

# LIVOLTEK

A member of **HEXING**  
South Africa



## COMPANY PROPOSAL **HANDBOOK**

[www.livoltek.co.za](http://www.livoltek.co.za)

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# Transforming Businesses with Cost Saving, Functional Solar Systems

Hexing is the EPC contractor for medium voltage micro-grid projects with Global & National senior engineers & technicians which includes procurement, transportation, installation, integration, testing and commissioning of microgrid equipment, as well as post installation maintenance.







# Project Proposal

The Hexing Electrical Midrand plant was experiencing loadshedding for about 5 hours per day on average causing a loss of production and loss of revenue.

There are typically 2 power cuts a day according to the loadshedding schedule. Each power cut interval lasts between 1 and 2.5 hours. The factory's production lines need to be in constant production and therefore always require uninterrupted power supply.

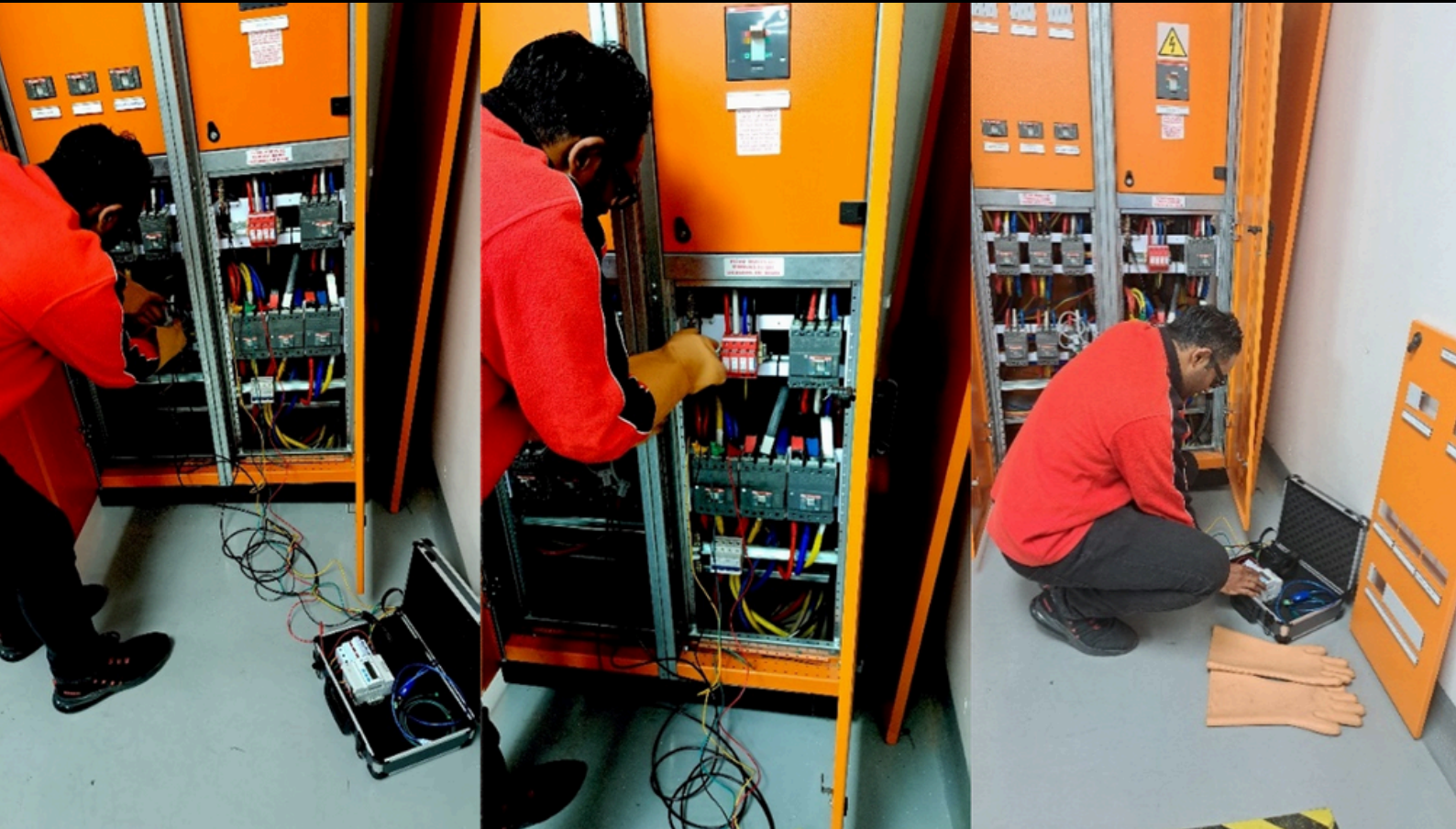
Considering the impact of loadshedding, large financial losses can be encountered by the factory not only affecting the loss of products but also wasting labor hours.

The cost of electricity at the factory was another major concern. As an operating business tariff, Hexing is getting charged R3,92 per unit of electricity currently. This is an increase of 20% from 2023's tariff of R3,14 per unit of electricity which also followed an increase of 15% in 2022. The increase in electricity prices is still expected to continue for the year 2025.

Hexing management took the decision to invest in a solar system that would cater for rising costs of electricity and production loss. This initiative was also part of Hexing long-term goal of achieving carbon neutrality for the protection of the environment.

# Step 1.

# Energy Audit Assessment



.1

An Energy audit's purpose is to record the power quality and energy consumption data for a particular commercial or industrial building.

.2

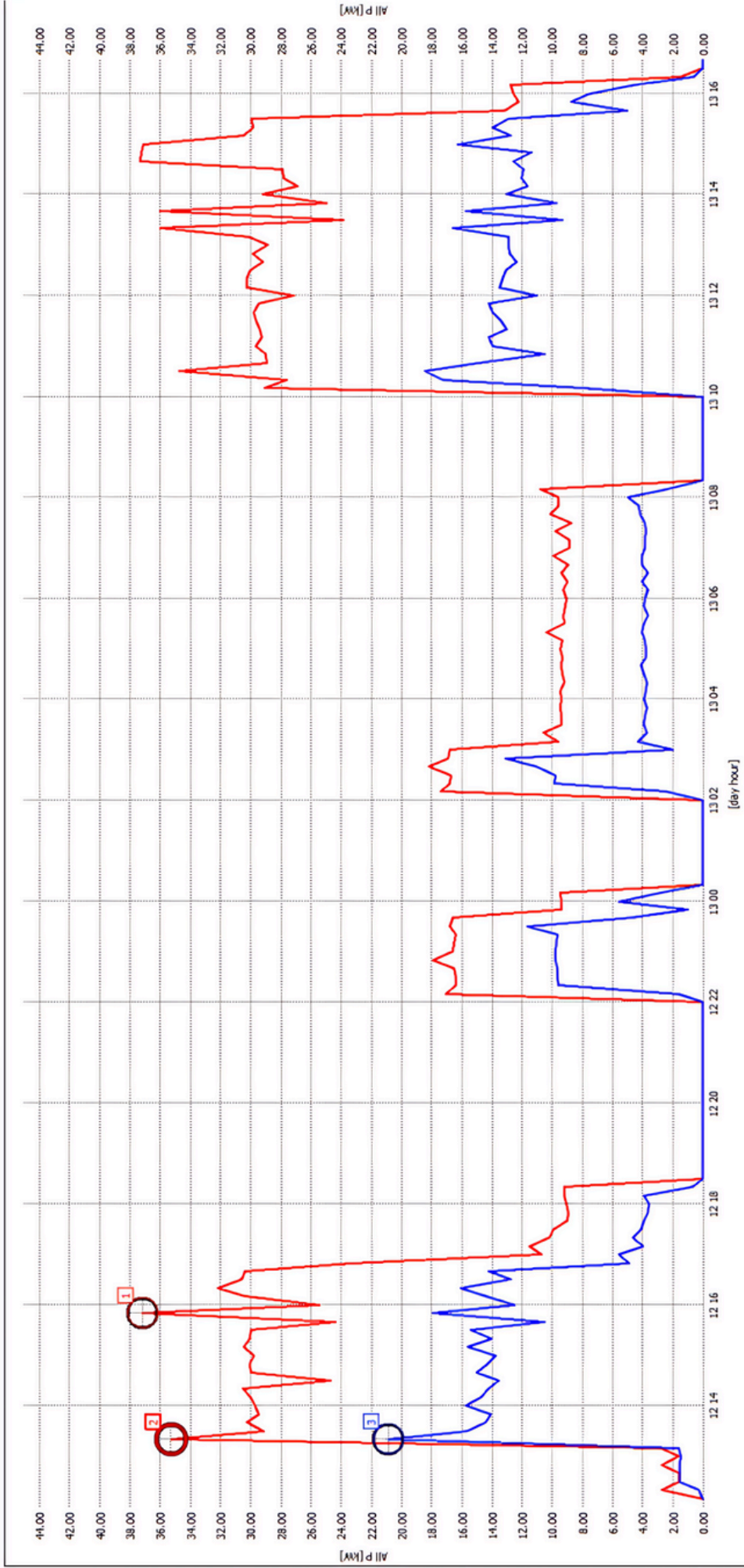
The data collected is used to determine the inverter size, battery size (if required), and number of solar panels. During the energy audit, the technical team also collected important site information including location of where the system may be installed, cable lengths, roof type, weight carrying capacity, and transformer information.

.3

Once the data logging was done, our team of experts carefully and critically analysed the data. We recommended the best solution which gave the best return on investment.



# Example of our readings



## Summary

12/7/23 15:50  
12/7/23 13:20  
12/7/23 13:20

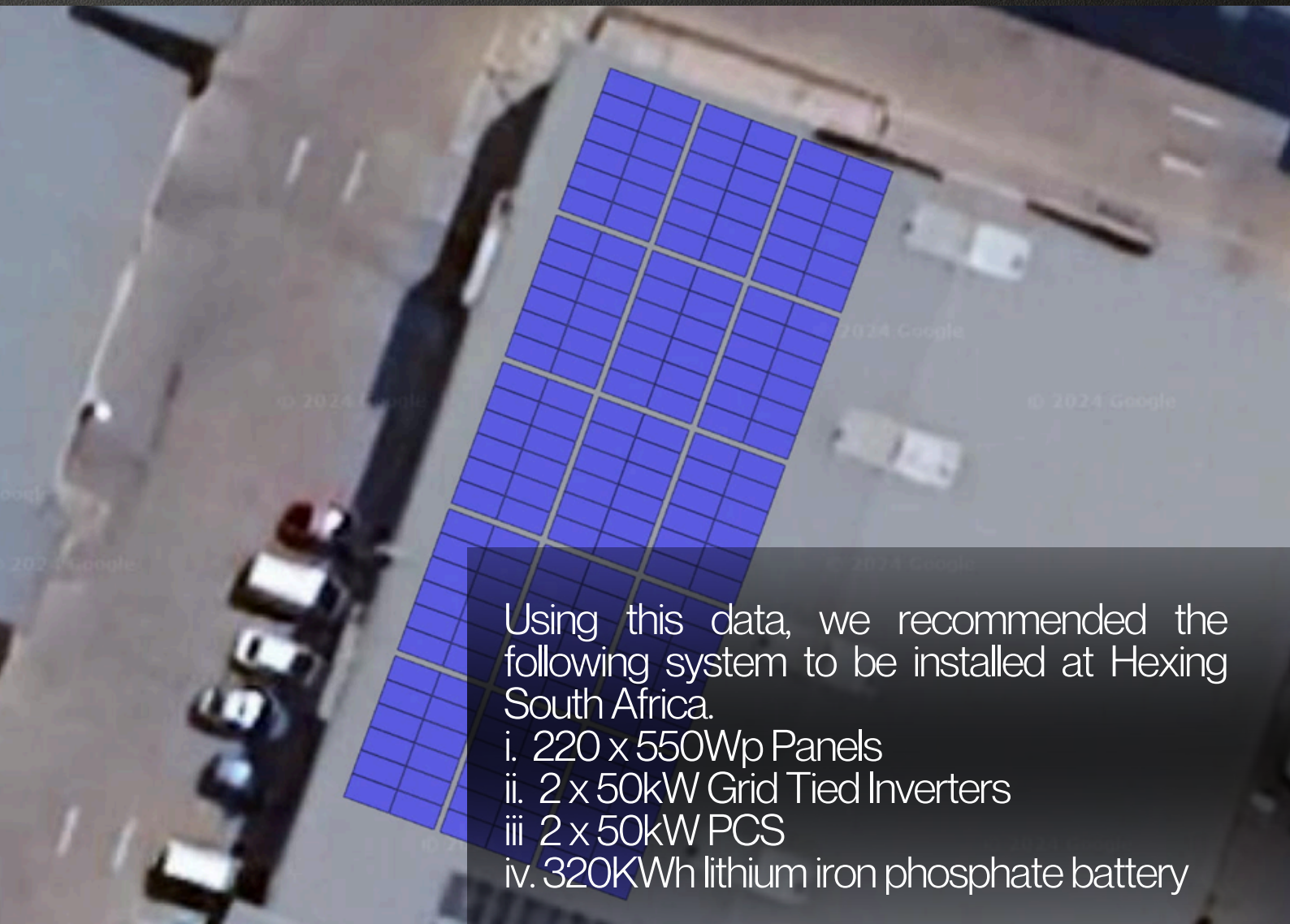
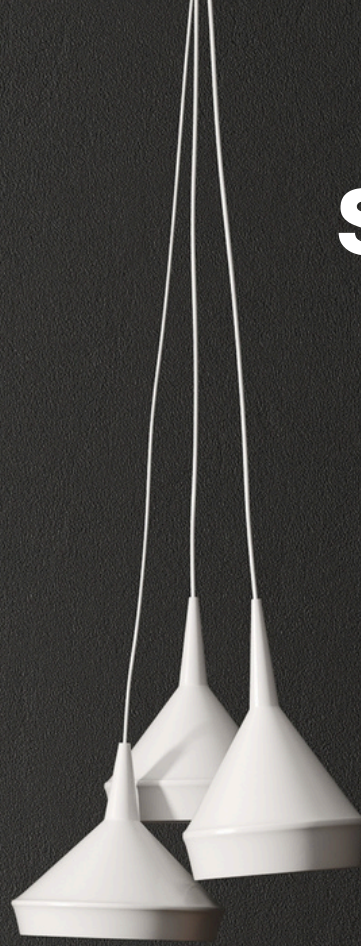
37.13kW  
35.24kW  
20.86kW



# Site Design

Hexing uses internationally recognised simulation software to carefully analyse the estimated power generation, that gives a visual of how the system will look like, when installed at the site. Hexing gives a performance guarantee of up to 90% for the simulated performance. The simulated visuals of the proposed solar installation for Hexing is given below.

## Step 2.



Using this data, we recommended the following system to be installed at Hexing South Africa.

- i. 220 x 550Wp Panels
- ii. 2 x 50kW Grid Tied Inverters
- iii. 2 x 50kW PCS
- iv. 320KWh lithium iron phosphate battery



# Installation of the Solution

## Step 3.

Our installation process lasted for two weeks and highlighted our passion for going green. Many of the solar companies around the world sell solar products, but don't utilize it for their own assets/properties.



Aerial view of our completed solar power installation at Hexing



Our Grid Tied Inverter & PCS Unit



# Post Installation

Our installation was certified by an installation electrician, and we received our Certificate of Compliance (COC).

## Installation Benefits

We have saved over R60 000 with our new installation. The estimated pay back period is about 4,2 years. Our annual savings for the installation amount to an impressive R470 000. The great benefits from the backup power which are stable and reliable support for load operation during load shedding. The price per unit electricity during the peak demand times is much higher than off peak times. The backup power can be used during the peak times thus saving us more money.

## Conclusion

We are highly capable of preserving our environment and helping the future generations by going green. Even though the initial investment cost of solar power may be slightly high but the return on investment over time is incredible. ESKOM plans to ferociously increase electricity prices from 2025. This means that the quicker we install solar power the faster we can start saving money.



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