

Project Name: Solar Energy fed Cellular Communication Base Stations

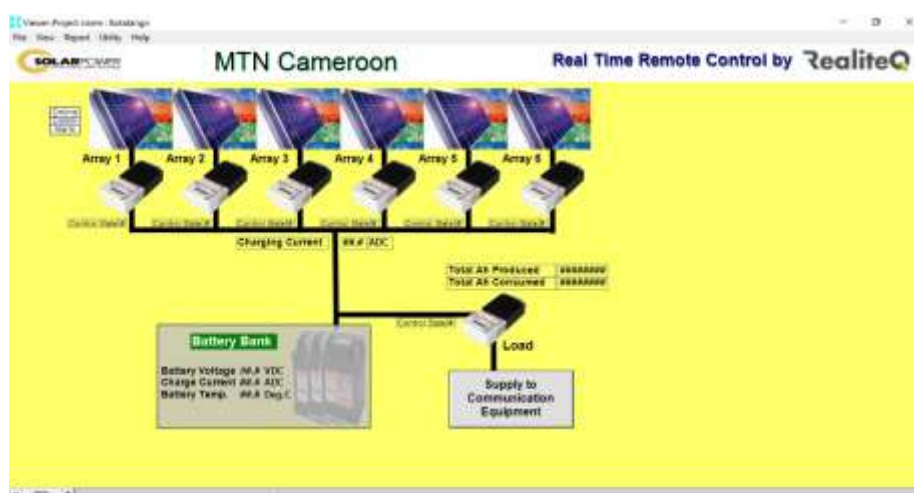
Background:

In Cameroon, Africa, the base stations for its cellular network are partially fed by solar energy systems, particularly in areas that are difficult to access.

In 2011 RealiteQ provided systems for remote monitoring and control of cellular systems to South African company MTN, which is also active in Cameroon.

Project description:

The project included 7 stations throughout Cameroon. Each station is divided into a number of solar arrays, each such array being controlled by a separate designated charging controller, with up to 10 controllers per station. Each of them was connected, for station management technical reasons, each controller defined as being independent on the network, although they were all served by a single ICEX unit. In each ICEX, separate ports and separate drivers were defined for each controller, each ICEX serving five controllers. The ICEX unit is used not just to coordinate communications, but also as a system gateway, with significant monetary savings in the initial investment.



Unique capabilities:

The distinction of the RealiteQ solution is that it provides maintenance personnel with remote access to systems in out-of-the-way locations that are difficult to access physically. Each ICEX unit has the ability to serve a number of controllers, and the ICEX units serve both as a communications coordinators and as gateways. They work at high temperatures. Data is shared between network operators and the solar energy systems' maintenance companies. In addition to remote monitoring, the interface was also used for calibrating the system and changing parameters.

Summary and results:

The system operated under extreme climate and physical conditions, at very distant sites that require complex technological capabilities, all with relatively low investment (CAPEX) and off-site service (SaaS – Software as a service) that completely relieved the cellular company of the issue of maintenance.