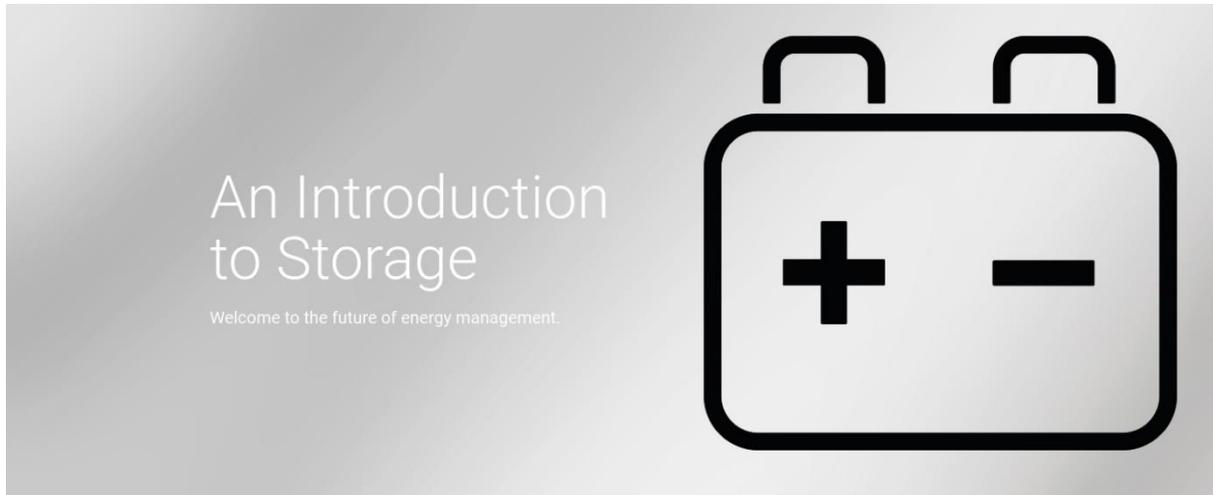


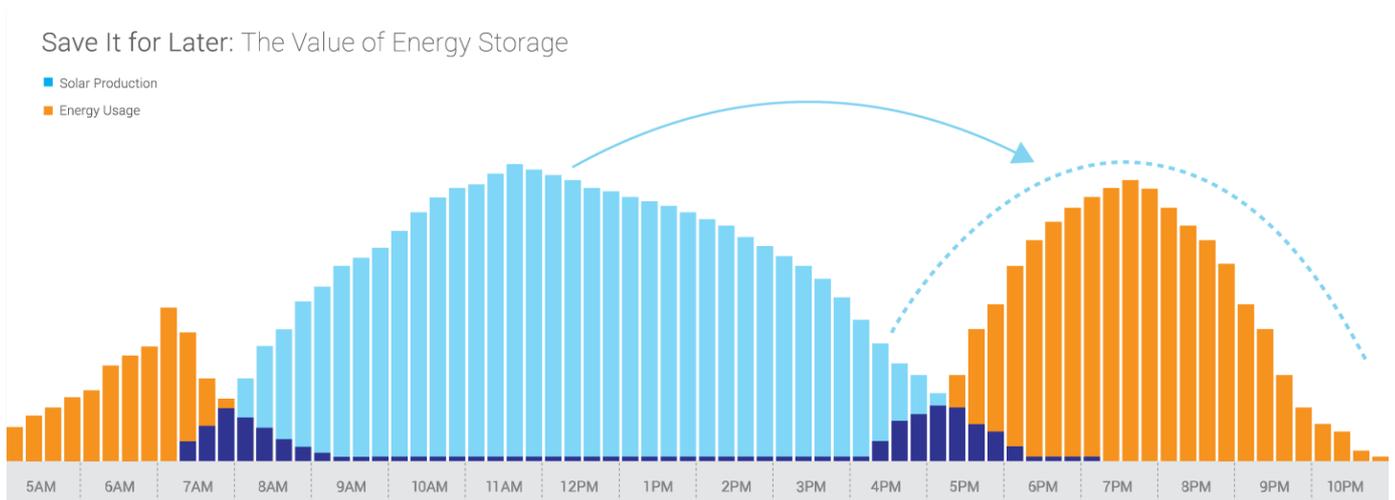
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# McNAE ELECTRICAL SOLUTIONS

## LOOKS AT SOLAR STORAGE FOR SELF CONSUMPTION



All around the world, solar owners understand that adding battery storage makes sense. [Storage solves the basic dilemma](#) of not being home when the sun is shining. Storage addresses a fundamental problem of solar energy—while solar production peaks during midday, energy consumption is highest in the morning and evening. With storage, you can save the energy you produce for when you need it most.



Storage captures low cost clean energy and adds flexibility to when you can use that energy, helping you get the lowest electricity bill and increasing your energy independence.

McNae Electrical Solutions is constantly evaluating the range of battery storage options coming onto the market. We believe that the Enphase AC Battery or the Storion Smile B3 are perfect for self-consumption without backup. For batteries that provide backup, we recommend a hybrid inverter—either the Storion Smile

5 (single phase) or T5 (three phase) or the Selectronic SP Pro inverter paired with a BYD battery (where backup and transition to off-grid is required).

The Enphase [AC Battery](#) or the Storion Smile B3 are all-in-one solutions that include the battery, management system and inverter charger all in one stylish wall-mounted enclosure. This makes wiring really simple with only a single AC connection to your switchboard required.

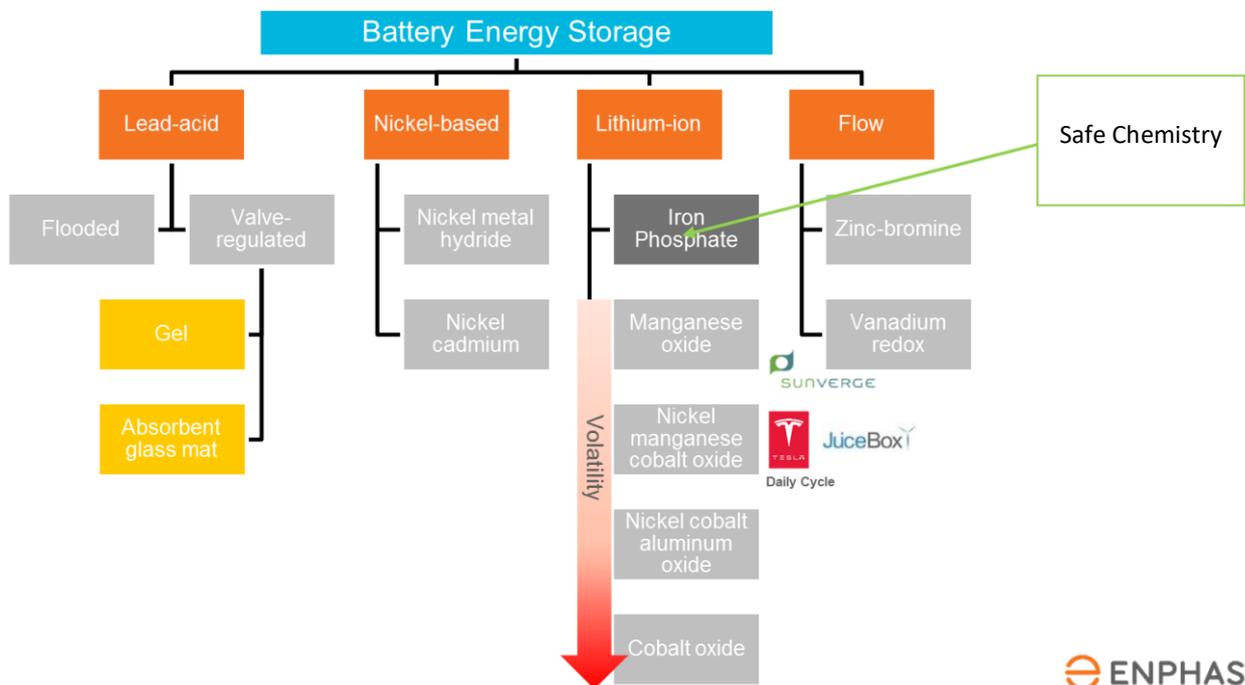
These batteries have a unique set of features which we've put together into a simple list for you below. If you are thinking about a storage system, it's worth considering these advantages.

## WHERE THESE BATTERIES REALLY SHINE.



### 1. SAFETY

Like micro inverters, the Enphase, Storion, and BYD batteries offer significant safety advantages.



We all hope that nothing will go wrong but Enphase, Storion, and BYD have made safety a standout strength. They chose to use a super safe chemistry and construction (Lithium Iron Phosphate) which you can learn about [here](#) and a see video of Enphase testing [here](#).

## 2. AFFORDABLE & ENTRY LEVEL

The majority of solar homes will probably need to add 3-8kWh of storage to get the most out of their solar production, depending on a variety of factors. However, many owners don't yet understand all these factors and would prefer to dip a toe in the water and start small, then build up as their experience grows and this is a key strength of the Enphase AC Battery. For just over \$3,000 you can get started with a 1.2kWh battery. The Storion Smile B3 is even more cost effective as 2.9kWh of storage starts just over \$6,000. As time passes, you simply add more units as your energy demands change.

## 3. RELIABILITY & PERFORMANCE

The advantages of modularity in micro inverters is reflected in the AC Battery. Each unit has its own optimised micro inverter charger and Battery Management System (BMS) which offers redundancy in the event of a problem. If one unit fails, the rest remain fully operational protecting your returns. The BYD battery is made in huge numbers with BYD being the largest manufacturer of Lithium batteries in the world. The product performance levels also back up the reliability story. They are reflected in strong warranties. Enphase, Storion, Selectronic and BYD all offer a 10-year warranty.

## 4. POWERFUL BACKUP CAPABILITY

When you need electricity during a blackout and want your battery to charge from solar when the grid is down, you need a hybrid inverter. The Storion Smile 5 or T5 and the Selectronic SP Pro give seamless backup power when the grid fails. The Storion inverters are the most cost-effective quality storage option available at the moment. The Selectronic/BYD combination is more expensive than the Storion inverters, as they utilise heavy transformer technology that is fully functional for long periods without power. The powerful transformer gives the SP Pro inverter the highest surge capability of any inverter on the market and will

operate all your heavy duty loads like pumps, motors and refrigerators without problems.



## 5. SIMPLICITY & ADAPTABILITY

The Enphase AC batteries and the Storion Smile B3 are designed with a simple [philosophy and intent](#) – to support safe energy storage and energy shifting. This keeps the components and design nice and simple. The downside is that they can't operate as a permanent off grid system. In New Zealand where grid reliability is extremely high this isn't a major downside in our view. As such, these non-hybrid inverters provide no backup power. On the other hand, the Storion Smile 5 or T5 and the Selectronic SP Pro inverter paired with the BYD battery can operate on grid or off grid. This gives comprehensive backup and charging from solar during a power outage.

One of the very cool things about these products is that they are so adaptable. You can add them to any existing solar system. They simply connect into the AC switchboard and you then monitor the solar and house consumption using their sophisticated monitoring systems.



## 6. FORM AND FUNCTION

The way a product looks shouldn't override other features but none of us wants to bolt a dog ugly box onto our wall, right? The Enphase and Storion inverters are very good looking. They won't spoil the looks of your home. On the form side of the equation the products are well thought out. A simple and heavy duty back plate gets mounted to the wall and electrically connected in an integrated junction box. The battery housing then clips on and automatically connects.



The Enphase batteries are not rated for outdoor installation so must be installed indoors in a non-habitable room e.g., garage, hallway, weatherproof porch, laundry. The Storion inverter and the Selectronic SP Pro hybrid inverter and BYD batteries can be installed outside in a location away from the sun—although we always recommend an indoor location if possible.

So, there you have it. We think the Enphase AC Batteries, the Storion Smile series, and the Selectronic SP Pro and BYD batteries have powerful strengths and features. Contact us now for pricing and options.

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