



REPORTS

# ENERGY STORAGE MANUFACTURER RANKING

EDITION 1/2026





Welcome to this Edition 1 - 2026 version of the **SINOVOLTAICS Energy Storage Manufacturer Ranking Report.**

The Altman-Z Scores in this report has been calculated from March 2023 until December 2025, and provide detailed insight how the financial strength of energy storage manufacturers has evolved over the past 3 years.

## What's the value of Altman-Z Scores?

Altman-Z Scores are calculated to understand which **energy storage 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 energy storage 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?

In this new emerging energy storage market, its grand variety of existing and research-in-progress technologies, purchasers face a grand and difficult choice of manufacturers, many of which only recently ventured into this market. In such a new market with average warranties that vary widely between 2-10 years, the financial stability of an energy storage manufacturer is crucial as it is geared to the validity and enforceability of the warranty policies on its products. Most people realize that today's energy storage manufacturers will probably not be around in 5 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 solar PV & energy storage projects will likely face this tough question: whom to contact with performance complaints and replacement requests regarding a malfunctioning battery after 2, 5 or 10 years?

**2023 - 2025:  
rating of  
energy storage  
manufacturers  
worldwide**

In this report we present you the **Altman Z-Scores of 50+ energy storage 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 energy storage manufacturer.

The Altman Z-Scores show you which energy storage 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	MAR23	JUN23	SEP23	DEC23	MAR24	JUN24	SEP24	DEC24	MAR25	JUN25	SEP25	DEC25	LISTING
TESLA	1	↓	12.44	14.97	14.54	14.21	9.6	10.86	12.73	17.52	11.3	14.41	19.13	18.69	NAS:TSLA
SOLID POWER	2	↑	9.95	8.46	7.75	5.99	7.12	4.41	3.52	5.82	4.54	8.8	13.25	13.32	NAS:SLDP
MUSTANG BATTERY	3	↓	9.17	9.1	8.48	7.47	7.33	7.71	7.15	7.36	7.85	14.05	13.72	12.02	SHSE:605378
HYUNDAI ELECTRIC	4	↑	1.85	1.83	2.11	2.31	3.83	5	5.57	6.44	4.87	5.84	7.05	8.32	XKRX:267260
KUNG LONG BATTERIES	5	↑	8	8	5.31	6.89	7.44	8.01	6.07	8.29	7.83	7.71	5.63	6.91	TPE:1537
SINEXCEL (SHENZHEN SINEXCEL ELECTRIC)	6	↓	5.23	7.37	5.57	4.9	4.86	4.28	4.9	5.08	5.32	5.39	6.09	5.38	SZSE:300693
EATON	7	↓	3.62	3.99	4.13	4.47	5.31	5.39	5.44	5.43	4.46	5.39	5.38	4.93	NYSE:ETN
YUASA BATTERY	8		5.23	5.04	4.98	4.57	4.63	4.79	4.66	4.38	4.31	4.51	4.78	4.78	BKK:YUASA
SANYO	9	↑	4.47	4.62	4.69	4.39	4.38	4.43	4.36	3.93	3.77	3.42	3.56	4.19	TSE:3176
ENERSYS	10	↑	3.47	3.72	3.87	3.93	3.88	4.03	3.99	3.46	3.36	3.52	3.65	4.05	NYSE:ENS
SACRED SUN (SHANDONG SACRED SUN POWER SOURCES CO LTD)	11	↓	4.35	4.25	4.25	4.08	3.8	3.36	3.65	3.59	4.57	4.52	4.34	3.9	SZSE:002580
GREENSMITH ENERGY (WÄRTSILÄ)	12	↑	2.14	2.26	2.28	2.62	2.73	2.88	3.01	2.92	2.77	2.96	3.42	3.8	OHEL:WRTIV
SIMPLO TECHNOLOGY	13	↓	3.44	3.52	3.34	3.53	3.62	3.62	3.42	3.7	3.49	3.6	3.62	3.49	ROCO:6121
LIVENT (RIO TINTO)	14	↑	5.36	6.25	4.74	3.17	3.17	4.33	1	0.93	2.91	2.89	3.09	3.4	LSE:RIO
SEBANG GLOBAL BATTERY	15	↓	3.38	3.23	3.45	3.3	3.77	3.79	3.39	3.45	3.54	3.47	3.54	3.38	XKRX:004490
ZHONGTIAN TECHNOLOGY	16	↓	3.96	3.81	3.66	3.2	3.34	3.64	3.36	3.21	3.19	3.31	3.46	3.35	SHSE:600522
CAMEL GROUP	17	↓	3.57	3.45	3.31	3.19	3.21	3.21	3.19	3.08	3.07	3.3	3.5	3.33	SHSE:601311
DMEGC SOLAR (DMEGC MAGNETICS GROUP)	18	↓	3.88	3.64	3.4	2.84	3.07	2.75	2.85	2.73	2.7	2.86	3.26	3.23	SZSE:002056
CATL (CONTEMPORARY AMPEREX TECHNOLOGY CO)	19	↓	1.93	2.53	2.48	2.23	2.36	2.24	2.65	2.8	2.51	2.59	3.31	3.13	SZSE:300750
CENTER POWER	20	↓	2.91	2.78	2.59	2.97	2.95	2.46	2.37	2.39	2.62	2.85	3.22	2.96	SZSE:002733

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

MANUFACTURERS	RANKING	TREND	MAR23	JUN23	SEP23	DEC23	MAR24	JUN24	SEP24	DEC24	MAR25	JUN25	SEP25	DEC25	LISTING
WUXI LEAD INTELLIGENT EQUIPMENT CO LTD	21	↓	3.11	2.92	2.71	2.17	2.04	1.82	1.66	1.62	1.58	1.8	2.87	2.74	SZSE:300450
JOHNSON CONTROLS	22	↑	1.71	1.82	1.7	1.74	1.84	1.71	1.99	1.93	1.84	2.33	2.36	2.56	NYSE:JCI
DESAY BATTERY	23	↓	4	3.77	3.44	3.02	2.63	2.7	2.78	2.46	2.44	2.63	2.63	2.51	SZSE:000049
NIDEC CORPORATION	24	↓	3.26	3.44	3.21	3	3.14	3.16	3.09	2.85	2.65	3.1	2.89	2.48	OTCPK:NJDCY
EAST GROUP	25	↑	2.97	2.68	2.69	2.77	2.72	2.23	2.02	2.3	2.25	2.15	2.36	2.47	SZSE:300376
ALBEMARLE	26	↑	3.82	3.8	3.15	2.83	2.29	1.97	1.81	1.5	1.25	1.25	1.62	2.34	NYSE:ALB
BASF	27	↑	2.51	2.46	2.3	2.28	2.52	2.31	2.15	2.23	2.2	2.18	2.2	2.31	XTER:BAS
SONNEN (SHELL PLC)	28	↑	2.65	2.65	2.54	2.54	2.36	2.37	2.34	2.26	2.27	2.25	2.23	2.3	NYSE:SHEL
GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI	29	↑	1.72	1.69	1.8	1.83	1.89	1.79	2.03	2.12	2.02	1.85	1.84	2.12	SZSE:000651
FARADION (RELIANCE INDUSTRIES)	30	↓	1.98	2.07	1.97	2.1	2.31	2.33	2.53	1.91	1.91	2.01	2.24	2.02	NSE:RELIANCE
FESE (FAR EAST SMARTER ENERGY)	31		1.85	1.84	1.69	1.68	1.67	1.66	1.63	1.68	1.68	1.74	2.02	2.02	SHSE:600869
EVE ENERGY	32	↓	2.56	2.26	1.95	1.85	1.83	1.73	1.87	1.79	1.77	1.76	2.49	2.01	SZSE:300014
BYD	33	↓	1.95	1.85	1.79	1.74	1.61	1.75	2	1.76	2.32	2.34	2.16	2	HKSE:01211
FLUENCE ENERGY INC	34	↓	1.75	2.96	3.68	2.64	2.72	2.49	2.87	2.6	1.62	1.49	2.01	2	NAS:FLNC
LG ENERGY SOLUTION	35	↓	5.51	5.26	4.71	4.13	3.47	3.17	3.26	2.47	2.15	1.91	1.96	1.86	XKRX:373220
CHANGHONG	36	↑	1.51	1.51	1.47	1.55	1.56	1.46	1.53	1.7	1.71	1.66	1.68	1.74	SHSE:600839
GREAT POWER (GUANGZHOU GREAT POWER ENERGY&TECHNOLOGY CO LTD)	37	↑	3	2.24	1.9	1.56	1.37	1.12	1.51	1.38	1.34	1.26	1.4	1.65	SZSE:300438
GANFENG LITHIUM	38	↑	4.94	4.44	3.39	2.79	2.25	1.67	1.46	1.3	1.09	1.06	1.48	1.58	HKSE:01772
CSSC (CHINA SHIPBUILDING INDUSTRY GROUP POWER CO)	39		1.51	1.72	1.55	1.49	1.56	1.53	1.6	1.62	1.56	1.58	1.56	1.56	SHSE:600482
ENERGIZER HOLDINGS	40	↑	1.08	1.24	1.02	1.39	1.32	1.35	1.29	1.32	1.3	1.23	1.42	1.41	NYSE:ENR

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

MANUFACTURERS	RANKING	TREND	MAR23	JUN23	SEP23	DEC23	MAR24	JUN24	SEP24	DEC24	MAR25	JUN25	SEP25	DEC25	LISTING
SAMSUNG SDI	41	↑	3.53	3.32	2.91	2.81	2.74	2.35	2.13	1.73	1.32	1.25	1.26	1.32	XKRX:006400
CORUN NEW ENERGY	42	↑	2.13	1.83	1.54	1.24	1.16	0.85	0.93	0.9	1.05	1.26	1.28	1.31	SHSE:600478
GENERAL MOTORS	43	↑	1.23	1.23	1.25	1.25	1.24	1.29	1.29	1.33	1.22	1.26	1.26	1.29	NYSE:GM
SUNWODA	44	↓	1.35	1.26	1.36	1.26	1.26	1.22	1.36	1.3	1.27	1.25	1.47	1.24	SZSE:300207
JINKOSOLAR	45	↓	2.21	2.21	2.02	2.07	2.03	1.85	1.91	1.73	1.68	1.31	1.2	1.09	SHSE:688223
FORD	46	↑	1.16	1.19	1.18	1.15	1.09	1.07	1.06	1.01	1.08	1.06	1.01	1.04	NYSE:F
GUANGDONG LYRIC ROBOT AUTOMATION CO LTD	47	↑	1.77	1.4	1.2	1.04	0.76	0.72	0.41	0.12	0.26	0.51	0.85	1.02	SHSE:688499
VOLKSWAGEN	48	↓	1.17	1.16	1.13	1.17	1.18	1.12	1.1	1.07	1.09	1.05	1.01	1	OTCPK:VWAPY
GOTION HIGH-TECH CO	49	↓	1.08	1.02	0.96	0.88	0.88	0.71	0.77	0.73	0.74	0.88	1.04	0.97	SZSE:002074
SK INNOVATION	50	↑	1.49	1.69	1.58	1.47	1.43	1.32	1.28	1.23	0.87	0.87	0.89	0.95	XKRX:096770
FARASIS ENERGY (GAN ZHOU)	51	↓	1.33	1.24	1.2	0.85	0.71	0.67	0.96	0.97	1.07	0.9	1.16	0.93	SHSE:688567
TRINA SOLAR	52	↓	2.2	2.03	1.83	1.75	1.69	1.51	1.4	1.24	1.2	0.92	0.81	0.79	SHSE:688599
SHENZHEN HYMSON LASER INTELLIGENT EQUIPMENTS CO LTD	53	↓	1.66	1.56	1.51	1.24	1.25	1.27	1.42	1.22	1	0.67	0.76	0.72	SHSE:688559
CALB Group Co Ltd	54	↓						0.53				0.35	0.6	0.52	HKSE:03931
NARADA	55	↓	1.95	1.76	1.56	1.5	1.46	1.1	1.29	1.26	1.3	0.44	0.61	0.45	SZSE:300068
JIawei	56	↓	4.14	3.01	2.48	1.74	1.48	1.27	1.08	0.65	0.71	0.59	0.61	0.4	SZSE:300317
CBAK ENERGY	57	↓	0.3	0.44	0.02	0.15	0.19	0.53	0.78	0.49	0.22	0.12	-0.2	-0.17	NAS:CBAT
MICROVAST	58	↓	-0.56	-0.38	-0.37	-0.61	-0.85	-1.06	-1.42	-0.43	-1.11	0.19	-0.39	-0.79	NAS:MVST
TIGO ENERGY INC	59	↓	3.82	4.3	5.44	2.36	1.09	1.32	-0.76	-3.08	-3.8	-3.45	-2.18	-1.34	NAS:TYGO
DRAGONFLY ENERGY	60	↓	1.28	0.75	0.34	-0.48	-0.52	-0.02	-0.8	-0.95	-1.48	-1.52	-1.09	-1.39	NAS:DFLI

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

MANUFACTURERS	RANKING	TREND	MAR23	JUN23	SEP23	DEC23	MAR24	JUN24	SEP24	DEC24	MAR25	JUN25	SEP25	DEC25	LISTING
ROMEO POWER (NIKOLA)	61	↓	-3.98	-3.8	-3.23	-4.65	-3.61	-5.59	-6.15	-6.52	-6.6	-6.61	-6.61	-14.47	NAS:NKLA

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

# Graph overview

**Graph #1** - The latest energy storage manufacturers ranking, recorded December 2025

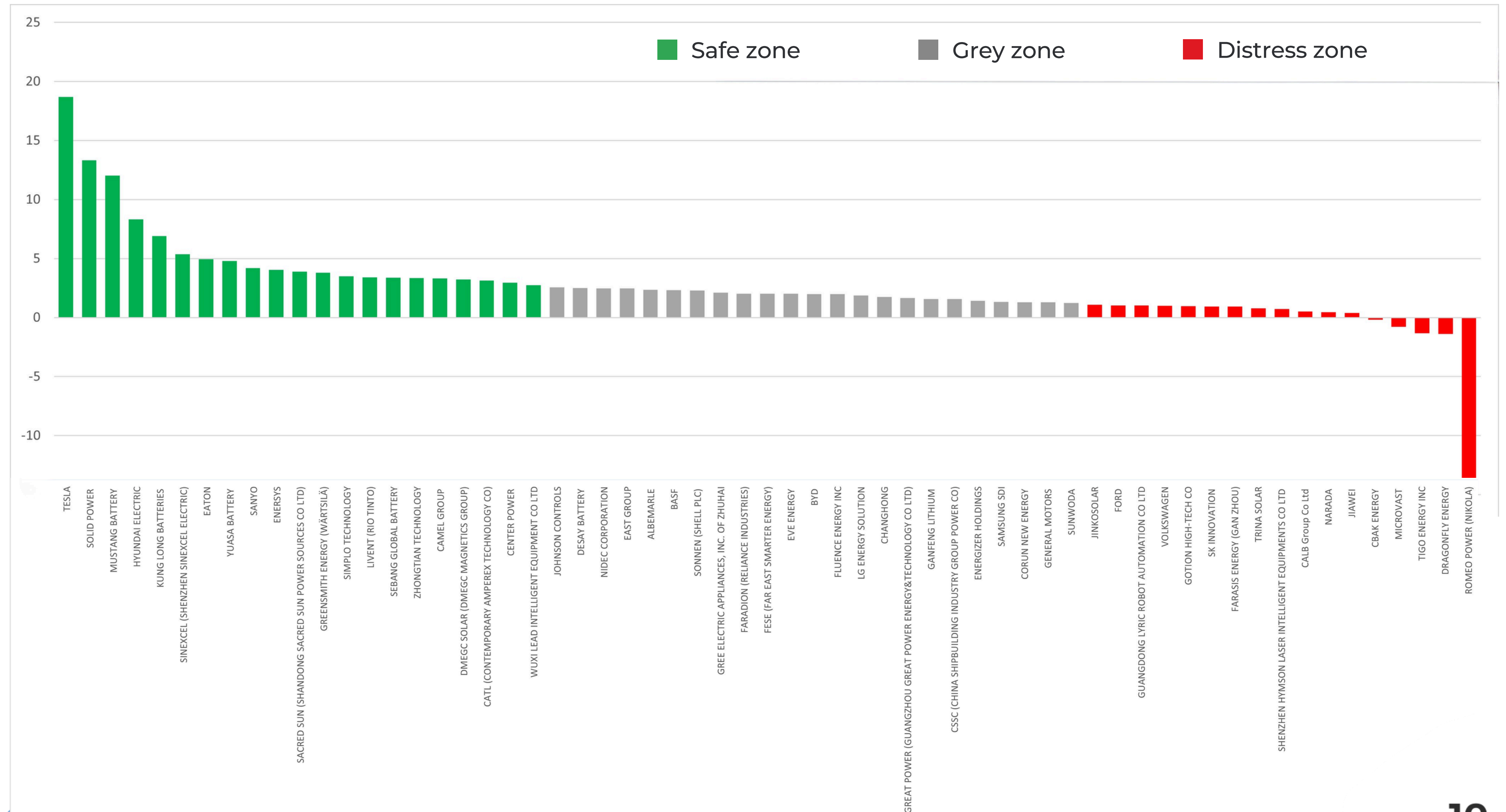
**Graph #2** - Energy storage manufacturers that are currently in the Safe Zone

**Graph #3** - Energy storage manufacturers that are currently in the Grey Zone

**Graph #4** - Energy storage manufacturers that are currently in the Distress Zone

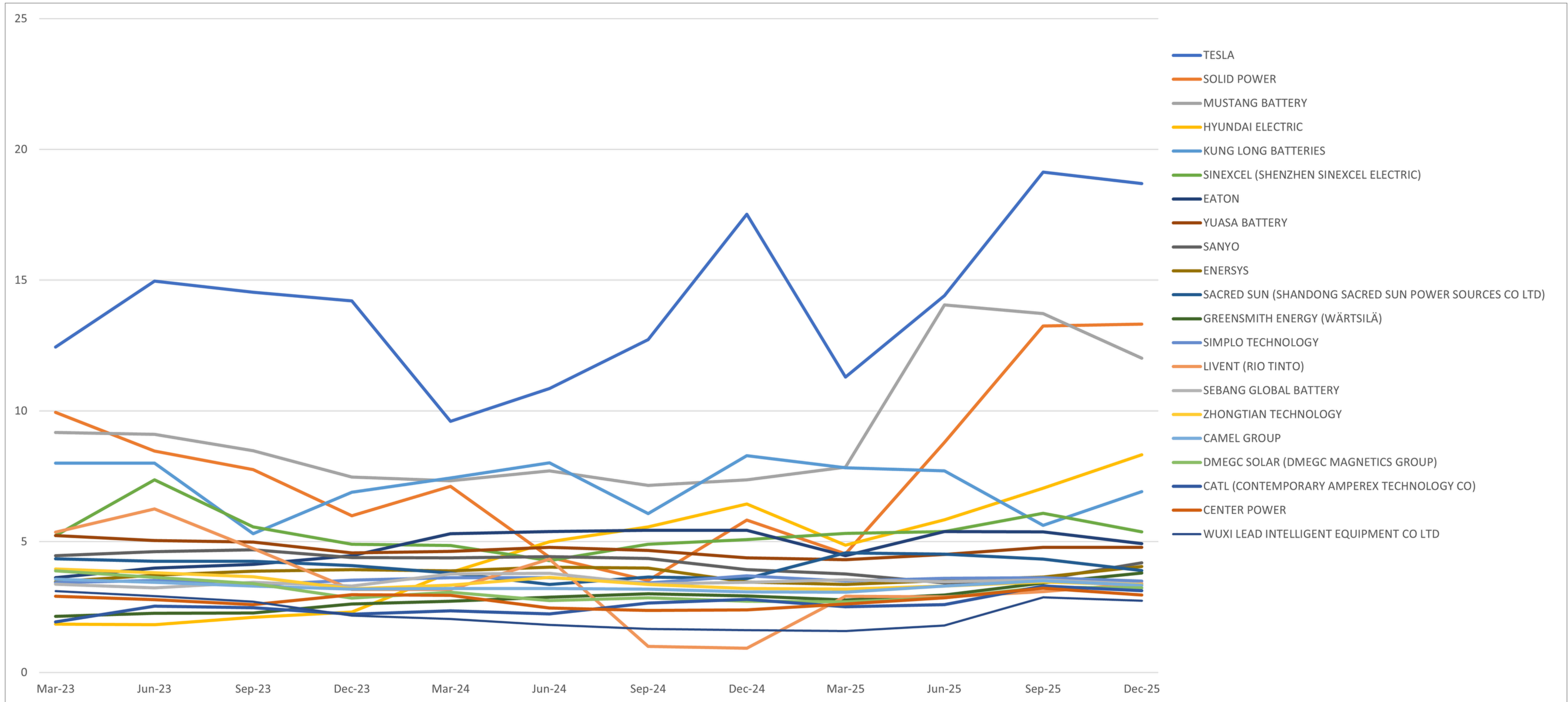
# Graph #1 - Full ranking overview of energy storage manufacturers

## Sinovoltaics Energy Storage manufacturer ranking - Edition #1 - 2026



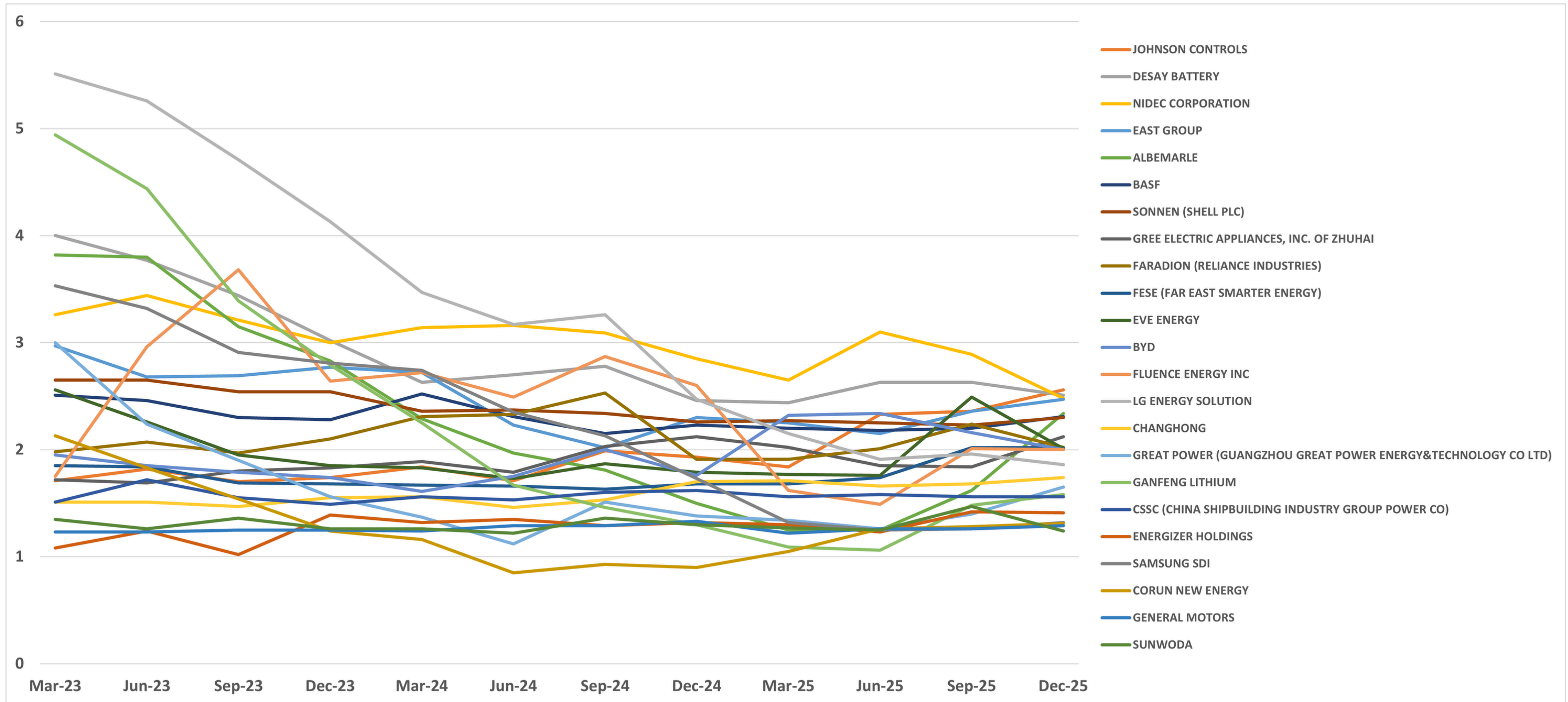
# Graph #2 - Energy storage manufacturers - Safe Zone

## Sinovoltaics Energy Storage manufacturer ranking - Edition #1 - 2026 - Safe Zone



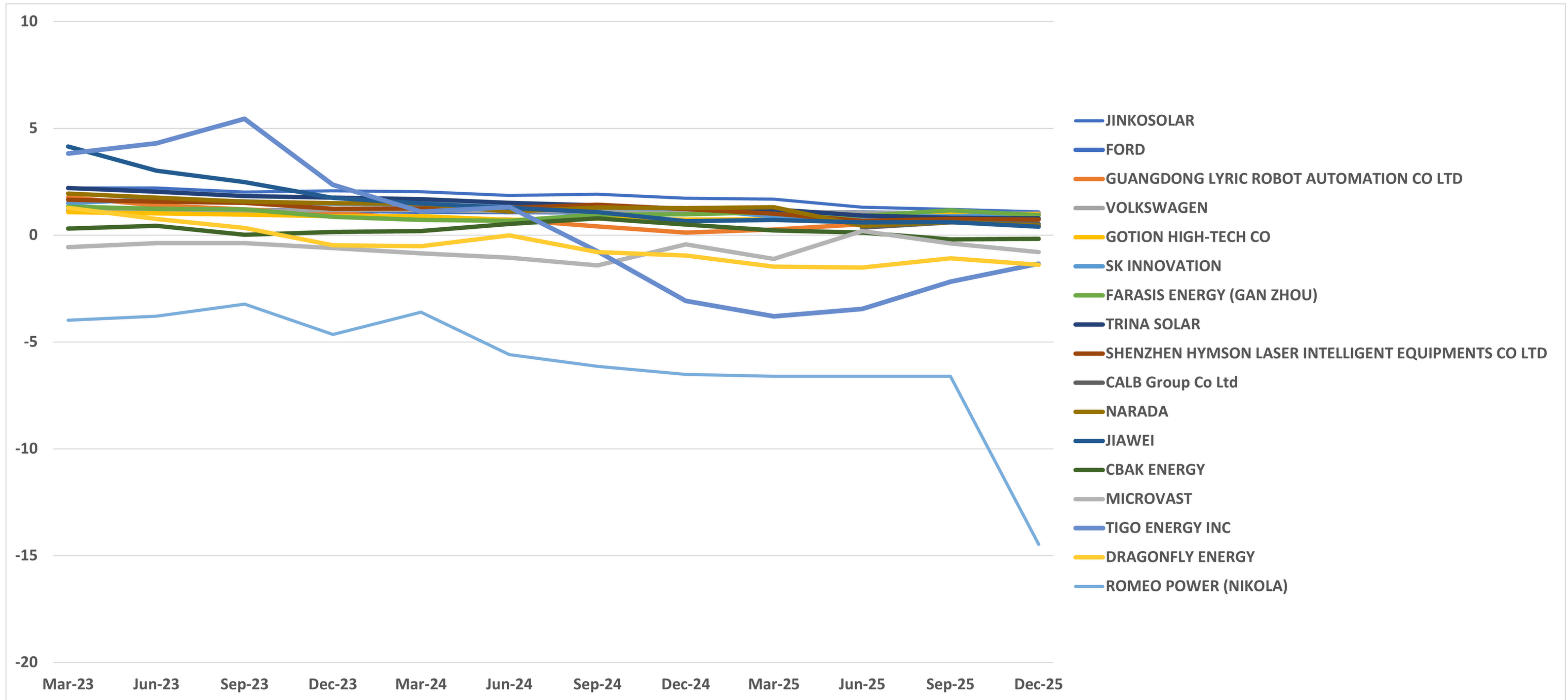
# Graph #3 - Energy storage manufacturers - Grey Zone

## Sinovoltaics Energy Storage manufacturer ranking - Edition #1 - 2026 - Grey Zone



# Graph #4 - Energy storage manufacturers - Distress Zone

Sinovoltaics Energy Storage manufacturer ranking - Edition #1 - 2026 - Distress Zone



## How is the Sinovoltaics Ranking Score calculated?

The Sinovoltaics Energy Storage 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:

<b>A</b>	Working Capital/Total Assets: measures liquid assets in relation to the size of the company.
<b>B</b>	Retained Earnings/Total Assets: measures profitability that reflects the company's age and earning power.
<b>C</b>	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.
<b>D</b>	Market Value of Equity/Total Liabilities: adds market dimension that can show up security price fluctuation as a possible red flag.
<b>E</b>	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:

$Z > 2.6$	Safe Zone
$1.1 < Z < 2.6$	Grey Zone
$Z < 1.1$	Distress Zone

## How to interpret companies in the 'GREY ZONE'?

With a large number of companies in the 'Grey Zone', how to interpret these scores when selecting a manufacturer?

While ideally a manufacturer is in the 'Safe Zone', some companies have been consistently in the 'Grey Zone' for years.

Take for instance **SOLID POWER**. Here's a number of Altman Z-Scores over the years:

**9.95 Q1 2023**

**4.41 on Q2 2024**

**3.52 on Q3 2024**

**13.32 on Q4 2025**

### **Currently stands at 13.32 (Dec'25)**

The energy storage manufacturing sector maintains a solid level of financial stability, with **21 manufacturers currently in the safe zone (AZ  $\geq 2.6$ ), compared with 23 companies in the previous edition.**

**SOLID POWER**, headquartered in **Louisville, Colorado, United States**, currently holds an **Altman Z-score of 13.32 as of December 2025**, positioning it among the most financially robust companies in the energy storage and battery sector. While the company's score experienced fluctuations—from **9.95 in Q1 2023 to 4.41 in Q2 2024 and 3.52 in Q3 2024**—it rebounded sharply to **13.32 in Q4 2025**, well above the safe-zone threshold (AZ  $\geq 2.6$ ). This strong recovery highlights **improved financial strength, solid liquidity, and a strengthened balance sheet**, reinforcing Solid Power's position as one of the financially resilient players in the market.

A comparison with peers such as **SANYO** and **ENERSYS** further highlights the overall financial resilience within the sector. SANYO maintains a consistently strong solvency profile, with Altman Z-scores remaining well within the safe zone despite a gradual moderation from **4.47 in Q1 2023 to 4.19 in Q4 2025**. ENERSYS, meanwhile, shows a modest improvement over the same period, rising from **3.47 in Q1 2023 to 4.05 in Q4 2025**, with only minor fluctuations along the way. Together, these trends suggest that several established players in the battery manufacturing landscape continue to maintain **solid financial positions and stable solvency levels**.

SANYO	ENERSYS
4.47 Q1 2023	3.47 Q1 2023
4.43 Q2 2024	4.03 Q2 2024
4.36 Q3 2024	3.99 Q3 2024
4.19 Q4 2025	4.05 Q4 2025



# **SINOVOLTAICS** ENERGY STORAGE MANUFACTURER RANKING

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**CONTACT US:** [contact@sinovoltaics.com](mailto:contact@sinovoltaics.com)

# 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



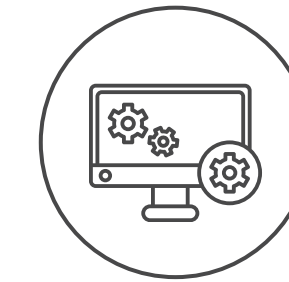
### SOLAR FARM INSPECTIONS

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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[contact@sinovoltaics.com](mailto:contact@sinovoltaics.com)

**15+ Years**  
at the PV  
factories in Asia

**25+ GWp**  
Zero Risk  
Solar projects

**14,800+**  
Community

**350+**  
PV & BESS  
Factories  
Audited