



LOAD SHEDDING WARNING

IMPORTANT POINTS TO CONSIDER WHEN SETTING UP A BACK UP SYSTEM FOR YOUR HOME.

1. **Always use a reputable supplier** of batteries, inverters and charging systems.
2. The use of a **reputable system installer** is highly recommended.
3. **Do not undersize** the system. Remember that for every 1A of current (240W) you require on the AC side you require about 22 -24A of DC current from the batteries for a 12V system, 11-12A for a 24V system and 5.5 – 6A for a 48V system.
4. Put whatever you have heard or been taught about **“Deep Cycle” and “High Cycle”** batteries out of your mind. Every lead-acid battery can be deeply discharged. What is important is the number of times each particular battery can be discharged at a chosen depth of discharge (DOD). For example an Excis 100 battery (102Ah) from First National Battery can give 950 cycles (load shedding occurrences) if only 30% of its capacity is removed each cycle, 500 cycles if 50% is removed and only 60 cycles if 80% is removed (based on a 25°C operating temperature and correct charging). Do not size your system so that you remove 80% of the batteries capacity each cycle and expect 2 years battery life as you will more than likely only get 2-3 months life!
5. Ensure that the batteries are correctly charged. **Do not overcharge or undercharge the batteries.** Correct voltage regulation during charging is essential. Recommended charging is as follows:
 - Charge at a maximum of 15% of the batteries capacity in A (For Excis 100 – approximately 15A).
 - The charging voltage must be set to 2.45V/cell (14.7V/battery) at 25°C.
 - Once the batteries reach the above voltage they must remain at this voltage for 3 hours after which the charger must limit the voltage to 2.25V/cell until the next power outage.
 - Do not expect optimum battery life from chargers which cannot regulate the charging voltage accurately!