



# ELEMENTARY TECHNOLOGIES

## **SOLAR** PROJECT INSTALLATIONS

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# PROJECT: 10 ROBERT BROOM STREET



**Date:** August 2023.

**Industry:** Residential.

**Area:** Phalaborwa, Limpopo.

**Tag:** Hybrid Solar System.

## Client Requirement:

- | Energy consumption reduction.
- | Up to stage 6 loadshedding immunity.

**Electricity saved:** 70-80%.

**Back-up duration:** 6-8 hrs.

## PROJECT SUMMARY

The 10 Robert Broom Street solar project takes place in Phalaborwa, Limpopo with the objective to reduce energy consumption while also achieving immunity to loadshedding from the national power grid.

This requirement meant we installed a 24kW single-phase hybrid solar system that can generate up to 15.2 kWp and store 19.2 kWh. Based on the customer's consumption profile, the battery storage installed can withstand up to Stage 6 Loadshedding, with the exact duration being dependent on the usage of appliances within the home.

The solar system also facilitates a user-friendly interface and mobile app that allows the residents to monitor the hybrid solar system conveniently.

### TECHNICAL DETAILS

- | Peak power generated = 15.2 kWp.
- | Battery Capacity = 19.2 kWh.
- | Inverter size = 24 kW.
- | Level of loadshedding avoided = 6.
- | Hardware devices used.
  - Inverter – Deye
  - Solar Panel – Canadian Solar
  - Battery – Pylontech

### RESULTS ACHIEVED THUS FAR (1 MONTHS)

- | Solar power generated: 615 kWh.
- | Total money saved: R 1 291.50.
- | Hours of loadshedding avoided: 150 hrs.
- | CO2 emission prevention: 0.40 Tones.