

# Power your future, today

Generate, store and manage your own clean energy – **for your home, major appliances, and electric vehicles.**



The Australian engineered ElektroBank 14, powered by our patented EmpowerIQ software, delivers **smarter, more reliable, and lower cost energy.**

# Introducing Australia's highest performing and future proof solar-battery

In a world where electricity policies, regulations, tariffs and revenue opportunities are changing rapidly, a flexible, fast and intelligent solar-battery is key.

The ElektroBank 14 is built on **next generation technology**, known as Field Programmable Gate Arrays (FPGAs), which are used by high frequency stock traders due to its speed and versatility.



Smartest



Fastest



Most Adaptable

Combined with our patented EmpowerIQ software, it forecasts your daily solar PV production and energy usage, and then optimises itself and integrated devices like water heating and EV charging.

Its CPU operates at industry leading GHz speed, which allows it to respond much faster to extreme changes in wholesale prices, both positive and negative, delivering 40% more savings on average than leading competitor solutions.

It can be reprogrammed in the field, allowing us to continually improve its performance over time and to deliver new types of market or grid services – none of which may have been thought of yet.

These features, combined with **Australian engineering for Australian conditions**, translate directly into a faster payback, a higher return-on-investment, and a more future proof solution over its 15-year design lifetime than competing solar-battery products.

# What's Inside – Industry Leading Technology

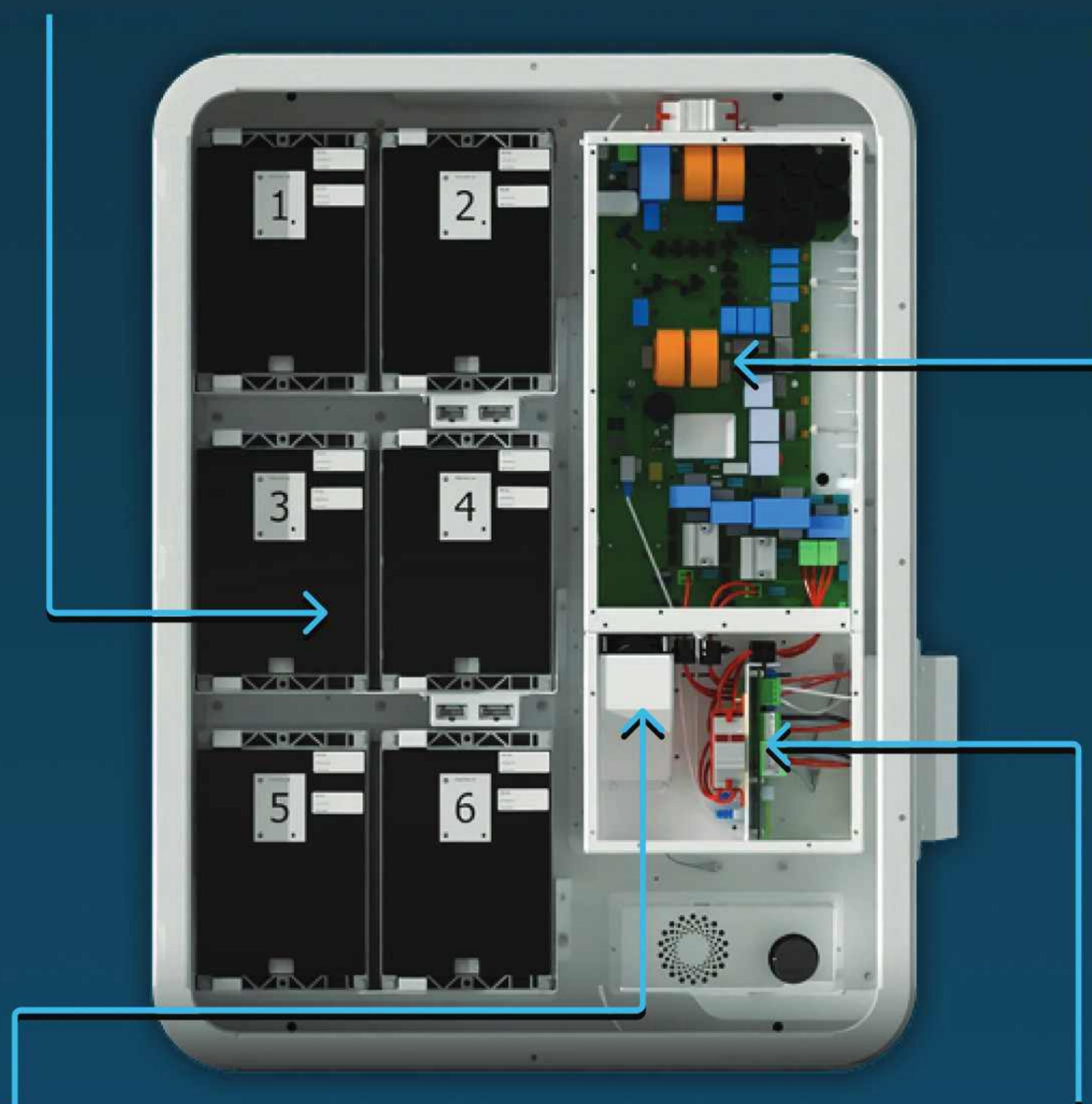
The ElektroBank 14 has been designed from the ground up to support Australia's future energy system, while also delivering industry leading performance and benefits today.

## The Safest Type of Lithium Batteries from a Tier-1 Source

Our proprietary battery management system is secure from external cyber-threats, and operates to maximize battery lifetime and performance under hot and cold conditions.

## Space and Cost Saving Hybrid Inverter

Our hybrid inverter provides 8kW solar PV capacity, 5 kW of grid export capacity and 5 kW of backup capacity. It can run indefinitely by recharging using solar PV during an outage.



## Active Heat Management System Boosts Performance

The ElektroBank 14 regulates its own temperature, heating in cold climates to boost capacity, and cooling in heat to protect longevity. Its ultra-quiet fan only runs on the hottest days and is quieter than a fridge.

## Optimises 3rd Party Resistive Water Heaters and EV Chargers

Just plug in any resistive water heater or compatible Level 2 charger, no extra setup needed. These devices are able to be monitored and managed via our app and automatically optimised using our patented algorithms.

# Summary of Key ElektroBank 14 **Features and Benefits**

Elegant all-in-one design, engineered in Australia, with more bells and whistles than any Tier-1 product at a lower cost per kWh.



## **Local Warranty Support**



Industry-leading 10-year or 45 MWh warranty, with national support from our NSW headquarters.

## **Compact All-in-one Design**



Sleek all-in-one design avoids multiple boxes on your wall, enhances aesthetics, and cuts installation costs.

## **Designed for Australian Conditions**



Reliable in any Australian climate, from -20°C to 50°C, with an industry-leading corrosion resistant enclosure.



## **Integrated Solar PV Inverter**

Removes the need for a separate inverter, reduces clipping losses, and avoids export penalties.

## **Software so Intelligent it's Patented**



Patented AI optimises your battery, solar, EV charger, and water heater for maximum savings and efficiency.



## **Integrated EV Charging Control**

Automatically optimises EV charging and supports 3rd party chargers, most don't, and it can drain your battery.

## **Integrated Customer App**



Stay in control with an easy-to-use app to track savings and manage your solar, battery, water heater, and EV charger.



## **Integrated Water Heating Control**

Automatically optimises water heating to lower costs and maximise savings if you're on a wholesale electricity plan.

## **Wholesale and VPP Plan Ready**



Enjoy industry leading payback periods by going on to a wholesale passthrough energy plan or a Virtual Power Plant (VPP).

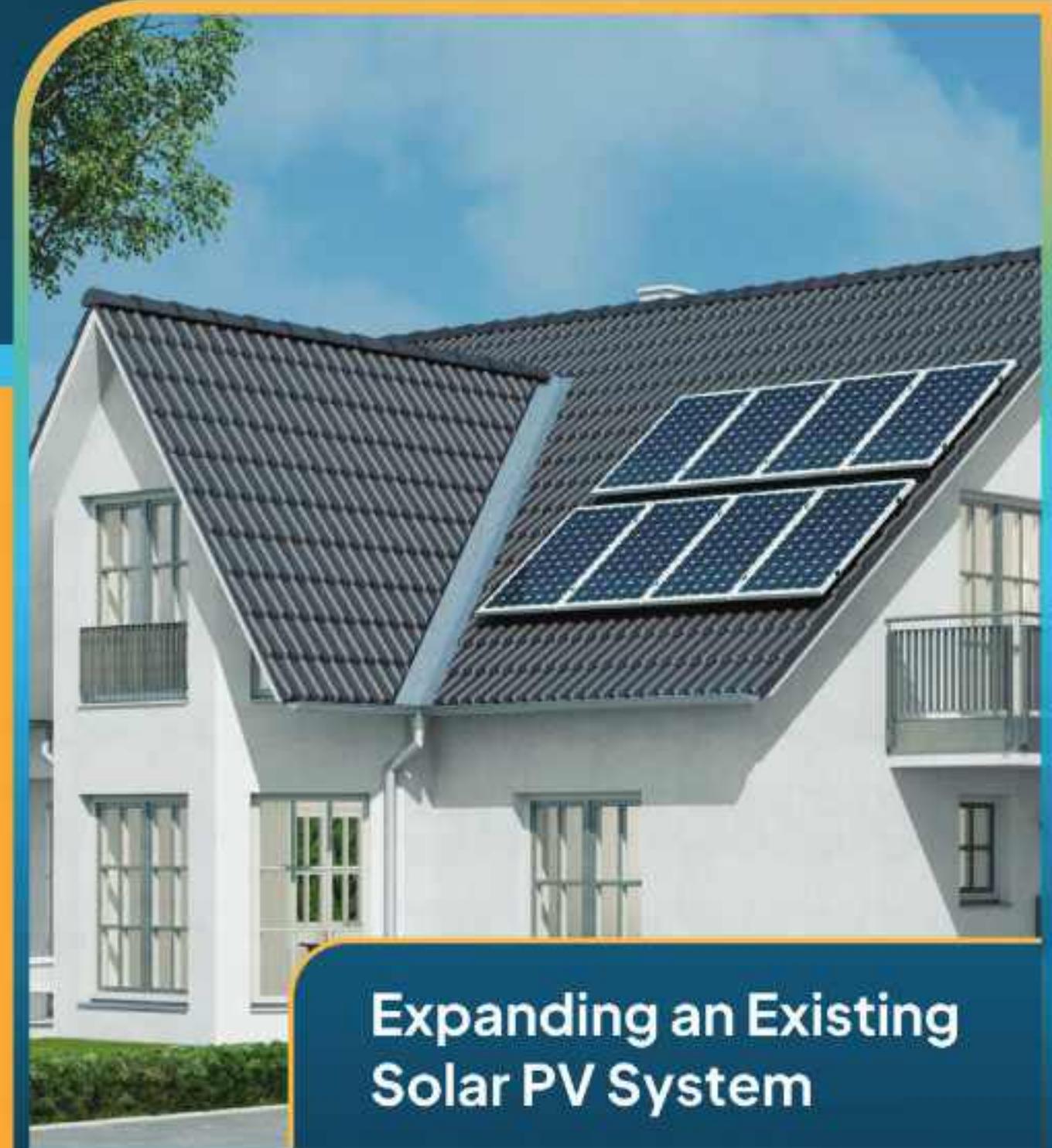


## **Long Duration Emergency Backup**

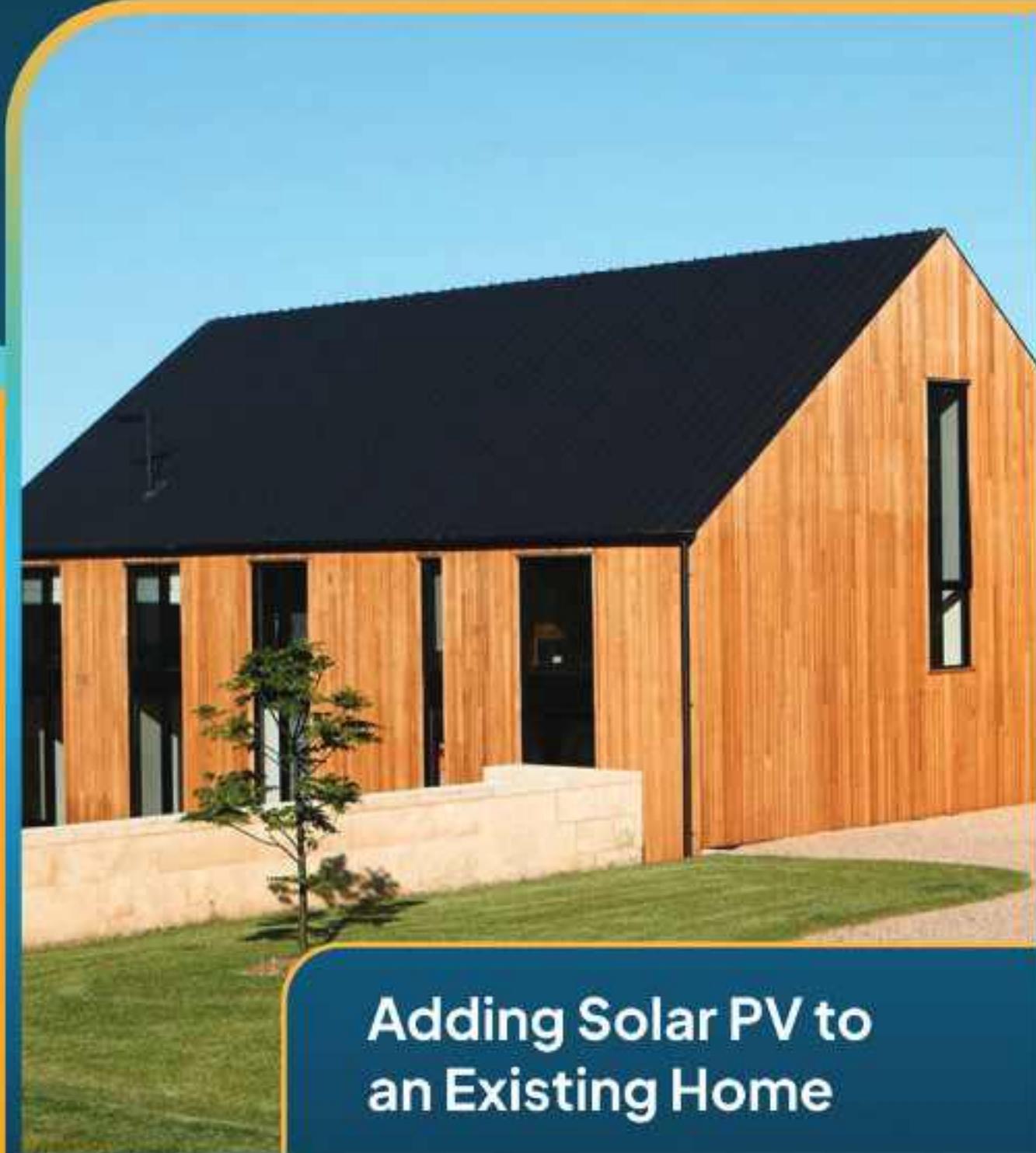
With a 14 kWh capacity, and ability to recharge from solar PV generation, it can run indefinitely during an outage.

# The ElektroBank 14

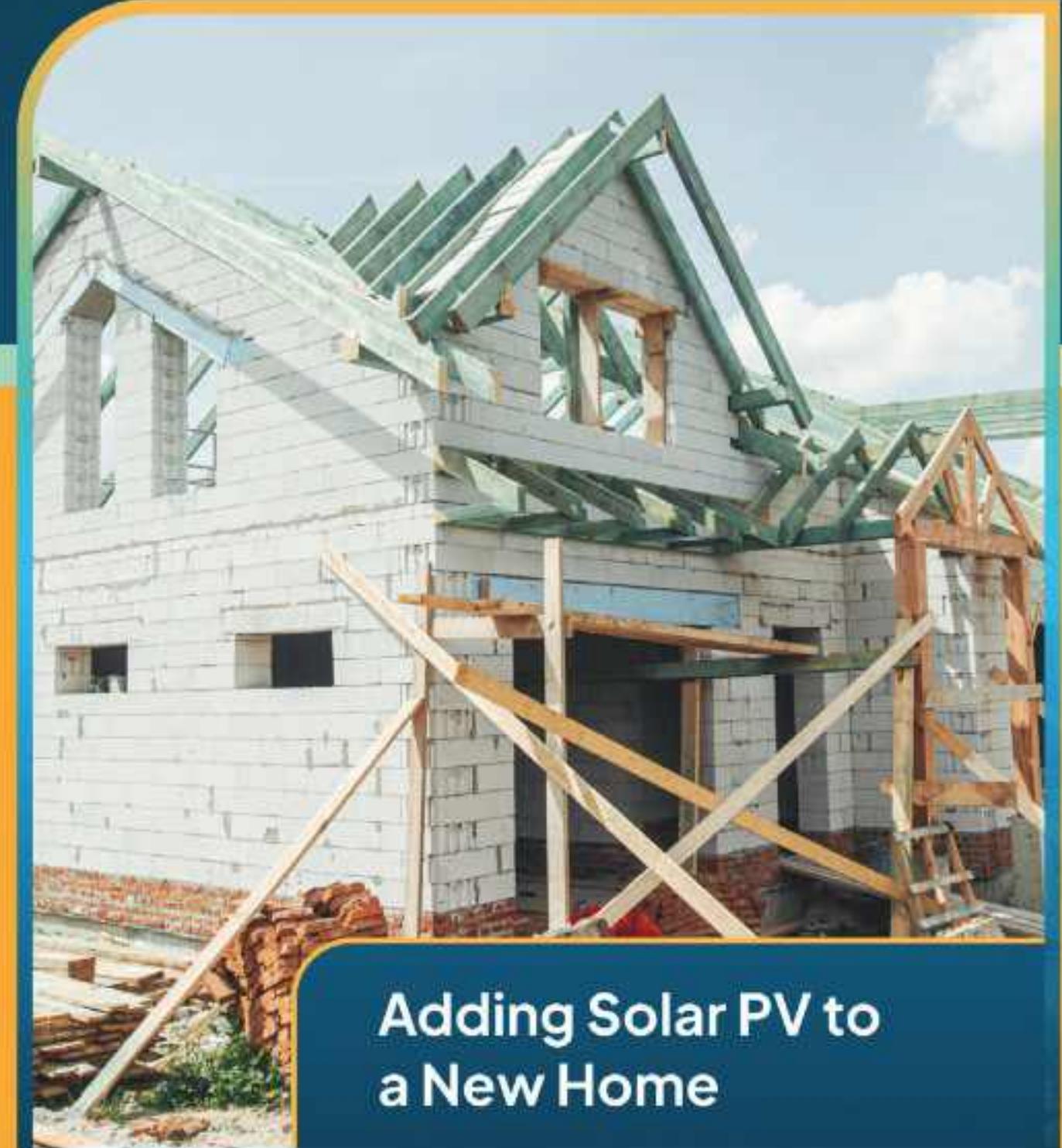
is the optimal solution to a wide range of residential homeowner needs



Expanding an Existing Solar PV System



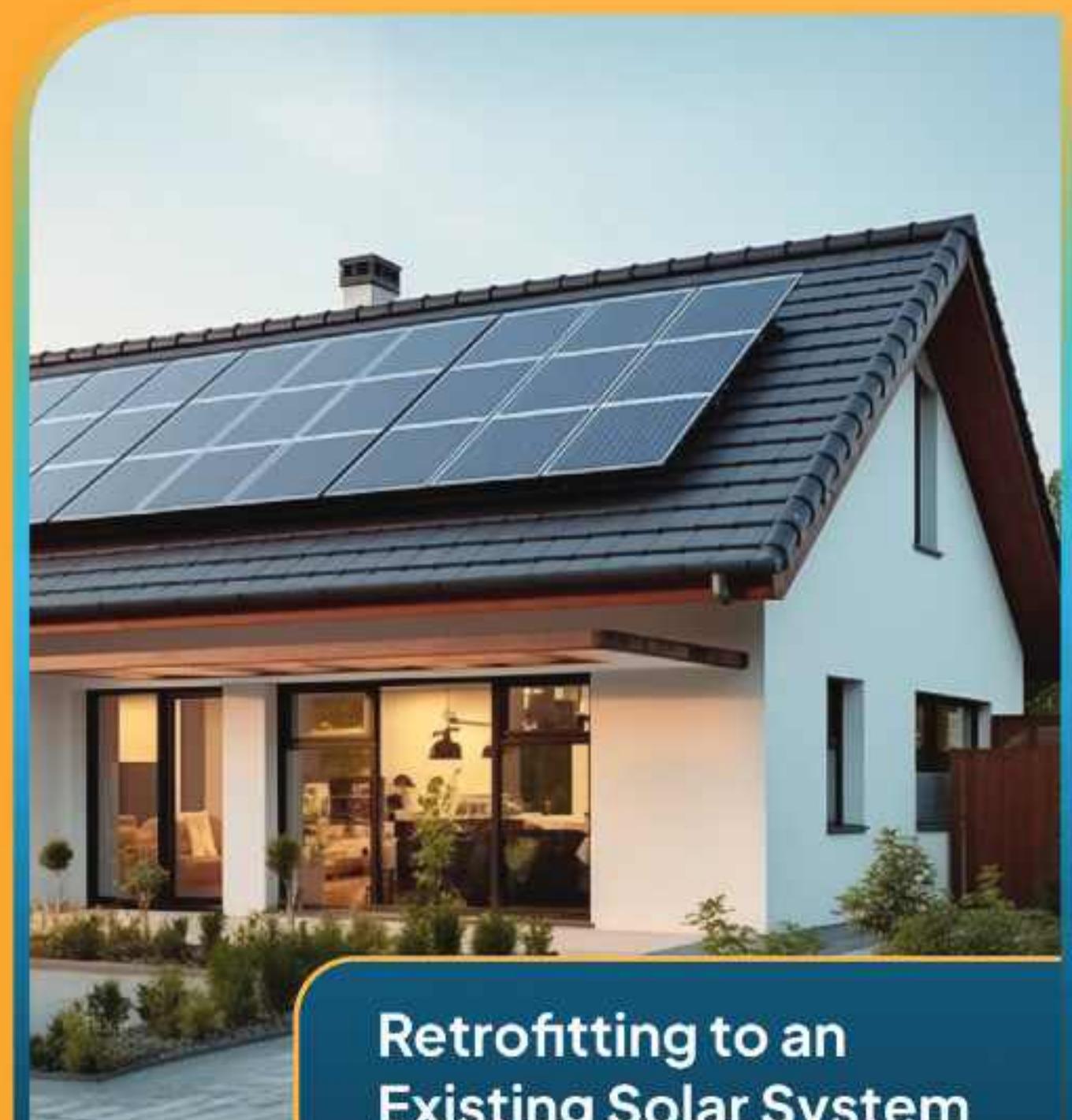
Adding Solar PV to an Existing Home



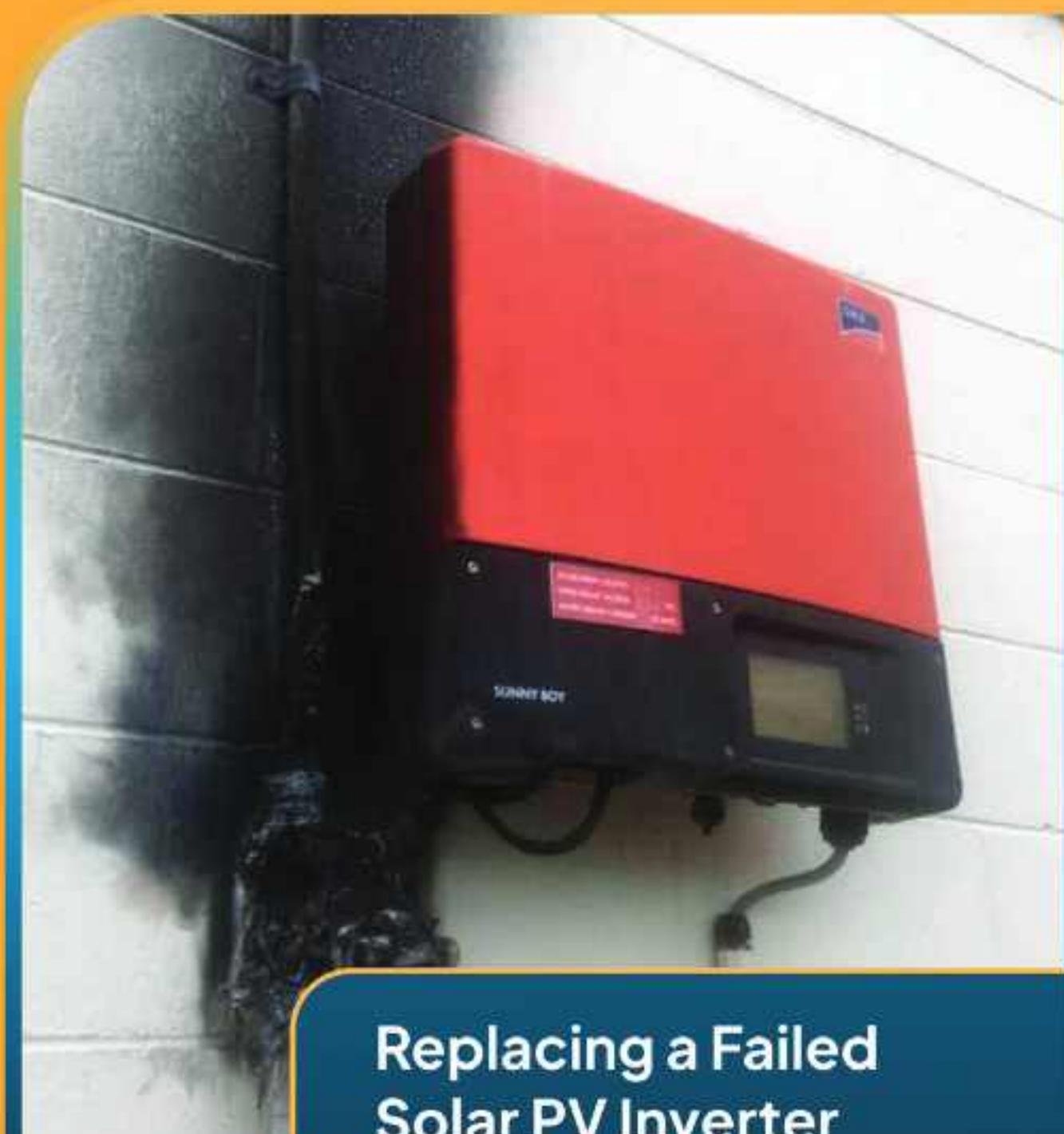
Adding Solar PV to a New Home

**The ElektroBank 14's built-in 8 kW solar PV inverter avoids the cost of an additional solar inverter, or the need for another box on your wall.**

Additional solar PV inverter capacity can be added via a second system, or via a third party solar PV inverter, which can be managed by the system to avoid negative solar export prices.



Retrofitting to an Existing Solar System



Replacing a Failed Solar PV Inverter



Seamless Home Energy Management

Integrates easily with any solar PV inverter, and is able to turn most of them off during negative prices, which is becoming an increasingly common occurrence.

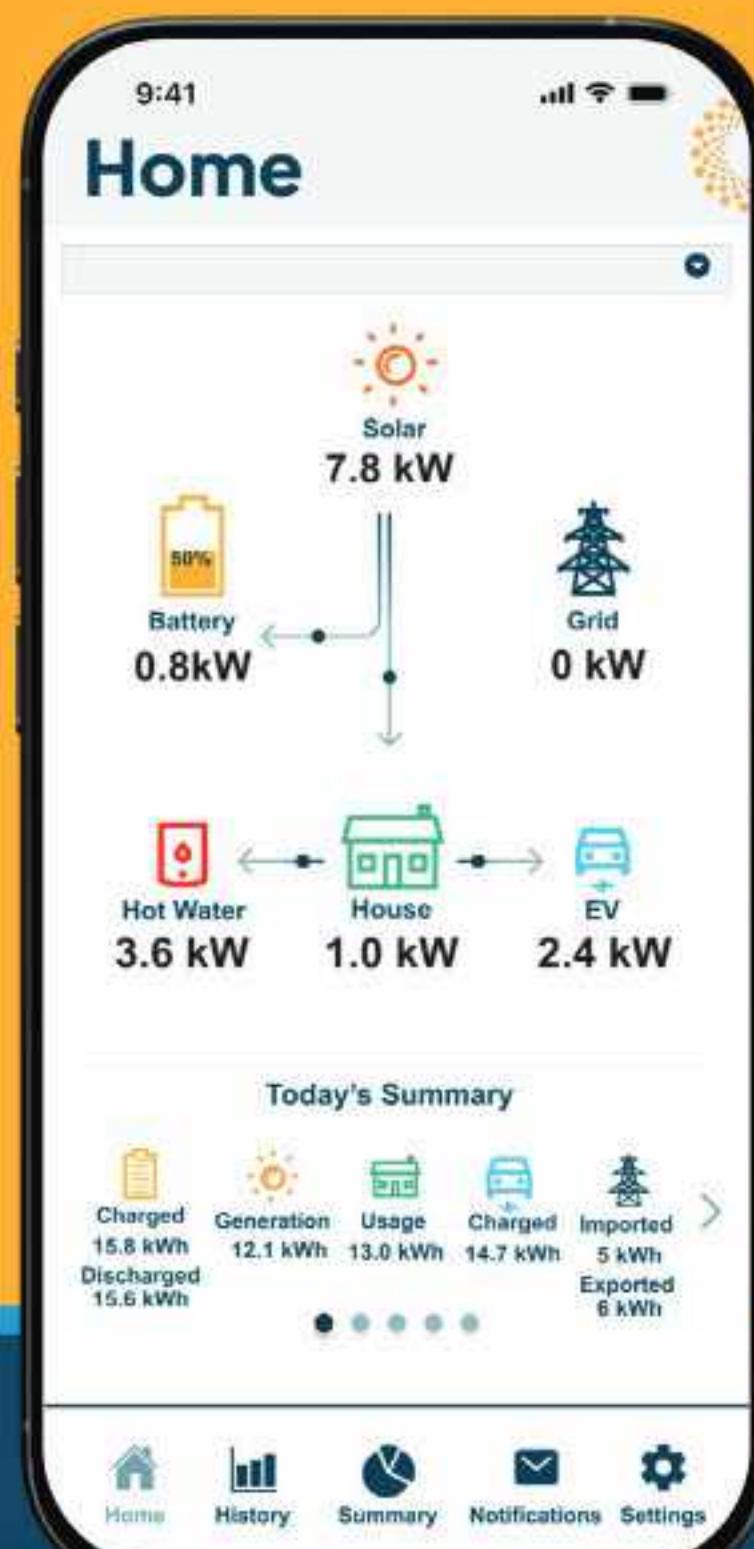
Replaces most failed solar PV inverters of the same or lower capacity, providing a drop in solution to get your solar PV generation back up and running in no time.

Automatically optimises your major flexible electric loads including EV charging, resistive water heating, pool pumps, and more!

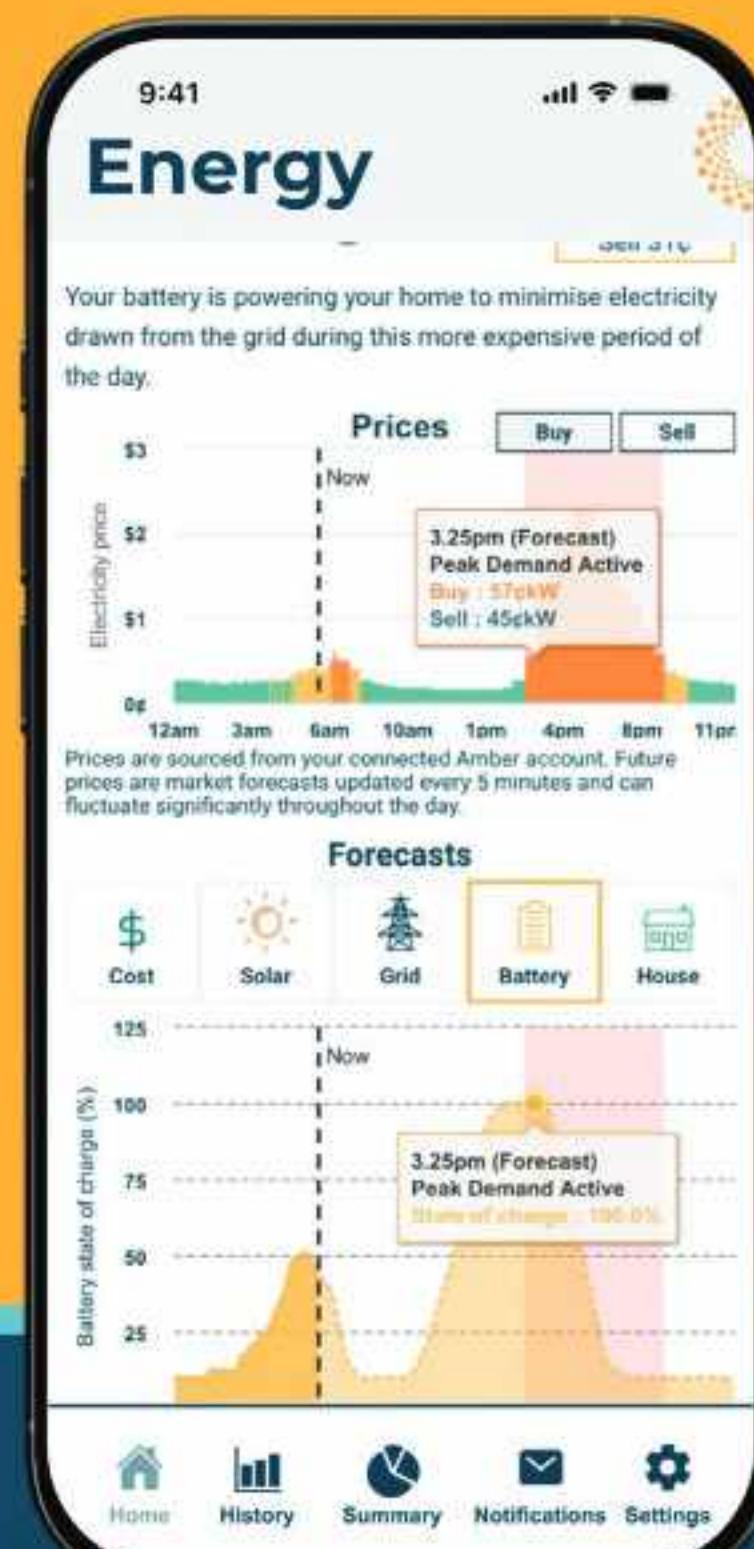
# The Empower Ecosystem

## The ElektroBank 14 is the heart of Empower's future-focused home energy platform.

It comes with the industry's only unified App, and can be integrated with a range of 3rd party resistive water heating and EV charging devices, as well as our own, two-way EV charger.



See all your devices in our unified App, including your solar PV, battery, EV charger, and resistive water heater.



Easily monitor our rolling forecast of your solar PV generation, load, retail prices and charging strategy.



One click check of current and future energy prices, even 5-minute wholesale prices, and your personal charging strategy.



Empower's Two-Way EV Charger<sup>1</sup>

Our 2-way EV charger enables your vehicle to act as an additional energy storage resource.



Empower's Gateway

Our gateway reduces installation costs and enables participation in grid services.



3rd Party Devices

Our system integrates with any resistive storage water heater, and selected EV chargers.

# Technical Specifications

PV input	
Vmax PV	430V
Max Continuous Current / Isc PV	15A / 19A
PV MPPT Starting Voltage	150V (then works down to 100V for hysteresis)
PV Maximum Power	2x4 KW MPPT
PV MPPT Operating Range	100V - 430V
Inverter Efficiency (PV to grid)	96%
Battery	
Voltage (nominal)	154V
Max Continuous Current Input / Output	32A
Maximum Continuous Power	5 KW
Battery Type	Lithium Ion Phosphate (LiFePO4)
Battery Total Energy	15.4KWh
Battery Usable Capacity	13.9KWh at 90% Depth of Discharge
Battery Round Trip Efficiency from Grid	Approx.91%
Battery Lifetime Warranty	70% total capacity remaining after 10 years or 45 MWh throughput (whichever comes first)
AC Input/Output Ratings (Grid Port)	
Grid Nominal Frequency	50Hz
Voltage (nominal)	230V single phase
Maximum Continuous Current Input/Output	41.7A rms / 21.7 A rms
Inrush Current	50 A rms for 100ms
Active/Apparent Power Continuous	9.6 kW / 5 kW
Apparent Power Continuous	9.6 kVA / 5 kVA
Power Factor	+/-0.6 adjustable
Maximum Input/Output Overcurrent Protection	40A
Maximum Output Fault Current	30A
System	
Residual Current Monitoring	Integral for grid port (backup port requires external RCD)
Inverter Topology	Non-isolated
Supporting Demand Response Modes	DRMO
Certification Marks	AS 4777.2.2020, IEC 62109-1, IEC 62109-2, AS 62040.1, AS 6100.6.3:2012, IEC 62619
Communications	Wi-Fi, LAN (RJ-45), 3G/4G
Mechanical & Environmental	
Maximum Dimensions (H / W / D)	1200 mm / 900 mm / 225 mm
Ambient Operating Temperature Range*	-20 °C to +50 °C
Ingress Protection (IP) Rating	IP 66
Weight	180 kg
Environmental Category	Outdoor
Wet Location Classification	Wet
Maximum Altitude	2000m
Enclosure Storage Conditions	-20 °C and 50 °C, max 95% RH non-condensing
AC Output Ratings (Backup Port)	
Frequency	50HZ
Voltage (nominal)	230V single phase
Maximum Continuous Current Input/Output	20A rms
Inrush Current	90A max
Active / Apparent Power Continuous **	3.5 kW / 3.5 kVA
Active / Apparent Power Overload	4.6 kW / 4.6 kVA for 1 hour
Power Factor	+/-0.6

Designed in Australia, Manufactured in Malaysia

\* Battery will automatically de-rate power according to internal temperatures. Maximum ambient temperature for continuous 5 kW charging/discharging (unrealistic use case) with no PV is ~40°C. Minimum temperature with no de-rating is ~4°C.

\*\* Empower only supports installations using an external contactor, which allows for 4.6 kW continuous from the backup port. The 3.5 kW mentioned in the table assumes no external contactor, which Empower no longer supports.



**Empower**  
Empowering People

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