



Orange Sands

# The Guide to Solar Backup

Empowering Kenyan Homes and Businesses with Energy  
Independence and Unmatched Reliability.

# The Case for Solar

Why Kenyan properties are switching to solar energy now more than ever before.

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# Addressing Local Challenges



## Grid Instability

Kenya faces frequent power outages and load shedding. Solar backup ensures your home or business continues without a flicker.



## Rising Energy Costs

KPLC tariffs continue to climb with fuel charges and forex adjustments. Solar allows you to lock in your energy costs for 25+ years.

# Unmatched Reliability

Solar provides absolute peace of mind for the modern Kenyan lifestyle:

- 🛡️ Security systems stay active 24/7.
- 📶 Uninterrupted internet for remote work.
- ❄️ Refrigeration remains stable, preventing waste.
- 👜 Maintain high business productivity.



# Engineering the Future

Understanding the core components of your personal energy ecosystem.

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# Core System Components



## Solar Panels

The Generator: Captured sunlight is converted into DC electricity during the day.



## Hybrid Inverter

The Brain: Manages power flow and converts DC to AC for your appliances.



## Battery Storage

The Reservoir: Stores excess energy for use at night or during blackouts.

# Simplified Energy Flow

## Generation to Storage

Sunlight hits the panels, creating clean energy. The hybrid inverter intelligently powers your active loads first.

Any surplus energy is automatically channeled to your high-capacity Lithium batteries. It is a silent, automatic, and sustainable cycle.



# Appliance Power Guide

Appliance Type	Typical Examples	Backup Support
Light Load	LED Lights, Wi-Fi Routers, Phone Charging	Always Supported (100% Reliability)
Medium Load	TVs, Refrigerators, Laptops, Sound Systems	Standard Support (Priority Backup)
Heavy Load	Electric Cookers, Water Heaters, Iron Boxes	Requires Significant System Upscaling

# Average Investment Ranges (KES)

**150k -  
350k**

## Starter Systems

Ideal for essentials (Lights, Internet, Security).

**400k -  
850k**

## Family Backup

Full household load and bill reduction.

**900k+**

## Premium Systems

Total independence for large luxury homes.

# Common Solar Pitfalls to Avoid

- ✓ **Installing Systems Too Small:** Always plan for your "Peak Load" to avoid inverter trips.
  - ✓ **Buying Cheap Lead-Acid Batteries:** Invest in **Lithium-ion** for 10+ years of lifespan.
  - ✓ **Poor Installation Quality:** Incorrect wiring or mounting can lead to system failures or fire hazards.
  - ✓ **Ignoring Warranties:** Ensure you have solid local support for both equipment and workmanship.
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# Ready for Solar?

Take control of your energy future today. Our experts are available for free load assessments across Nairobi.

**Contact Our Team Today**

Call us at +254 114 594 994

[www.orangesandspower.co.ke](http://www.orangesandspower.co.ke)

