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How to choose Batteries

Powerpoint Presentation

Learning Centre

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Batteries

- Batteries store DC electrical energy in chemical form for later use
- Automotive Batteries are not recommended for PV applications
- Recommended – "Deep Cycled batteries"
- Deep cycled Lead Acid batteries most commonly used in PV applications

Types of Lead Acid Batteries

Liquid Vented

- Less expensive
- Maintenance required

Sealed Lead Acid Batteries
(Valve Regulated Lead Acid - VRLA)

- More expensive
- Maintenance free

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Battery Voltage

- 1500+ Watts – 24 Volt System is ***optimal***
- 3000+ Watts – 48 Volt System is ***optimal***

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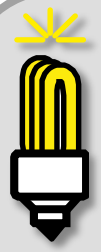
Batteries - Sizing

Batteries are sized based on:

- Desired autonomy i.e. Amount of back-up time required in the absence of sunlight for prolonged periods
- The total power rating of the connected AC and DC load
- The daily duration of operation of each of the loads
- Desired depth-of-discharge (DOD) of the batteries



Optimum depth-of-discharge (DOD) can be calculated based on how frequently you cycle your battery system and the shelf life of the batteries (contact your Battery Manufacturer for more details)