Sun, Sea and C-Rates

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Jinko ESS

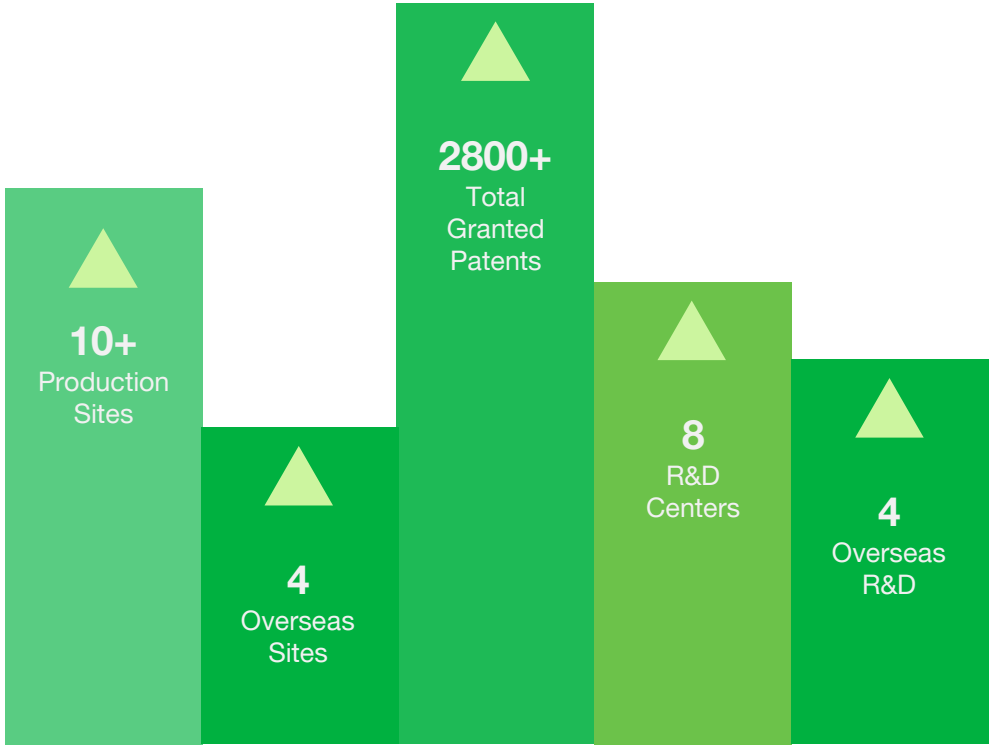
jinkosolar.eu/ess

About Jinko ESS

Jinko ESS entered the global energy storage market in 2019, using its PV expertise for integrated PV-storage solutions. Established in 2022, it includes Zhejiang Jinko Energy Storage and Jinko Energy Storage International. Jinko ESS offers residential, C&I, and utility-scale storage solutions with modular products.

Jinko ESS is listed as a BNEF Tier 1 Energy Storage Manufacturer.

Facts & Figures



Mission: Optimize the energy portfolio and take responsibility for enabling a sustainable future.

Vision: Provide a one-stop solution for clean energy and become an industry leader.

Jinko's Values

Equity

People are treated, motivated, valued and respected equally.

Results Orientation

Results are relevant, delivered in a timely manner and an appropriate cost.

Responsibility

Inspiring our people and exemplifying the responsibility culture and common values.

Innovativeness

New solutions for customers and ourselves.

ESS Industry Planning

Cell
314Ah prismatic cells in 2024.
Scalable 4 GWh cell production lines.

BMS
Developing in-house Battery Management System with advanced cell balancing options

System integration
Safe and reliable.
High energy density.
GB/UL/IEC certifications.
Plug & Play integration, test and delivery.

PCS
Partnered with mainstream suppliers.
Self-developed cluster PCS planned for SunTera.

EMS
Local EMS available in 2024.
Partnered with mainstream EMS manufacturers globally. Self-developed EMS in 2025.

Cloud Platform
Cross regional, multi-industry options available for VPP, remote monitoring and O&M in 2024 for C&I and Utility scale in 2025.

Seamless Compatibility

Engineered to seamlessly integrate with renewables including Solar PV systems, enhancing the adoption of renewable energy sources into our power networks.

Table of Contents

01 Customer Business Case

Driving the Future of Clean Energy in Tahiti

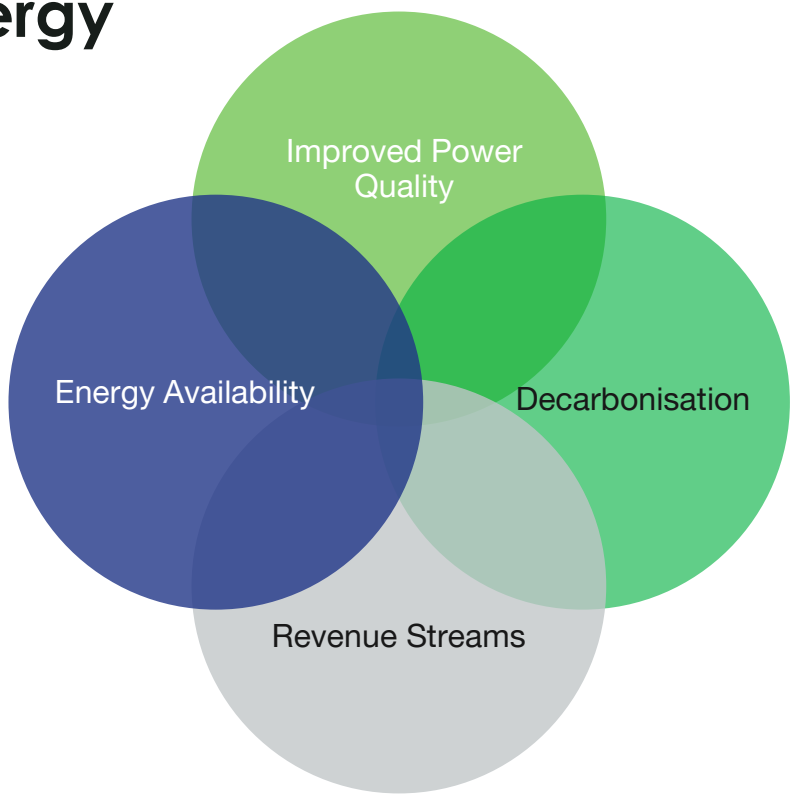
- Tahiti has a population of 190,000 spread over 1,042 sq. km, making reliable power supply a challenge.
- In 2019, 28% of French Polynesia's energy came from renewables (mostly hydroelectric, but also wind, PV, and geothermal); the majority was from fossil fuels.
- Tahiti is aiming for 75% renewable energy by 2030.

Driving the Future of Clean Energy in Tahiti

- Fossil fuel reliance drives a strong case for decarbonisation, but Grid reliability must be ensured. Power generation losses can quickly cause local outages or wider blackouts.
- Tourism is the island's main income source; agriculture supports self-sufficiency and high value crop exports to the USA and APAC.
- Agrivoltaics can enhance energy and food security, improving efficiency and delivering financial benefits.

Driving the Future of Clean Energy in Tahiti

- For the Manasolar project, the site must provide a daily production forecast and dispatch energy to the Grid accordingly.
- Batteries are essential to smooth the PV production and meet the output commitment.
- Financial penalties apply if forecasts are missed, impacting customer cash flow and the daily lives of the local population.



03 Navigating Challenges


Tokyo
11h
San Francisco
8h
Los Angeles
8h
Honolulu
5h
TAHITI
Noumea
6h
Rarotonga
2.5h
Auckland
5h
Easter Island
5h
Santiago
11h

Navigating Challenges – literally!

- Tahiti is part of the French Polynesia island group, located in the heart of the Pacific Ocean.
- The project involved several international companies, each contributing different capabilities.
- Operating in such a remote location is a big challenge.
- Unsurprisingly, the list of volunteers for commissioning and now aftersales site visits is very long!

04 Chosen Solution

Chosen Solution

The 10 Hectare site consists of 18,700 Jinko Solar panels, with 18MWh of Jinko SunTera containers and 10MW of SMA inverters and transformers.

- It can produce 13,000MWh of power and provides a direct saving of 2,000,000 lts of fuel oil.
- Timeshifting and smoothing production by the battery is key for full site optimisation.

SunTera G1 3.44MWh Container

- Liquid-cooled self-contained LFP battery with 3-level onboard safety system.
- Designed for -20 to +55°c operating environment.
- Compatible with a range of inverters and EMS from multiple manufacturers.
- Remote diagnostics and control compatible.
- 32t all-up-weight so road-transportable to site pre-built, reducing the logistics burden.

05 Lessons Learned

Lessons Learned

• Never underestimate the issues of transporting to remote locations. Sea freight co-ordination via multiple ports is time-consuming and carries extra risk.

• Site surveys, project planning, and system integration control are essential.

• When many parties are involved (e.g., separate EPC, sub-system suppliers, solution integrators), clear responsibility matrices must be agreed upon early. Multiple partners = multiple project plans to co-ordinate.

• Customer timescales are always challenging!

Lessons Learned

- Local health and safety (H&S) requirements may differ from what you are used to. Local partners are crucial for understanding needs and ensuring success.
- Providing specialist MHE for small projects can be a significant element to consider.
- No matter how big a company is, it is never fully prepared for the realities of long-distance projects.
- The 6P rule is the most important lesson.

And it's never like what it is in the brochure!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Thank you

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