Proposed new Solar for Camp Kitchen

The detail!

I recommend a 48 Volt system with a 100 Amp-hour Lithium Phosphate battery.
(These batteries are very safe and are not to be confused with Lithium Ion batteries0
This would provide 5KW-hours of storage.

The big advantage of these batteries is that you can use 80% of the rated energy without harming them and they charge up faster and more efficiently.

I am using Jakiper Battery
Link JK48V100PRO Jakiper 51.2V 100Ah Server Rack LiFePO4 Battery » LiFePo4 Australia
Cost $2389

These are available from an Australian supplier so service and warranty should not be a problem.
Easy to add more capacity in the future if desired.
I have hooked my battery up to a display that shows percentage of charge remaining and other useful info.
Link Renogy 500A Battery Monitor, High and Low Voltage Programmable Alarm, Voltage Range 10V-120V and up to 500A, Compatible with 12V Lithium Sealed, Gel, Flooded Batteries : Amazon.com.au: Electronics

The next thing required is either a separate Solar Regulator and 48V-240V inverter
OR
A hybrid inverter that does both things.

These hybrid inverters are low cost and very efficient.

I would recommend the GroWatt hybrid inverter.
Link 5KW 48V Growatt OffGrid Hybrid Inverter - SPF5000ES – LiFePO4 OZ
Cost $1189

This is fully compatible with the Jakiper battery and comes from the same supplier which would be a good thing.

I made the mistake of buying a MrPow Inverter which sounded almost too good to be true.
Link PowMr 6200W 48V Solar Hybrid Inverter Charger 120A MPPT AU Stock Fast Delivery | eBay
And guess what?
It blew up after 1 week.
Unfortunately I had the thing in storage for a few months before I used it so I am not covered by Ebay's warranty and I am now having an interesting time arguing with the supplier in Hong Kong .
Do not recommend.

Next item is solar panels.
I have 5kW of panels which is ideal because we use it all day long.

The camp kitchen system would probably sit idle for most of the time so you could get by with about 1 kW of panels and add more later if required.

Mounting equal number of panels on both the East and West facing roof and fitted flush with the roof would work perfectly.

The practice of mounting panels on tilt stands to optimise winter power is now redundant.
This latitude tilt rule came about when panels were really expensive and lead acid batteries needed every ounce of power to stop them from dying.
Also the rule was made by people living in the high latitudes of Europe and not in sub-tropical mid-North coast.

To run the regulator efficiently at Maximum Power Point you need a string of 4 panels on each side.
There are plenty of well priced new panels available on Ebay

Alternatively you can get used solar panels that still have 20 years life left in them for almost free.
(I have spare 200 Watt panels that you can have for $30 each – same as I am using myself)

Finally we need solar racking.

New or used racking available on Ebay or Gumtree
Price approx $200.

The cost of work by a licensed solar electrician is not included.

Finally I would suggest that the old system remain in place as an emergency back up.