

# Solar Sector Analysis (I'M BUYING SOLAR, BIG TIME)

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## SUMMARY

The solar sector bubble still hasn't deflated, and I feel there is still exuberance in the sector and therefore possibly room for further downside. It might not happen, but it is a risk a value investor will not take.

The 2021-2023 boom has flushed companies with money, the sector with money as everybody wanted to get on the green bandwagon, governments increased subsidies etc. This usually results in overinvestment and lower prices for longer.

Another key factor here is technology, that is constantly advancing and improving which is then pushing companies into constant investments, improving technologies but with constantly declining selling prices - which is not a business you want to be in. You want to be a buyer there!!!

THUS, IF THE 12 CENTS PER WAT TRICKLE DOWN TO YOUR COUNTRY, MAYBE SOME SUBSIDIES, CHECK HOW MUCH YIELD YOU CAN GET TO PUT SOLAR ON YOUR ROOF NOW!!! THAT IS WHAT I'LL DO OVER THE SUMMER AND SEE WHETHER I CAN GET A YIELD ON THAT THAT IS DOUBLE DIGIT - GIVEN CURRENT PRICES, WE WILL SEE, CHECK HOW IT IS FOR YOU, BUT PRICES HAVE NEVER BEEN SO LOW!

THE BAD ISN'T PRICED IN THE STOCKS YET.

## TAN Stock - Sector Overview

If we look at the solar sector ETF, 2021 was pure exuberance and we are down 60% since. Thus, as I did in 2019, it is time to look again into the sector and see what is on offer. Maybe we find another Scatec that did a 4x if I remember well.

Market Summary > Invesco Solar ETF

**43,72** USD

+ Follow

+18.92 (76.29%) ↑ past 5 years

4 Apr, 20:00 GMT-4 • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | **5Y** | Max



There are 39 positions so, as always, I'll just go one by one. Such a method will give us a good indication of the risk and reward of the sector and of the specific players in it.

Holding Ticker	Weight	Name	Class of Shares	Sector
FSLR	10.689	First Solar Inc	Common Stock	Information Technology
ENPH	9.416	Enphase Energy Inc	Common Stock	Information Technology
NXT	8.522	NEXTracker Inc	Common Stock	Industrials
SEDG	5.522	SolarEdge Technologies Inc	Common Stock	Information Technology
HASI	5.028	Hannon Armstrong Sustainable Infrastructure Capital Inc	Real Estate Investment Trust	Financials
968 HK	4.970	Xinyi Solar Holdings Ltd	Common Stock	Information Technology
3800 HK	4.835	GCL Technology Holdings Ltd	Common Stock	Information Technology
RUN	4.454	Sunrun Inc	Common Stock	Industrials
ARRY	4.050	Array Technologies Inc	Common Stock	Industrials
SHLS	3.320	Shoals Technologies Group Inc	Common Stock	Industrials
ECV	3.315	Encavis AG	Common Stock	Utilities
DQ	2.387	Daqo New Energy Corp ADR	American Depository Receipt	Information Technology
009830 KS	2.308	Hanwha Solutions Corp	Common Stock	Materials
NEOEN FP	2.108	Neoen SA	Common Stock	Utilities
CSIQ	2.037	Canadian Solar Inc	Common Stock	Information Technology
CWEN	1.981	Clearway Energy Inc	Common Stock	Utilities
ENLT	1.938	Enlight Renewable Energy Ltd	Common Stock	Utilities
JKS	1.901	JinkoSolar Holding Co Ltd ADR	American Depository Receipt	Information Technology
S92	1.879	SMA Solar Technology AG	Common Stock	Information Technology
6865 HK	1.828	Flat Glass Group Co Ltd	Common Stock	Information Technology
SLR	1.639	Solaria Energia y Medio Ambiente SA	Common Stock	Utilities
NOVA	1.631	Sunnova Energy International Inc	Common Stock	Utilities
AY	1.321	Atlantica Sustainable Infrastructure PLC	Common Stock	Utilities
3576 TT	1.181	United Renewable Energy Co Ltd/Taiwan	Common Stock	Information Technology
ENRG	1.124	Energix-Renewable Energies Ltd	Common Stock	Utilities
1407 JP	1.107	West Holdings Corp	Common Stock	Utilities
6443 TT	1.100	TSEC Corp	Common Stock	Information Technology
NOFR	1.040	OY Nofar Energy Ltd	Common Stock	Utilities
GRE	917	Greenergy Renovables SA	Common Stock	Utilities
SCATC	906	Scatec ASA	Common Stock	Utilities
6244 TT	861	Motech Industries Inc	Common Stock	Information Technology
AMPS	717	Altus Power Inc	Common Stock	Utilities
3868 HK	715	Xinyi Energy Holdings Ltd	Common Stock	Utilities
SPWR	678	SunPower Corp	Common Stock	Industrials
RNW	648	ReNew Energy Global PLC	Common Stock	Utilities
DORL	638	Doral Group Renewable Energy Resources Ltd	Common Stock	Utilities
MBTN SW	519	Meyer Burger Technology AG	Common Stock	Information Technology
9519 JP	483	RENOVA Inc	Common Stock	Utilities
MAXN	327	Maxon Solar Technologies Ltd	Common Stock	Information Technology

## First Solar NASDAQ: FSLR

FSLR stock is doing better than the ETF, the market cap is \$18 billion, and it is the largest position of the ETF with 10.6% weight.

Market Summary > First Solar Inc

**171,46** USD

+ Follow

+115.17 (204.60%) ↑ past 5 years

Closed: 5 Apr, 08:00 GMT-4 • Disclaimer

Pre-market 172,00 +0,54 (0,31%)

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	170,10	Mkt cap	18,35B	52-wk high	232,00
High	177,34	P/E ratio	22,16	52-wk low	129,22

Let's dig into the business to see how it is reflected above in the stock price.

### First Solar Business

The first thing they say on their website is that First Solar is the only solar manufacturer of the top 10 global ones without production in China and with US headquarters. In short, their business is solar modules. Solar module production is pretty much a capacity game where your price depends on the price of solar modules, plus or minus some technological advantages.

First solar makes cadmium-telluride panels compared with Chinese silicon. First Solar's can sustain hailstorms and do have world record conversion efficiency, for now.

When it comes to solar module prices, we have to always take into account that the revenues shown by any producing company are based on past contracts and past prices while future revenues will depend on current prices and future of course. In short, after the 2021 boom, likely high investments in capacity as the world was supposed to turn totally green in 2021, prices have halved in 2023. This will be reflected in revenues in 2024 and 2025. We'll see later about the impact on First Solar.



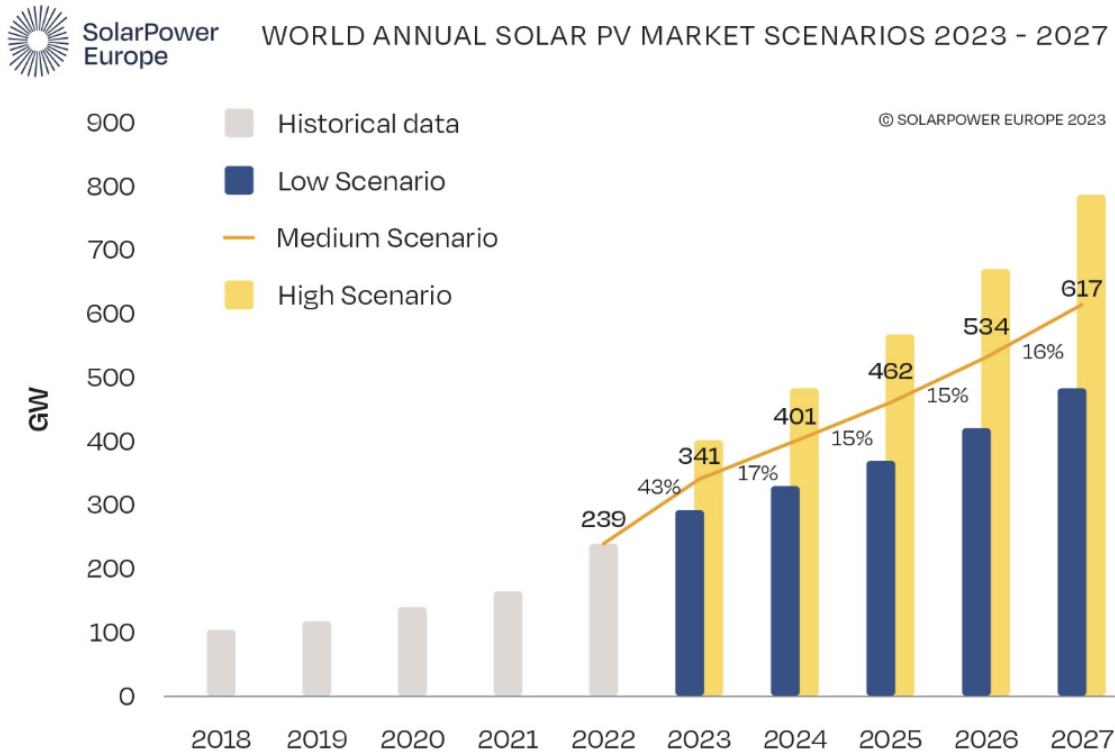
Source: [PV Australia](#)

The above prices are a clear indication of an oversupplied market. However, the solar market is a growth market and sooner or later the cycle should turn. Even in the lower end scenario, solar should still grow significantly over the next years and perhaps even decades.

## Global PV capacity forecast 2024 – 2027

Milestones for global installed PV generation capacity over the next five years are projected as follows:

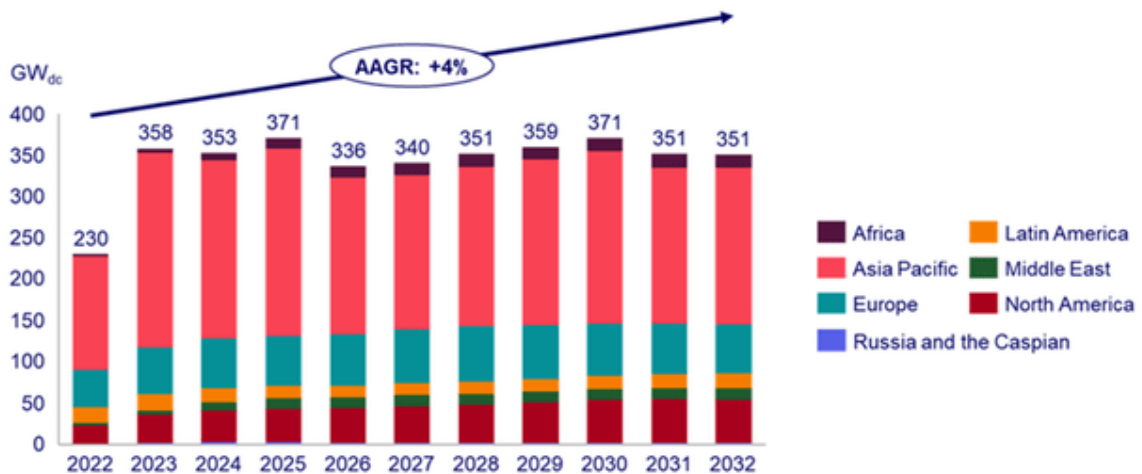
- 1.5 TW in 2023,
- 1.9 TW in 2024,
- 2.4 TW in 2025,
- 2.9 TW in 2026,
- 3.5 TW in 2027



Source: [VP Solar](#)

On the other hand, Wood Mackenzie doesn't estimate growth in installation going forward.

Annual solar PV installations by region



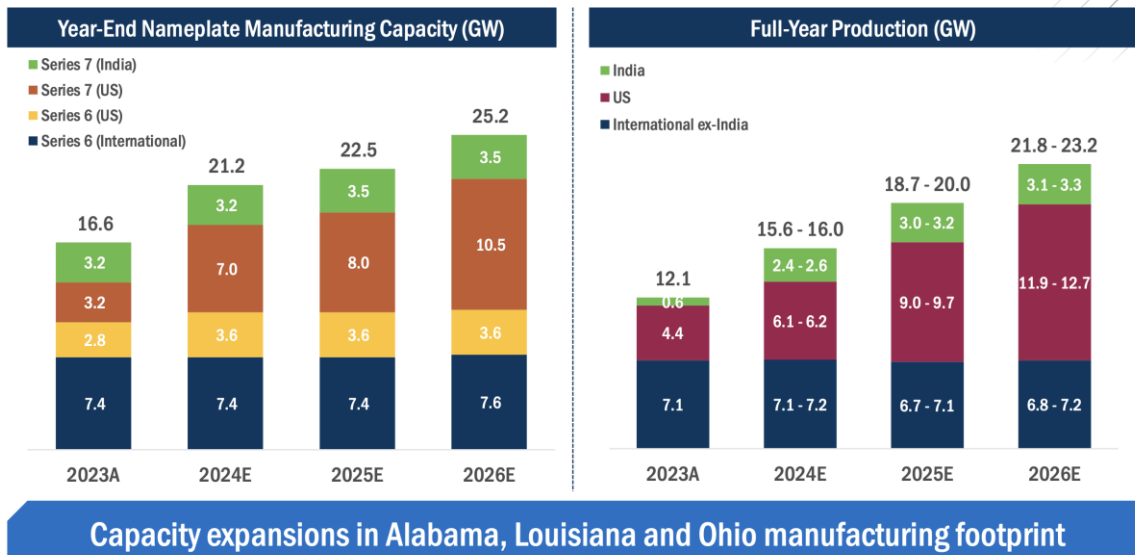
Source: Wood Mackenzie

Some Chinese factories have closed down or are in standstill so we have to see for how long will this downturn last. I know First Solar will just keep adding production, but we will have to see how profitable will that be. In the mean-time, imports are surging.



Plus, it is estimated that US panel prices will decline to 23 cents in 2024 and 16 cents in 2025. Thus, the tax credits might not be enough.

## Expansion Update



First Solar Production Growth: Source: [Investor Presentation](#)

The above sounds great, but [Bloomberg has a different view](#).



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Green

## US Solar Factories Are In for ‘Rude Awakening,’ Report Warns

- US plants in for ‘rude awakening,’ BloombergNEF warns
- Many factory projects likely to be canceled as prices fall



The current price in China is 13 cents per watt, First Solar expects to sell at 28.2 cents per watt in 2024. Their cost per watt is 18.9 cents which means it is difficult that they make any money until the sector turns, if it will turn.

### 2024 Guidance Assumptions



#### Volumes Sold

- Global: 15.6 GW to 16.3 GW
- Produced in US: 5.8 GW to 6.1 GW
- Produced and sold in India: 2.0 to 2.2 GW



#### Average Selling Prices

- 28.2 cents per watt global ASP (includes domestic India sales)
- Includes benefit of certain technology, commodity and freight adders



#### Cost per Watt

- CpW produced: 18.7 to 18.9 cents per watt, reduction of 2-3% vs FY 2023
- Sales freight ramp and period costs of approximately 3 cents per watt
- CpW sold: 21.7 to 21.9 cents per watt, reduction of ~7% vs FY 2023

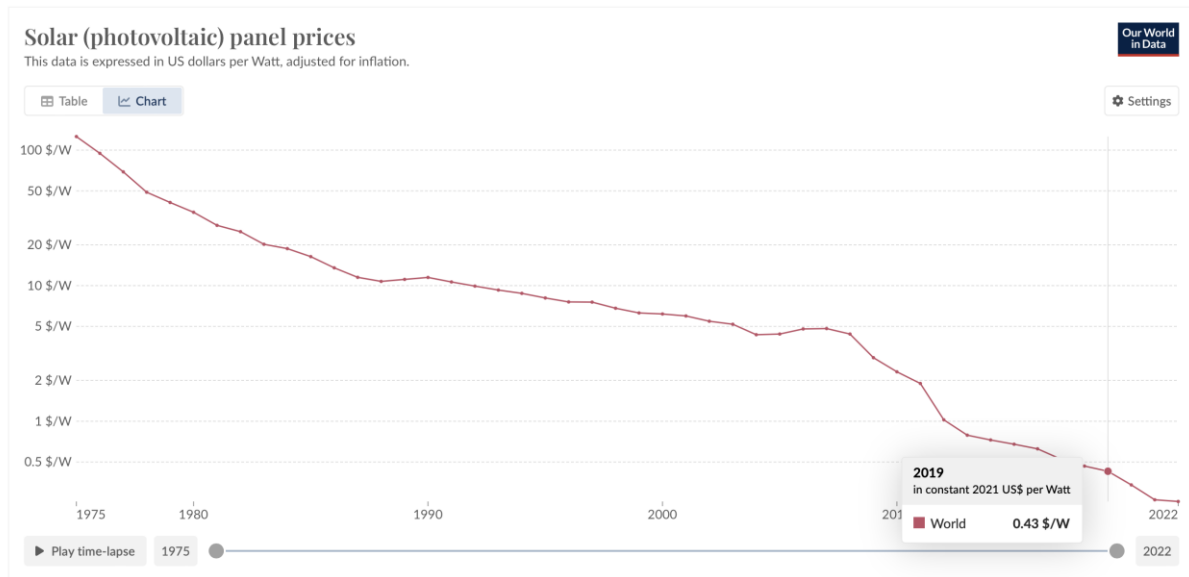


#### Capital Structure

- Anticipate ability to finance current CapEx program without raising new capital
- Forecasting to elect direct payment for 2024 Section 45X tax credits

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Another problem of solar modules is that the technology is constantly improving driving costs down, and it is hard to make money in a business where your selling price is constantly going lower.



Source: [Our World In Data](#)

Can you imagine that your sale prices go from \$0.43 in 2019 to \$0.13 in 2024? Anyway, let's look into how First solar is dealing with that. One of the best ways to see how a sector is breathing, is to check the conference calls.

## First solar Earnings Call Q4 2023

Here are just a few notes from First Solar's last conference call:

They say they have a lot booked, but I don't know whether the booked has been made on an adjustable price or not. It is unlikely they make sales at a fixed priced 10 years ahead.

From a commercial perspective, 2023 continued momentum established in 2022, as long-term multiyear procurement continued to drive demand. We added 10 new customers, and secured 28.3 gigawatts of net bookings at a base ASP of over \$0.30 per watt. Despite industry macro challenges such as global oversupply and pricing volatility, we continue to see strong mid to long-term demand, especially in the United States, as shown with 2.3 gigawatts of net bookings since the previous earnings call at an ASP of \$0.318 per watt excluding adjusters or \$0.334 per watt, assuming the realization of our technology adders. Our total contracted backlog now stands at 80.1 gigawatts, with orders stretching to the end of this decade.

Big current and future investments:

Regarding growth, we exited the year with 16.6 gigawatts of nameplate capacity. This marks an increase of 6.8 gigawatts from 2022 driven by the commencement of operations at our Series 6 factories in Ohio and India. In 2023, we announced a \$1.1 billion investment in a new manufacturing facility in Louisiana, which is expected to add 3.5 gigawatts to our nameplate capacity in 2026. When combined with our Alabama facility and our Ohio manufacturing footprint expansions, both of which are in progress, we expect 2026 year-end nameplate capacity of approximately 14 gigawatts domestically, with another 11 gigawatts internationally for a global nameplate capacity of approximately 25 gigawatts. We also continue to invest in our technology with our R&D Innovation Center and a perovskite development line, both under construction in Ohio. These facilities are expected to commence operations in the first-half and second-half of 2024, respectively.

The investments keep being higher than the cash flows:

Cash flows from operations were \$602 million in 2023 compared to \$873 million in 2022. This decrease was primarily driven by higher operating expenditures in support of our ongoing manufacturing expansion and lower advanced payments received for future module sales partially offset by higher cash receipts from modules sold during the year. Capital expenditures were \$347 million in the fourth quarter compared to \$286 million in the third quarter. Capital expenditures were \$1.4 billion in 2023 versus \$0.9 million in 2022. Now I'll turn the call back to Mark to provide a business and strategy update.

On strategy and industry (my question is how doesn't that reflect US prices ? )

### **Mark Widmar**

All right. Thank you, Alex. A word about overall market conditions and the policy environment, as we enter 2024, while we continue to operate from a position of strength, leveraging our point of differentiation and strong contracted backlog, the continuation of Chinese subsidization and dumping practices has caused a significant collapse in cell and module pricing. Last month, Meyer Burger, a European module and cell manufacturer announced that deteriorating market conditions in Europe resulting from such practices as forcing them to prepare for shuttering module assembly in Germany, exemplifying the challenges to the EU stated goal of creating a self-sustaining renewable manufacturing industry.

Here is the continuation and a very dangerous point when the CEO invokes for regulatory protection because prices are lower abroad, thus calls on the tax payer to pay almost 3 times the price.

And here in the U. S., notwithstanding the U.S. Department of Commerce's general determination of antidumping and countervailing duty circumvention by four Southeast Asia countries, the continued record level of cell and module imports from these regions poses a threat to the current administration's ambitions of scaling and securing a robust onshore solar manufacturing base.

In light of the current and forecasted state of oversupply in these markets and the resulting headwinds to the ability of domestic manufacturers to scale, we call upon governments and policymakers to either reinforce the measures already enacted or move expeditiously to take action. For instance, here in the U.S., we have long taken the position that the Section 201 Safeguard Bifacial Exemption simply opened the door for a multi gigawatt scale crystalline silicon product to have unfettered access to the American solar market, threatening U.S. Solar manufacturing. Indeed a recent report released by the U.S. International Trade Commission noted that a number of commenters cited the bifacial exclusion along with the 2022 executive order temporary blocking the U.S. Department of

Production in the US will always be much more expensive than in the below countries, so it is about asking the US taxpayer to pay more so that First Solar can exist:

In light of the current and forecasted state of oversupply in these markets and the resulting headwinds to the ability of domestic manufacturers to scale, we call upon governments and policymakers to either reinforce the measures already enacted or move expeditiously to take action. For instance, here in the U.S., we have long taken the position that the Section 201 Safeguard Bifacial Exemption simply opened the door for a multi gigawatt scale crystalline silicon product to have unfettered access to the American solar market, threatening U.S. Solar manufacturing. Indeed a recent report released by the U.S. International Trade Commission noted that a number of commenters cited the bifacial exclusion along with the 2022 executive order temporary blocking the U.S. Department of Commerce for imposing new tariffs on solar imports from Cambodia, Malaysia, Thailand and Vietnam as leading to increased availability of foreign made solar panels.

Their capacity is booked till 2027 and they should be profitable no matter the prices in China:

Operationally, in 2024, we're expected to produce 15.6 to 16 gigawatts of modules. From a sold perspective, we expect to sell 15.6 to 16.3 gigawatts, of which 5.8 to 6.1 gigawatts is produced in the U.S. And 2 to 2.2 gigawatts is assumed to be domestic sales in India. For the full-year, we expect to recognize a fleet ASP sold of approximately 28.2 cents per watt. This includes India domestic sold volume, a non-India base ASP, roughly in line with our expectations from our September Analyst Day, and the benefit of certain technology, commodity, and freight adders.

From a cost perspective, full-year 2024 cost bought produced is forecast to be in the range of 18.7 to 18.9 cents per watt, an approximately 2% to 3% improvement versus 2023. This is driven by expected improvements in

Tax credits make a bit part of this business:

I'll now cover the full-year 2024 guidance ranges on slide 10. Our net sales guidance is between 4.4 billion and 4.6 billion. Gross margin is expected to be between 2 billion and 2.1 billion, or approximately 46%, which includes 1 billion to 1.05 billion of Section 45X tax credits and 40 million to 60 million of ramp costs.

SG&A expenses are expected to total \$170 million to \$180 million versus \$197 million in 2023, demonstrating our ability to leverage our largely fixed operating cost structure while expanding production. R&D expenses are expected to total \$200 million to \$210 million, versus \$152 million in 2023. R&D expenses are increasing primarily due to commencing operations at our R&D Innovation Center and perovskite development line, and the expectation of adding headcount to our R&D team to further invest in advanced research initiatives.

Capital expenditures in 2024 are expected to range from \$1.7 billion to \$1.9 billion as we progress the construction of our Alabama and Louisiana Series 7 factories, implement throughput upgrades to the fleet, and invest in other R&D-related programs.

Approximately two-thirds of our CapEx is associated with capacity expansion, and one-quarter relates to our R&D center and technology replication, with the remainder mostly related to maintenance and logistics. Our year-end 2024 net cash balance is anticipated to be between \$0.9 billion and \$1.2 billion.

Turning to slide 11, I'll summarize the key messages from today's call. Demand has been solid with 2.3 gigawatts of net bookings since the previous earnings call, leading to a contracted backlog of 80.1 gigawatts. Our opportunity pipeline remained strong, with global opportunity set at 66.5 gigawatts, including mid to late-stage opportunities of 32 gigawatts.

We continue to expand our manufacturing capacity, exiting 2023 with 16.6 gigawatts of nameplate capacity, and expect to exit 2026 with approximately 25 gigawatts of nameplate capacity, including

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We're forecasting full-year 2024 earnings per diluted share of \$13 to \$14. Finally, we ended the year with a cash balance of \$1.6 billion net of debt, and expect to end 2024 with a cash balance of \$900 million to \$1.2 billion net of debt. This net cash position together with optionality around monetizing our 2024 Section 45X tax credits places us in a position of strength from which to expand our capacity to invest research, development and technology improvements, pursue other strategic opportunities as we march forward on our journey to lead the world's sustainable energy future.

## First Solar Financials

Sales in 2024 should increase 50% to 16GW and then go to 26 GW in 2026, all booked! At an average selling price of 28.2 cents and costs of 18.9 cents, plus the tax credits, it should all lead to high profitability.

## 2024 Guidance Assumptions



### Volumes Sold

- Global: 15.6 GW to 16.3 GW
- Produced in US: 5.8 GW to 6.1 GW
- Produced and sold in India: 2.0 to 2.2 GW



### Average Selling Prices

- 28.2 cents per watt global ASP (includes domestic India sales)
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### Cost per Watt

- CpW produced: 18.7 to 18.9 cents per watt, reduction of 2-3% vs FY 2023
- Sales freight ramp and period costs of approximately 3 cents per watt
- CpW sold: 21.7 to 21.9 cents per watt, reduction of ~7% vs FY 2023



### Capital Structure

- Anticipate ability to finance current CapEx program without raising new capital
- Forecasting to elect direct payment for 2024 Section 45X tax credits

The EPS are estimated to be between \$13 and \$14. When production increases towards 2026, EPS should go even higher.

## 2024 Guidance as of February 27, 2024 <sup>(1)</sup>

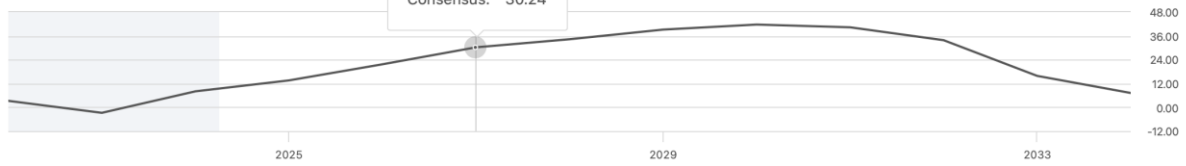
	2024 Guidance
Net Sales	\$4.4B to \$4.6B
Gross Margin (\$) <sup>(2)</sup>	\$2.0B to \$2.1B
Operating Expenses <sup>(3)</sup>	\$455M to \$485M
Operating Income <sup>(4)</sup>	\$1.5B to \$1.6B
Earnings Per Diluted Share	\$13.00 to \$14.00
Net Cash Balance <sup>(5)</sup>	\$0.9B to \$1.2B
Capital Expenditures	\$1.7B to \$1.9B
Volume Sold	15.6GW to 16.3GW



EPS estimations for 2026 are for it to be around \$30.



Consensus EPS Estimates



Fiscal Period Ending	EPS Estimate	YoY Growth	Forward PE	Low	High	# of Analysts
Dec 2024	13.56	68.50%	12.88	13.13	13.98	13
Dec 2025	21.69	59.98%	8.05	18.11	23.90	15
Dec 2026	30.24	39.43%	5.77	27.49	32.38	10

FSLR EPS estimations by Wall Street

They do have \$2 billion in cash to fund expansion and long-term debt is only \$500 million.

Now, if they make \$30 bucks in 2026 and keep doing that for the long-term, even increasing that, this stock is cheap. However, their cost of production is 19 cents while current prices in China are 12 cents, thus First Solar is not competitive on a global playing field. It has local advantages and depends on local credits and regulation.

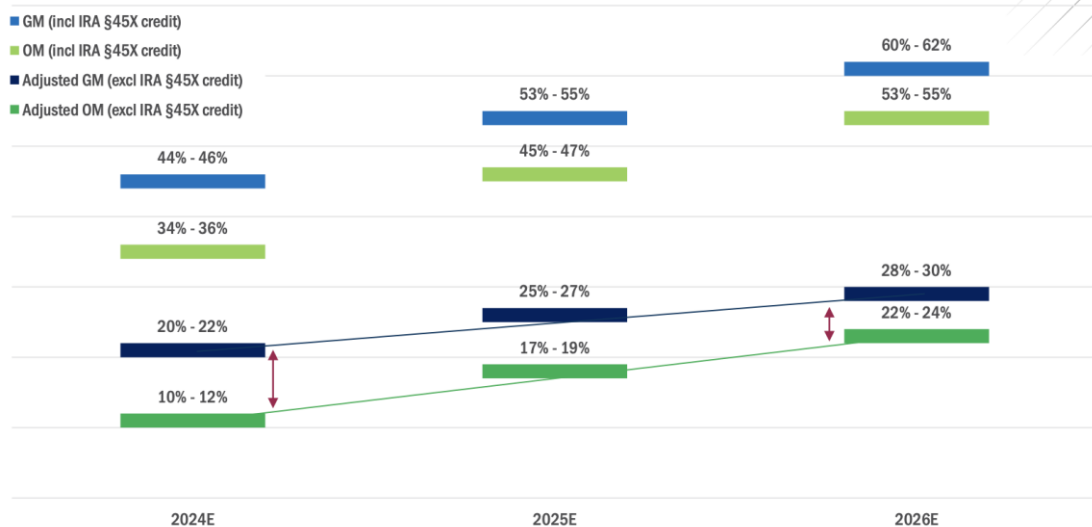
So, this is a bet on US regulation, solar subsidization, trade obstruction and the US tax payer remaining happy to pay almost thrice the price.

I don't know enough about US politics to know the risk and reward of the above business construction. In case of the Inflation Reduction Act being cancelled, this is toast.

[Democrats](#) say Republicans will cancel the Act, that would make First Solar's panes unprofitable and the capacity useless... especially if US panel prices also drop to 15 cents in 2026.

Margins are halved without the credit.

**Margin Profile: Forecast**



Forecast margins based on management estimates and assumptions as of September 7, 2023. Gross Margin includes forecast ramp costs, Operating Margin includes forecast ramp costs and production startup expenses



## Enphase Energy NASDAQ: ENPH

I did look at Enphase in June of 2019 but then it wasn't yet known what kind of tech will be applied and win in the microinverter world and I didn't understand the risk versus reward. Or, better to say, there were 3 players if I remember correctly, two won, one lost. Thus, if I invested into all 3, the loss would had been 100% with one and the gain 5x with the other two. Total return 3x, not bad but still risky. Anyway, let's check what is on the table now.

Market Summary > Enphase Energy Inc

**112,27** USD

+ Follow

+104.93 (1,429.56%) ↑ all time

5 Apr, 16:00 GMT-4 • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	113,58	Mkt cap	15,24B	52-wk high	231,42
High	117,58	P/E ratio	36,65	52-wk low	73,49
Low	112,25	Div yield	-		

Enphase makes microinverters to convert energy from the solar panel to the system.

## A leading energy technology company in the world

- 
- 
- 
- 
- 



1 Includes Enphase residential and commercial managed systems as of Dec. 31, 2023, grossed up for non-managed systems based on cumulative sales records  
 2 As of Dec. 31, 2023  
 3 Please reference Appendix for GAAP to Non-GAAP reconciliation

Source: [Investor Presentation](#)

The company and operations:

## Global Supply Chain

### Microinverters

Currently, 5 manufacturing sites with capacity at 7.25M micros/Qtr.

Leveraging Inflation Reduction Act (IRA) to bring high-tech manufacturing and jobs to the U.S.

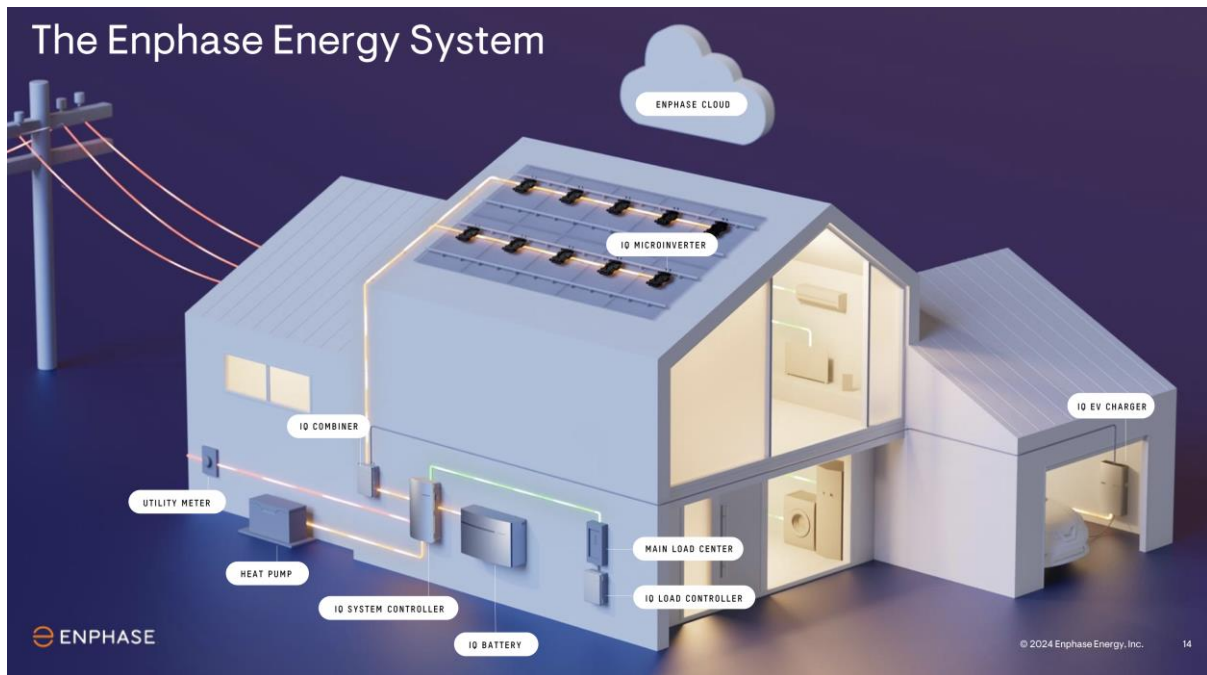
### Batteries

2 cell pack suppliers > 1 GWh a year

Globalization efforts on batteries underway



The system, which means there should be more work for Enphase:



Alongside batteries:

## IQ® Battery

### IQ® Battery 10 and 3 (1<sup>st</sup> and 2<sup>nd</sup> Gen)

Shipping to U.S., Canada, Mexico, Germany, Belgium, Austria, France, the Netherlands, Spain, Portugal, Switzerland, Sweden, Denmark, Greece, Belgium

Configuration:  
10.1kWh and 3.4kWh

One-stop-shop, reliable,  
scalable, simple, safe



### IQ® Battery 5P (3<sup>rd</sup> Gen)

Shipping to Australia, U.S., Puerto Rico, U.K.

Configuration:  
5.0kWh

2X Continuous and 3X Peak  
power per kWh



They are making acquisitions to integrate solutions into their system:

## Acquisitions

SOFDESK

CLOSED ON  
JANUARY 25, 2021

Solargraf™ offers a simple platform to accelerate the end-to-end sales process across the residential solar industry.

DIN  
ENGINEERING SERVICES

CLOSED ON  
MARCH 31, 2021

A leading provider of outsourced proposal drawings and permit plan sets for residential solar installers in North America.

365  
PRONTO

CLOSED ON  
DECEMBER 13, 2021

Provides a platform to match cleantech asset owners with a local and on-demand installation and service workforce.

CLIPPERCREEK  
RELIABLE. POWERFUL. MADE IN AMERICA.

CLOSED ON  
DECEMBER 31, 2021

Offers electric vehicle (EV) charging solutions for residential and commercial customers in the U.S.

SOLARLEADFACTORY

CLOSED ON  
MARCH 14, 2022

Provides consistent high-quality leads to solar and storage installers, resulting in lower customer acquisition costs.

itl  
Independent  
Test Laboratories

CLOSED ON  
JUNE 03, 2022

Provides a range of testing capabilities including EMC testing, product testing, product safety testing, environment testing, and high-power testing.

GREENCOM  
NETWORKS

CLOSED ON  
OCTOBER 10, 2022

Provides Internet of Things (IoT) software solutions to connect and manage a wide range of distributed energy devices within the home.

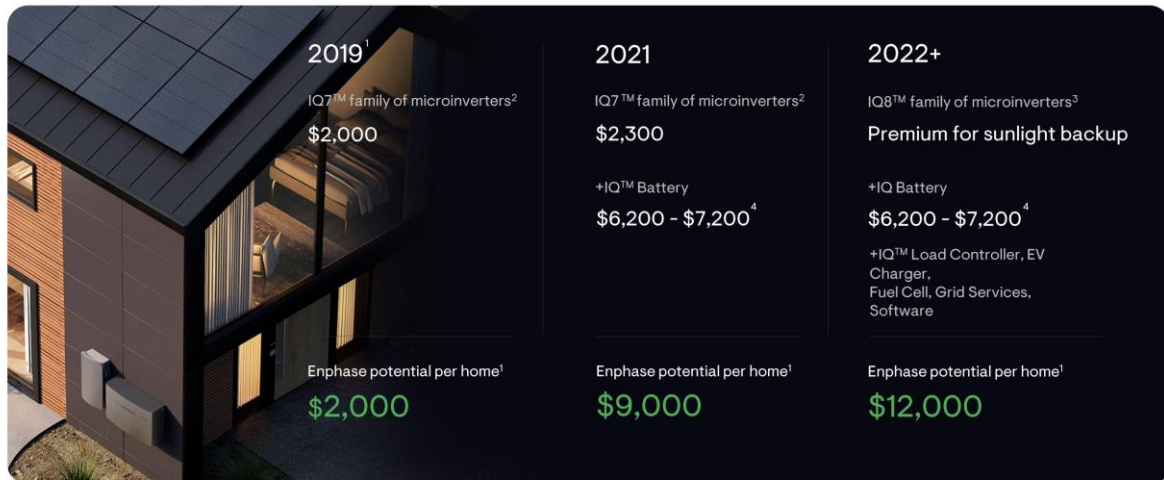
ENPHASE.

© 2024 Enphase Energy, Inc. 21

The focus is on homes:

### FINANCIALS

## Increasing Our 'Share of Wallet' Per Home

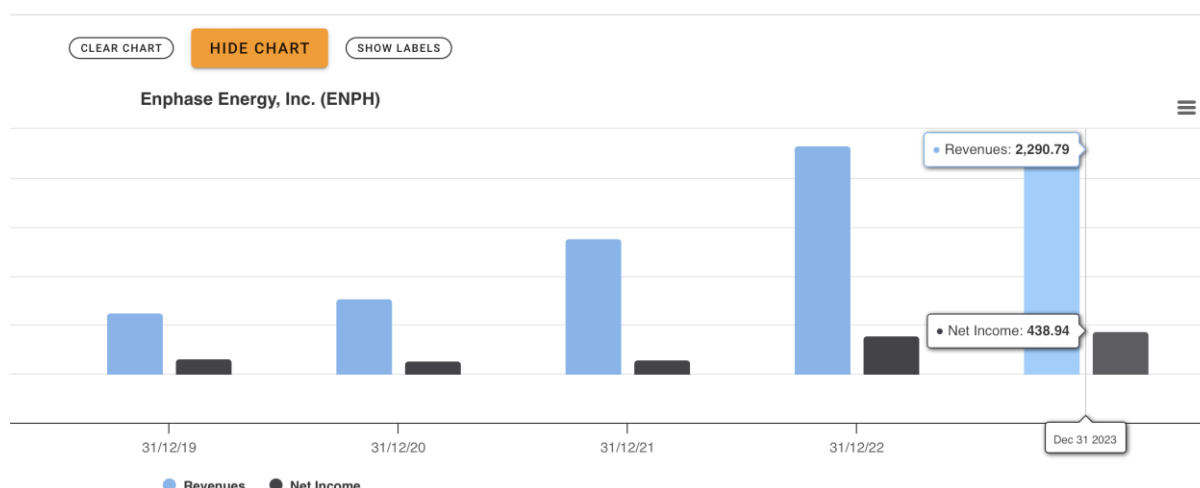


ENPHASE.

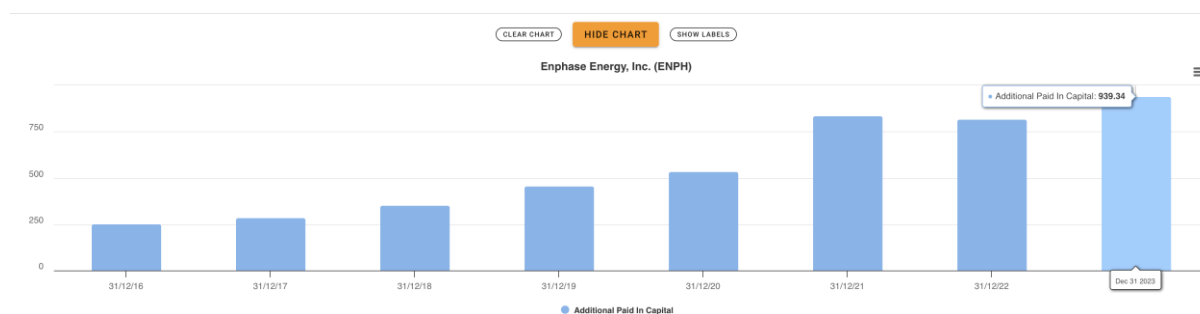
<sup>1</sup> Enphase internal data and approximate estimates  
<sup>2</sup> Refers to IQ7, IQ7+, IQ7X, IQ7A with 20 micros per home  
<sup>3</sup> Refers to IQ8, IQ8+, IQ8M, IQ8A, IQ8H with 20 micros per home  
<sup>4</sup> Assumes 10 kWh battery

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The company has been growing fast with an expected slowdown last year due to higher interest rates and a general slowdown into the green boom:



They have \$1.2 billion of debt and they have also constantly issues shares:



Plus, something not discussed in the investor presentation is that quarterly revenue for Q4 2023 dropped more than 50%, from 724 million in 2022 to 302 million in 2023. At that rate, we can expect revenues to be half in 2024., with EPS, below \$1.

(In thousands, except per share and percentage data)

	GAAP			Non-GAAP		
	Q4 2023	Q3 2023	Q4 2022	Q4 2023	Q3 2023	Q4 2022
Revenue	\$ 302,570	\$ 551,082	\$ 724,652	\$ 302,570	\$ 551,082	\$ 724,652
Gross margin	48.5 %	47.5 %	42.9 %	50.3 %	48.4 %	43.8 %
Operating expenses	\$ 156,893	\$ 144,024	\$ 153,741	\$ 86,551	\$ 99,027	\$ 87,718
Operating income (loss)	\$ (10,231)	\$ 117,989	\$ 156,960	\$ 65,587	\$ 167,593	\$ 229,389
Net income	\$ 20,919	\$ 113,953	\$ 153,753	\$ 73,474	\$ 141,849	\$ 212,389
Basic EPS	\$ 0.15	\$ 0.84	\$ 1.13	\$ 0.54	\$ 1.04	\$ 1.56
Diluted EPS	\$ 0.15	\$ 0.80	\$ 1.06	\$ 0.54	\$ 1.02	\$ 1.51

The explanation:

Total revenue for the fourth quarter of 2023 was \$302.6 million, compared to \$551.1 million in the third quarter of 2023. Our revenue in the United States for the fourth quarter of 2023 decreased approximately 35%, compared to the third quarter of 2023. Our revenue in Europe decreased approximately 70%, compared to the third quarter of 2023. The declines were primarily the result of reduced shipments to manage high inventory at our distribution partners along with a further softening in demand.

The same as with First Solar, without tax credits and with a softening in demand, this could look ugly. A bet on interest rates and a revival of home solar systems. Given prices, I might put one now, but few think like me. This company will not make any money in 2024 with uncertainty over the future very high. Thus risky, as it was in 2019

before the green exuberance mania that still has room to deflate. Another sign that it was a mania is the list of analysts present at their last conference call:

Enphase Energy, Inc. (NASDAQ:[ENPH](#)) Q4 2023 Earnings Conference Call  
February 6, 2024 4:30 PM ET

### **Company Participants**

Zachary Freedman - Head of Investor Relations

Badri Kothandaraman - President and CEO

Mandy Yang - Chief Financial Officer and EVP

Raghu Belur - Chief Products Officer, SVP and Co-Founder

### **Conference Call Participants**

Brian Lee - Goldman Sachs

Colin Rusch - Oppenheimer

Julien Dumoulin-Smith - Bank of America

Philip Shen - Roth MKM

Mark Strouse - JPMorgan

Praneeth Satish - Wells Fargo

Eric Stine - Craig-Hallum Capital Group

Christine Cho - Barclays

Jordan Levy - Truist Securities

Kashy Harrison - Piper Sandler

Andrew Percoco - Morgan Stanley

Joseph Osha - Guggenheim Partners

Auguste Richard - Northland

Moses Sutton - BNP Paribas

Maheep Mandloi - Mizuho

Tristan Richardson - Scotia Bank

Vikram Bagri - Citigroup

Pavel Molchanov - Raymond James

Austin Moeller - Canaccord

Everybody has to been in the sustainability/green story, thus it is likely still very expensive for value investors.

From the conference call, when somebody's revenue drops 58% and the CEO discusses how they have a wait time of 1 minute to service customers, you know something is wrong. OF COURSE YOU HAVE A WAIT TIME OF 1 MINUTE AS YOU LOST 58% of the customers....



Now I'd like to introduce Badri Kothandaraman, our President and Chief Executive Officer. Badri?

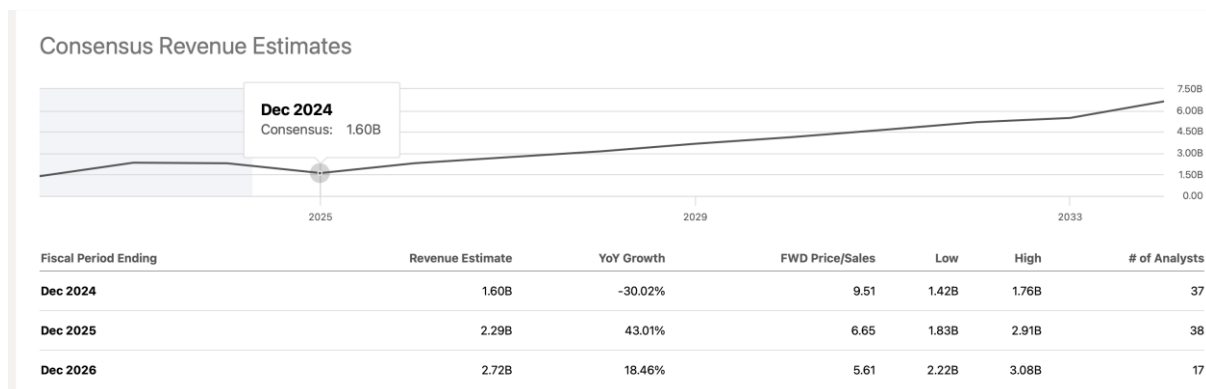
**Badri Kothandaraman**

Good afternoon, and thanks for joining us today to discuss our fourth quarter 2023 financial results. We reported quarterly revenue of \$302.6 million, shipped approximately 1.6 million microinverters and 80.7 megawatt hours of battery and generated free cash flow of \$15.4 million. On our last earnings call, we said we would reduce channel inventory by approximately \$150 million. We achieved a reduction of \$147 million in Q4.

For the fourth quarter, we delivered 50% gross margin, 29% operating expenses and 22% operating income, all as a percentage of revenue on a non-GAAP basis and including the IRA benefit. Mandy will go into our financials later in the call.

Let's now discuss how we are servicing customers. Our worldwide NPS was 77% in Q4, the same as Q3. Our average call wait time was one minute compared to 1.3 minutes in Q3. We have made good progress on solving customer issues by focusing on both automation as well as expanding our field service teams globally.

Revenue estimates are for a drop in 2024 but then a continuation in growth.



I would not be that sure, if rates persist, even the lower solar prices might not push people to install more.

The management expects Q4 2023 to be the bottom, but they always expect the current quarter to be the bottom, this is a great question:

**Operator**

The next question comes from Philip Shen of Roth MKM. Please go ahead.

**Philip Shen**

Hi, everyone. Thanks for taking my questions. You highlighted that you think the destocking ends in Q2 now. But prior, you had talked about destocking ending at the end of Q1 and then before that, also by the end of '23. What's the probability and confidence in your call now that the destocking truly ends by the end of Q2? I don't know if the answer is different to the U.S. market versus Europe.

And then how does the impact of some of these meaningful shutdowns and bankruptcies impact you guys, and your confidence in your ability to say it's Q2. You've been talking about this \$450 million to \$500 million run rate, but then ADT solar shutdown, Enphase Infinity vision, so how does that -- are those dynamics? Because that number, \$450 million, \$500 million back in Q4 of last year when you had the Q3 call, these companies weren't talking about going away or shutting down. So does that -- how has that impacted you, guys? Do you assume that others will just pick up the volume. And then we're also watching closely what happens with the SunPower situation. So if that goes negative, what are your thoughts on how that can impact you to?

Thanks.

Further on the question above, the sector looks ugly, there were many cowboys riding the green boom and doing crazy things, I remember that still from 2019, taking crazy risks and long-term contracts. That is now reverting and the whole sector will suffer.

In short, the whole conference call is about bottoming out soon and then picking up but without certainty that it will happen, just hope.

**AT 10 TIMES REVENUES, THIS IS STILL CRAZY!!!!!!**

**\$300 million per quarter at \$15 billion market capitalization!!!**

## NEXTracker NASDAQ: NXT

I see it is a recent IPO and doing well (spin from FLEX):



The market capitalization is \$10 billion.

### Q3 FY2024 Financial Highlights

**Q3 Revenue**  
**\$ 710M**  
 38% Y/Y Growth

**Q3 Adj. EBITDA**  
**\$ 168M**  
 168% Y/Y Growth

- **Record revenue and profits;** strong execution, significant revenue growth of 38% YoY, and further optimization of our re-architected supply chain
- **Record backlog;** continued demand strength globally, achieved 10 GW milestone in India, Middle East, and Africa regions for projects in operation or under fulfillment
- **High-quality balance sheet** with liquidity of approx. \$800M and **strong adjusted free cash flow generation** of over \$300M YTD

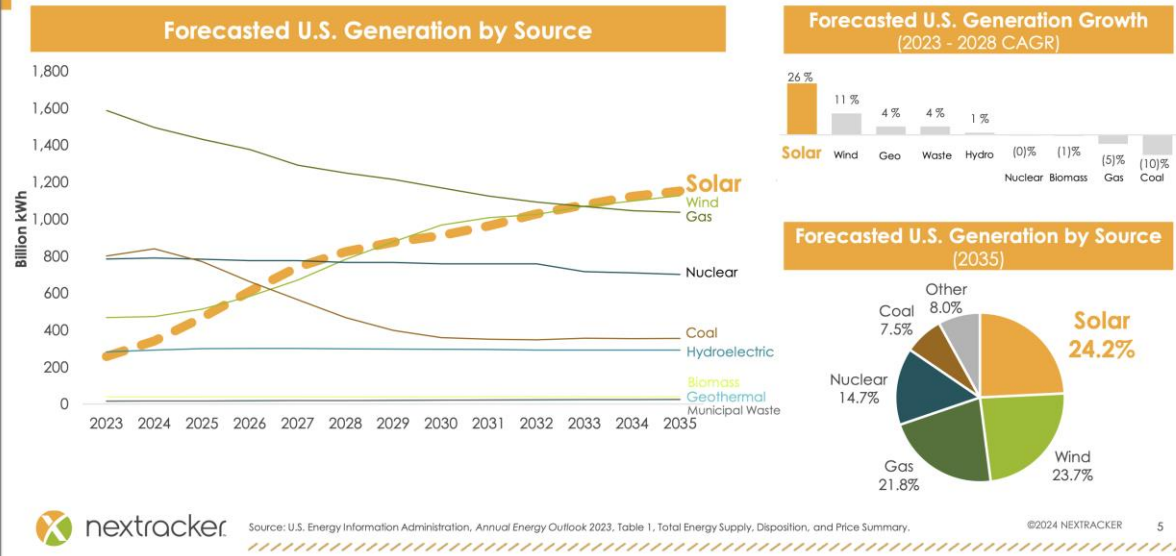
#### Raised FY24 Full Year Guidance

- FY24 Revenue raised by \$100M to \$2.45B at mid-pt
- FY24 Adj. EBITDA raised by \$73M to \$488M at mid-pt

Backlog includes executed contracts or purchase orders with deposits and specific bills of materials for EPCs, and Volume Commitment Agreements (VCAs) with customer deposits on portfolios of specific projects. See Appendix for reconciliation of each non-GAAP financial measure to most directly comparable financial measure stated in accordance with GAAP.

All positive on the solar front there:

## U.S. EIA: Solar is Fastest Growing Energy Source Today, Becomes Largest Source After 2033



The story:

### Our Story

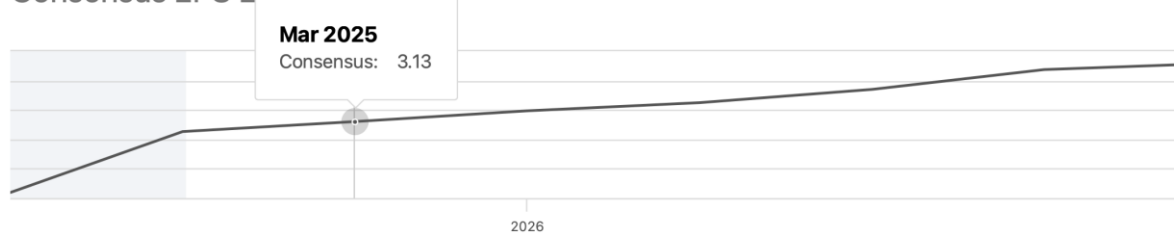
When Dan Shugar and his team founded Nextracker, they had a vision for what a solar tracker should be. After redesigning, engineering and building an innovative independent-row system from the ground up and taking the NX Horizon system to market, the company quickly went from start-up to global market leader

### Unmatched Market Leadership

Nextracker has been the number-one global market-share solar tracker company with an average market share of 30% for seven years and counting, according to global research firms WoodMackenzie and IHS Markit.

The expectation is that the market for their solar trackers will keep growing as there is more solar being installed, the story continues and they should be making more money:

### Consensus EPS Estimates



Fiscal Period Ending	EPS Estimate	YoY Growth	Forward PE
Mar 2024	2.72	1,103.88%	18.43
Mar 2025	3.13	15.05%	16.02
Mar 2026	3.56	14.07%	14.04

This is in line with First Solar's booked capacity till 2026, but then again, we don't know beyond, even if lower cost panes could keep demand strong, and thus also demand for Nextracker's products.

Looking nothing wrong, just a bit expensive as it is expected to be when it is the third business in weigh in the solar ETF.

However, for growth, batter storage development is crucial as the grid can't take the solar power easily anymore, which is the current problem in the Netherlands.

## SolarEdge NASDAQ: SEDG

I am retreating on what I said that there were two winners in the inverter segment when discussing Enphase, I see SEDG is back where it was in 2019.

Market Summary > Solaredge Technologies Inc

**66,69** USD

+ Follow

+45.62 (216.52%) ↑ all time

5 Apr, 16:00 GMT-4 • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	67,45	Mkt cap	3,81B	52-wk high	322,19
High	68,82	P/E ratio	111,19	52-wk low	60,44

This company is the example of what happens when sales dry up, huge profitability and growth turns into losses.



The beautiful trend shown is every solar presentation doesn't save the company nor the stock.

# Renewables set to be the dominant electricity source



### Individuals

Growing demand for electrification and drive for energy independence.



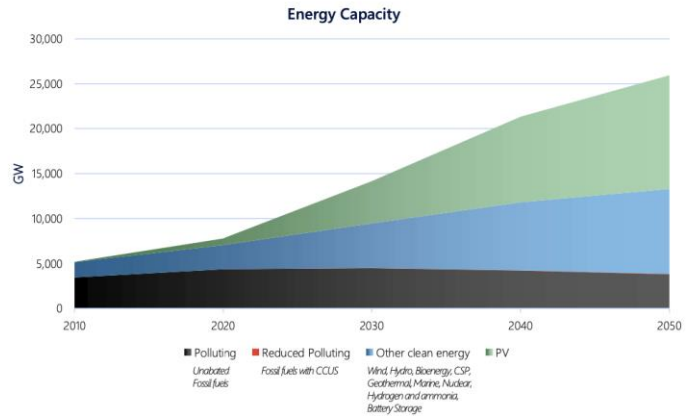
### Corporations

Decarbonization commitments in most industries driven by ESG standards. "Going green" is a smart business choice.



### Governments

Nation-level initiatives to decarbonize (Glasgow, Paris).



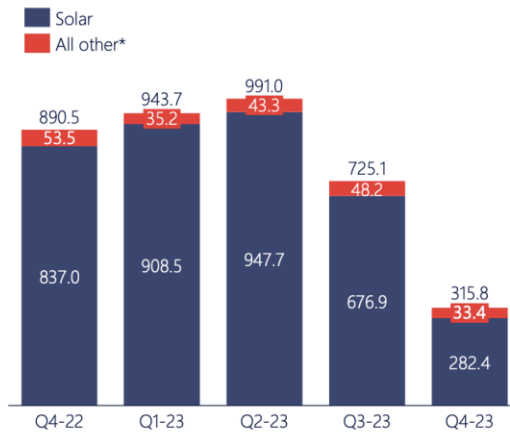
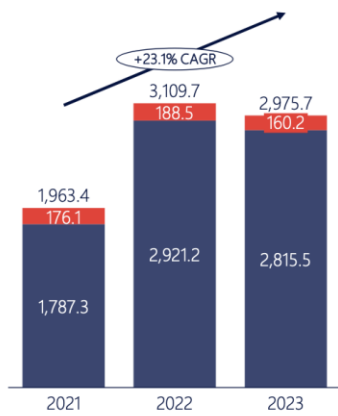
Source: International Energy Agency World Energy Outlook 2023, <https://www.iea.org/reports/world-energy-outlook-2023>, pages 17 and 267

8



Revenue destruction:

# Revenues Growth By segment



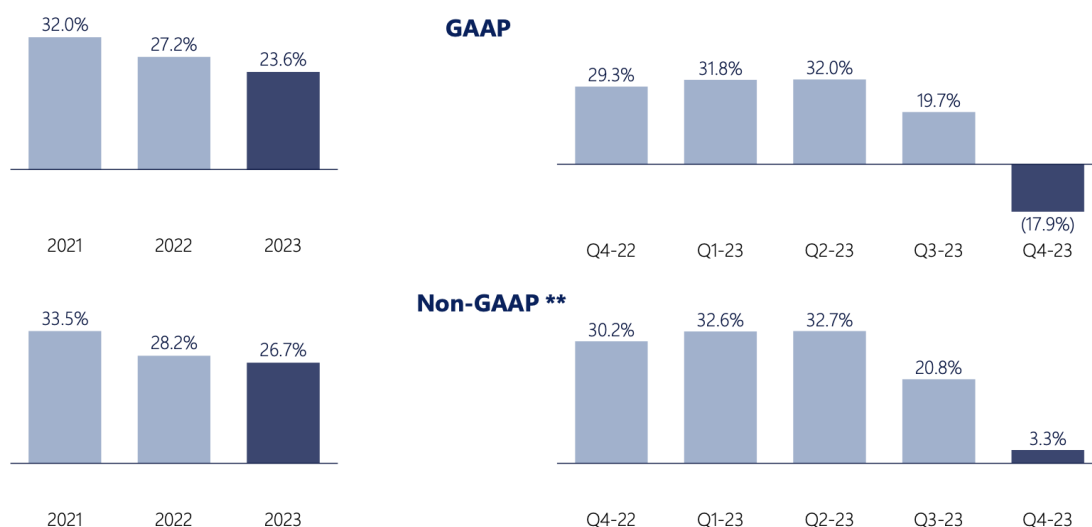
\* All other refers to energy storage and automation machines  
26

USD millions



Profitability:

## Consolidated\* Gross Margin



\* For purposes of this presentation, "consolidated" refers to solar, energy storage, and "all other" segments

\*\* Non-GAAP financial measures; see reconciliation in Appendix

solar**edge**

And the destruction above will likely continue as they are also holding on sales so the inventories in the market can get sold a bit, but still.

Turning to our guidance as discussed in our earnings release for the first quarter of 2024. We are guiding revenues to be within the range of \$175 million to \$215 million. We expect non-GAAP gross margins to be within the range of negative 3% to positive 1%, including 850 basis points of IRA benefit. We expect our non-GAAP operating expenses to be within the range of \$122 million to \$130 million. Revenues from the solar segment are expected to be within the range of \$160 million to \$200 million. Gross margins from the solar segment is expected to be within the range of 1% to 5%, including 900 basis points of IRA benefits.

I will now turn the call to the operator to open it up for questions.

The guidance is for 20% of Q1 2023 revenues. Crazy!

In short, the management expects things to normalize as Europe comes back to buying more inverters after the first quarter. They expect to get back to a run rate of \$600 million per quarter:



And again, these are based on discussions that we had with our customers, analysis of historical trends that we saw, seasonality, and market by market also from political and other regulatory environment. Gross margins in this situation. So when it comes to the gross margin, as I mentioned in the prepared remarks, we expect that once we're back to \$600 million to \$650 million of revenues a quarter, we should be at 30% to 32% gross margins, which already include 500 basis points of IRA benefit. And the way to get there is actually twofold. One is of course, is our regular product gross margin

The above should be in line with 2023, on higher gross margins, and thus we have around \$300 million in net income - what the management expects.



Ok, if they come back, and then keep growing at some rate, it might be something, but there is so much risk and it is unclear at what prices will they be selling their products in the future..

The thing is that companies in the green sector also have to start thinking about returns, thus about price paid, that with increased competition, makes it hard to make money. The stock price still shows signs of higher elevation due to the exuberance from previous years, I hope the AI story doesn't end up the same for investors. We will have AI run our solar systems, but few will make money on that!

## Hannon Armstrong NYSE: HASI

The stock boomed, only to return to pre boom levels.

Market Summary > Hannon Armstrong Sustnbl Infrstr Cap Inc

**26,58** USD

+ Follow

+15.33 (136.27%) ↑ all time

5 Apr, 16:00 GMT-4 • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	26,35	Mkt cap	2,99B	52-wk high	29,88
High	26,73	P/E ratio	18,74	52-wk low	13,22
Low	26,16	Div yield	6,25%		

This looks to me like an infrastructure play, where their investments yield 9%, which were people willing to pay 2% for the stock a few years ago beats me.

## Successful 2023 Execution Positions Company for Long-Term Growth

HASI

### Strong Financial Results Reflect Resilient Business

- FY23 Distributable EPS<sup>1</sup> of \$2.23 and GAAP EPS<sup>2</sup> of \$1.42
- Record \$2.3b of closed transactions at >9% investment yield<sup>1</sup> for on-balance sheet transactions
- 44% portfolio growth and 21% Distributable NII<sup>1</sup> growth
- Increased quarterly dividend to \$0.415 for Q1 2024

### Well Positioned in the Current Landscape

- Track record of earnings growth across different interest rate cycles
- Demonstrated success in all public policy environments

### 3-Year Guidance Consistent with Long-Term Business Model

- New guidance for 2024-26 of Distributable EPS<sup>1</sup> CAGR of 8-10%<sup>3</sup> consistent with historical 10% CAGR between 2014-2023
- Annual dividend payout ratio of 60-70% through 2026<sup>4</sup>

They say they will keep growing:

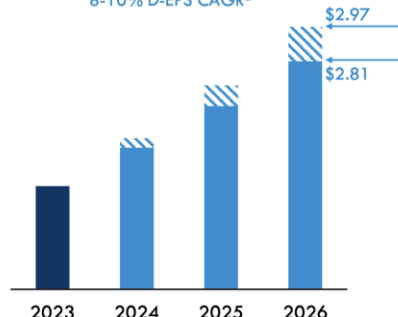
## 2024-26 Guidance Bridge to Long-Term Business Model

HASI

	Distributable EPS <sup>1</sup>	Dividend Per Share (DPS)
Long-Term Business Model	10% CAGR (Realized 2014-2023 CAGR of 10%)	50% payout ratio
2024 – 2026 Guidance	8-10% CAGR <sup>2</sup>	60-70% payout ratio

### Guidance Distributable EPS<sup>1</sup>

8-10% D-EPS CAGR<sup>2</sup>



### Continued DPS growth while reducing payout ratio

Year	Payout Ratio	Dividend per share <sup>3</sup>
2018	96%	\$1.32
2019	96%	\$1.34
2020	88%	\$1.36
2021	74%	\$1.40
2022	72%	\$1.50
2023	71%	\$1.58
2024	60-70%	\$1.66
2025-26	60-70%	

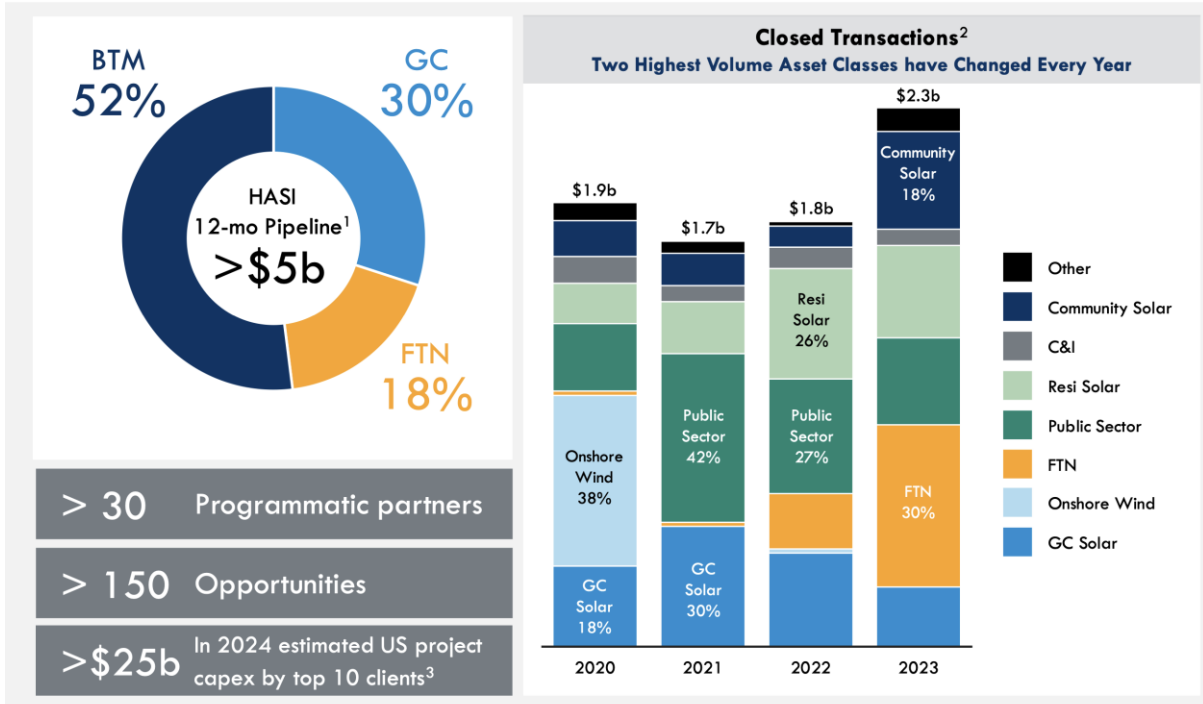
### Primary upside potential not included in Guidance:

- Second IG rating
- Expansion with current clients or into new markets and assets
- Market drives higher asset economics

1. See Appendix for an explanation of Distributable Earnings, including reconciliations to the relevant GAAP measures  
 2. Using 2023 base year  
 3. Based on declaration date

The following is just an indication of how volatile the sector is, nobody knows what to do and it seems people are just following trends as they had been splashed with money when everyone decided to go green in 2021.

### Programmatic Partners Drive Consistent Diversified Volume



1. Next 12-months pipeline as of 12/31/23. BTM is Behind-the-Meter, GC is Grid-Connected, and FTN is Fuels, Transport and Nature. No offshore wind in the pipeline  
 2. As of 12/31 2020, 2021, 2022 and 2023, respectively  
 3. HASI internal estimates based on public filings by top clients and company assumptions

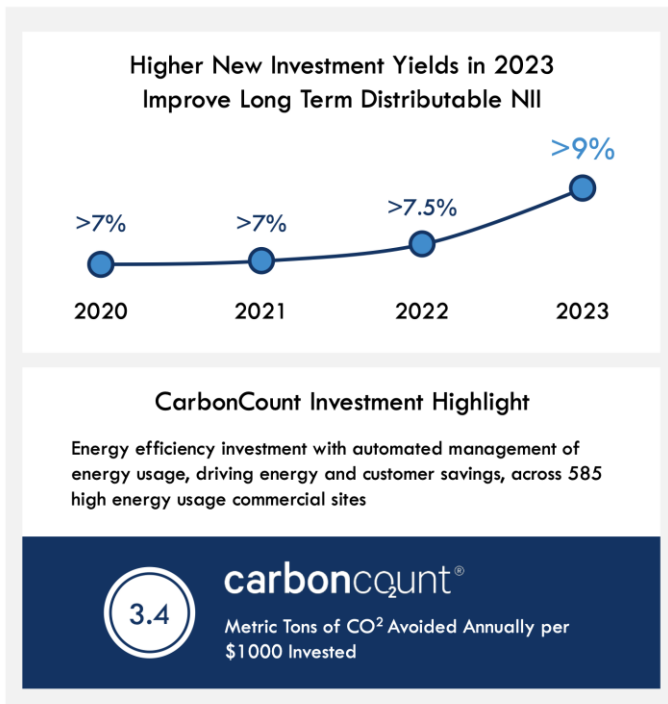
Prices have come down a bit and consequently yields are up, which is good:

## Continued Growth in Portfolio, Dist. NII and GoS Fees



### Financial Results (FY23)

Results Unaudited <sup>1</sup>	FY22	FY23	Change YoY
GAAP Diluted EPS	\$0.47	\$1.42	
Distributable EPS	\$2.08	\$2.23	+7%
GAAP NII	\$45m	\$58m	
Distributable NII	\$180m	\$217m	+21%
Gain on Sale, Fees and Securitization Income	\$79m	\$91m	+15%
Transactions Closed	\$1.8b	\$2.3b	
Portfolio <sup>2</sup>	\$4.3b	\$6.2b	+44%
Managed Assets	\$9.8b	\$12.3b	+26%
Distributable ROE <sup>3</sup>	11.4%	11.8%	



### CarbonCount Investment Highlight

Energy efficiency investment with automated management of energy usage, driving energy and customer savings, across 585 high energy usage commercial sites

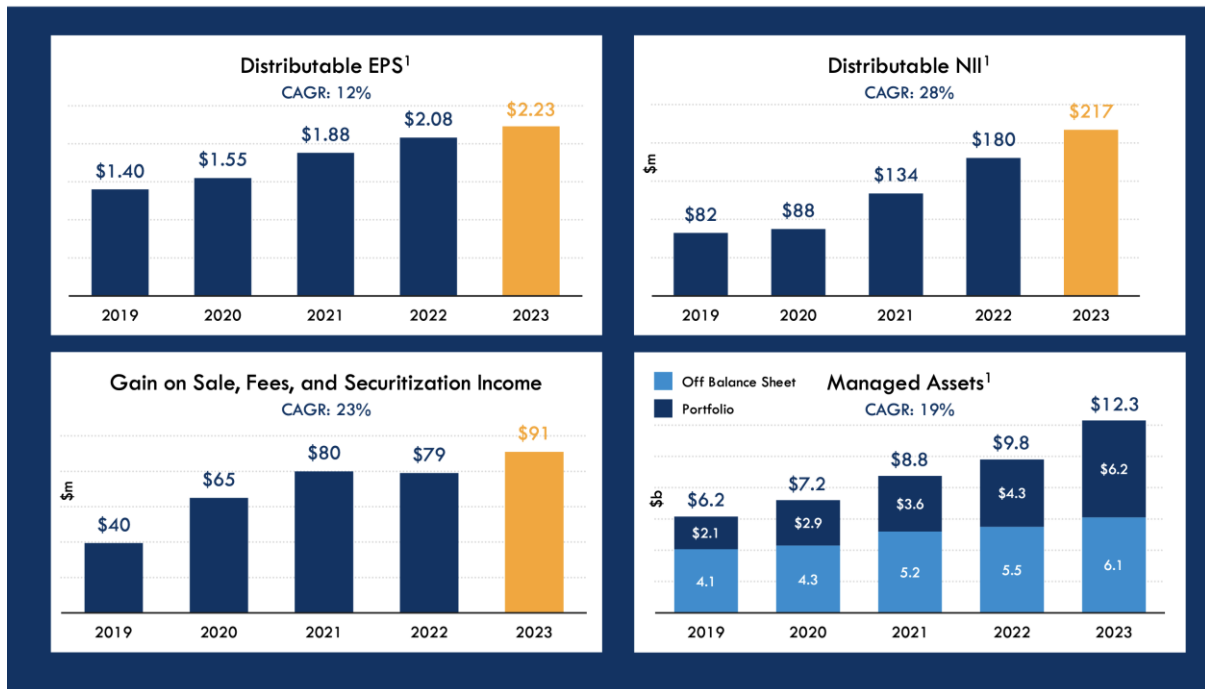
**carboncount<sup>®</sup>**  
Metric Tons of CO<sub>2</sub> Avoided Annually per \$1000 Invested

1. See Appendix for an explanation of Distributable Earnings, Distributable NII and Managed Assets, including reconciliations to the relevant GAAP measures, where applicable.  
 2. GAAP-based  
 3. Distributable ROE is calculated using Distributable Earnings for the period and the average of the quarterly ending equity balances for the period. Refer to reconciliation of GAAP Earnings to Distributable Earnings

The trend does remain positive:

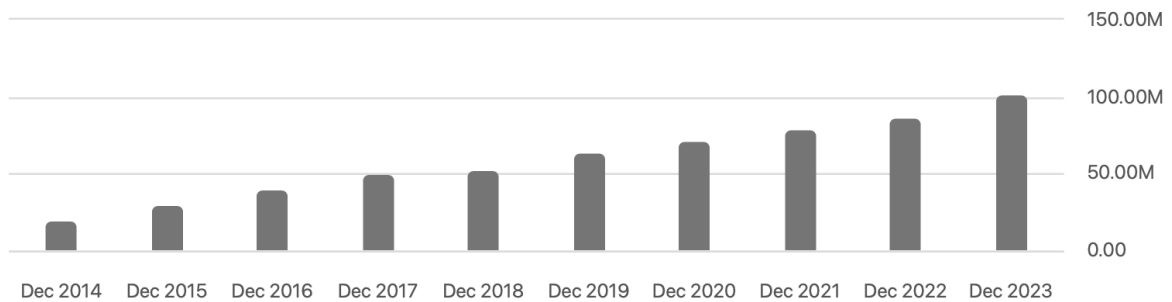
## Consistent High Growth in Key Metrics

**HASI**



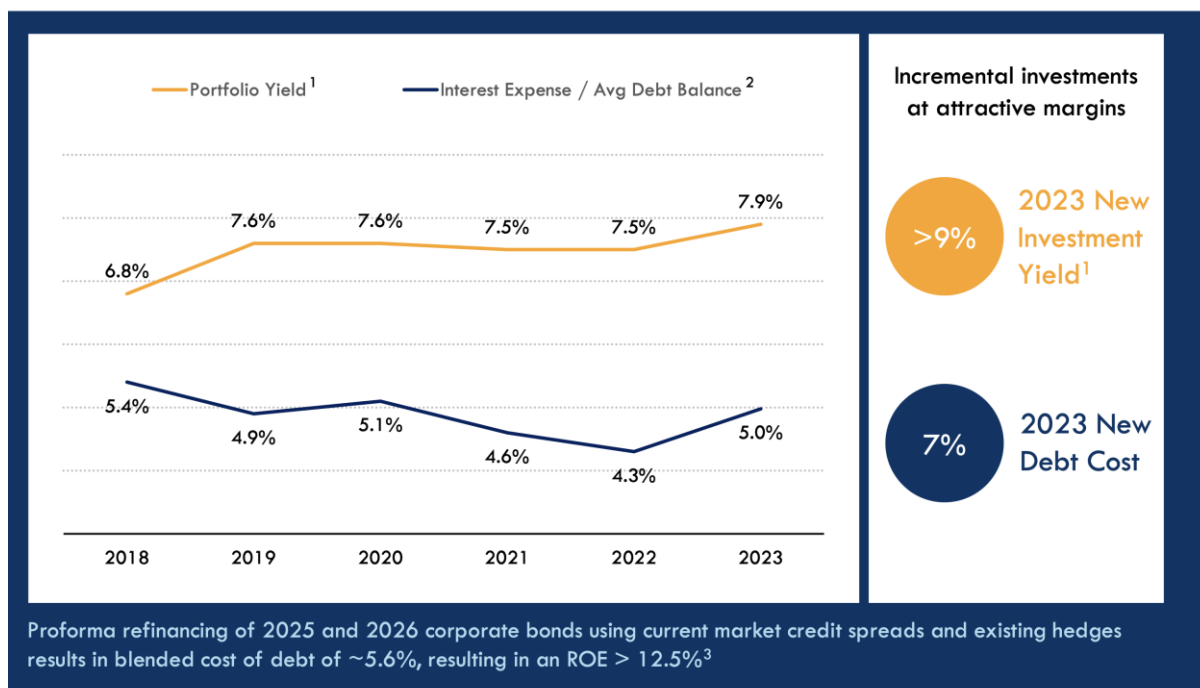
1. See Appendix for an explanation of Distributable Earnings, Distributable NII and Managed Assets, including reconciliations to the relevant GAAP measures, where applicable.

Unfortunately the company is growing but is doing that by issuing shares, a lot of shares:



Now with the stock price down, it might not be as smart. Further, this is a pure spread game, which is a game, when things turn, the management will disappear and have had their bonuses already and onto the next growing sector, be it marijuana, AI or whatever we will see in the future.

## Strong Margins through Various Interest Rate Environments



When the below is refinanced at 8%, it can get ugly, but of course, rates will go down and we all live happily ever after.

## Summary of Total Debt and Hedge Portfolio



Debt Facility	Debt Amount (millions) <sup>1</sup>	Interest Rate <sup>2</sup>	Maturity Year
Corporate Senior Unsecured Notes	\$1,000	3.38%	2026
Corporate Senior Unsecured Notes	\$550	8.00%	2027
Term Loan A	\$532	6.47%	2025
Convertible Notes	\$403	3.75%	2028
Revolving Line of Credit <sup>3</sup>	\$400	6.62%	2025
Corporate Senior Unsecured Notes	\$400	6.00%	2025
Corporate Senior Unsecured Notes	\$375	3.75%	2030
Convertible Notes	\$200	3.25%	2025
Rhea Debt Facility	\$200	6.88%	2028
Sustainable Yield Bond 2015-1A	\$68	4.28%	2034
Sustainable Yield Bond 2016-2	\$50	4.35%	2037
Commercial Paper Notes <sup>4</sup>	\$30	6.80%	2024
Other Non-Recourse	\$44	3.15%-7.23%	2024 to 2032

Hedged Instrument	Notional (\$ in millions)	Fixed Rate	Hedge Structure	Termination Date
2026 Sr. Notes	\$600	3.085%	Fwd-starting Pay fixed / Receive SOFR	6/15/2033 <sup>5</sup>
2026 Sr. Notes	\$400	2.980%	Fwd-starting Pay fixed / Receive SOFR	6/15/2033 <sup>5</sup>
2025 Sr. Notes	\$400	3.075%	Fwd-starting Pay fixed / Receive SOFR	4/15/2035 <sup>5</sup>
Term Loan A	\$400	3.788%	Pay fixed / Receive 1-mo Term SOFR	3/27/2033
Revolving Line of Credit	\$250	3.695% (Floor) 4.000% (Cap)	Collar	5/26/2026
Rhea Debt Facility	\$170	4.41%	Pay fixed / Receive Daily SOFR	9/10/2033

Fixed Rate Debt  
Floating Rate Debt, Swapped to Fixed Where Noted Below

## Xinyi Solar HKG: 0968

same story in HK when it comes to solar stocks. The company is a solar cover glass producer and has a 30% market share in the world. It is the world's leading manufacturer of photovoltaic glass.



### Xinyi Solar Holdings Ltd

HKG: 0968

Overview

Compare

Financials

Market Summary > Xinyi Solar Holdings Ltd

6,17 HKD

+4.75 (334.51%) ↑ all time

8 Apr, 16:08 GMT+8 • Disclaimer

+ Follow

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	6,22	Mkt cap	54,96B	52-wk high	9,65
High	6,26	P/E ratio	13,12	52-wk low	3,42
Low	5,91	Div yield	3,65%		

The stock jumped significantly after earnings had been announced in Feb 2024. And results looked better than in 2022:



**CONSOLIDATED INCOME STATEMENT  
FOR THE YEAR ENDED 31 DECEMBER 2023**

	Note	2023 <i>HK\$'000</i>	2022 <i>HK\$'000</i>
<b>Revenue</b>	3	<b>26,628,754</b>	20,544,041
Cost of sales	6	<u><b>(19,539,056)</b></u>	<u>(14,385,531)</u>
<b>Gross profit</b>		<b>7,089,698</b>	6,158,510
Other income	4	<b>370,149</b>	240,035
Other (losses)/gains – net	5	<b>(247,386)</b>	43,282
Selling and marketing expenses	6	<b>(106,062)</b>	(91,312)
Administrative and other operating expenses	6	<b>(1,203,556)</b>	(979,181)
Net impairment losses on financial and contract assets		<u><b>(10,070)</b></u>	<u>(53,641)</u>
<b>Operating profit</b>		<b>5,892,773</b>	5,317,693
Finance income	7	<b>34,315</b>	30,866
Finance costs	7	<b>(383,760)</b>	(198,392)

They are trading now at a PE ratio of 13:

**10 Earnings per share**

**(a) Basic**

Basic earnings per share is calculated by dividing the profit attributable to equity holders of the Company by the weighted average number of ordinary shares in issue during the year.

	2023	2022
Profit attributable to equity holders of the Company (HK\$'000)	<b>4,187,127</b>	3,820,144
Weighted average number of shares in issue (thousands)	<b>8,901,738</b>	8,894,405
Basic earnings per share (HK cents)	<u><b>47.04</b></u>	<u>42.95</u>

It is a weak investor relations page and I don't have the instruments to dig into this deeper and what is the expected revenue going forward....

# GCL Technology HKG: 3800

Well, it is for sure a volatile stock this one!!!



## GCL Technology Holdings Ltd

HKG: 3800

Overview

Compare

Market Summary > GCL Technology Holdings Ltd

1,22 HKD

+ Follow

-3.68 (-75.10%) ↓ all time

8 Apr, 16:08 GMT+8 • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	1,23	Mkt cap	32,87B	52-wk high	2,11
High	1,26	P/E ratio	11,92	52-wk low	0,89

Anyway, it is a silicon producer, thus depends on the demand for solar panels. Profits not looking good:



## GCL Technology Holdings Limited

協鑫科技控股有限公司

(Incorporated in the Cayman Islands with limited liability)

(Stock code: 3800)

### INSIDE INFORMATION PROFIT WARNING AND BUSINESS UPDATE

This announcement is made by GCL Technology Holdings Limited (the “**Company**”, together with its subsidiaries, the “**Group**”) pursuant to Rule 13.09(2)(a) of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Hong Kong Listing Rules**”) and the Inside Information Provisions (as defined in the Hong Kong Listing Rules) under Part XIVA of the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong).

#### PROFIT WARNING

Based on a preliminary assessment of the Group’s latest unaudited management accounts, the board of directors of the Company (the “**Board**”) wishes to inform the shareholders (the “**Shareholders**”) and potential investors of the Company that, for the year ended 31 December 2023 (the “**Year 2023**”), the profit attributable to the owners of the Company is expected to be approximately RMB2.3 billion to RMB2.6 billion, representing a decrease of approximately 84% to 86% compared to the audited profit attributable to the owners of the Company of approximately RMB16.0 billion for the year ended 31 December 2022 (the “**Year 2022**”).

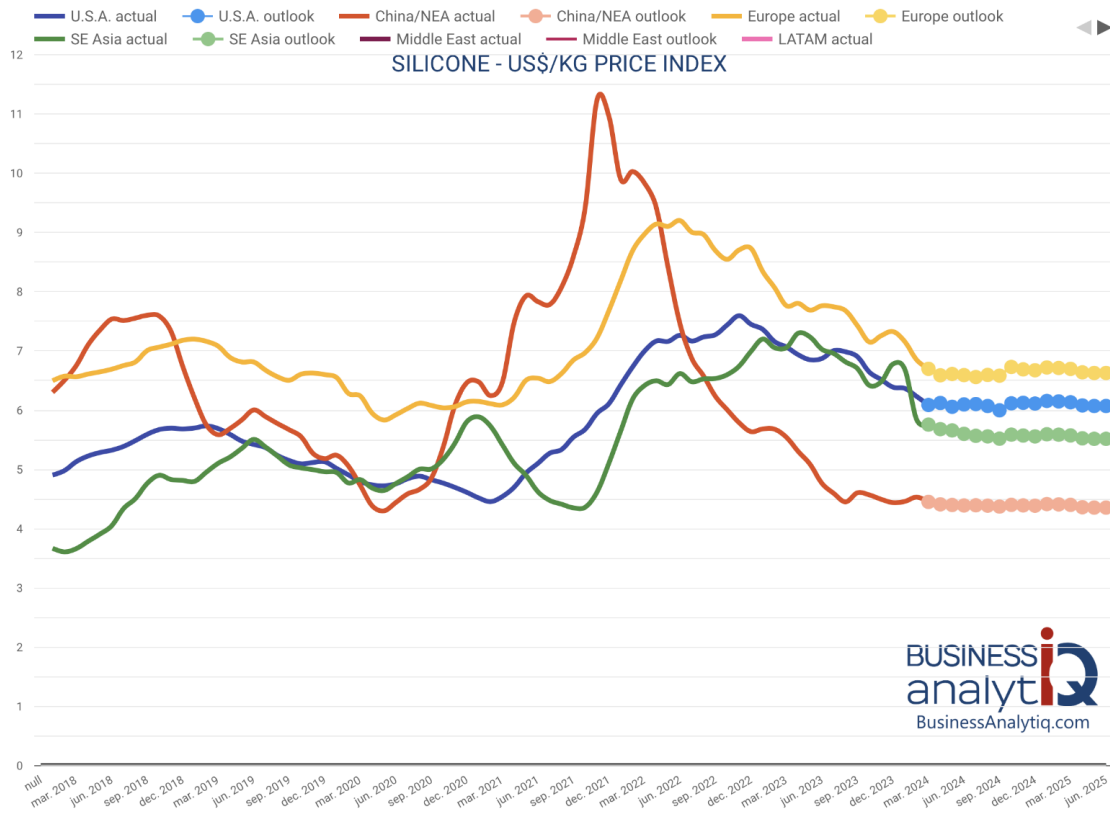
Unfortunately profits were down 84%, but revenues stable thus they are selling, but at lower prices:

### ANNOUNCEMENT OF AUDITED ANNUAL RESULTS FOR THE YEAR ENDED 31 DECEMBER 2023

Financial Highlights	Year ended 31 December		% of changes
	2023 RMB'million	2022 RMB'million	
<b>Continuing operations</b>			
Revenue	33,700.5	35,930.5	-6.2%
Gross profit	11,692.2	17,495.5	-33.2%
Profit for the year attributable to owners of the Company	2,510.1	16,393.7	-84.7%
Basic earnings per share	RMB9.47 cents	RMB61.34 cents	-84.6%
Diluted earnings per share	RMB9.46 cents	RMB61.21 cents	-84.6%

Silicon prices have reverted to pre-pandemic levels:

The chart below summarizes Silicone price trend per region, as well as the outlook. It takes a moment to load.



But, if the industry reverts to growth, this will grow too. Again, bad investor relations information.

## Sunrun NASDAQ: RUN Rooftop solar business

If I remember well, I considered Sunrun sort of a scam in booking revenues and profits when I looked at it in 2019, I see I've been right:



There is \$10 billion of debt on the balance sheet that nobody plans to repay. The losses are mounting and now the company is promising batteries:

Consolidated GAAP Income Statement (\$ in millions)	FY2020	FY2021	FY2022	1Q2023	2Q2023	3Q2023	4Q2023	FY 2023
<b>Revenue:</b>								
Customer agreements	\$ 433	\$ 725	\$ 872	\$ 225	\$ 274	\$ 290	\$ 288	\$ 1,077
Incentives	52	101	111	21	28	27	34	110
Customer agreements and incentives	484	827	983	246	302	317	322	1,187
Solar energy systems	270	471	914	229	202	135	90	656
Products	168	312	424	114	86	111	105	417
Solar energy systems and product sales	438	783	1,338	343	288	247	195	1,073
<b>Total revenue</b>	<b>922</b>	<b>1,610</b>	<b>2,321</b>	<b>590</b>	<b>590</b>	<b>563</b>	<b>517</b>	<b>2,260</b>
<b>Operating expenses:</b>								
Cost of customer agreements and incentives	386	699	844	237	269	284	288	1,077
Cost of solar energy systems and product sales	358	666	1,179	320	271	234	195	1,020
Sales and marketing	352	623	745	203	195	176	167	741
Research and development	20	23	21	5	5	5	8	22
General and administrative	267	259	189	52	56	48	57	214
Goodwill impairment	-	-	-	-	-	1,158	-	1,158
Amortization of intangible assets	5	5	5	1	1	5	-	7
<b>Total operating expenses</b>	<b>1,387</b>	<b>2,276</b>	<b>2,984</b>	<b>818</b>	<b>796</b>	<b>1,911</b>	<b>714</b>	<b>4,238</b>
<b>Loss from operations</b>	<b>(465)</b>	<b>(666)</b>	<b>(662)</b>	<b>(228)</b>	<b>(206)</b>	<b>(1,347)</b>	<b>(198)</b>	<b>(1,979)</b>
Interest expense, net	231	328	446	143	157	171	182	653
Other expenses (income), net	(8)	(23)	(261)	25	(41)	(78)	158	64
Loss before income taxes	(688)	(971)	(847)	(395)	(322)	(1,441)	(537)	(2,696)
Income tax (benefit) expense	(61)	9	2	(60)	19	30	(2)	(13)
Net loss	(627)	(981)	(850)	(336)	(341)	(1,471)	(535)	(2,683)
Net loss attributable to NCI and non redeemable NCI	(454)	(901)	(1,023)	(95)	(396)	(401)	(185)	(1,078)
<b>Net income (loss) attributable to common stockholder</b>	<b>(173)</b>	<b>(79)</b>	<b>173</b>	<b>(240)</b>	<b>55</b>	<b>(1,069)</b>	<b>(350)</b>	<b>(1,604)</b>
<b>EPS, diluted</b>	<b>\$ (1.24)</b>	<b>\$ (0.39)</b>	<b>\$ 0.80</b>	<b>\$ (1.12)</b>	<b>\$ 0.25</b>	<b>\$ (4.92)</b>	<b>\$ (1.60)</b>	<b>\$ (7.41)</b>
Wt avg basic shares	140	205	211	215	216	217	218	217
Wt avg diluted shares	140	205	219	215	222	217	218	217

I don't know. Likely the ETF solar craze kept this alive.

They are using a 6% discount rate for their long-term value estimations, use 9% and it is all a big negative.

Ah, too risky, anything can happen, not for me.!

# Array Technologies NASDAQ: ARRY

Another relatively recent sun IPO that tried to ride the trend.



## Array Technologies Inc

NASDAQ: ARRY

Overview

Financials

Compare

Market Summary > Array Technologies Inc

# 14,00 USD

+ Follow

-24.95 (-64.06%) ↓ all time

Closed: 9 Apr, 00:30 GMT-4 • Disclaimer

After hours 14,00 0,00 (0,00%)

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	14,01	Mkt cap	2,12B	52-wk high	26,64
High	14,12	P/E ratio	24,88	52-wk low	11,38
Low	13,82	Div yield	-		

Solar trackers:

### Our utility-scale solar trackers are deployed all across the globe



Revenue down, EBITDA up but still trading at 10 times EBITDA with declining revenues.

## Executive Summary

### 4Q 2023 Highlights

- ▶ Significant margin expansion from cost takeout initiatives, non-tracker revenue streams and 45X benefit recognition
- ▶ Gross Margin of 24.7%<sup>(1)</sup> and Adjusted Gross Margin<sup>(1)(2)</sup> of 25.7%, an expansion of 560 and 520 bps respectively from 4Q 2022
- ▶ Net Income of \$6.0 million and Adjusted EBITDA<sup>(2)</sup> margin expansion of 120 bps from 4Q 2022
- ▶ Free cash flow<sup>(3)</sup> of \$88.6 million

### Full Year 2023 Highlights

- ▶ Operational improvements driving increased profitability year-over-year
- ▶ Gross Margin of 26.4%<sup>(1)</sup> and Adjusted Gross Margin<sup>(1)(2)</sup> of 27.3%, an expansion of 1340 and 1300 bps respectively from 2022
- ▶ Net Income of \$85.5 million and Adjusted EBITDA<sup>(2)</sup> margin expansion of 1040 bps from 2022
- ▶ Free cash flow<sup>(3)</sup> increased to \$215.0 million, a 64% increase year-over-year

### 4Q 2023 Select Financials



### Full Year 2023 Select Financials



(1) 4Q 2023 and full year 2023 gross margin include a \$9.3 million cost of revenue reduction related to a portion of the \$50 million 45X manufacturing benefit earned for certain torque tube shipments in 2023; remainder of credit for 2023 will be recognized in 2024.  
 (2) See Appendix for reconciliation of non-GAAP measures to the closest GAAP measure.  
 (3) Free Cash Flow calculated as cash from (used in) operating activities less purchase of property, plant and equipment

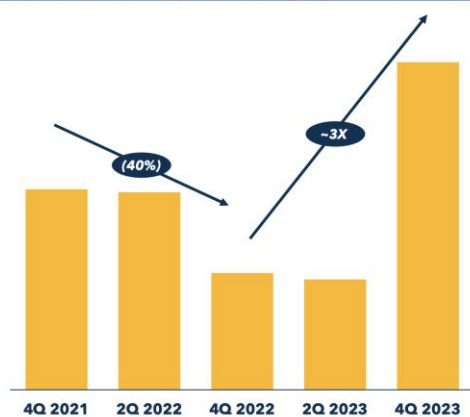
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As all others are saying, so does Array project huge growth ahead:

## Market Update and Revenue Outlook Dynamics

### ARRAY U.S. High Probability Pipeline Trend



5

### ARRAY U.S. Market Dynamics

- ▶ Expect 2024 ASPs to be down low double digits % year-over-year due to lower commodity costs, structural cost enhancements and partial pass through of 45x benefits
- ▶ Project delays continue in 1H 2024 as certain customers are signaling permitting/interconnection challenges, longer financing timelines, and supply chain constraints
- ▶ Key focus in early 2023 was structural margin enhancement which resulted in a temporary reduction in our high probability pipeline
- ▶ 2H 2023 business process improvements coupled with expanded product, software and service offerings driving high probability pipeline recovery
- ▶ Strong bookings momentum with \$600M in Q4 2023
- ▶ Expecting volume and revenue growth to resume in 2H 2024



guidance is for 20% lower in 2024:



## Full Year 2024 Guidance

Full Year Ending December 31, 2024		Planning Assumptions
Revenue	\$1.25 billion to \$1.40 billion	▶ Adjusted GM% in the low 30s, inclusive of retained torque tube 45X benefit
Adjusted EBITDA <sup>(1)(2)</sup>	\$285 million to \$315 million	▶ Adjusted SG&A between \$33 million - \$35 million per quarter
Adjusted net income per common share <sup>(1)(2)</sup>	\$1.00 to \$1.15	▶ Net Interest expense of \$8 - \$9 million per quarter
		▶ Preferred dividends of ~\$14 million per quarter (cash/PIK + discount amort)
		▶ Effective Tax Rate for Adjusted EPS: 26% - 28%
		▶ Capital Expenditures of \$25 - \$30 million
		▶ Free Cash Flow of \$100 - \$150 million

(1) Guidance includes retained benefits related to Inflation Reduction Act torque tube manufacturing 45X tax credits  
 (2) A reconciliation of projected adjusted Gross Margin, adjusted EBITDA and adjusted net income per share, which are forward-looking measures that are not prepared in accordance with GAAP, to the most directly comparable GAAP financial measures, is not provided because we are unable to provide such reconciliation without unreasonable effort. The inability to provide a quantitative reconciliation is due to the uncertainty and inherent difficulty predicting the occurrence, the financial impact and the periods in which the components of the applicable GAAP measures and non-GAAP adjustments may be recognized. The GAAP measures may include the impact of such items as non-cash charge-based compensation, revaluation of the fair value of our contingent consideration, amortization of intangible assets and the tax effect of such items, in addition to other

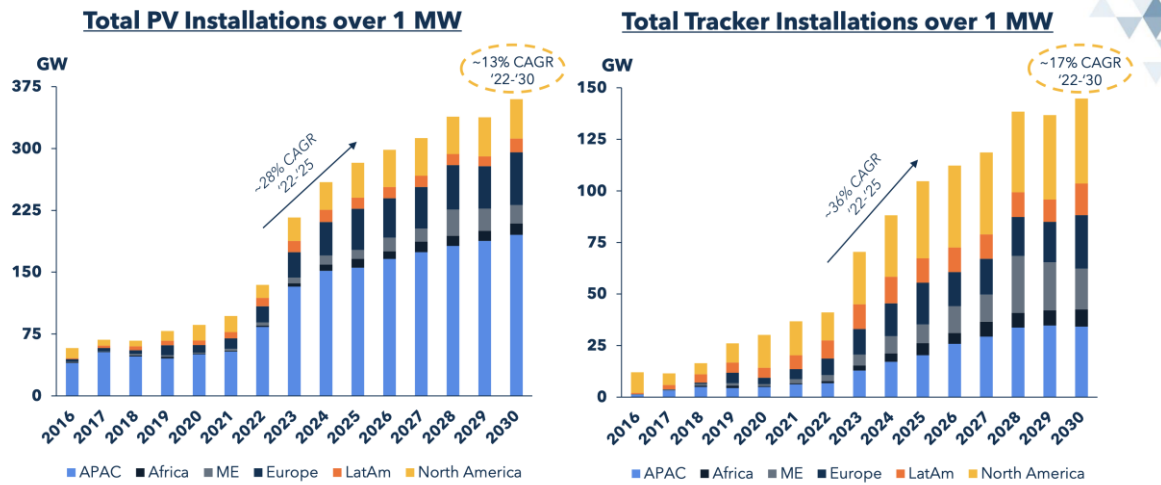
Acquisition at the peak of the solar boom, thus paid a big price.

## Company History



This is from their November 2023 presentation, huge growth in the market, but their revenues will at best be 20% down in 2024.

## Tracker Market Outpacing Total Utility Scale Solar Growth



Now, the logic should be simple, the more solar plants are built, the more trackers you need, but it seems there is no competitive advantage here, thus producers are at the mercy of supply and demand, it is just a commodity where there is a lot of capacity as everyone invested in the huge growth expected and shown above. Thus, a difficult business.

## Shoals Technologies NASDAQ: SHLS

When you see another IPO, that means there has been so much money chasing the trends, the subsidies, the possibility to go public and invest, that it can last very long for that supply of whatever it was to get cleaned in the cycle. Thus, the downturn might last longer than expected.

 **Shoals Technologies Group Inc**  
NASDAQ: SHLS

[Overview](#) [Financials](#)

Market Summary > Shoals Technologies Group Inc

10,27 USD

[+ Follow](#)

-23.66 (-69.73%) ↓ all time

Closed: 8 Apr, 17:33 GMT-4 • Disclaimer

After hours 10,22 -0,050 (0,49%)

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	10,54	Mkt cap	1,75B	52-wk high	28,34
High	10,79	P/E ratio	42,26	52-wk low	10,18
Low	10,24	Div yield	-		

This is 'electrical balance':



They are growing:

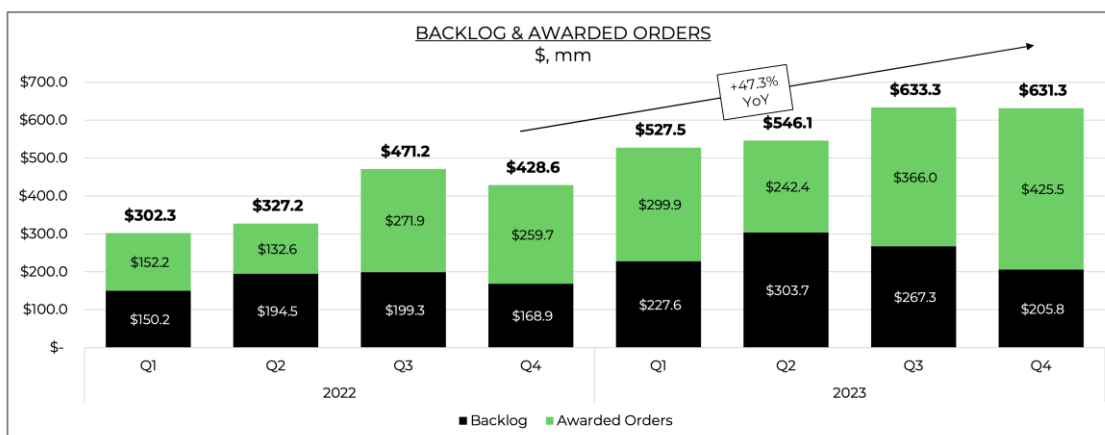
# SHOALS BUSINESS UPDATE

<b>Continued Strong Growth in 2023</b>	<b>Revenues and Adjusted EBITDA up 50% and 86%, respectively versus prior year period<sup>(1)</sup></b>
<b>New Plant</b>	<b>Shoals expanding and centralizing capacity in Portland, Tennessee with 638,330 square foot facility</b>
<b>Strong Order Book</b>	<b>Backlog and awarded orders up 47% versus prior year<sup>(2)</sup></b>
<b>Strong Operating Leverage</b>	<b>Adjusted Gross profit % increased 680 bps in 2023 versus prior year to 47.0%, reflecting favorable mix and operational efficiencies<sup>(3)</sup></b>
<b>International</b>	<b>Strong growth in international business, which now accounts for more than 13% of backlog and awarded orders</b>

(1) Based on revenues and adjusted EBITDA for the period ended December 31, 2023, of \$468.9 million and \$173.4 million, respectively, compared with revenues and adjusted EBITDA of \$326.9 million and \$92.9 million, respectively, for the period ended December 31, 2022. See Appendix for reconciliation of non-GAAP measures.  
 (2) Based on backlog and awarded orders of \$631.3 million as of December 31, 2023, compared to backlog and awarded orders of \$428.6 million as of December 31, 2022.  
 (3) Based on adjusted gross profit % of 47.0% for the period ended December 31, 2023, compared with adjusted gross profit % of 40.2% for the period ended December 31, 2022.

But their backlog has plateaued:

## BACKLOG & AWARDED ORDERS



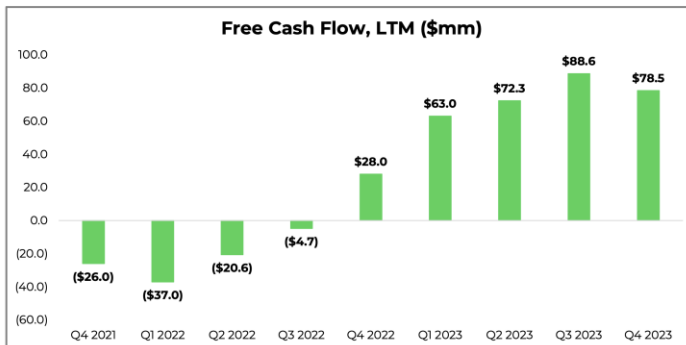
- Fourth quarter orders of \$128 million, up 147% year-over-year
- Fourth quarter quoting activity increased 154% year-over-year
- International comprised more than 13% of backlog and awarded orders as of December 31, 2023

They had \$78 million in FCF.

## FREE CASH FLOW

\$, mm	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023
Net Cash Provided by (Used in) Operating Activities	\$2.6	(\$25.9)	\$19.1	\$11.8	\$34.4	\$9.9	\$27.9	\$27.7	\$26.4
Net Cash Used in Investing Activities	(\$1.6)	(\$0.9)	(\$1.3)	(\$0.7)	(\$0.8)	(\$2.0)	(\$2.4)	(\$3.5)	(\$2.9)
Distributions to non-controlling interest	\$ -	(\$2.9)	(\$1.6)	(\$3.2)	\$ -	(\$2.6)	\$ -	\$ -	\$ -
Free Cash Flow <sup>1</sup>	\$1.0	(\$29.7)	\$16.2	\$7.8	\$33.7	\$5.3	\$25.5	\$24.1	\$23.5
<b>Free Cash Flow, LTM</b>	<b>(\$26.0)</b>	<b>(\$37.0)</b>	<b>(\$20.6)</b>	<b>(\$4.7)</b>	<b>\$28.0</b>	<b>\$63.0</b>	<b>\$72.3</b>	<b>\$88.6</b>	<b>\$78.5</b>

- Free cash flow generation is expected to support further deleveraging and investment in the business.



<sup>1</sup> Free cash flow is defined as Net Cash Provided by (used in) Operating Activities plus Net Cash Used in Investing Activities plus Distributions to non-controlling interest



And guidance is flat for 2024:

## GUIDANCE

1Q 2024, (\$mm)	Guidance
Revenue	\$90 - \$100
Adjusted EBITDA	\$15 - \$20

2024, (\$mm)	Guidance
Revenue	\$480 - \$520
Adjusted EBITDA	\$150 - \$170
Adjusted Net Income	\$90 - \$110
Cash Flow from Operations	\$100 - \$120
Capital Expenditures	\$15 - \$20
Interest Expense	\$15 - \$20

Ok, just another of these businesses, will there be a winner? Impossible to know.

# Encavis ETR: ECV - TAKEOVER

ENCAVIS

## Transaction highlights

- » Encavis AG and Elbe BidCo AG ("Investor"), a holding company controlled by investment funds, vehicles and accounts advised and managed by Kohlberg Kravis Roberts & Co. L.P. and its affiliates ("KKR"), entered into an Investment Agreement on 14<sup>th</sup> March 2024.
- » KKR will be investing from its Core Infrastructure Strategy.
- » The strategic investment vehicle of family company Viessmann, will invest as co-investor in a KKR-led consortium in Encavis AG.
- » The Investor will concurrently launch a voluntary public takeover offer (the "Offer"), offering all shareholders a cash consideration of EUR 17.50 per share.
- » The ABACON CAPITAL GMBH and other existing shareholders have signed binding agreements to sell and partly roll-over to the Investor a total amount of around 31% of Encavis AG shares and are fully supportive of the takeover offer.
- » The Management Board and the Supervisory Board of Encavis AG, which have approved the execution of the Investment Agreement today, expressly support the Offer<sup>1</sup>.
- » The Management Board and Supervisory Board of Encavis AG intend to recommend acceptance of the Offer to Encavis AG's shareholders.

<sup>1</sup>Subject to their review of the Offer Document still to be published by Elbe BidCo AG and their fiduciary duties

2

A business that has been around for a while.

ENCAVIS

Encavis AG

ETR: ECV

Overview

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Market Summary > Encavis AG

16,85 EUR

-10.28 (-37.89%) ↓ all time

9 Apr, 09:34 CEST • Disclaimer

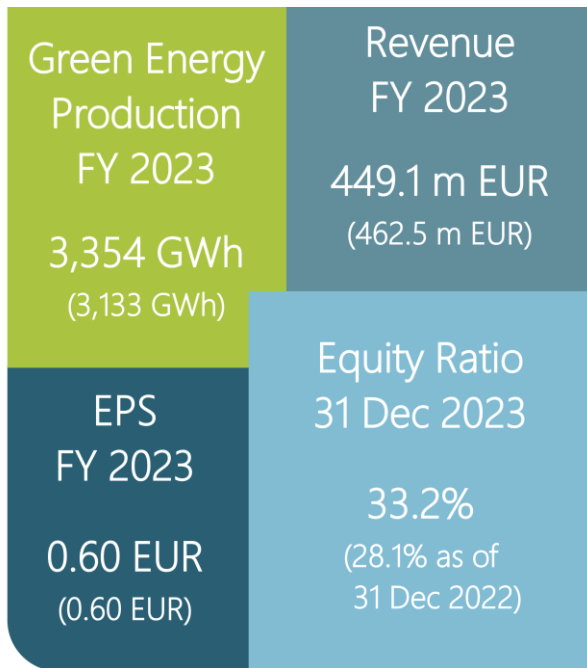
+ Follow

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	16,86	Mkt cap	2,71B	52-wk high	17,16
High	16,87	P/E ratio	-	52-wk low	10,72
Low	16,85	Div yield	-		

Utility:



Investment Agreement signed with KKR and Viessmann to accelerate ENCAVIS' growth

ENCAVIS

**ENCAVIS is right on track!**

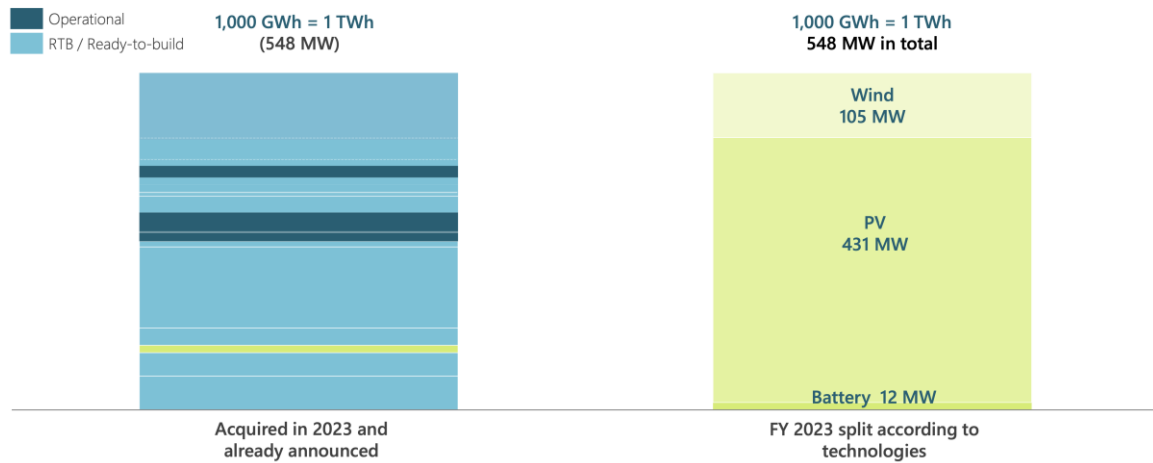
- + FY results 2023 beat Guidance again
- + Uplifted Growth Ambitions up to FY 2027

Conference Call Consolidated Financial Statements FY 2023 incl. Guidance FY 2024e and Uplifted Accelerated Growth Strategy 2027, 27<sup>th</sup> March 2024

Growing with acquisitions:

ENCAVIS

**Acquisitions in 2023 with 1 TWh = 1,000 GWh are in total 33 percent above the targeted electricity production of 750 GWh**



9% operating cash flow yield:

## Operating EPS achieves last year's level despite lower electricity prices in 2023

Operating figures (in EUR million)	FY 2021	FY 2022	FY 2023	Absolute change to FY 2022	Change to FY 2022 in percent
Energy production in GWh	2,755	3,133	3,354	+ 221	+ 7 %
<i>thereof existing portfolio</i>	2,755	3,129	3,069	- 60	- 2 %
Operating / Net Revenue	332.7	487.3 / 462.5 <sup>*)</sup>	460.6 / 449.1 <sup>*)</sup>	- 26.7 / - 12.6	- 5 % / -3 %
Operating EBITDA	256.4	350.0	319.2	- 30.8	- 9 %
Operating EBIT	149.1	198.3	194.3	- 4.0	- 2 %
Operating Cash Flow	251.9	327.2	234.9	- 92.4	- 28 %
Operating CFPS in EUR	1.74	2.04	1.46	- 0.58	- 28 %
Operating EPS in EUR	0.48	0.60	0.60	+/- 0.00	n.a.

2023/12/31  
Equity ratio  
33.2 %

<sup>\*)</sup> FY 2022 Net revenue of EUR 462.5 million post subtracted European price caps in the amount of EUR 24.9 million  
FY 2023 Net revenue of EUR 449.1 million post subtracted European price caps in the amount of EUR 11.5 million

### Lower energy prices:

## Significant decline in revenue from parks based on lower prices in combination with lower output

Operating P&L (in EUR million)	Solar parks		Wind farms		PV Services		Asset Management		HQ/Consolidation	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Operating Net Revenue	311.9	<b>288.6</b>	120.6	<b>98.9</b>	12.7	<b>55.0</b>	24.0	<b>28.9</b>	-	-
Operating EBITDA	250.2	<b>221.7</b>	99.9	<b>86.0</b>	2.7	<b>6.1</b>	10.6	<b>14.8</b>	- 13.4	<b>- 9.7</b>
Operating EBITDA margin*	80 %	<b>77 %</b>	83 %	<b>87 %</b>	21 %	<b>11 %</b>	44 %	<b>51 %</b>	-	-
Operating EBIT	125.9	<b>133.6</b>	74.3	<b>55.8</b>	2.5	<b>5.1</b>	9.9	<b>10.0</b>	- 14.4	<b>- 10.5</b>
Operating EBIT margin*	40 %	<b>46 %</b>	62 %	<b>56 %</b>	19 %	<b>9 %</b>	41 %	<b>35 %</b>	-	-

(Operating expenses distributed among Business Segments)

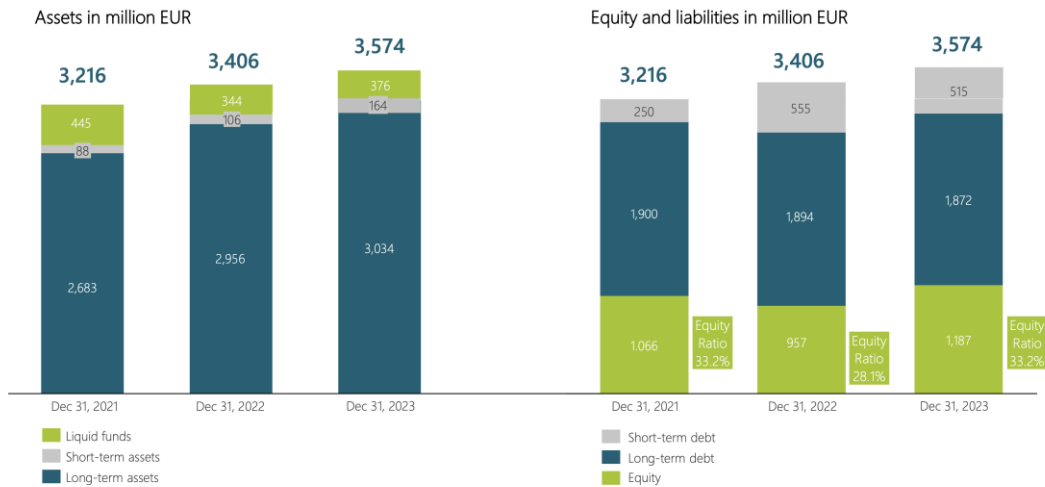
\* Relative to net revenue

26/03/2024 10

and then there is the debt:



### Slight growth of balance sheet total and strong increase in equity boost equity ratio by five percentage points to 33.2 percent



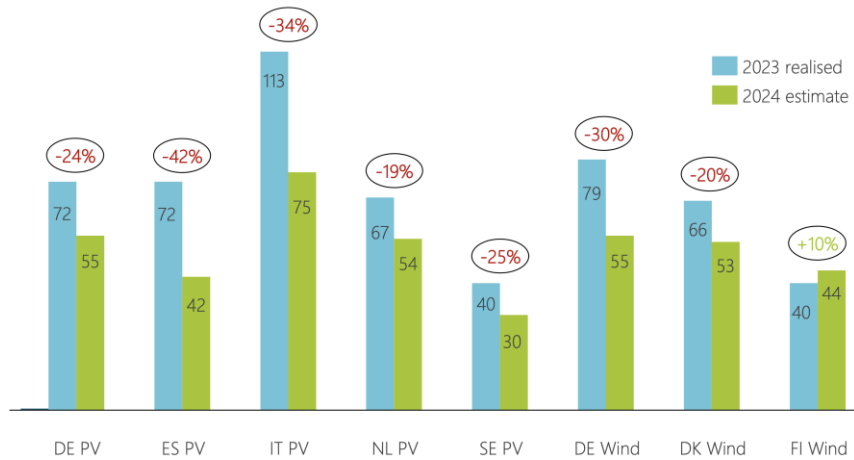
26/03/2024 16

### Lower prices:

02 Guidance FY 2023e

### Expected development of electricity price levels 2024 versus 2023

- Chart shows average day-ahead capture market prices for different technologies (w/o consideration of price cap regimes, subsidies, PPAs ...)
- These prices are relevant for the valuation of open positions, additional short-term hedges as well as higher payment opportunities exceeding German and Dutch FiT



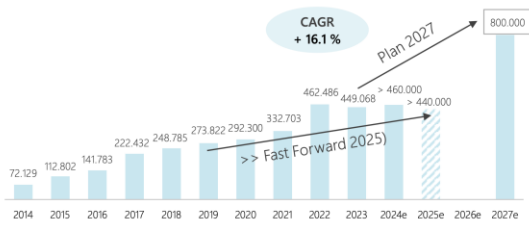
2023 – Jan 2024: Data from ENTSO-E  
Feb – Dec 2024: Expectations according to Forward Prices

18

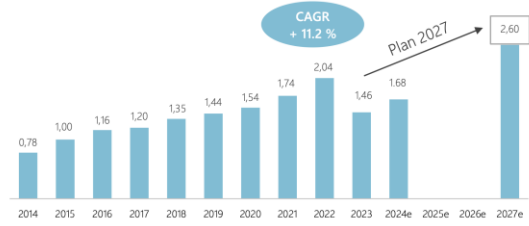
### They plan to grow, by using more debt or equity:

Accelerate growth - Right now!

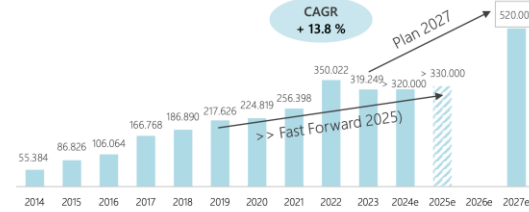
Revenue (in EUR '000)



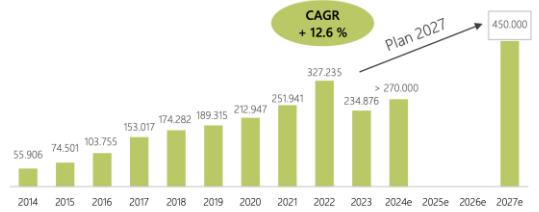
Operating CFPS (in EUR)



Operating EBITDA (in EUR '000)



Operating Cashflow (in EUR '000)



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These things work in this way: IF THIS WORKS, WE GET RICH, IF IT DOESN'T, TAXPAYERS WILL DEAL WITH IT:

06 Accelerated Growth Strategy 2027

Financing of the new Accelerated Growth Strategy 2027

The planned investment volume of 3.9 billion euros covers the purchase of the project rights of the cumulative 5.2 GW as well as the construction of 3.7 GW of these generation capacities

60% of this volume is to be covered by non-recourse project financing: 2.4 billion euros

The share of own resources for the financing is thus 1.5 billion euros

Of this, 0.2 billion euros will be provided by minority shareholders at park level

The remaining 1.3 billion euros will be financed over the course of the five planning years, i.e., around 260 million euros per year

The Group relieves the balance sheet in the planning period through repayments of 150 million euros p.a. at the SPV level

At the same time, the Group's equity will be strengthened by releasing the currently very high hedge reserves

Despite the increased indebtedness the Group maintains the equity target ratio of >24%

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JOB DONE, WE GET RICH FROM TAKEOVER....

# Daqo New Energy NYSE: DQ - NET NET

Silicone and polysilicon.



## Daqo New Energy Corp

NYSE: DQ

Overview

Financials

Compare

Market Summary > Daqo New Energy Corp

25,92 USD

+ Follow

+15.79 (155.87%) ↑ all time

Closed: 8 Apr, 16:01 GMT-4 • Disclaimer

Pre-market 25,92 0,00 (0,00%)

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	27,05	Mkt cap	2,03B	52-wk high	48,76
High	27,12	P/E ratio	0,92	52-wk low	17,30
Low	25,92	Div yield	-		

Many ask me how they have \$3 billion in cash and the market capitalization is \$2 billion. Well, they also have an A listing in China with a market capitalization of \$7.9 billion USD and where the cash is. Daqo New Energy owns 72.68% of the Chinese subsidiary Xinjiang Daqo. Thus, yes, \$2.18 billion should belong to US listing shareholders, plus the rest of the business.

## Xinjiang Daqo New Energy Co Ltd

SHA: 688303

Overview

Financials

Co

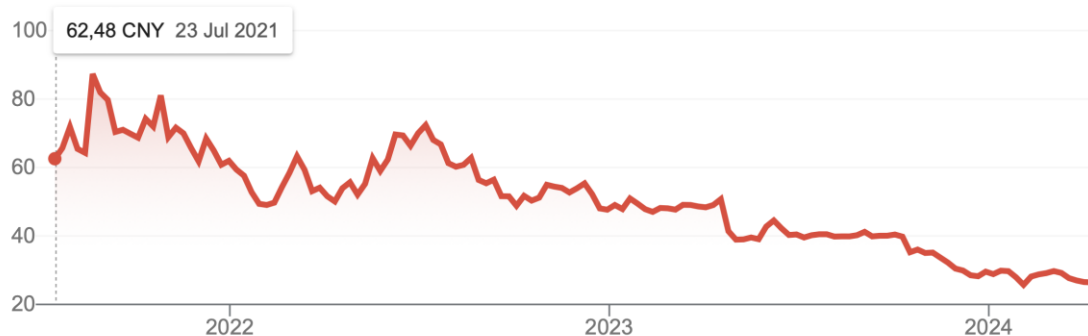
Market Summary &gt; Xinjiang Daqo New Energy Co Ltd

26,45 CNY

-36.03 (-57.67%) ↓ all time

+ Follow

9 Apr, 15:00 GMT+8 • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max

Open	25,90	Mkt cap	56,91B	52-wk high	52,20
High	26,50	P/E ratio	9,80	52-wk low	24,69
Low	25,71	Div yield	-		

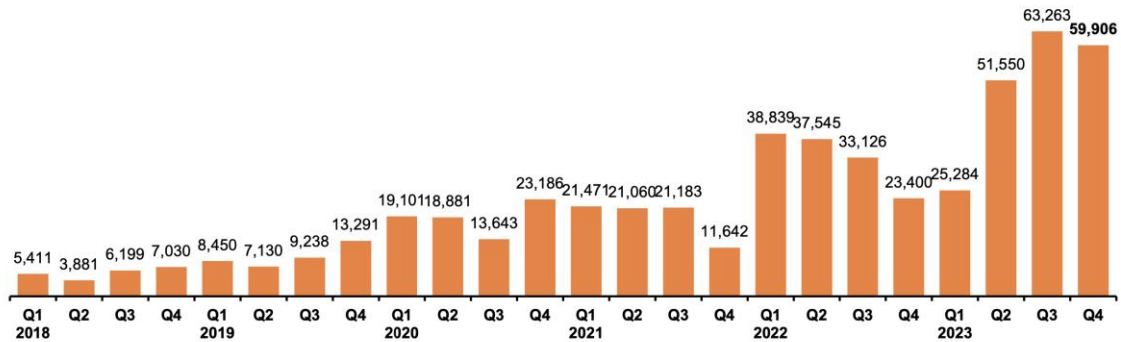
Now, the question is why aren't shareholders rewarded? A common question with Chinese stocks listed in the US first, only to follow with listing China but one where it is often hard to find the answer going past words in conference calls.

Polysilicon prices boomed in 2021, remained high in 2022 only to crash in 2023. In that period, producers were filled with cash that led them to increase production capacity like Daqo did too and is still planning to do. As surging supply was met by a slowdown in demand, prices have crashed.

## Quarterly Polysilicon Sales Volume and ASPs



### Polysilicon External Sales Volume



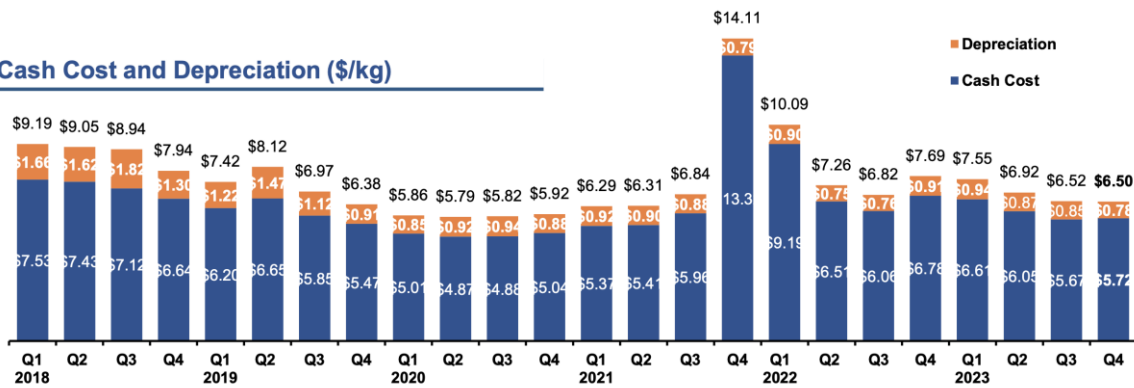
### Polysilicon ASPs



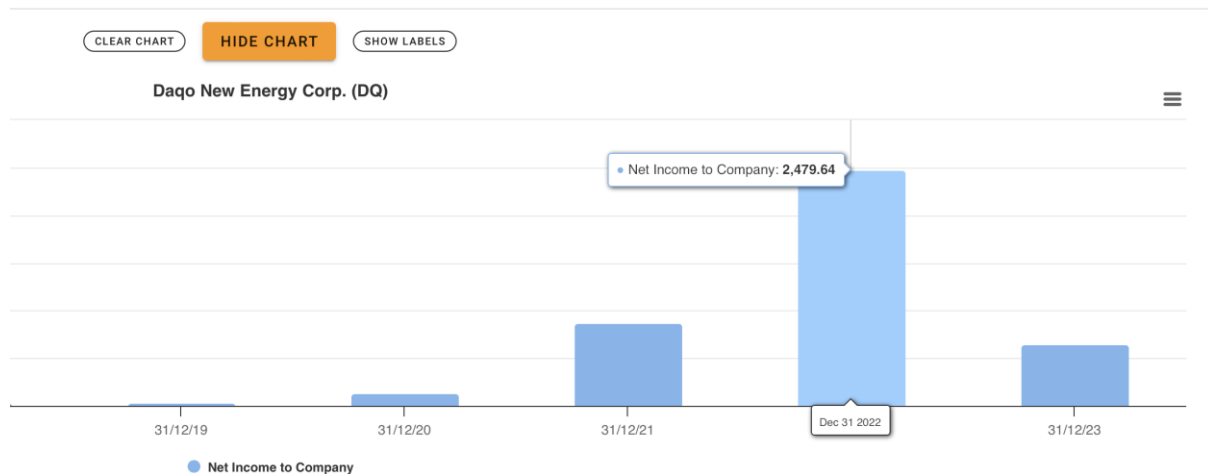
10

Current prices are just above production costs which means nobody is making any money in the industry.

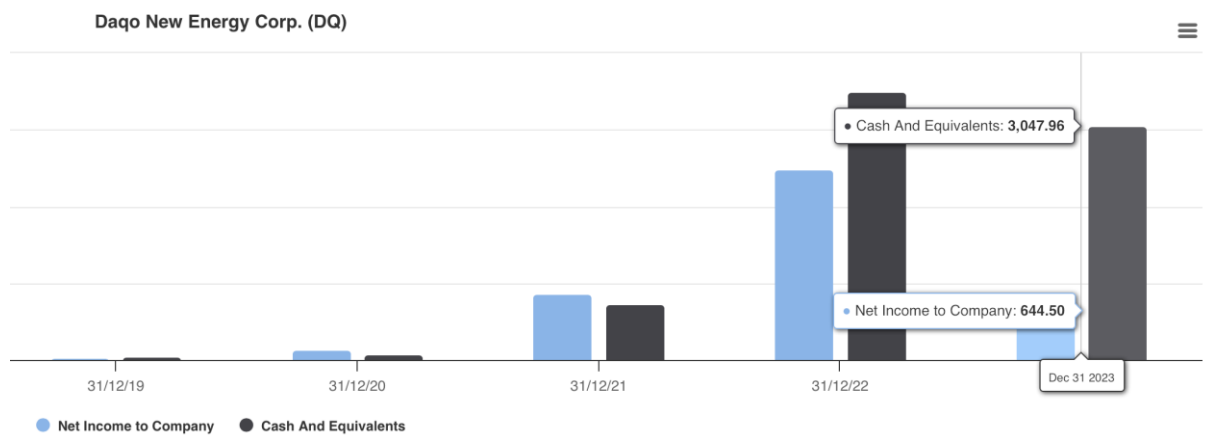
### Cash Cost and Depreciation (\$/kg)



When prices were high, Daqo was making a lot of money.



They made more than \$3 billion in profits over the booming years. The thing is those profits are not rewarding shareholders but held at company level and the current cash level is \$3 billion.



Same old story, market challenges and then a maybe promise of a dividend or buybacks.

**Xiang Xu**

[Foreign Language] [Interpreted]

So thank you. Thank you, Phil. So we are, first of all, we are very confident in our company's operations and we have sufficient cash flows that Ming has mentioned previously. However, as the market is currently undergoing tremendous challenges and there are a lot of unforeseeable market dynamics happening, the board is keeping an close eye on the current market conditions and see how it evolves as time goes. And we believe that we still want to maintain a very healthy balance sheet to survive in this market and to undergo the current conditions.

That being said, we have -- we are still considering the share repurchase plan, but that will be contingent upon the A-share dividend plan, which the A-share board will discuss. And post they decide on the A-share dividend plan for 2023, we believe that we will get back to our investors about whether we'll release another share repurchase program or via other methods to increase shareholder confidence like dividends.

And, they are still investing in production:

**Ming Yang**

Hi, Alan. This is Ming. So, regarding the CapEx plan this year, so if you look at our ongoing CapEx projects, right, so primarily this year will be for the Inner Mongolia Phase 2, that's where we're spending most of our CapEx, as well as some of the remaining payments on the Inner Mongolia Phase 1. And there's some small payments on the semiconductor project that's expected to start production this year, and then our silicon metal projects in both in the Mongolia and Xinjiang.

So from that perspective, our current CapEx budget for the year is around RMB8 billion to RMB9 billion for 2024 to implement the above projects and we're expecting that, so in terms of U.S. dollars roughly \$1.1 billion to \$1.3 billion. And certainly the CapEx fully funded.

The Asian dividend has been announced recently and now one can wait what will be announced for the US listing.

## Xiang Xu

[Foreign Language] [Interpreted]

So, based on the Asia regulation and disclosure requirements, we expect to announce sometime near the end of March. And after, as we have said previously, after the Asia Xinjiang Daqo announces their dividend plan for the year. We will discuss among our board again whether to roll out another share purchase program or to distribute dividends.

## Unidentified Analyst

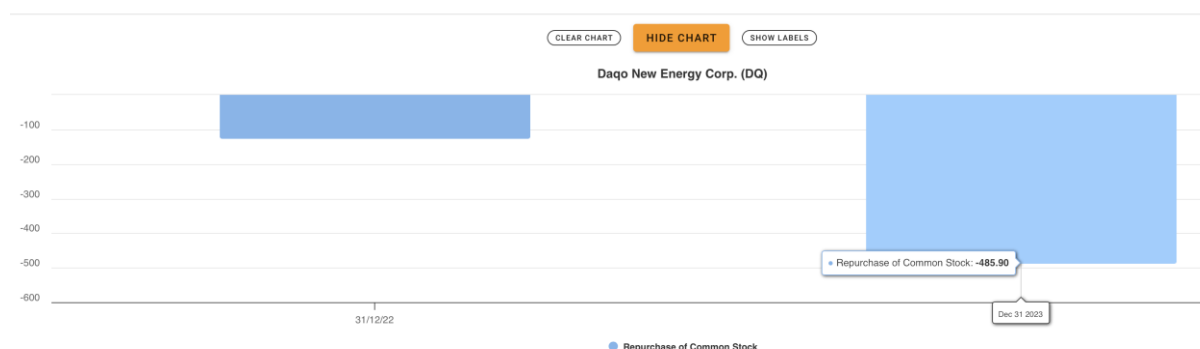
Okay. So, like in March, April, we should hear also from the Daqo New York Stock Exchange listed company a response on the dividend or the extended buyback or special dividend from the cash balance or something like that? So April, let's say April starts to mid-April?

## Ming Yang

Yes, yes, that will be the likely timeline, yes, after Asia down their dividend level.

[The announcement gives a](#) dividend of RMB 893,308,292 which accounts for 15.50% of the net profit attributable to them in 2023. That is about \$90 million for the US listed entity. Something, but just crumbs compared to the \$3 billion in net income.

For now, they did do some repurchases in 2023 but stopped with the program due to market uncertainties.



Now, the owner of the Chinese company can sell shares of it 3 years after the IPO, which will be mid 2024. The management said that is an option and then to buy back in the US at a quarter of the price immediately creating value.

HOW WILL THE CASH COME OUT, WILL IT, WHEN AND HOW MUCH? Impossible to know without having a direct link to the owner. THAT IS THE RISK AND REWARD - delisting at current prices would be the smartest thing to do for the owners. Maybe they are waiting for lower prices...



# Neoen EPA: NEOEN



## Neoen SA

EPA: NEOEN

Overview

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Market Summary > Neoen SA

# 28,54 EUR

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+13.25 (86.66%) ↑ all time

9 Apr, 17:35 CEST • Disclaimer

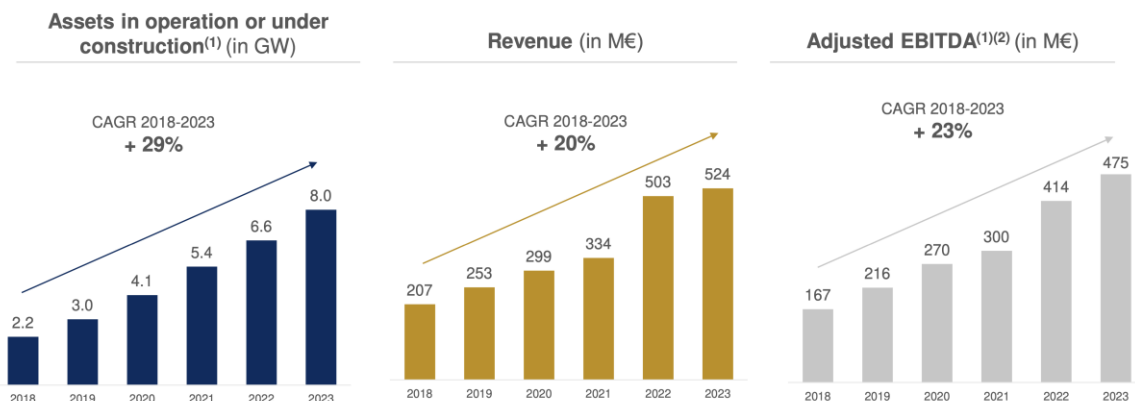
1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	28,70	Mkt cap	4,34B	52-wk high	30,92
High	29,12	P/E ratio	27,36	52-wk low	21,80
Low	28,40	Div yield	0,53%		

First page of the presentation is of how they grow:

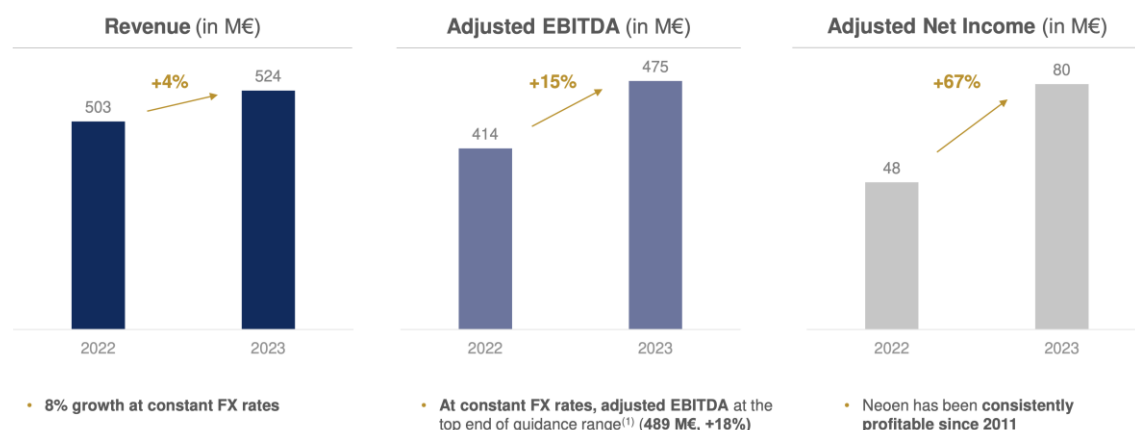
## Neoen has been delivering superior growth since its IPO



(1) Restated from the biomass business sold in September 2019  
 (2) Adjusted EBITDA implemented in 2022

Net income 80 million and they plan to double GW as the assets are built.

## 2023, a year of record financial performance



(1) Guidance between 460 and 490 M€ given on March 2023

and the 4th slide is about how they grow, by issuing rights. There is one letter from Buffett discussing how one should better stay away from rights and warrants. In this case you are on the receiving end, as just 50% of shareholders gave support to it.

## Corporate financial resources significantly strengthened

€

€750 million Rights issue

March 2023

- €750 million gross proceeds raised
- Overall subscription rate of 162%
- Strong support from existing shareholders (representing 50% of the right issue)
- Free float increased to 45.2%<sup>(1)</sup> from 43.3% before rights issue

€

€500 million Syndicated credit facility

February 2024 (post-closing)

*Refinancing of the undrawn €250m syndicated credit facility maturing 2026*

- Amount raised to €500m (€300m Term Loan and €200m RCF)
- Maturity extended to February 2029 (+ 2 one-year options for the RCF)
- Margin indexed to ESG criteria<sup>(2)</sup>
- Renewed trust from a longstanding pool of international banking partners

**By further increasing its corporate liquidity position, Neoen is fully on track to deliver 10 GW of assets in operation and under construction in the course of 2025**

Anyway, crazy market cap for the profits, even if all is built. The green energy boom still hasn't deflated and these prices are ridiculous.

And this is the final description of the sector: everybody is investing in growth, everybody is competing for the same assets - the only conclusion is that returns will be low.

## Strong increase in portfolio

Category	31.12.2022	31.12.2023
<b>Total Pipeline</b>	<b>11.9 GW</b>	<b>18.6 GW</b>
Advanced development	9.9 GW	15.7 GW
Tender-ready	2.0 GW	3.0 GW
Awarded	0.8 GW	1.0 GW
Under construction	2.5 GW	3.0 GW
In operation	4.1 GW	5.0 GW
<b>Secured Pipeline</b>	<b>7.4 GW</b>	<b>9.0 GW</b>
<b>Advanced Pipeline</b>	<b>11.9 GW</b>	<b>18.6 GW</b>
<b>2025 Capacity Target</b>	-	<b>10 GW</b>

(1) Consolidated capacity post farm-down

## Growth by dilution and debt:

Income Statement   TIKR.com	31/12/16	31/12/17	31/12/18	31/12/19	31/12/20	31/12/21	31/12/22	31/12/23	LTM
Weighted Average Diluted Shares Outstanding		70.49	89.46	94.66	107.62	121.81	144.01	144.01	
Total Liabilities	973.93	1,631.45	1,913.70	2,705.20	3,135.50	3,571.20	4,359.30	4,737.60	4,737.60

31

## Canadian Solar NASDAQ: CSIQ

I've [made a video debunking Canadian solar in October 2024](#) - it says it all. In short, it is another example of non-rewarding shareholders. It can change in the future, but you never know.



### Debunking Canadian Solar Stock - A STRONG BUY! (NASDAQ: CSIQ)

25K views · 5 months ago

Value Investing with Sven Carlin, Ph.D.

My passion is to look for low risk high reward investment opportunities. I apply my accounting skills and investing experience in ...



## Canadian Solar Inc

NASDAQ: CSIQ

Overview

Financials

Compare

### Market Summary > Canadian Solar Inc

18,74 USD

+ Follow

-20.03 (-51.66%) ↓ past year

Closed: 9 Apr, 16:58 GMT-4 • Disclaimer

After hours 18,73 -0,010 (0,053%)

1D | 5D | 1M | 6M | YTD | **1Y** | 5Y | Max



Open	17,39	Mkt cap	1,21B	52-wk high	45,29
High	18,85	P/E ratio	4,93	52-wk low	17,08
Low	17,39	Div yield	-		

# Clearway Energy NYSE: CWEN

d



## Clearway Energy Inc Class C

NYSE: CWEN ⋮

Overview
Compare

Market Summary > Clearway Energy Inc Class C

## 24,21 USD

+ Follow

-0.29 (-1.18%) ↓ all time

Closed: 9 Apr, 16:01 GMT-4 • Disclaimer

After hours 24,21 0,00 (0,00%)

1D
5D
1M
6M
YTD
1Y
5Y
Max

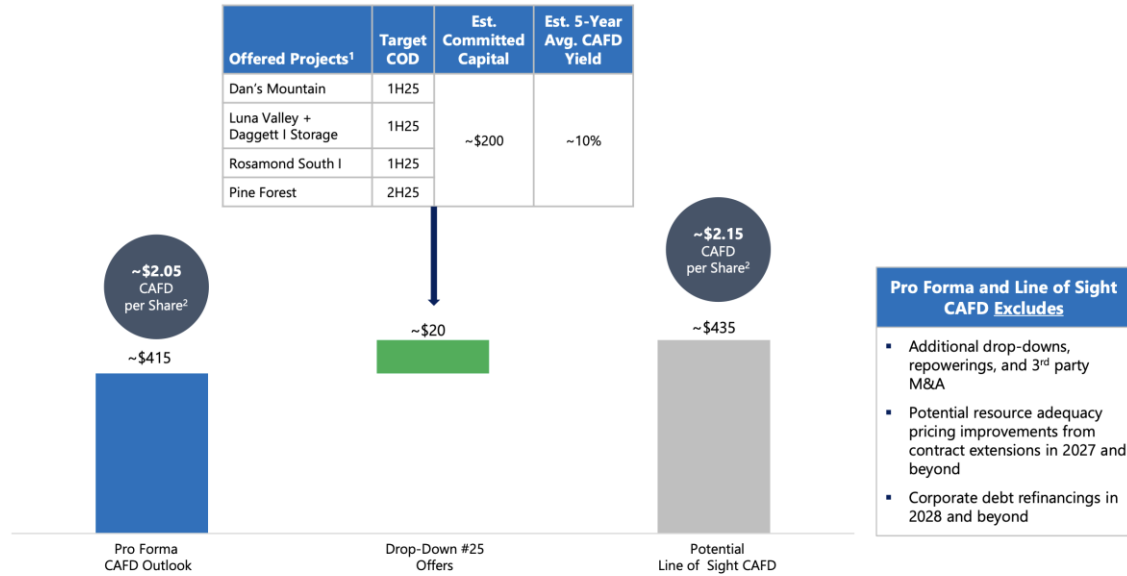


Open	23,96	Mkt cap	4,75B	52-wk high	32,23
High	24,39	P/E ratio	35,86	52-wk low	18,59
Low	23,96	Div yield	6,66%		

this chart says it all: corporate debt refinancing in 2028 and beyond.

## Full Allocation of Thermal Proceeds Continues to Lead to No External Capital Needs to Meet 2026 DPS Growth Target Clearway Energy

(\$ millions, except per share figures)

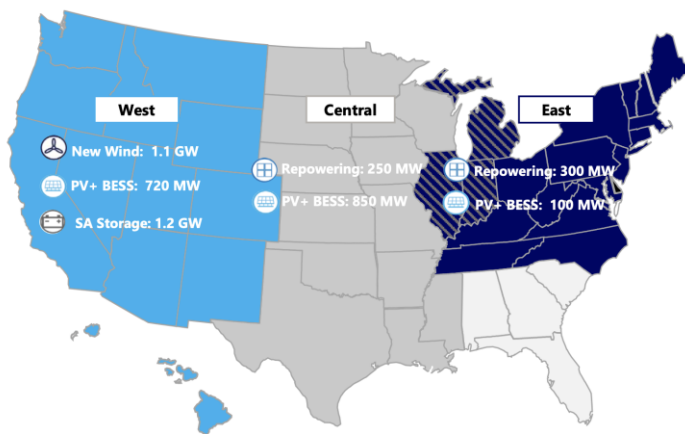


Full Allocation of Excess Thermal Sale Proceeds Continues to Reaffirm CWEN's Ability to Achieve the Upper Range of 5-8% DPS Growth Annually through 2026 Without External Capital

<sup>1</sup> Refer to Appendix slide 14; <sup>2</sup> Based on approx. 202 MM shares outstanding as of 1/31/24

Not to forget the risk Buffett discussed for utilities in his last letter.

### Additional Opportunities Advancing for CWEN Fleet Growth & Optimization Investments In 2026-2027<sup>1</sup>



- Commercial engagement and later-stage development spans CAISO, HECO, WECC, ERCOT, SPP, MISO, PJM, enabling diversification of CWEN operating fleet asset base
- Robust customer interest for mid-decade assets reflected in awards/shortlistings and bilateral negotiations – customers still see value in new resources at today's pricing levels
- Sponsor's new build and repower opportunities developed for advantaged grid and permitting feasibility, drawing from significant later-stage queue positions and advanced HV equipment procured to enable growth in these vintages
- Clearway's approach to siting and supply chain management also will provide projects in these vintages opportunity to deploy domestic content and invest in energy communities, enabling customer value proposition and also enabling return requirements
- Schedules and project commercial constructs are being shaped to match with CWEN capital allocation posture

CWEN's Future Drop-Down Opportunity Set Remains Robust With Over 4 GW of Fleet Optimization & Expansion Opportunities Maturing for Potential Investment in 2026-2027

<sup>1</sup> 2026-2027 pipeline of advanced and intermediate stage development assets

Ok, but anyway, looks like a 10% yield here, minus the investments in growth:



## Financial Update

(\$ millions)

2023 Financial Results			Reaffirming 2024 CAFD Guidance	
	4 <sup>th</sup> Quarter	Full Year		Full Year
Adjusted EBITDA	\$201	\$1,058		
CAFD	\$53	\$342	CAFD	\$395

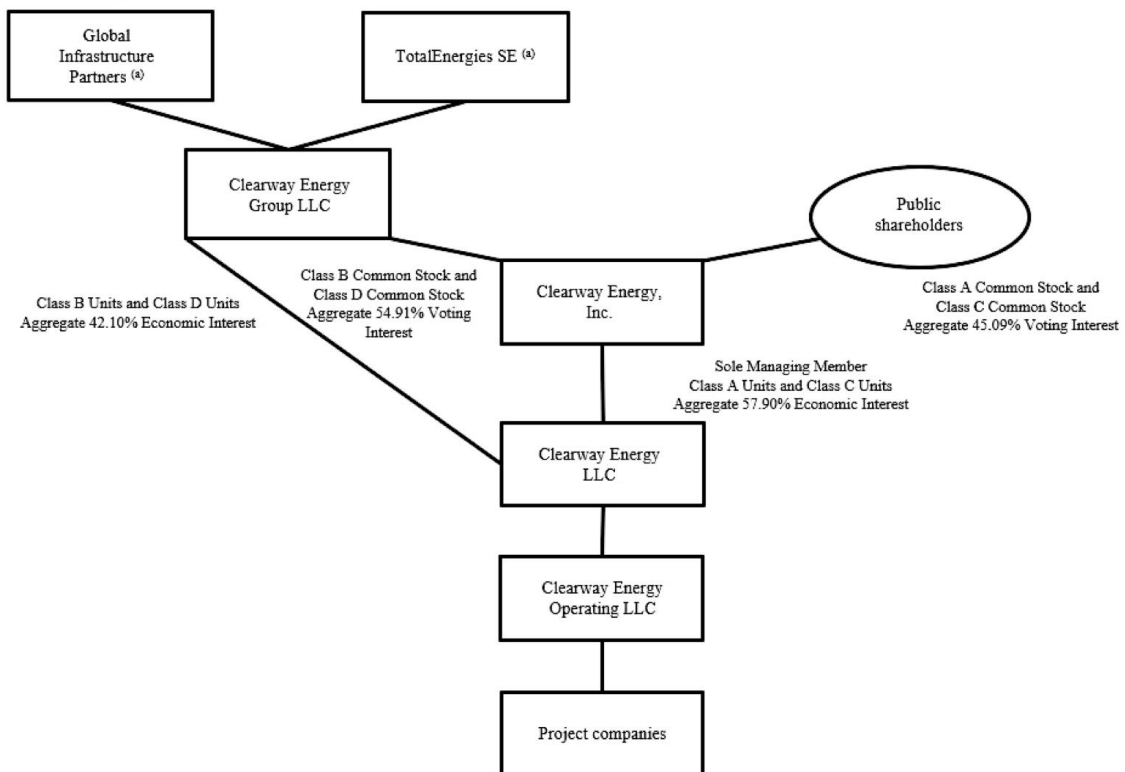
- 4Q23 Financial Highlights**
  - ▲ Conventional: Strong availability
  - ▼ Wind: Lower resource partially offset by timing of maintenance cap ex and other items
  - ▼ Solar: Lower resource
- Continue to Maintain Balance Sheet Flexibility**
  - No external capital needed to meet DPS growth objectives through 2026 given Thermal proceeds
  - Nearly 99% of consolidated long-term debt interest cost fixed with earliest corporate maturity in 2028
  - Pro Forma credit metrics remain in-line with target ratings
- 2024 CAFD Guidance Factors In...**
  - P50 median renewable energy production for full year
  - Expected timing of committed growth investments, including estimated project CODs
- ...Excludes the Timing of CAFD Realized from Committed Growth Investments Beyond 2024 that Informs the Pro Forma CAFD Outlook**

2023 Results In-Line With Revised Guidance Range;  
Balance Sheet In-Line with Target Metrics with Continued Flexibility From Excess Thermal Sale Proceeds

9

what, and then as a public shareholder I own just 57.9% of the company???

The diagram below represents a summarized structure of the Company as of December 31, 2023:



(a) GIP and TotalEnergies each own 50% of CEG through intermediate holding companies.

The following table summarizes the credit ratings for the Company and its Senior Notes as of December 31, 2023. The ratings outlook is stable.

	S&P	Moody's
Clearway Energy, Inc.	BB	Ba2
4.750% Senior Notes, due 2028	BB	Ba2
3.750% Senior Notes, due 2031	BB	Ba2
3.750% Senior Notes, due 2032	BB	Ba2

2028 \$800 million, 2031 \$925 million, 350 million.

Now, all these projects have offtake agreements, thus a set date, and that is another risk, you don't know what will be afterwards. So, you are getting paid for holding a risk, nothing wrong with that, but not much value investing here.

## Item 2 — Properties

Listed below are descriptions of the Company's interests in facilities, operations and/or projects owned or leased that were operating as of December 31, 2023.

Assets	Location	Capacity		Ownership	Fuel	COD	Long-term Contract Terms	
		Rated MW	Net MW <sup>(a)</sup>				Counterparty	Expiration
<b>Conventional</b>								
Carlsbad	Carlsbad, CA	527	527	100 %	Natural Gas	December 2018	San Diego Gas & Electric	2038
El Segundo	El Segundo, CA	550	550	100 %	Natural Gas	August 2013	SCE	2026 - 2027
GenConn Devon	Milford, CT	190	95	50 %	Natural Gas/ Oil	June 2010	Connecticut Light & Power	2040
GenConn Middletown	Middletown, CT	190	95	50 %	Natural Gas/ Oil	June 2011	Connecticut Light & Power	2041
Marsh Landing	Antioch, CA	720	720	100 %	Natural Gas	May 2013	Various	2026 - 2030
Walnut Creek	City of Industry, CA	485	485	100 %	Natural Gas	May 2013	SCE	2026
<b>Total Conventional</b>		<b>2,662</b>	<b>2,472</b>					
<b>Utility Scale Solar</b>								
Agua Caliente	Dateland, AZ	290	148	51 %	Solar	June 2014	PG&E	2039
Alpine	Lancaster, CA	66	66	100 %	Solar	January 2013	PG&E	2033
Avenal	Avenal, CA	45	23	50 %	Solar	August 2011	PG&E	2031
Avra Valley	Pima County, AZ	27	27	100 %	Solar	December 2012	Tucson Electric Power	2032
Blythe	Blythe, CA	21	21	100 %	Solar	December 2009	SCE	2029
Borrego	Borrego Springs, CA	26	26	100 %	Solar	February 2013	San Diego Gas and Electric	2038
Buckthorn Solar <sup>(b)</sup>	Fort Stockton, TX	150	150	100 %	Solar	July 2018	City of Georgetown, TX	2043
CVSR	San Luis Obispo, CA	250	250	100 %	Solar	October 2013	PG&E	2038
Daggett 2 <sup>(b)</sup>	San Bernardino, CA	182	46	25 %	Solar	December 2023	Various	2038
		131	33	25 %	BESS			
Daggett 3 <sup>(b)</sup>	San Bernardino, CA	300	75	25 %	Solar	July - November 2023	Various	2033 - 2038
		149	37	25 %	BESS			
Desert Sunlight 250	Desert Center, CA	250	63	25 %	Solar	December 2014	SCE	2034
Desert Sunlight 300	Desert Center, CA	300	75	25 %	Solar	December 2014	PG&E	2039
Kansas South	Lemoore, CA	20	20	100 %	Solar	June 2013	PG&E	2033



# Enlight Renewable NASDAQ: ENLT

**enlight** **Enlight Renewable Energy Ltd**  
 NASDAQ: ENLT Overview Financials

Market Summary > Enlight Renewable Energy Ltd

**16,80** USD + Follow

-2.78 (-14.20%) ↓ all time

9 Apr, 16:00 GMT-4 • Disclaimer



Open	16,83	Mkt cap	7,20B ILS	52-wk high	20,44
High	16,94	P/E ratio	-	52-wk low	12,11
Low	16,26	Div yield	-		

same story as the other utilities, borrow, sell, gain the spread:

**Project returns: mid-teens levered returns expected for 2024-26 CODs**

Overlaying a 10% unlevered return with a 5.25%-5.75% cost of debt

**Global Portfolio of 2024-26 CODs**

- 3.5 GW 5.4 GWh
- 90% With Signed PPAs
- \$352-370m Estimated First Full Year EBITDA<sup>1</sup>
- \$3.6bn Estimated Net Project Costs<sup>2</sup>
- 10% Unlevered Ratio**

**Equity IRR**

**Mid-teens %**

Unlevered Ratio 10%

5.25%-5.75% Project Finance

DA is a non-IFRS financial measure. The Company is unable to provide a reconciliation of EBITDA to Net Income on a forward-looking basis without unreasonable effort because items that impact this IFRS financial measure are not within the Company's control and/or cannot be reasonably predicted. <sup>1</sup>Construction costs for our U.S. projects assume receipt of certain ITC and PTC credits under the IRA and are net of the estimated value of these credits. For projects under the PTC track, the credit value is based on annual expected production and a steady-state utilization of 23% discounted by 8% to COD. For ITC projects, the credit value is 20% to 40% of project costs, depending on whether facility qualifies for energy community status. The net cost does not reflect the value of the credits.

10% yields, ok, you are paid for the risks, US investors are not stupid to not know how to calculate the risk and reward on these projects.

### Growth in 2024: Starting on three new flagship projects, Atrisco reaches COD

Combination of large-scale projects at high returns

Country Acres	
Location	California
Capacity	392 MW + 688 MWh
Status	Construction starts 1H24
First Year Revenues / EBITDA <sup>1</sup>	\$58-61m / \$48-50m
Unlevered Ratio	10.1%-10.6% <sup>2</sup>

Roadrunner	
Location	Arizona
Capacity	294 MW + 940 MWh
Status	Construction starts 2H24
First Year Revenues / EBITDA <sup>1</sup>	\$48-51m / \$38-40m
Unlevered Ratio	11.3%-11.9% <sup>2</sup>

Atrisco	
Location	New Mexico
Capacity	364 MW + 1,200 MWh
Status	Under Construction
First Year Revenues / EBITDA <sup>1</sup>	\$51-54m / \$41-44m
Unlevered Ratio	9.8%-10.3% <sup>2</sup>

Quail Ranch	
Location	New Mexico
Capacity	120 MW + 400MWh
Status	Construction starts 2H24
First Year Revenues / EBITDA <sup>1</sup>	\$21-23m / \$18-19m
Unlevered Ratio	13%-13.7% <sup>2</sup>

EBITDA is a non-IFRS financial measure. The Company is unable to provide a reconciliation of EBITDA to Net Income on a forward-looking basis without unreasonable effort because items that impact this IFRS financial measure are not within the Company's control and/or cannot be reasonably predicted. <sup>2</sup>Construction costs assume receipt of certain ITC and PTC credits under the IRA and are net of the estimated value of these credits. For solar and storage, 40% ITC is assumed, given brownfield qualification. The net cost does not reflect the full tax equity investment, only the estimated value of the tax credits.

huge investments in storage - what if then you invest and somebody comes with a new tech to do it cheaper? just to discuss the risks.

### Portfolio snapshot

Generation, MW

Storage, MWh

Graph, scale

**Portfolio definitions**

- Mature** Operational, under construction and pre-construction (expected to start construction within 12 months)
- Advanced development** Projects which are expected to begin construction within 13 to 24 months of the Approval Date
- Development** The rest of the projects in development process

Operational projects sold

**1.7 GW** still under the company's operational management

1,883 + 277

Operational

637 + 1,603

Under Construction

2,856 + 3,770

Pre-Construction

0-12 months (Feb 26, 2025) until start of construction

5,376 + 5,649

Mature Projects

4,693 + 12,491

Advanced Development

13-24 months until start of construction

10,549 + 12,603

Development

20,618 + 30,743

Total Portfolio

Note: Portfolio information as of the Approval Date, Projects that are not consolidated in our financial statements are reflected at their proportional share

# Jinko Solar - NYSE: JKS

d



## JinkoSolar Holding Co., Ltd

NYSE: JKS

Overview

Compare

Financials

Market Summary > JinkoSolar Holding Co., Ltd

**25,60** USD

+ Follow

+14.59 (132.52%) ↑ all time

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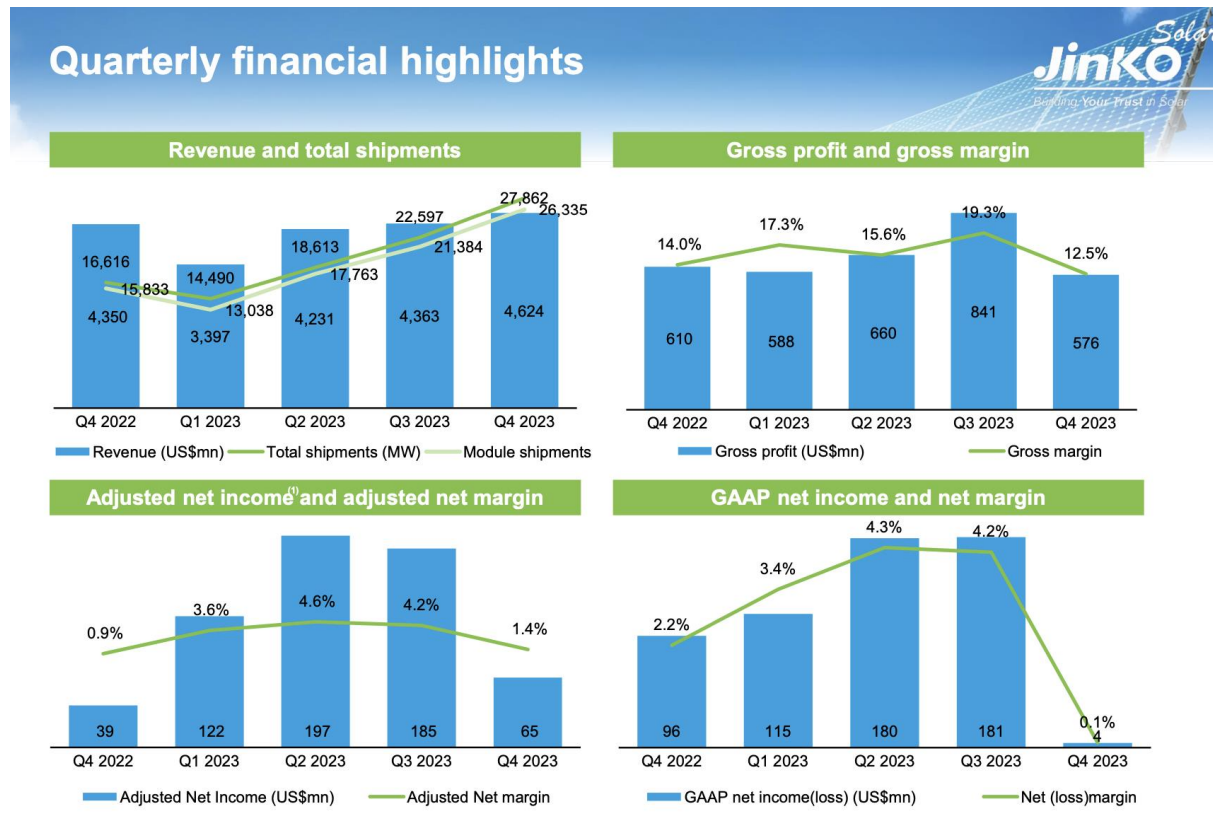
After hours 25,50 -0,10 (0,39%)

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	23,95	Mkt cap	1,33B	52-wk high	51,36
High	25,60	P/E ratio	3,04	52-wk low	22,06
Low	23,77	Div yield	-		

Simple, at these prices, they are not making money, but if the cycle reverts, they could be back to making money.



Note:  
 (1) Excluding the impact from (i) a change in fair value of the Notes; (ii) a change in fair value of long-term investment and (iii) the share based compensation expenses.

There is debt, so it is not like they have \$2 billion in cash to distribute even if their profits were \$3.4 billion in 2023.

## Balance sheet summary



(US\$m)	Q4 2022	Q3 2023	Q4 2023
<b>Cash and restricted cash <sup>(1)</sup></b>	<b>1,634</b>	<b>1,934</b>	<b>2,754</b>
<b>Accounts and notes receivable</b>	<b>3,450</b>	<b>4,097</b>	<b>3,810</b>
<b>Inventories</b>	<b>2,530</b>	<b>2,625</b>	<b>2,566</b>
<b>Net PPE</b>	<b>4,682</b>	<b>4,938</b>	<b>5,812</b>
<b>Total assets</b>	<b>15,755</b>	<b>17,455</b>	<b>19,132</b>
<b>Total debt <sup>(2)</sup></b>	<b>3,937</b>	<b>4,226</b>	<b>4,381</b>
<b>Short-term debt <sup>(3)</sup></b>	<b>1,834</b>	<b>1,773</b>	<b>1,835</b>
<b>Long-term debt <sup>(4)</sup></b>	<b>2,103</b>	<b>2,453</b>	<b>2,546</b>
<b>Net debt <sup>(5)</sup></b>	<b>2,303</b>	<b>2,292</b>	<b>1,627</b>
<b>Total liabilities</b>	<b>11,839</b>	<b>12,919</b>	<b>14,408</b>
<b>Total shareholders' equity</b>	<b>3,915</b>	<b>4,535</b>	<b>4,723</b>

Notes: Unaudited quarterly financials.

(1) Including short-term restricted cash only.

(2) Interest-bearing debt.

(3) Short-term debt includes short-term borrowings, financing and operating lease liabilities and bond payable and current convertible senior notes.

(4) Long-term debt includes long-term borrowings, convertible senior notes and financing and operating lease liabilities.

(5) Total debt minus cash and short-term restricted cash.

Now, even if the cycle turns, they make money, when will I see it as a shareholder. A bit of buybacks, don't do much.

# SMA Solar Technology ETR: E92

d



## SMA Solar Technology AG

ETR: S92

Overview

Financials

Market Summary > SMA Solar Technology AG

**51,70** EUR

+ Follow

-3.80 (-6.85%) ↓ all time

10 Apr, 10:59 CEST • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	51,10	Mkt cap	1,79B	52-wk high	112,70
High	52,25	P/E ratio	7,95	52-wk low	45,20
Low	51,10	Div yield	-		

Equipment, thus as investments will be lower in a couple of years, less equipment given the investment boom in capacity we have seen. I see 50 million in FCF, which is little.



looks good:

Solid positive Free Cash Flow driven by significantly higher profitability compared to 2022



Cash Flow (in € million)

	FY 2022	FY 2023
Net Income	56	226
Gross Cash Flow	33	333
Cash Flow from Operating Activities	29	141
Net Capex	-62	-84
Cash inflow from divestments	38 <sup>1</sup>	0
<b>Free Cash Flow<sup>2</sup></b>	<b>5</b>	<b>57</b>

But check the capex, it is necessary to keep up, and it will forever be so. Shareholder rewards? Who knows....

After a very successful year in 2023, SMA expects further sales growth in 2024, mainly driven by Large Scale & Project Solutions



**Management comments**

- Sales in the Large Scale segment will continue to grow strongly driven by the existing high order backlog and sustained demand.
- Due to high inventory levels at customers, SMA's Home and C&I segments are facing headwinds in key markets in H1 2024.
- Against this backdrop and in view of normalized supply and order situation, 2024 will be a transition year.
- For the Group in total, management continues to expect continued sales growth and a double-digit EBITDA margin in 2024.



# Flat Glass Group 6865 HK



## Flat Glass Group Co Ltd

HKG: 6865

Overview

Financials

Compare

Market Summary > Flat Glass Group Co Ltd

### 20,15 HKD

+18.28 (977.54%) ↑ all time

10 Apr, 16:08 GMT+8 • Disclaimer

+ Follow

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	21,35	Mkt cap	67,88B	52-wk high	27,75
High	21,35	P/E ratio	15,01	52-wk low	10,70
Low	19,74	Div yield	-		

Glass company, thus in that cycle. Too hard for me to follow the glass cycle on top of it having a weak investor relation page.

## Solaria Enrgia BME: SLR

Another European solar utility. Same story, investments into huge future production - I have no idea what will be the cost of electricity in 2037, and therefore this is another risk, plus these guys are investing and investing like there is no tomorrow.



### Solaria Energia y Medio Ambiente SA

BME: SLR

Overview

Market Summary > Solaria Energia y Medio Ambiente SA

9,54 EUR

+ Follow

-2.82 (-22.84%) ↓ all time

10 Apr, 15:15 CEST • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	9,70	Mkt cap	1,19B	52-wk high	18,92
High	9,79	P/E ratio	11,09	52-wk low	9,44
Low	9,51	Div yield	-		

# Sunnova NYSE: NOVA



## Sunnova Energy International Inc

NYSE: NOVA

Overview

Financials

Market Summary > Sunnova Energy International Inc

4,92 USD

+ Follow

-6.52 (-56.99%) ↓ all time

10 Apr, 09:32 GMT-4 • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	4,89	Mkt cap	606,20M	52-wk high	24,56
High	4,91	P/E ratio	-	52-wk low	3,80
Low	4,88	Div yield	-		

158 million of levered cash flows per year and the market cap is \$600 million???

## Strong Performance Continues



**419.2K**  
Customers as of  
12/31/2023

**34.8K** customers deployed in Q4 2023  
**143.6K** customers deployed in 2023  
**2,041** dealers, sub-dealers, and new homes installers as of 12/31/2023



**1,090**  
Megawatt-Hours of  
Energy Storage Under  
Management as of  
12/31/2023

**2.5** gigawatts of solar power generation under management as of 12/31/2023  
Battery penetration rate of **15%** as of 12/31/2023  
Battery attachment rate on origination equaled **24%** in Q4 2023  
**4,184** battery retrofits performed life to date as of 12/31/2023



**\$16 Billion**  
Expected Cumulative  
Nominal Contracted  
Cash Inflows Over the  
Remaining Life of our  
Customer Contracts<sup>1</sup>

Weighted average customer contract life remaining of **22 years** as of 12/31/2023<sup>2</sup>  
**\$789 million** expected contracted cash inflows in 2024 from our customer contracts<sup>1)</sup>



**\$136 Million**  
Expected Levered  
Cash Flows in 2024<sup>3</sup>

Levered Cash Flows expected to average **\$158 million** per year for the next 10 years (2024 through 2033)  
Levered Cash Flows expected to average **\$221 million** per year for the following 15 years (2034 through 2048)

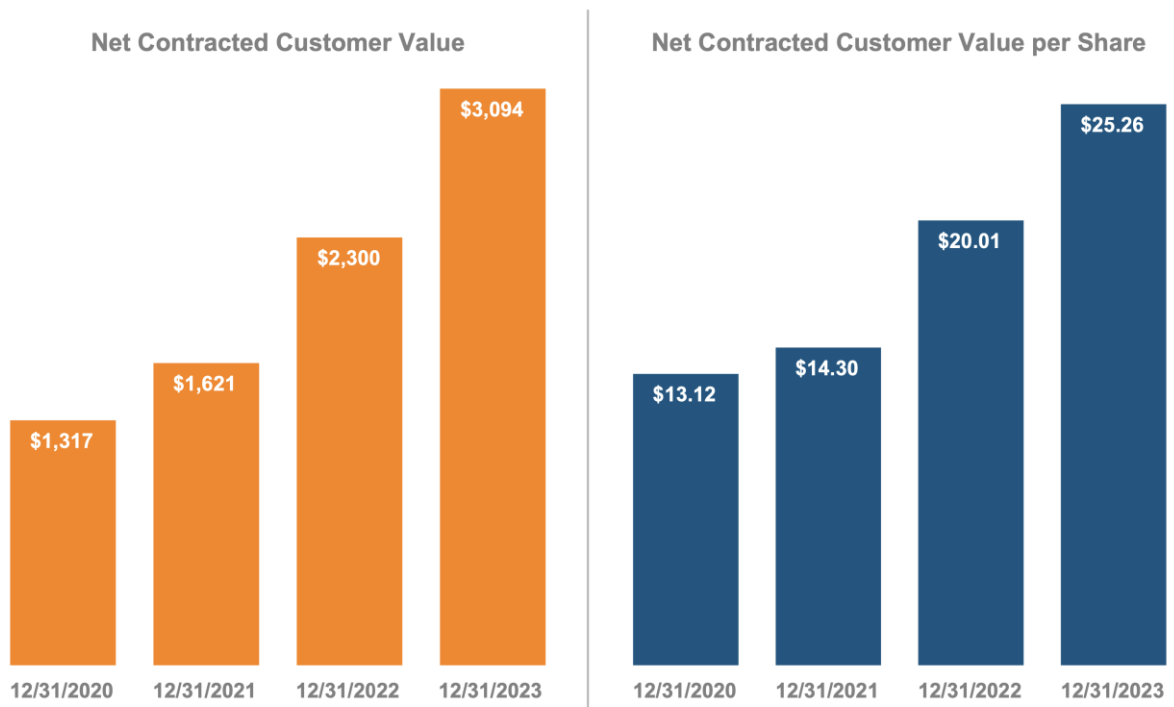
1. The sum of expected cash inflows from all customer lease, PPA, and loan contracts in-service as of 12/31/2023, plus the expected associated cash inflows from SRECs and grid services. Excludes renewals.
2. Average remaining tenor of all in-service customer lease, PPA, and loan contracts; excluding renewals, weighted by capital.
3. The sum of expected residuals from securitized customer lease, PPA, and loan contracts as of 12/31/2023, plus all MSA fees and inflows from unpledged SRECs and grid services.

3

I don't know, for now rooftop companies have been a disaster and the value of their calculated cash flows is uncertain.

## Strong Net Contracted Customer Value Growth

(\$ millions)



For the purposes of calculating this metric, we discount all future cash flows at 6%.

In short, they lost half a billion in 2023. that is about it.

# Atlantica Sustainable Infrastructure NASDAQ: AY

10% yield, let's see.



## Atlantica Sustainable Infrastructure PLC

NASDAQ: AY

Overview

Market Summary > Atlantica Sustainable Infrastructure PLC

18,43 USD

+ Follow

-18.57 (-50.19%) ↓ all time

10 Apr, 09:37 GMT-4 • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	18,53	Mkt cap	2,14B	52-wk high	28,54
High	18,53	P/E ratio	50,86	52-wk low	16,35
Low	18,43	Div yield	9,66%		

Great story, as with every solar stock:

Corporate Presentation



ATLANTICA AT A GLANCE

## A Premier Clean Energy Transition Company

**\$8.7bn** Total assets  
As of Dec. 2023

**45** Operating Assets  
100% contracted<sup>1</sup>

**13** Weighted Average PPA Life Remaining<sup>2</sup>

**Renewables-focused portfolio...**

**2.2GW** Renewable Energy in Operation

**73%** Revenue from Renewables<sup>3</sup>

**..Complemented by other technologies enabling the clean energy transition...**

**1,229.mts** of Transmission Lines

**398MW** of Efficient Nat. Gas & Heat

**17.5** Mft<sup>3</sup>/day Water capacity

...& a Clear Growth Line of Sight

Development pipeline of **2.2GW + 6.0GW<sup>4</sup>** of Renewable Energy of Storage

- ✓ Focus on **North America**
- ✓ Predominantly **solar, wind and storage** projects

Diversified growth strategy based on **4 key sources of growth**

1. **Development**
2. **Expansion and repowering**
3. **M&A**
4. **Optimization of existing assets**

Note: Capacity included in this slide represents total installed capacity in assets consolidated, regardless of Atlantica's percentage of ownership in each of these assets and proportional share of capacity in assets not consolidated.  
 (1) 100% Contracted or regulated. Regulated revenues in Spain, Chile TL 3 and Italy and non-contracted nor regulated in the case of Chile PV 1 and Chile PV 3.  
 (2) Represents weighted average years remaining as of December 31, 2023. Based on CAFD estimates for the 2024-2027 period as of December 31, 2023 for the assets that have reached COD before March 1, 2024. See "Disclaimer Forward Looking Statements".  
 (3) For the full year 2023.  
 (4) Only includes projects estimated to be ready to build before or in 2030 of approximately 3.7 GW, 2.2 GW of renewable energy and 1.5 GW of storage (equivalent to 6.0 GWh). Capacity measured by multiplying the size of each project by Atlantica's ownership. Potential expansions of transmission lines not included.

And \$4 billion in debt:

Corporate Presentation



PRUDENT FINANCING

## Healthy Balance Sheet with Prudent Financing and Strong Credit Profile

**Self Amortizing Project Debt Structure**

**\$4,319M** (Dec. 31, 2023)  
**~\$1.9B<sup>1</sup>** scheduled debt reduction in the next 5 years

- **Key Principle:** majority of non-recourse self amortizing project debt in ring-fenced subsidiaries
- **Project debt is fully repaid progressively** before the end of PPA/regulation<sup>1</sup>
- **No complex financings.** No partnerships where the partner has preferred distribution rights

**Conservative Corporate Leverage**

- **Corporate Ratings of BB+ / BB+** (S&P / Fitch)
- **Net corporate debt** represents ~21% of net consolidated debt
- **Conservative Corporate Leverage:** Net corporate debt CAFD before corporate interest 3.8x as of December 31, 2023<sup>2</sup>

**Foreign Exchange Exposure Risk**

- **Natural hedge:** distributions of assets in Europe are partially offset with corporate interest and corporate G&A paid in euros
- **The resulting net euro exposure is hedged through currency options on a rolling basis:** 100% for the next 12 months and 75% for the following 12 months
- Small exposure to other currencies

**Interest Rate Risk**

- **>93%**<sup>3</sup> of consolidated debt at **fixed or hedged** interest rates
- **First sizeable corporate maturity in 2025** for \$110 million<sup>4</sup>
- **Project debt hedged** for the life of the finance agreements

(1) Project debt repayment schedule as of December 31, 2023, adjusted by two tranches of debt with mini-perm structures: \$140 million in Coso to be refinanced in 2027 and \$87 million in Logrosan (holding of Solaben assets) to be refinanced in 2028.  
 (2) Net corporate debt / CAFD before corporate debt service is calculated as net corporate debt divided by 2023 CAFD before corporate debt service.  
 (3) Based on weighted average outstanding debt as of December 31, 2023.  
 (4) Excluding \$54 million corresponding to the Revolving Credit Facility.

Wonderful headline below, but the footnote says hedged for 2024 - 2025? we don't know. Hedging costs a lot.

Corporate Presentation



INTEREST RATE RISK COVERAGE

## 93%<sup>1</sup> of Consolidated Debt Fixed or Hedged<sup>2</sup>

Project Debt			Corporate Debt		
ASSET	INTEREST TYPE	FIXED <sup>1,3</sup>	INSTRUMENT	INTEREST TYPE	DEC. 31, 2023
Solana	fixed	100%	Revolving Credit Facility (RCF)	Variable	54.4
Mojave	fixed	100%	Green Exchangeable Notes	Fixed	110.0
Coso	hedged	100%	2020 Green Private Placement	Fixed	318.7
Solaben 2	hedged	90%	Note Issuance Facility 2020	Hedged (100%) <sup>6</sup>	152.4
Solaben 3	hedged	90%	Green Senior Notes	Fixed	396.0
Logrosan	hedged	100%	Other facilities <sup>5</sup>	Fixed	52.3
Solacor 1	hedged	90%	<b>Total Outstanding Debt</b>		<b>1,084.8</b>
Solacor 2	hedged	90%			
Helioenergy 1	hedged	99%			
Helioenergy 2	hedged	99%			
Solnova 1	hedged	90%			
Solnova 3	hedged	90%			
Solnova 4	hedged	90%			
Helios 1/2	fixed	100%			
Solaben 1/6	fixed	100%			
Palmatir	fixed	94%			
Cadonal	hedged	88%			
Melowind	hedged	75%			
ACT	hedged	75%			
ATN	fixed	100%			
ATN 2	fixed	100%			
ATS	fixed	100%			
Quadra 1	hedged	75%			
Quadra 2	hedged	75%			
Palmucho	hedged	75%			
Skikda	fixed	100%			
Tenes	fixed	100%			
Kaxu	hedged	58%			
Chile PV 1&2	hedged	80%			
Rioglass	hedged	78%			
Montesejo	fixed	100%			
	<b>Hedged<sup>4</sup></b>	<b>42.6%</b>		<b>Hedged<sup>4</sup></b>	<b>14.1%</b>
	<b>Fixed<sup>4</sup></b>	<b>59.7%</b>		<b>Fixed<sup>4</sup></b>	<b>80.0%</b>
	<b>Total Fixed or Hedged</b>	<b>92.3%</b>		<b>Total Fixed or Hedged</b>	<b>94.1%</b>

**~94% of Corporate Debt & ~92% of Project Debt fixed or hedged<sup>1</sup>**

(1) Calculated as the weighted average of the % of fixed or hedged corporate debt and the % of fixed or hedged project debt based on outstanding balance as of December 31, 2023.  
 (2) See our Annual Report on Form 20-F for the fiscal year ended December 31, 2023 for additional information on the specific interest rates and hedges.

(3) Percentage fixed or hedged.  
 (4) Weighted average based on outstanding balance as of December 31, 2023.  
 (5) Other facilities include the Commercial Paper Program, accrued interest payable and other debt.  
 (6) Hedged at 100% until the end of 2024.

# Greenergy Renewables BME: GRE



## Greenergy Renewables SA

BME: GRE

Overview

Compare

Financ

Market Summary > Greenergy Renewables SA

26,35 EUR

+ Follow

+24.55 (1,363.89%) ↑ all time

10 Apr, 15:32 CEST • Disclaimer

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	26,40	Mkt cap	808,15M	52-wk high	34,78
High	27,55	P/E ratio	15,33	52-wk low	18,20
Low	26,20	Div yield	-		

With US subsidies, now all global companies rush to that market:

HIGHLIGHTS
**BUSINESS REVIEW**
FINANCIAL REVIEW
ESG

**PLATFORM OVERVIEW – SOLAR PV & BESS**

**2023**  
15.4GW<sup>1</sup> & 11.3GWh

**2028**  
Identified Opportunities  
5.1GW & 1.5GWh

**2027**  
Early Stage  
6.1GW & 4.8GWh

**2026**  
Advanced Development  
1.8GW & 1.7GWh

**2025**  
Backlog  
0.7GW<sup>1</sup> & 2.1GWh

**2024**  
Ready to Build  
Under Construction  
0.8GW & 1.0GWh  
In Operation  
0.9GW<sup>1</sup>

Estimated COD

**USA**

Pipeline **4.7GW**

Pipeline **3.0GWh**

**LATAM**

In Operation & U.C.  
**1.1GW + 1.0GWh**

Pipeline **4.7GW**

Pipeline **5.2GWh**

**EUROPE**

In Operation & U.C.  
**0.7GW**

Pipeline **5.0GW**

Pipeline **3.1GWh**

<sup>1</sup>Total Platform Includes 100MW of wind, of which 40MW in backlog and 60MW in operation.



## Asset rotations - thus not investors!

HIGHLIGHTS | **BUSINESS REVIEW** | FINANCIAL REVIEW | ESG


**643MW ASSET ROTATED FOR EQUITY PROCEEDS OF c€340m IN 2023-24YTD**


- ✓ Sale of **447MW** of solar PV capacity in Spain for **€445m (EV)**, implying €1.00m/MW or **1.5x EV/IC**
- ✓ Sale of **174MW** of solar PV (97MW) and wind (77MW) assets in Peru for **\$150m**, implying **1.3x EV/IC**
- ✓ Since the Peruvian projects have no associated debt, the proceeds will reduce Greenergy's corporate debt by the same amount
- ✓ Asset rotation of **643MW** for **c€610m (EV)** in 2023-24YTD, implying **40%** of the **350-450MW** p.a. target for 2023-26
- ✓ Equity proceeds of **c€340m** in 2023-24YTD, implying **55%** of the **€0.6bn** asset rotation target for 2023-26

VALKYRIA				PERU			
	1 <sup>st</sup> MILESTONE	2 <sup>nd</sup> MILESTONE	TOTAL		SOLAR PV	WIND	TOTAL
	EQT-SPK deal	ALLIANZ CP deal	Valkyria		YINSON	ENGIE	PERU
MW	150	297	447	MW	97	77	174
Deal closing	3Q23	2Q25	-	Deal closing	1Q24	1H24	-
EV (€m)	174	271	445	EV (\$m)	90 <sup>3</sup>	60	150
EV/MW (€m)	1.16	0.91 <sup>1</sup>	1.00	EV/MW (\$m)	0.84 <sup>4</sup>	1.62 <sup>5</sup>	-
EBITDA (€m)	69	75-80 <sup>2</sup>	144-149	EBITDA (\$m)	21 <sup>5</sup>	2 <sup>7</sup>	23 <sup>8</sup>
EV/IC (x)	1.7	1.4	1.5	EV/IC (x)	1.4	1.0	1.3

€0.96m/MW including early revenues. | <sup>2</sup> €85-90m included early revenues. | <sup>3</sup> Includes an \$8m Wk-related cash inflow. | <sup>4</sup> \$0.85m/MW including the earn-out. | <sup>5</sup> \$22m including the earn-out. | <sup>6</sup> The multiple refers to the assets in operation. | <sup>7</sup> \$5m including the earn-out. | <sup>8</sup> \$27m including the earn-outs.

08

leveraged plays - there was money in the segment, there still is, and you just play the spread until it works.

**FY23 RESULTS**
*Balance Sheet*


Balance Sheet				Balance Sheet			
(€m)	FY23	FY22	Var.	(€m)	FY23	FY22	Var.
<b>Non-current assets</b>	<b>877.9</b>	<b>681.8</b>	<b>196.1</b>	<b>Equity</b>	<b>343.7</b>	<b>244.8</b>	<b>98.9</b>
Intangible assets	5.8	0.2	5.5	<b>Non-current liabilities</b>	<b>584.6</b>	<b>420.9</b>	<b>163.7</b>
Tangible asset	730.0	582.1	147.8	Deferred tax liabilities	33.7	20.4	13.3
Rights-of-use assets	33.8	28.2	5.7	Provisions	14.3	16.4	(2.0)
Deferred tax assets	44.1	47.3	(3.2)	LT Financial debt	536.6	384.1	152.4
Other non-current assets	64.2	23.9	40.3	Bonds & Commercial Paper	51.9	83.2	(31.3)
				Bank debt	433.8	254.2	179.6
				Derivatives	-	20.6	(20.6)
				Lease liabilities	50.8	26.1	24.8
<b>Current assets</b>	<b>388.4</b>	<b>205.1</b>	<b>183.3</b>	<b>Current liabilities</b>	<b>338.0</b>	<b>221.3</b>	<b>116.7</b>
Inventories	142.8	6.0	136.2	Provisions	0.6	8.2	(7.5)
Accounts receivable	112.1	80.0	32.1	Accounts payable	116.9	94.5	22.4
Current financial investments	9.9	12.0	(2.1)	ST Financial debt	220.5	118.6	101.9
Other current assets	2.1	0.8	1.2	Bonds & Commercial Paper	68.4	34.5	33.9
Cash & cash equivalents	121.5	105.7	15.8	Bank debt	144.2	46.3	97.9
				Derivatives	3.9	36.1	(32.2)
				Lease liabilities	3.0	1.5	1.5
				Other financial liabilities	0.9	0.1	0.8
<b>TOTAL ASSETS</b>	<b>1,266.3</b>	<b>887.0</b>	<b>379.4</b>	<b>TOTAL EQUITY AND LIABILITIES</b>	<b>1,266.3</b>	<b>887.0</b>	<b>379.4</b>

23

## Scatec ASA - FRA: 66T

Where did it all go wrong?

Market Summary > Scatec ASA

**6,85** EUR

+4.75 (226.19%) ↑ all time

10 Apr, 13:56 CEST • Disclaimer

FRA: 66T

+ Follow

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



Open	6,68	Mkt cap	-	52-wk high	7,60
High	6,90	P/E ratio	-	52-wk low	4,02
Low	6,68	Div yield	-		



### 2023: Delivering on strategy

#### Power Production: EBITDA increase



**NOK 3.2 billion**  
Power Production EBITDA

#### Development & Construction: Strong margins



**NOK 8.2 billion**  
D&C Revenues with 12% gross margin

#### Optimise portfolio: Increased funding



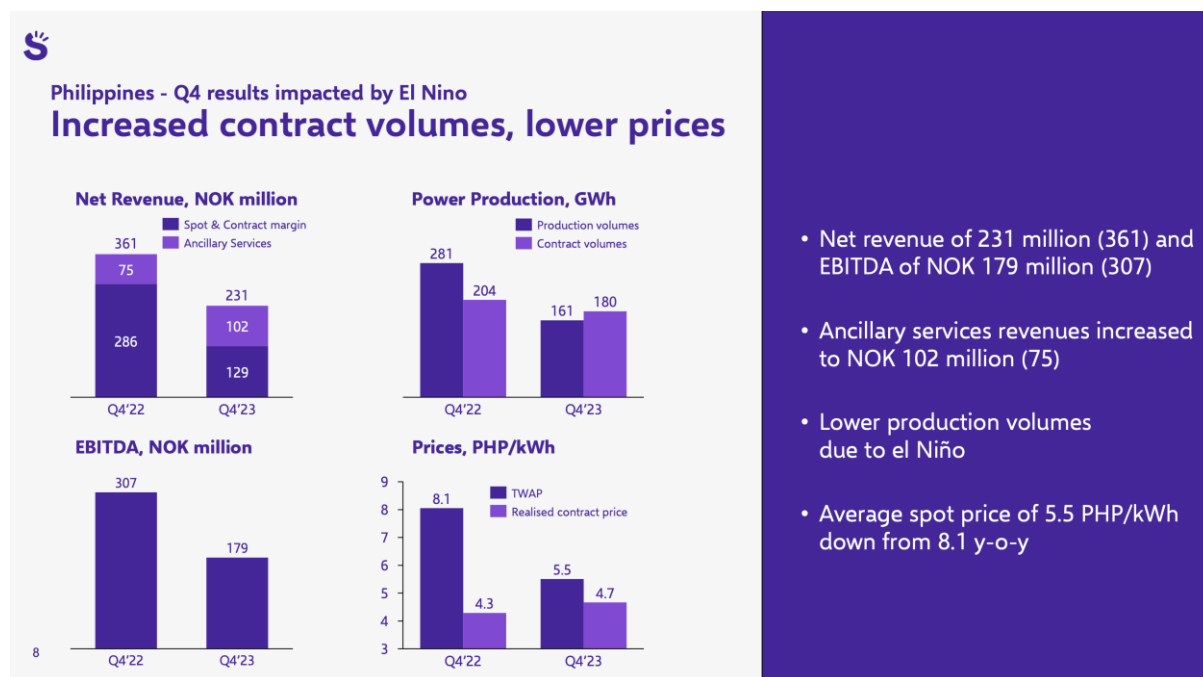
**NOK 2.7 billion**  
of growth funding from transactions

#### Growth: Secured projects for 2024



**NOK 350 million** equity investments  
**NOK 2.5 billion** secured EPC revenues

so yes, they all have take agreements, but if the price is lower, and might be with all the solar energy being built, you don't get much:



Discussing EBITDA as a focus means there is no cash flow, I also see the dividend has been cut:

**Outlook**

**Power Production**

- FY'24 Power production estimate: 4,200-4,600 GWh
- FY'24 EBITDA estimate: NOK 3,400-3,700
- 1Q'24 Power production estimate: 800-900 GWh
- 1Q'24 Philippines EBITDA estimate: NOK 10-70 million

**Total D&C remaining contract value**

- Remaining contract value: NOK 2.5<sup>1</sup> billion
- Estimated D&C gross margin: 8-10% for new projects

**Services EBITDA**

- FY'24 EBITDA estimate: NOK 120-130 million

**Corporate EBITDA**

- FY'24 EBITDA estimate: NOK -120 to -130 million

18 1) Includes NOK 2 billion for the 273 MW Grootfontein in South Africa and NOK 0.5 billion for the first 60 MW of the 120 MW solar project in Botswana

I stopped liking this when they acquired the hydro thing for more than \$1 billion.



Debt, contracted prices, overpaying for acquisitions, issuing stocks for growth -the standard story, it works until it doesn't.

NO NEED TO DO THE OTHERS, THE STORY IS CLEAR.

6244 TT	861	Motech Industries Inc	Common Stock	Information Technology
AMPS	717	Altus Power Inc	Common Stock	Utilities
3868 HK	715	Xinyi Energy Holdings Ltd	Common Stock	Utilities
SPWR	678	SunPower Corp	Common Stock	Industrials
RNW	648	ReNew Energy Global PLC	Common Stock	Utilities
DORL	638	Doral Group Renewable Energy Resources Ltd	Common Stock	Utilities
MBTN SW	519	Meyer Burger Technology AG	Common Stock	Information Technology
9519 JP	483	RENOVA Inc	Common Stock	Utilities
MAXN	327	Maxeon Solar Technologies Ltd	Common Stock	Information Technology