Solar Energy & Storage Sourcing Guide

Re&Source HUB — Hong Kong

Tier-1 solar panels, battery storage, and clean energy equipment — precision procurement from factory to project site.

> **"Clean energy projects depend on dependable procurement. It is not enough to find products — buyers need the right products, from the right manufacturers, at the right commercial terms."**

Who This Guide Is For

This guide is for solar project developers, EPC contractors, energy storage integrators, distributors, and procurement teams sourcing photovoltaic modules, battery storage systems, inverters, and balance-of-system components from manufacturers in China and Asia.

Re&Source HUB supports procurement across a range of project scales — from small commercial and C&I installations to large utility-scale solar and storage projects — providing independent manufacturer verification, technical compliance review, and end-to-end logistics management.

Why Independent Procurement Matters in Solar

The solar supply chain is one of the most commercially complex in manufacturing. Tier-1 status, Bloomberg NEF ratings, and IEC certifications all matter — but the market also contains a significant volume of uncertified, mis-labelled, and underperforming product that passes casual inspection.

Re&Source HUB conducts independent due diligence on every manufacturer it recommends — including certification validity checks, production capacity assessment, financial standing review, and factory inspection for significant orders. The objective is not simply to find the cheapest price; it is to identify the best-value product from a manufacturer that can consistently deliver it.

What Re&Source HUB Covers for Solar & Storage

Service Area	What We Do
Manufacturer Identification	Identify suitable Tier-1 or qualified manufacturers for modules, batteries, and inverters
Tier Verification & Technical Review	Verify Bloomberg NEF rating, IEC certifications, production capacity, and warranty terms

Service Area	What We Do
Factory Inspection	Pre-production factory audit and in-process inspection for significant orders
Technical Compliance Review	Datasheet review, IEC test report review, and warranty document analysis
Price Negotiation	Direct manufacturer negotiation using consolidated project volumes
Production Monitoring	In-process inspections for batch consistency and quality management compliance
Pre-Shipment Inspection	AQL inspection covering product sampling, serial number recording, and carton integrity
Certification Re-confirmation	Validity re-check of IEC, CE, and TÜV certifications before shipment release
Export & Freight Management	FCL container bookings, cargo insurance, and phased delivery scheduling
Post-Delivery Support	Warranty registration support and manufacturing defect claim management

Product Categories We Source

Solar Photovoltaic Modules:

- Monocrystalline PERC — current commercial standard
- TOPCon (Tunnel Oxide Passivated Contact) — latest high-efficiency technology
- Bifacial modules — rear-side energy capture for ground-mount applications
- Half-cell and multi-busbar modules
- Building-integrated PV (BIPV) — selected formats

Battery Energy Storage Systems (BESS):

- LFP (Lithium Iron Phosphate) — preferred chemistry for safety and cycle life
- NMC (Nickel Manganese Cobalt) — higher energy density applications
- Rack-mounted and containerised BESS
- Residential storage systems

Inverters:

- String inverters — commercial and utility scale
- Microinverters — residential and small commercial
- Hybrid inverters — solar + storage integration
- Central inverters — large utility installations

Balance of System (BoS):

- Mounting structures — rooftop and ground-mount
- DC cables and connectors
- Monitoring systems and dataloggers
- Combiner boxes and switchgear

Key Certifications & Standards

Certification	Market	Product Type
IEC 61215	Global	Crystalline silicon PV modules
IEC 61730	Global	PV module safety qualification
IEC 62619	Global	Safety for secondary lithium cells and batteries
UL 1703 / UL 61730	USA	PV module safety
MCS	UK	Microgeneration Certification Scheme
CE Marking	EU	Modules, inverters, BESS
TÜV Rheinland / TÜV SÜD	Global	Third-party test and certification
Bloomberg NEF Tier 1	Global	Bankability rating for PV module manufacturers
CEC Approved	Australia	Clean Energy Council approved products list
IEC 62109	Global	Inverter safety for power conversion equipment

Re&Source HUB verifies current certification validity — not merely historical certification — before recommending any manufacturer. Certifications should be confirmed against the specific product model being sourced, not just the manufacturer.

Understanding Tier-1 vs. Certified

"Tier-1" is a Bloomberg NEF financial rating based on the manufacturer's balance sheet and bankability for project finance — it does not certify product quality. A Tier-1 rated module still needs to be individually verified against IEC standards, warranty terms, and production capacity. Re&Source HUB conducts both assessments independently.

The Solar Sourcing Process — Step by Step

Step 1 — Project Specification & Technical Brief

Define technical requirements — panel wattage, cell technology, battery chemistry, inverter type, project scale, and required certifications. Share installation location, grid connection type, and project timeline.

Step 2 — Manufacturer Identification & Tier Verification

Suitable Tier-1 or qualified manufacturers are identified, with Bloomberg NEF ratings, certification status, production capacity, and financial standing all verified.

Step 3 — Technical Compliance Review

Manufacturer datasheets, IEC test reports, and warranty terms are reviewed against project specifications before any commercial commitment is made.

Step 4 — Price Negotiation & Commercial Quotation

Direct manufacturer negotiation using consolidated project volumes. Quotations are presented with full transparency — unit pricing, freight, warranty terms, lead times, and payment structure.

Step 5 — Order Confirmation & Production Scheduling

Production scheduling is confirmed, aligning manufacturing capacity with project delivery requirements. Phased production is coordinated where required.

Step 6 — Factory Inspection & Pre-Production Audit

For significant orders, a pre-production factory inspection verifies manufacturing readiness, materials availability, and quality management systems.

Step 7 — Production Monitoring & Quality Checks

In-process inspections monitor production progress, cell efficiency, module construction, and electroluminescence (EL) imaging where required.

Step 8 — Pre-Shipment Inspection & Certification Verification

Final inspection covers product sampling, carton integrity, serial number recording, and documentation review. All certifications are re-confirmed valid before release.

Step 9 — Export, Freight & Project Logistics

Full export documentation is prepared. FCL container bookings, cargo insurance, and phased delivery scheduling are coordinated to align with the installation programme.

Step 10 — Delivery Support & Warranty Management

Post-delivery support for documentation and warranty registration. Manufacturing defects or shipping damage claims are managed directly with the factory on the client's behalf.

What to Include in Your Brief

- Project type (residential, commercial, utility-scale, storage only)
- Installation country and grid connection type
- Required wattage per module and total project MW/MWh
- Cell technology preference (or open to recommendation)

- Required certifications for the destination market
- Battery chemistry and configuration (if storage required)
- Target FOB or CIF price
- Delivery timeline and phasing requirements
- Financing or bankability requirements (relevant to manufacturer Tier rating)

Typical Lead Times

Stage	Estimated Duration
Manufacturer identification and verification	1–2 weeks
Technical review and quotation	1–2 weeks
Factory inspection (if required)	1–2 weeks
Production	4–8 weeks (subject to factory capacity and order size)
Pre-shipment inspection	1–2 weeks before shipment
Ocean freight — China to Europe	4–5 weeks
Ocean freight — China to USA (West Coast)	2–3 weeks
Ocean freight — China to Middle East / Australia	3–5 weeks

For utility-scale projects, production and logistics schedules are planned in coordination with EPC construction timelines. Early engagement — 3–6 months before required delivery — is strongly recommended.

A Note on Price

Solar module prices fluctuate with polysilicon supply, manufacturing capacity, and global demand cycles. Re&Source HUB monitors market pricing continuously and provides clients with current market context alongside quotations. The objective is not to find the lowest headline price, but the best-value product at a commercially defensible price from a manufacturer with the capacity and stability to deliver.

Key Terminology

Term	Meaning
Wp / kWp / MWp	Watt-peak / kilowatt-peak / megawatt-peak — standard measure of PV module output
MWh	Megawatt-hour — measure of energy storage capacity
LFP	Lithium Iron Phosphate — battery chemistry preferred for safety and cycle life in most storage applications
TOPCon	Tunnel Oxide Passivated Contact — current leading high-efficiency monocrystalline module technology

Term	Meaning
Bifacial	Module that captures solar energy from both front and rear surfaces
EL Testing	Electroluminescence imaging — detects micro-cracks and cell defects invisible to the naked eye
Bloomberg NEF Tier 1	Financial bankability rating — not a quality certification
IEC	International Electrotechnical Commission — sets international product safety and performance standards
FOB	Free On Board — price to named port of export
CIF	Cost, Insurance, Freight — FOB price plus freight and insurance to destination port
EPC	Engineering, Procurement, and Construction — contractor responsible for full project delivery
C&I	Commercial & Industrial — solar project category for business premises
BoS	Balance of System — all components other than the PV modules themselves

Starting Your Project

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Location: Hong Kong — serving clients across major international time zones

Deal with one trusted partner instead of a hundred factories.