Solar Power Equipment

(Simple, effective, light-weight, and possibly available in South Africa) for a 12-Men, 3-Month stay in Chagos).

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1. Portable Power Stations (Solar Generators)

Jackery Explorer 1000 V2 Solar Generator Kit

- **Capacity**: 1 070 Wh $LiFePO_4$ battery, 1 500 W AC output (3 000 W surge). Jackery+6Lowe's+6New York Post+6
- **Solar Recharge**: Typically paired with Jackery's SolarSaga panels (100–200 W); 200 W panel charges the unit in ~7.5 hr, two panels halve that. The Verge+1New York Post+1
- **Portability**: 24 lb / 11 kg; fold-out handle. New York Post+15Jackery EU+15TechRadar+15
- **Why it works**: One unit can power small appliances (fridge, lights, comms) overnight and recharge during daylight. Easily cartable for remote island logistics.

EcoFlow RIVER Pro Solar Generator

- **Capacity**: 720 Wh; designed for up to 9 devices simultaneously. BLUETTI-ZA+4Outbound Power+4Amazon+4Amazon+15EcoFlow South Africa+15Off Grid Power Station+15
- **Format**: Compact "all-in-one" kit (station + solar panel) with South African plugs—ideal for ordering locally. Jackery+9EcoFlow South Africa+9SFGATE+9
- **Why it works**: Great as a supplemental unit for phones, radios, LED lighting.

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2. Solar Panels

Jackery SolarSaga 100 W / 200 W

- Foldable monocrystalline panels—light (under 10 kg for two), waterproof, easy to angle for maximum sun exposure.

EcoFlow Bifacial / 220 W or 160 W

- Efficient panels; SA stock includes RIVER Pro bundles—no need to separately source panels. EcoFlow South Africa

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3. Scaling for 12-Person Camp

- **Minimum setup**:
  - **2× Jackery Explorer 1000 V2** units (≈2 140 Wh total)
  - **4× SolarSaga 100 W** panels (2 per unit)
  - **1× EcoFlow RIVER Pro** as a backup—total ~2 860 Wh
- **Mix & match**:
  - One high-capacity unit (Jackery 1000 V2) can power fridge/daily tasks.
  - Multiple smaller units (RIVER Pro) keep devices charged during the day.
- **Panel count**: Aim for ~800–1 200 W solar array (8–12 panels of 100 W each) to recharge units daily with full daylight.

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4. Why This Setup Is Simple & Lightweight

- **Plug-and-play**: Pre-built kits requiring no technical installation.
- **No fuel/logistics**: All-electric, clean, quiet—perfect for remote island life.
- **Modular**: Start small and scale by adding units or panels.
- **Portable**: Cartable in luggage or boats.

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5. Availability & Pricing in South Africa

- **Jackery Explorer 1000 V2** commonly available online, often discounted (~US $400–$700 retail). Jackery+15SFGATE+15Off Grid Power Station+15The Verge+2Jackery EU+2New York Post+2EcoFlow South Africa+1Sustainable+1New York Post+2Off Grid Power Station+2Outbound Power+2
- **EcoFlow RIVER Pro + panel bundle** listed around ZAR 9 999 (≈US $550).
- **Local supplier**: Sustainable.co.za offers portable solar kits (Jackery, EcoFlow, Bluetti). BLUETTI Europe+15Sustainable+15TechRadar+15

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6. Recommendations & Setup Tips

1. **Buying**
    - Purchase one **Jackery Explorer 1000 V2 kit** with a SolarSaga panel set.
    - Add a second Jackery unit or an **EcoFlow RIVER Pro** for redundancy.
2. **Solar Array**
    - Use **4–6× 100 W panels per large unit** (Jackery) and **1–2 panels per RIVER Pro**.
3. **Usage Strategy**
    - **Night**: Power station runs essentials like light, comms, fridge via inverter.
    - **Day**: Solar panels recharge stations.
    - **Rotate units** to ensure some are always charging while others in use.
4. **Transportation**
    - Each station + panel bundle weighs 10–12 kg and packs into two manageable boxes.

Final Take-away

- **Best core unit**: **Jackery Explorer 1000 V2 Solar Generator**—robust, portable, fast-charging.
- **Great supplemental option**: **EcoFlow RIVER Pro Solar Generator**—compact, easy to extend.

This combo delivers a lightweight, reliable power setup for a remote, solar-only semi-permanent camp of 12 people, with proven availability in South Africa and straightforward logistics for Chagos deployment.