA's lease-to own solar plant business model, Menengai Farmers Ltd. reaches its triple objective of affordability, reliability and sustainability. Both parties are already planning to scale up the solar farm with energy storage, allowing for total independence from the unreliable national grid.

