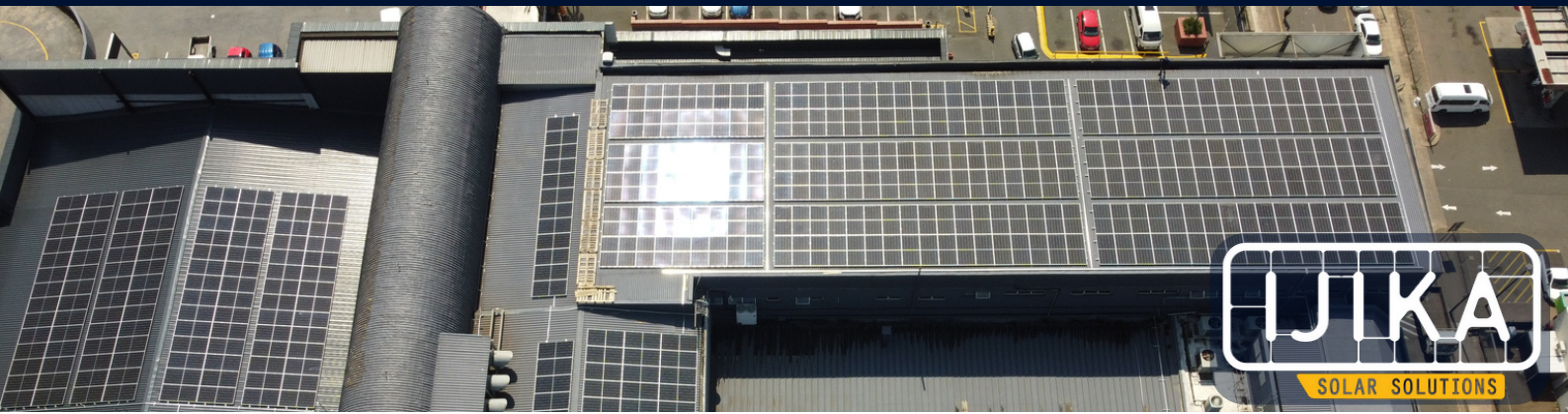


# BEREA CENTRE CASE STUDY



## INTRODUCTION

Berea Centre, a bustling commercial mall, embarked on a sustainable journey to reduce its electricity bills and carbon footprint. To achieve this objective, Ijika Solar Solutions, a leading renewable energy company, was entrusted with the task of designing and implementing a robust solar energy system. The project aimed not only to reduce the mall's electricity expenses but also to contribute significantly to environmental conservation.

## PROJECT SCOPE

- Total Annual Production: 501.5 MWh
- Number of Panels and Power Capacity:
  - 174 panels with 31.9 kW capacity
  - 204 panels with 112.2 kW capacity
  - 64 panels with 35.2 kW capacity
  - 120 panels with 33 kW capacity
  - 69 panels with 38 kW capacity
  - 54 panels with 29.7 kW capacity
- Type: Commercial Project
- Purpose: Reduce electricity bills and carbon emissions

Ijika Solar Solutions meticulously engineered the solar installation considering the unique challenges of Berea Centre. A comprehensive shading study was conducted to maximize output despite multiple orientations and shading issues caused by adjacent buildings and roof levels.

Ijika Solar Solutions navigated the complex landscape of permits and regulations, ensuring the project adhered to all legal requirements.

The implementation phase posed challenges due to the varied roof orientations and shading problems. Overcoming these issues, Ijika Solar Solutions completed the installation in just 5 weeks. They introduced Sungrow inverters in the inverter rooms on both sides of the mall, utilizing a daisy-chained configuration to optimize the DC array.

The solar system's performance is actively monitored using the iSolar Cloud platform, ensuring optimal efficiency and prompt detection of any issues.

# PROJECT BENEFITS

The solar installation has enabled Berea Centre to save approximately 20% on electricity costs, calculated based on the usable roof space allotted for the installation of solar panels. This substantial cost reduction enhances the mall's financial sustainability.

Ijika Solar Solutions navigated the complex landscape of permits and regulations, ensuring the project adhered to all legal requirements.

By reducing its reliance on conventional energy sources, Berea Centre's solar installation has contributed significantly to reducing CO2 emissions, aligning with sustainable and eco-friendly practices.

The project highlighted the importance of a detailed shading study, especially in urban environments where neighboring structures can impact solar energy generation. Ijika Solar Solutions' expertise in overcoming shading challenges ensured the project's success.

## CONCLUSION

The Berea Centre solar installation stands as a testament to innovative engineering, meticulous planning, and sustainable vision. Through the collaboration of Berea Centre, SBS Energy, Global Electric, and Ijika Solar Solutions, the mall has not only reduced its operational costs but has also become a beacon of environmental responsibility, inspiring similar initiatives in the community. This project showcases the potential of solar energy to transform commercial spaces into eco-friendly, financially sustainable entities, setting a positive example for businesses and communities alike.

