

SUPPLIER MARKET INTELLIGENCE PROGRAM



PV SMIP Overview

The Clean Energy Associates' Supplier Market Intelligence Program (SMIP) is a quarterly independent, unbiased market intelligence report of the top PV module manufacturers in the world.

Access to timely, accurate information is strategically important, and its absence creates sizable risk. The program brings together objective, high-quality, multi-sourced and verified data to create the supplier market intelligence report. The report includes detailed information and analysis on capacities, utilization, technology, and efficiency roadmaps, as well as PV module supplier cost data.

The Supplier Market Intelligence Program provides an objective method of evaluating the true capabilities of PV module suppliers.

The quarterly report contains critical up-to-date operational data for the largest Tier 1 suppliers, such as Canadian Solar, JA Solar, Jinko Solar, Trina Solar, and Hanwha. CEA's research team utilizes high quality, verified data to create the SMIP report.



The Problem: Choosing a reliable PV module supplier presents risks.

The Solution: Utilize market intelligence data to make an informed decision with confidence.

The Logic: Deliver objective, high-quality, multi-sourced and verified data.

The Result: Mitigate risk and optimize your solar energy investment.

Clean Energy Associates has supported more than **125 GW** of solar projects worldwide. This vast volume of quality assurance work has accumulated a treasure trove of data and expertise.



PROGRAM BENEFITS

Make the Right Decision

- Provides timely visibility into the world's top PV module suppliers to support best decisions that must be made now.
- Delivers accurate, unbiased information that enables clients to strategically benchmark and select suppliers for upcoming projects.
- Supports decision making process for procurement strategy and Approved Vendor Lists.
- Delivers detailed information and analysis on capacities, utilization, technology and efficiency roadmaps, as well as PV module supplier cost data.
- Actionable market intelligence helps procurement professionals make decisions with confidence.
- Enables developers, EPCs, IPPs, utilities, and financial institutions to maximize their solar energy investment.
- Customizable to meet client needs and easy to read format.

PROGRAM FEATURES

Reliable Data Sourcing Based On:

- In person interviews with high ranking technical sales employees, R&D personnel, and supplier sales officials.
- Onsite factory audits and execution of quality assurance assignment.
- Documentation provided by suppliers, such as technology roadmaps, capacity roadmaps, and more.
- Publicly available data from websites, press releases, public databases, news reports and financial reports.
- Information from industry trade shows, conferences, and technical forums.
- Research within CEA's extended network of partners across the PV value chains.
- Critical data points cross-checked against multiple sources to ensure validity.
- Clients can also ensure their voice is included in CEA's research agenda on a quarterly basis.

PROGRAM METHODOLOGY: Delivering Reliable Data

The supplier market intelligence program methodology is based on making the right purchasing decision to eliminate risk. The supplier market intelligence report will contain info including:

Manufacturing Capacity	<ul style="list-style-type: none">• Supplier capacities and future expansion plans listed by location, products and type.
Utilization Rates	<ul style="list-style-type: none">• Utilization rates for the past and current year, as well as a forecast for the next 12 months.
Technology Roadmap	<ul style="list-style-type: none">• Features new technologies explained in simple terms, with a focus on efficiency impact, cost reduction potential, and other potentially disruptive effects.• Current and projected status of the new technology's roadmap.
Efficiency Roadmap	<ul style="list-style-type: none">• Current and projected efficiencies of products.
Cost Analysis	<ul style="list-style-type: none">• Detailed cost analysis of current products and forecast costs of future products, with component and overhead breakdown where possible.
Continuing In-person Communication	<ul style="list-style-type: none">• The issues that matter to you, matter to us and will guide our research endeavors.• CEA will likewise offer its own opinions on which topics and trends should be top of mind.

Clean Energy Associates (CEA), a solar and storage technical advisory firm, provides quality assurance and independent engineering solutions worldwide. We serve financial institutions, project developers, EPCs, IPPs, and power plant owners. From our base in China, CEA's quality control engineers travel worldwide to conduct upstream in-factory technical evaluations, including factory audits, production monitoring and pre-shipment product inspections. Our US-based product management and engineering (IE/OE) teams provide support throughout the project life cycle, from upstream supply chain management and supplier benchmarking, to downstream system design, construction, commissioning, performance assessment, re-power and optimization as well as warranty support. We serve the solar and storage industries through our expertise in PV modules, racking, inverters and energy storage systems. Since 2008, CEA has reduced buyers' risks and improved returns on investments via quality assurance, technical and financial due diligence, engineering services and supply chain management globally.

As technical advisors, we provide procurement and investment confidence through risk mitigation to key stakeholders in solar and storage projects worldwide.

