



YOUR POWER PARTNER

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Ariya Finergy is a Nairobi-based EPC and technology company specialising in provision of seamless integration of power systems to commercial and industrial (C&I) clients across East Africa. We provide environment-friendly energy services that ensure businesses and individuals have access to economically attractive solutions that sustainably impact livelihoods.

1 Case Study: Tea Estate in Kaimosi

The client are Kenyan tea farmers who grow some of the most sustainable high quality liquoring teas in the world. They have tea farms located in the heart of the Kenyan highlands where climate is ideal for tea production. The Kaimosi factory is powered by renewable energy generated from the farm's solar PV + battery storage plant, and the farm at Kaimosi is committed to growing the highest quality teas to the benefit of Kenya, its communities, wildlife and environment.



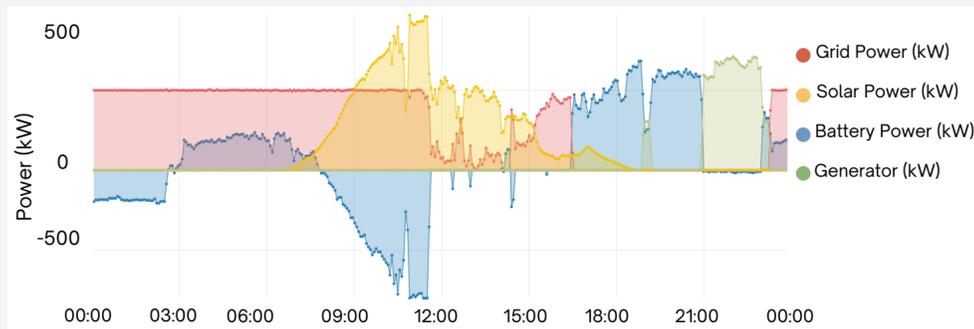
2 Power Challenge

Power supply to the factory was erratic resulting in regular power outages and poor power quality with frequent cases of under- and over-voltages during peak hours of operation. As a result, productive use of machinery was limited. The factory was also forced to operate generators for upto 6 hours a day, which was costly.

3 The Solution

1,540kWp solar PV with 3,876kWhr battery storage was installed at the Kaimosi factory to stabilise the power supply, reduce generator run hours and cut down on KPLC costs. Ariya Finergy took over operations and maintenance of the solar PV with battery storage system in 2021 and made upgrades to the system.

Ariya, together with Tesla, created a bespoke operating regime for the Hybrid system, accounting for the 5- hour block in the evening during which the Grid is the poorest (see sample graph below). The system is scheduled to transition to Off-grid operation during this period and run on solely Batteries. This ensures that the power supply to the facility is stable and uninterrupted. The system then transitions back to On-grid operation when the Grid has stabilized. As a result, the system performance ramped up significantly and the system performed at its best since installation.

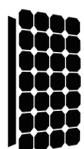


4 System Operation and Maintenance

Ariya Finergy understands that a significant capital investment goes into the design and construction of solar PV + battery systems. Cognizance of this fact drives our commitment to making certain that these systems are properly operated and maintained.

Ariya's Operations and Maintenance team consistently monitors the performance of our client's solar PV + battery plant using an advanced monitoring and control platform which maximizes operational efficiency, uptime and asset value.

5 Impact and Key Figures



System Size : 1504 kWp

No. of Modules : 3960



Battery Inverter : 986kW

Battery Storage Size : 3876 kWhr



Financing : No



Remote Monitoring : Tesla Power Hub



Genset Integration : Yes

