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12 December 2022

2:00 pm- 3:00 pm | AWST, Perth
5:00pm – 6:00 pm | AEDT, Sydney
7:00 am – 8:00 am | CET, Berlin



Bella Peacock

Editor
pv magazine Australia

pv magazine
webinars

Understanding Australia's tantalizing battery market



Laura Rodriguez

Account Executive Oceania, SEA
& Northern Europe
RatedPower



Irene Negro

Customer Success Manager
RatedPower

Welcome!



Do you have any questions? ? 

Send them in via the Q&A tab.  We aim to answer as many as we can today!

You can also let us know of any tech problems there.

We are recording this webinar today. 

We'll let you know by email where to find it and the slide deck, so you can re-watch it at your convenience.  

Understanding Australia's tantalizing battery market



Who we are



Laura Rodriguez

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**Customer Success Manager,
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PV expert leading customer support with a focus on the EMEA and LATAM markets and battery projects.

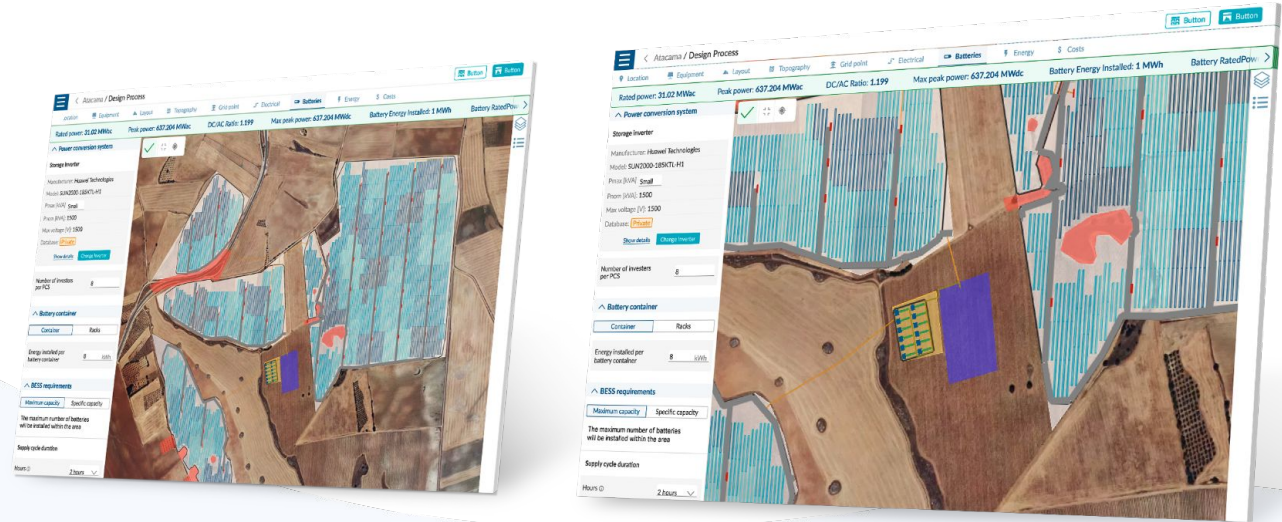
inegro@ratedpower.com



Accelerating photovoltaics

01

pvDesign: An end-to-end software for solar PV plant designing, engineering and optimization



How does it work?

1. Smoothen the planning process
2. Accelerate time-to-layout
3. Optimize your PV project
4. Get the technical documentation



A tantalising market

02

Lithium in Australia

24.54%

World's lithium
reserves

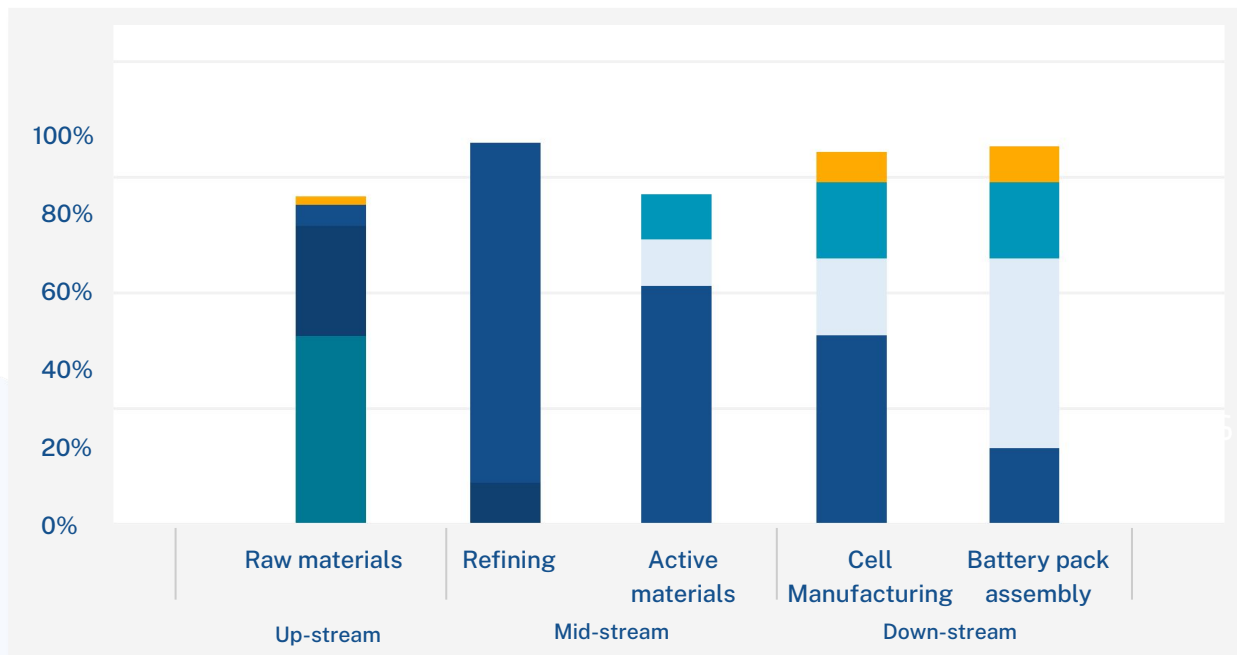
49%

Global lithium
production

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Lithium in Australia



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Australia is one of a few countries in the world that currently **mines** or is about to mine **all the raw materials required to produce lithium-ion batteries**

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Battery storage in Australia

Relevant projects

| Project | Company | Type | Status | Size (MW) |
|----------------------------|-----------------------------|-----------------|-------------------------|-----------|
| Great Western Battery BESS | Neoen | Battery | Announced | 500 |
| Eraring BESS | Origin Energy | Battery | Announced | 700 |
| Wooreen BESS | Maoneng Group | Battery | In construction | 350 |
| Hornsedale Power Reserve | Neoen/ Tesla/ SA Government | Solar + Battery | Completed, in expansion | 150 |
| Kiamal | Total Eren | Battery | In construction | 100 |
| DeGrussa Copper Mine | Juwi | Solar + Battery | Completed | 10,6 |
| Lakeland Solar and Storage | Conergy | Solar + Battery | Completed | 1,4 |

Source: Smart Energy Council

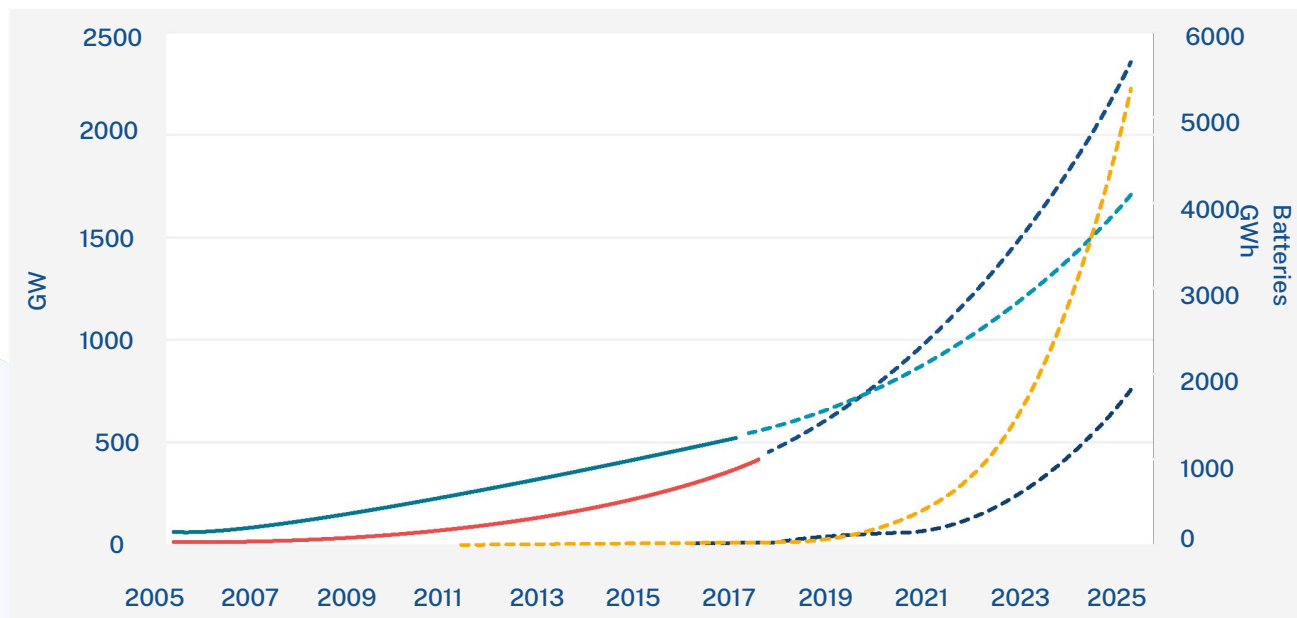
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Australian battery sector: Perspectives. 2005-2025.

Estimated capacity of renewable energies

- Solar PV projection
- Solar CST Projection
- Batteries Projection
- Solar PV
- Wind Projection
- Wind



Source: Future Smart Strategies

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Leading the global lithium-ion battery energy storage sector per capita

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pvDesign and batteries

03

pvDesign data: Oceania

World: 6.5%

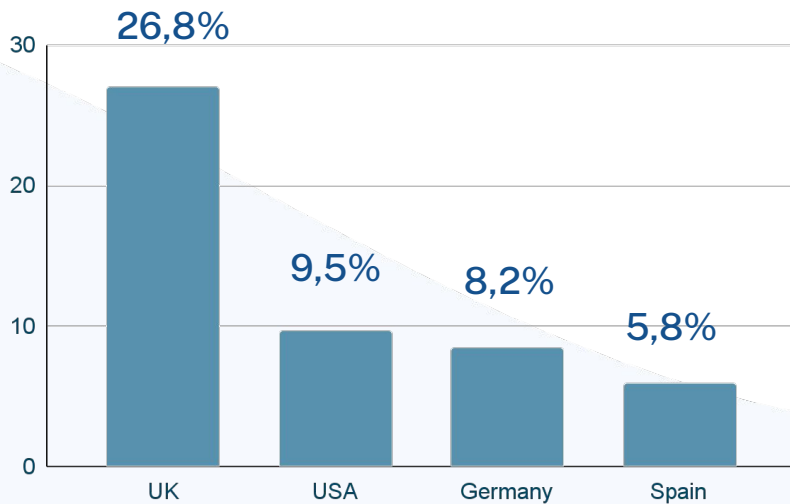
16 GW simulated with AC-coupling BESS (3.5%)

Australia: 3.5%

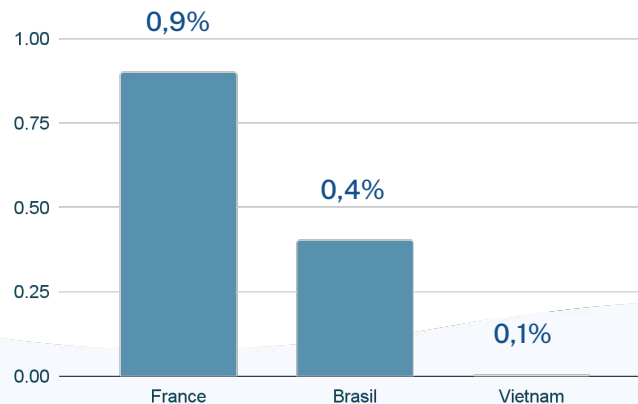


pvDesign data: countries comparison

USA, Germany, UK and Spain



Brazil, France and Vietnam



Hybridized PV system

04

Benefits and watch-outs of each type of battery

AC-coupling

In AC-coupled systems, there are **separate inverters** for the solar panels and the battery.

Benefits

- Retrofitting
- Flexibility
- Resiliency
- Versatility

Watch-outs

- Cost
- Lower efficiency
- Supply limitations

DC-coupling

DC-coupled systems typically **use solar charge controllers** and a **battery inverter** to convert the electricity flow to AC.

Benefits

- Affordability
- Higher efficiency
- Oversizing

Watch-outs

- Limited flexibility
- Less resiliency

Standalone

A standalone battery power system consists of **one or more standalone batteries**.

Benefits

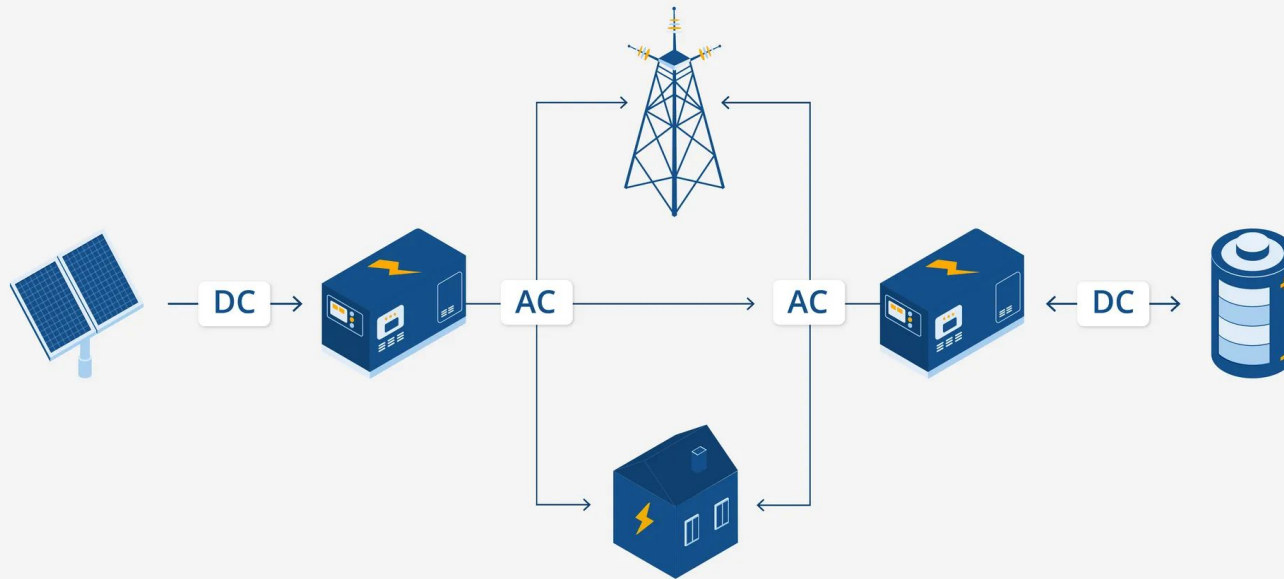
- Distributed generation
- Reaches locations
- Easy expansion

Watch-outs

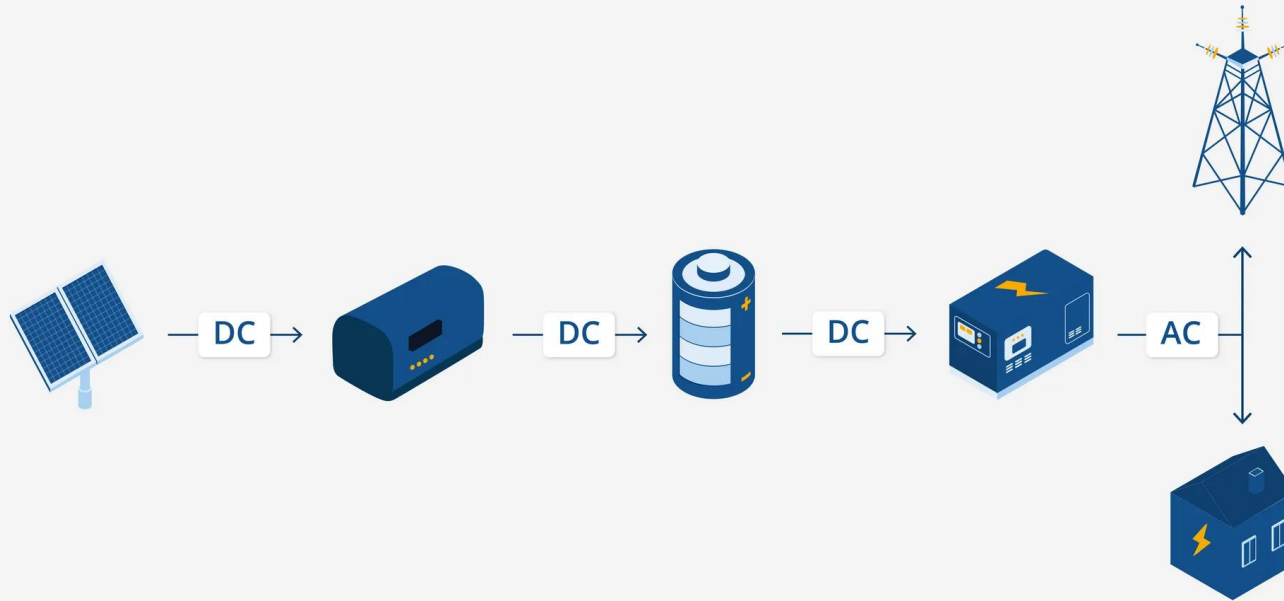
- High initial investment



AC-Coupled System



DC-Coupled System



The State of Green 2022 in Australia

116.3MW

Average
site size

95%

Central
inverters

98%

Tracker
structures

80%

Bifacial
modules



Download Ebook

The top 6 equipment brands by pvDesign users

Jinko Solar

CanadianSolar

SMA

Ingeteam

ARRAY
TECHNOLOGIES

nexttracker

Hybridized PV system



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California to cut solar net-metering payments by 75%

by Ryan Kennedy



Most-
read
online!

PV-powered residential air-source heat pump with PCM thermal storage

by Emiliano Bellini



Coming up next...

Thursday, 19 January 2023

8:00 am – 9:00 am PST, Los Angeles

11:00 am – 12:00 pm EST, New York City

Wednesday, 18 January 2023

10:00 am – 11:00 am PST, Los Angeles

1:00 pm – 2:00 pm EST, New York City

Many more to come!

**The IRA Impact
on U.S. Clean
Energy
Manufacturing**

**Hail risk in
solar: Identify,
quantify, and
mitigate**

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**Thank you for
joining today!**