



REPORTS | **PV INVERTER MANUFACTURER RANKING**

EDITION 3 - 2026





Welcome to this Edition 3 - 2026 version of the **SINOVOLTAICS Inverter Manufacturer Ranking Report.**

The Altman-Z Scores in this report has been calculated from September 2023 until June 2026, and provide detailed insight how the financial strength of inverter manufacturers has evolved over the past 3 years.

What's the value of Altman Z-Score?

Altman-Z Scores are calculated to understand which **inverter manufacturers are financially stable**, and which players are **at risk of going bankrupt**.

For any stakeholder involved in solar projects, the financial stability of the manufacturer is of crucial importance.

Employing inverters from financially stable manufacturers provides for a better hedge against the potential risks of collapsing return of investment (ROI) of any PV project.

Why is financial stability important?

Ultimately, the **financial stability of an inverter manufacturer is geared to the validity and enforceability of the warranty policies** on its portfolio of central, string or micro inverters. Most people realize that today's inverter manufacturers will probably not be around in 5 to 10 years. However for the short to medium term, you want to be sure that warranties are in place.

In many years to come, lots of PV projects will likely face this tough question: whom to contact with performance complaints and replacement requests regarding a malfunctioning inverter after 2, 5 or 10 years?

2023 - 2026: Rating of Inverter Manufacturers Worldwide

In this report we present you the **Altman Z-Scores of 30+ inverter manufacturers**. This report can be used to see how one manufacturer matches up to the other, and can be an important indicator when selecting your inverter manufacturer.

The Altman Z-Scores show you which inverter manufacturers are **financially strong**, and which manufacturers are in the **risk zone of going bankrupt within the coming 2 years**.

On the following pages you find the full table showing the Altman Z-Scores of the major, publicly listed Asian, European and American manufacturers.

The scores have been calculated by team Sinovoltaics with the use of publicly available financial data.

MANUFACTURERS	RANKING	TREND	ZONE	SEP23	DEC23	MAR24	JUN24	SEP24	DEC24	MAR25	JUN25	SEP25	DEC25	MAR26	JUN26	LISTING
DELTA ELECTRONICS	1	↑	SAFE	4.03	4.01	4.27	4.63	4.18	4.4	4.02	4.26	6.47	6.97	9.35	11.44	TPE:2308
KSTAR	2	↑	SAFE	5.32	5.83	5.47	4.94	4.98	5.09	5.42	5.01	7.97	8.55	8.06	8.08	SZSE:002518
APSYSTEMS (YUNENG TECHNOLOGY CO)	3	↓	SAFE	6.92	9.27	6.55	4.23	6.29	5.36	5.39	5.72	6.48	6.42	7.21	6.84	SHSE:688348
SINEXCEL	4	↑	SAFE	5.57	4.87	4.86	4.28	4.9	5.08	5.32	5.4	6.09	5.38	5.87	6.84	SZSE:300693
HOYMILES POWER ELECTRONICS	5	↓	SAFE	19.83	20.32	19.46	10.71	9.77	5.68	5.61	4.95	5.21	4.8	5.73	5.50	SHSE:688032
EATON	6	↓	SAFE	4.12	4.47	5.31	5.39	5.44	5.43	4.46	5.39	5.38	4.93	5.28	4.73	NYSE:ETN
SUNGROW	7	↓	SAFE	3.42	3.35	3.71	3.53	3.98	3.13	3.01	2.9	4.81	5.06	4.71	3.85	SZSE:300274
HOPEWIND ELECTRIC	8	↑	SAFE	3.97	4.19	4.02	2.94	2.77	3.13	4.03	4.17	4.17	3.92	3.76	3.81	SHSE:603063
GOODWE	9	↓	SAFE	5.52	5.64	5.01	4.16	3.42	2.6	2.8	2.57	3.15	2.92	3.76	3.67	SHSE:688390
JIUZHOU ELECTRIC	10	↑	SAFE	2.94	2.98	3.77	3.16	3.29	3.81	3.99	3.8	3.91	3.88	3.37	3.58	SZSE:000801
KEHUA HENGSHENG	11	↑	SAFE	2.52	2.18	2.29	2.13	2.11	2.15	2.81	3.08	4.2	3.32	3.27	3.29	SZSE:002335
SINENG ELECTRIC	12	↓	SAFE	2.84	2.76	2.67	2.5	3.13	2.95	2.47	2.21	2.93	2.72	3.12	3.01	SZSE:300827
GINLONG (SOLIS)	13	↓	SAFE	2.3	1.99	1.87	1.33	2.01	1.74	1.68	1.89	2.77	2.42	3.04	2.82	SZSE:300763
INVT SOLAR	14	↓	SAFE	3.86	3.61	3.53	3.22	3.41	3.42	3.61	3.34	3.7	3.19	3	2.73	SZSE:002334
ABLEREX	15	↑	SAFE	2.1	2.02	2.16	2.04	1.8	1.95	1.94	1.92	2.41	2.48	2.63	2.68	ROCO:3628
OMRON	16	↑	SAFE	4.88	4.7	2.87	3.2	3.27	2.93	2.64	2.55	2.64	2.52	2.53	2.67	TSE:6645
HITE (SHANGHAI HI-TECH CONTROL SYSTEM CO)	17	↑	SAFE	3.27	2.7	2.53	2.15	2.38	2.18	2.25	2.15	2.55	2.7	2.47	2.65	SZSE:002184
EAST GROUP	18	↑	SAFE	2.69	2.75	2.72	2.23	2.02	2.3	2.25	2.15	2.36	2.47	2.41	2.64	SZSE:300376
SIEMENS	19	↑	GREY	2	2.18	2.22	2.18	2.25	2.31	2.25	2.2	2.42	2.41	2.24	2.52	XTER:SIE
ENPHASE	20	↓	GREY	6.09	6.32	5.9	4.98	5.24	3.46	2.93	2.22	2.21	2.12	2.17	2.42	NAS:ENPH

**The trend column in the table reflects a comparison of the current quarter score to the previous one.*

MANUFACTURERS	RANKING	TREND	ZONE	SEP23	DEC23	MAR24	JUN24	SEP24	DEC24	MAR25	JUN25	SEP25	DEC25	MAR26	JUN26	LISTING
SMA	21	↑	GREY	3.55	3.7	3.79	3.13	2.81	2.31	1.72	1.63	1.6	1.72	2.09	2.36	XTER:S92
SENYUAN	22	↓	GREY	1.38	1.46	1.42	1.35	1.41	1.55	1.72	1.69	1.55	1.67	1.94	1.65	SZSE:002358
TBEA	23	↓	GREY	1.88	1.66	1.71	1.49	1.42	1.3	1.28	1.21	1.33	1.47	1.56	1.51	SHSE:600089
CHINT POWER (CHINT ELECTRICS)	24	↓	GREY	1.65	1.59	1.58	1.53	1.48	1.52	1.52	1.43	1.46	1.48	1.53	1.41	SHSE:601877
SHANGHAI ELECTRIC GROUP	25	↓	DISTRESS	0.81	0.8	0.82	0.77	0.77	0.89	0.88	0.83	0.87	0.83	0.8	0.83	SHSE:601727
CLOU ELECTRONICS	26	↑	DISTRESS	0.36	0.6	0.01	-0.03	0.01	-0.22	-0.13	0.09	0.91	0.76	0.79	0.80	SZSE:002121
SOLAREEDGE	27	↓	DISTRESS	4.1	3.47	2.7	1.64	1.24	-1.1	-1.62	-1.54	-1.29	0	0.58	0.40	NAS:SEDG
SOLARBRIDGE (SUNPOWER)	28	↓	DISTRESS	0.37	-0.52	-1.42	-1.44	-1.71	-1.71	-1.71	-2.49	-2.1	-0.42	-2.38	-1.54	NAS:SPWR

**The trend column in the table reflects a comparison of the current quarter score to the previous one.*

Graph overview

Graph #1 - The latest inverter manufacturer ranking, recorded June 2026

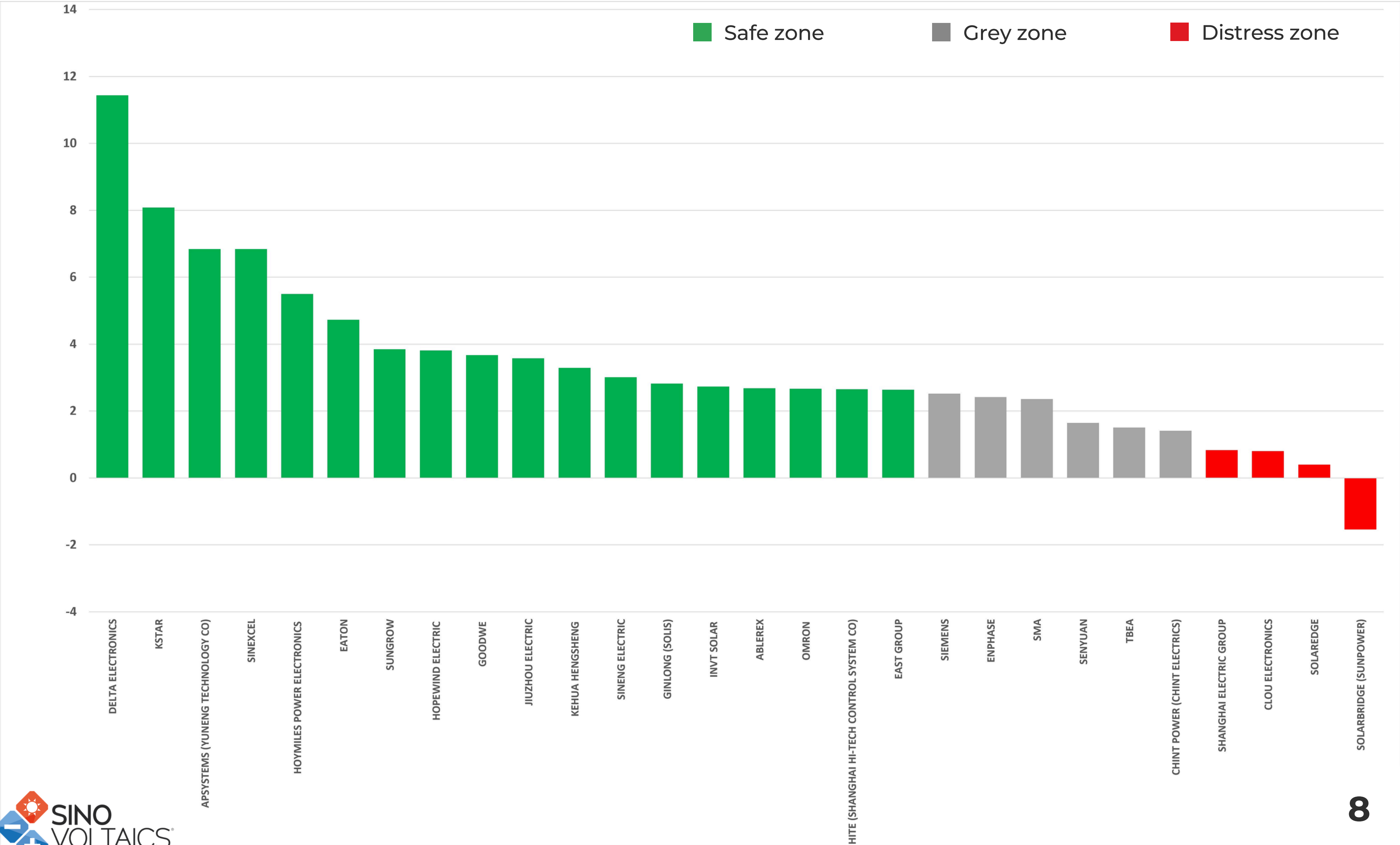
Graph #2 - Inverter manufacturer that are currently in the Safe Zone

Graph #3 - Inverter manufacturer that are currently in the Grey Zone

Graph #4 - Inverter manufacturer that are currently in the Distress Zone

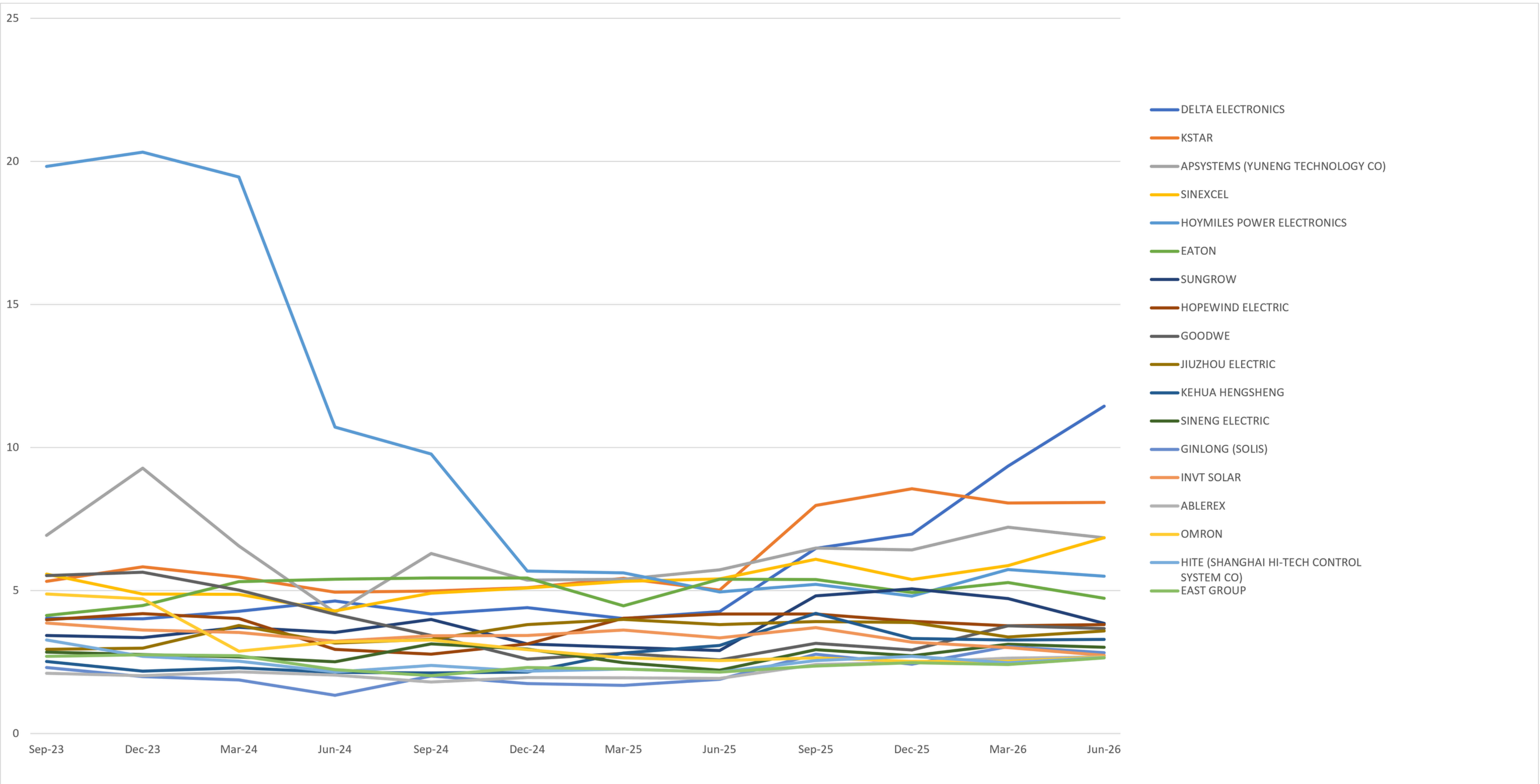
Graph #1 - Full ranking overview of inverter manufacturers

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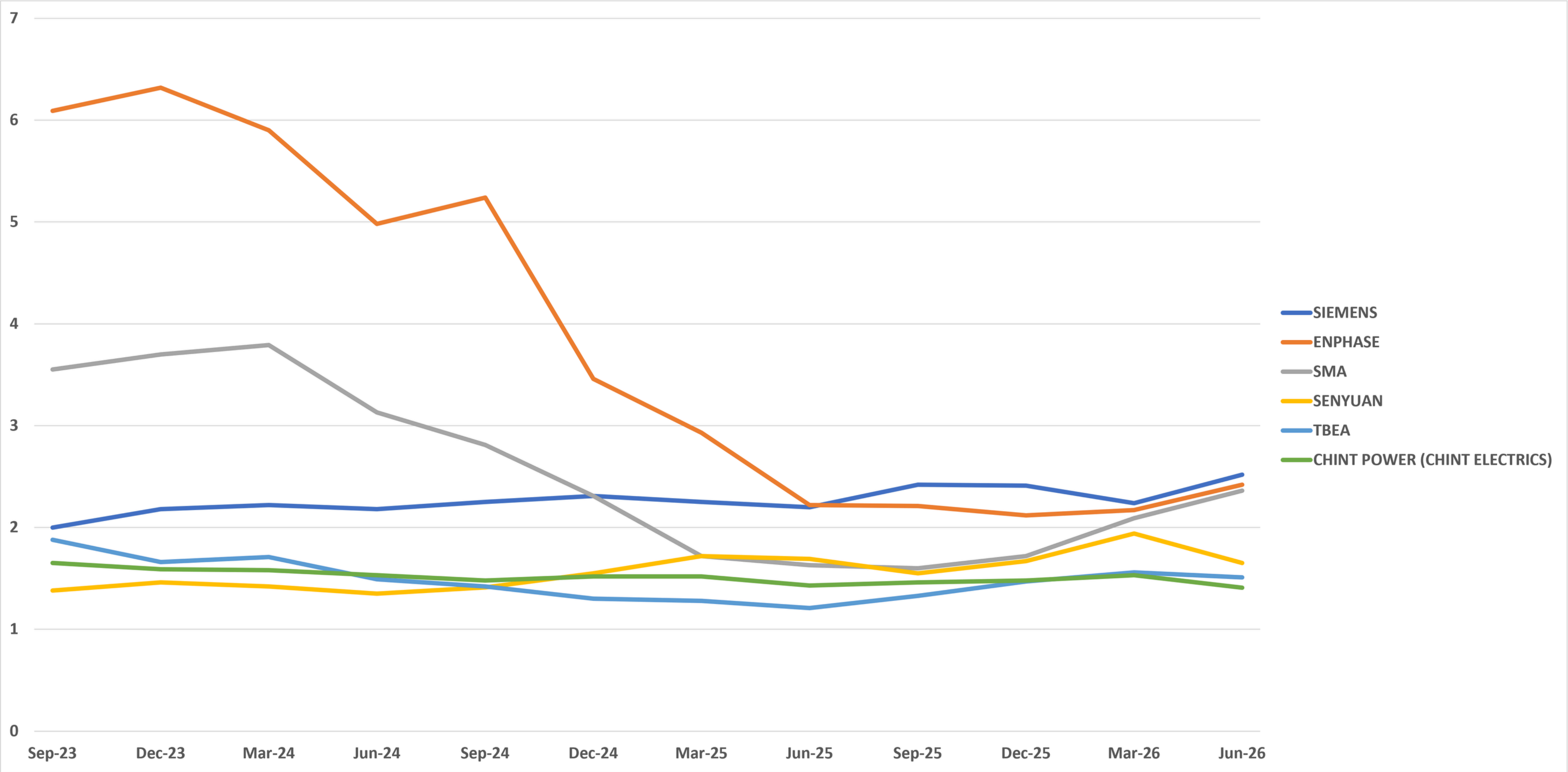
Graph #2 - Inverter manufacturer - Safe Zone

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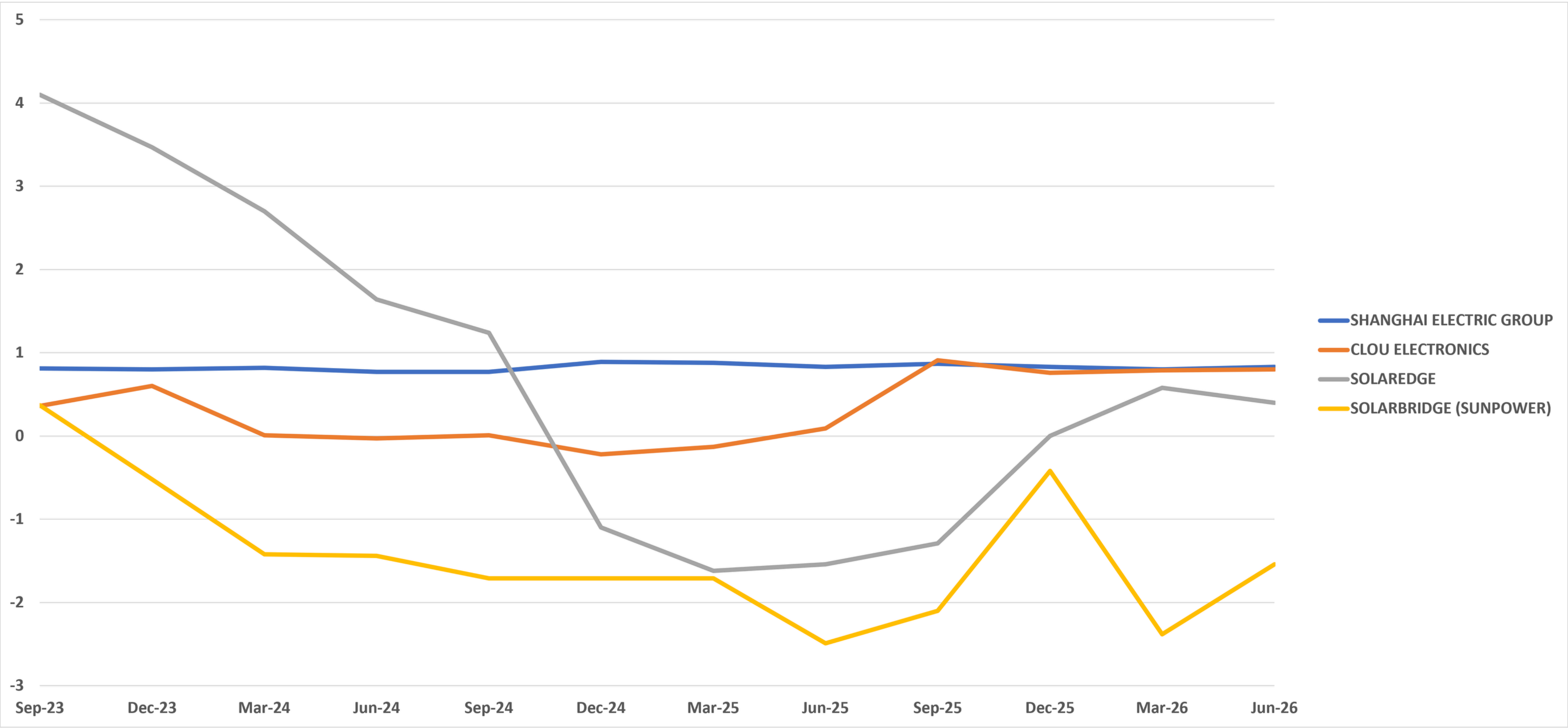
Graph #3 - Inverter manufacturer - Grey Zone

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Graph #4 - Inverter manufacturer - Distress Zone

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How is the Sinovoltaics Ranking Score calculated?

The Sinovoltaics Inverter Manufacturer Ranking Score is based on the Altman Z-Score

$$\text{Altman Z-Score} = 1.2A + 1.4B + 3.3C + 0.6D + 1.0E$$

The original formula is broken down as following:

A	Working Capital/Total Assets: measures liquid assets in relation to the size of the company.
B	Retained Earnings/Total Assets: measures profitability that reflects the company's age and earning power.
C	Earnings Before Interest & Tax/Total Assets: measures operating efficiency apart from tax and leveraging factors. It recognizes operative earnings as being important to long-term viability.
D	Market Value of Equity/Total Liabilities: adds market dimension that can show up security price fluctuation as a possible red flag.
E	Sales/Total Assets: a standard measure for total asset turnover.

How are the Altman Z-Scores interpreted?

The scores are categorized into 3 zones called the Safe Zone, Grey Zone and Distress Zone:

$Z \geq 2.6$	Safe Zone
$1.1 < Z < 2.6$	Grey Zone
$Z \leq 1.1$	Distress Zone

How to interpret companies in the ‘SAFE ZONE’?

A manufacturer in the 'Safe Zone' is generally a preferred choice, as it indicates stronger financial health and a lower risk of financial distress. Reviewing the company's Altman Z-Score trend over multiple years provides a more complete picture of its financial stability.

Take **HOPEWIND ELECTRIC**, the company has steadily improved its financial position and has now reached the Safe Zone. Here are its Altman Z-Scores over the years:

- 3.97 on Q3 2023
- 3.13 on Q4 2024
- 4.03 on Q1 2025
- 3.81 on Q2 2026

HOPEWIND ELECTRIC

Currently stands at 3.81 (June'26)

The inverter manufacturing sector **currently includes 18 manufacturers in the safe zone (Altman Z-Score ≥ 2.6), compared to 20 in the previous edition.** The slight reduction reflects changes in the financial profiles of several manufacturers, while many companies continue to maintain Altman Z-Scores above the safe-zone threshold.

JIUZHOU ELECTRIC, headquartered in Mianyang, Sichuan Province, China, recorded an Altman **Z-Score of 3.58 as of June 2026**. Although the company's Altman Z-Score has experienced moderate fluctuations over the reporting periods, it has consistently remained within the safe zone ($AZ \geq 2.6$). The latest score represents an improvement from 3.37 in Q1 2026.

EAST GROUP, headquartered in Dongguan, Guangdong Province, China, recorded an **Altman Z-Score of 2.64 as of June 2026**. The company's Altman Z-Score fluctuated over the reporting periods, declining into the grey zone before improving to 2.64 in June 2026, returning to the safe zone ($AZ \geq 2.6$).

JIUZHOU ELECTRIC	EAST GROUP
2.94 Q3 2023	2.69 Q3 2023
3.81 Q4 2024	2.3 Q4 2024
3.99 Q1 2025	2.25 Q1 2025
3.58 Q2 2026	2.64 Q2 2026

Discover our **ZERO RISK SOLAR & BESS SERVICES**

QUALITY ASSURANCE



PV QUALITY INSPECTIONS

Hire our **PV specialized quality engineers** to inspect your PV components on-site at the factories in Asia.

TEST ALL PV COMPONENTS, INCLUDING:

- Solar modules
- Inverters
- BOS components
- Solar cells
- Energy Storage



FACTORY AUDITS

Make a **fully informed decision** on the factories you're procuring from. Our accredited auditors provide you with **full insights** in the manufacturing capabilities of any PV factory worldwide. Use our **audit scoring card** system to manage and compare your factory selection.

FACTORY AUDITS INCLUDE:

- Pre-manufacturing audit
- General qualification audit
- Factory benchmark
- Factory background check
- Financial audit



LABORATORY TESTING

Thoroughly test your solar PV components at our **accredited PV lab**. Inform about country and climate specific test procedures for your region

A SELECTION OF LAB TESTS:

- Potential Induced Degradation (PID) test
- Light Induced Degradation (LID) test
- EVA gel content test
- Damp heat testing
- Thermal cycling testing



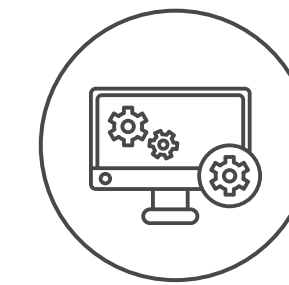
SOLAR FARM INSPECTIONS

On-site solar farm **inspections** and **troubleshooting** worldwide. Assess your existing solar farms and optimize performance.

SOLAR FARM INSPECTIONS INCLUDE:

- Drone infrared thermography
- I-V measurement
- Electroluminescence imaging
- Electrical safety tests
- Commissioning checks

SINOVOLTAICS EL MASS ANALYSIS (SELMA)



Eliminate **micro-cracks** and other cell-inherent defects and boost your solar power plant performance with **Sinovoltaics EL Mass Analysis (SELMA)**, our AI-driven electroluminescence Testing Software.

WHY CHOOSE SELMA FOR EL TESTING?

- Up to 99.9% accuracy
- Inspection of ALL modules (no sampling!)
- High-speed and on-the-fly analysis: avoid delays and easily keep up with the factory's production speed
- Identification and classification of up to 15 cell-inherent defect types
- Replace defective PV modules before shipment

QUALITY GUARANTEE

QUALITY ASSURANCE MEETS INSURANCE:

- With our Quality Guarantee, Sinovoltaics becomes a shared risk partner in our clients' PV projects.
- The Quality Guarantee enables the client to claim Liquidated Damages in case of a valid Warranty Claim with the factory.
- Eligibility: after performing our regular, 100% pre-shipment inspection on the client's PV modules at the factory, the client will be eligible for our Quality Guarantee for 3 years.
- Industry-wide unique protection and based on Sinovoltaics' Zero Risk Solar® framework, the Quality Guarantee is backstopped by Munich Re.

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at the
factories in Asia

10GWh+

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Zero Risk
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PV & BESS
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