

Q4: Quarterly Industry Update

AS OF December 31, 2023



Solar Energy Industry Summary

COGENT VALUATION identified **Solar Energy** publicly traded companies, IPOs, and recent M&A transactions within the Solar Energy industry, which provides a basis for market and transaction pricing that can be used by your firm in estimating market sentiment and its impact on your firm's value. Over the last year since December 31, 2022, the median 52-week share price return of the Solar Energy industry decreased from 6.6% to 5.2%, and the median YTD return increased from -3.2% to -.4%. Between December 31, 2022 and December 31, 2023, the median EV/Revenue multiple decreased from 7.8 to 1.4 and the median EV/EBITDA multiple decreased from 20.2 to 19.4. The median price-to-earnings multiple increased from 2.5 to 6.3 and the median EV/Gross Profit multiple decreased from 30.3 to 29.7 over the same period. The median MVIC/Earnings multiple decreased from 2.2 to 1.3. The median Price/Revenue multiple increased from .4 to 1.2 over the same period.

Public Company Key Statistics

Median 52-Week Return	Median YTD Return	Median EV/Revenue Multiple	Median EV/EBITDA Multiple
5.2%	-.4%	1.4x	19.4x
Median Price/Earnings Multiple	Median EV/Gross Profit Multiple	Median MVIC/Earnings Multiple	Median Price/Revenue Multiple
6.2x	29.7x	1.3x	1.2x

Public Company Median Multiples by Quarter

	12/31/23	9/30/23	6/30/23	3/31/23	12/31/22	9/30/22	6/30/22	3/31/22
Median EV/Revenue Multiple	6x	3.2x	3.4x	1.7x	3.1x	3.2x	2.9x	3.0x
Median EV/EBITDA Multiple	3.4x	18.0x	17.6x	13.4x	24.6x	14.6x	19.4x	10.7x
Median Price/Earnings Multiple	23.2x	30.1x	20.3x	21.2x	20.8x	19.7x	17.9x	17.7x
Median EV/Gross Profit Multiple	46.6x	22.2x	31.3x	23.6x	24.5x	23.3x	12.4x	46.9x
Median MVIC/Earnings Multiple	23.2x	11.6x	12.7x	13.7x	15.4x	26.5x	12.2x	13.2x
Median Price/ Revenue Multiple	6.9x	3.2x	3.4x	2.7x	10.6x	2.5x	3.2x	3.2x

■ Highest Multiple
 ■ Median Multiple
 ■ Lowest Multiple

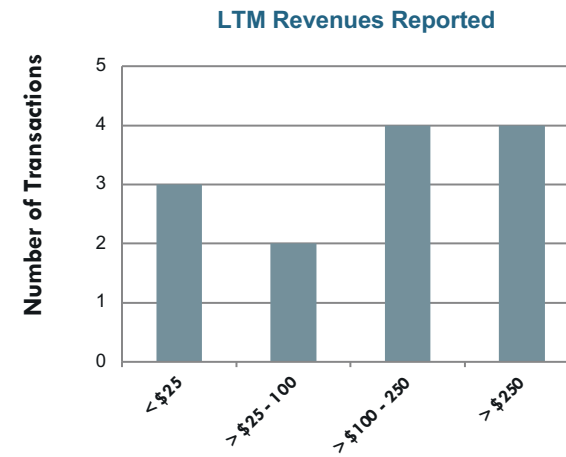
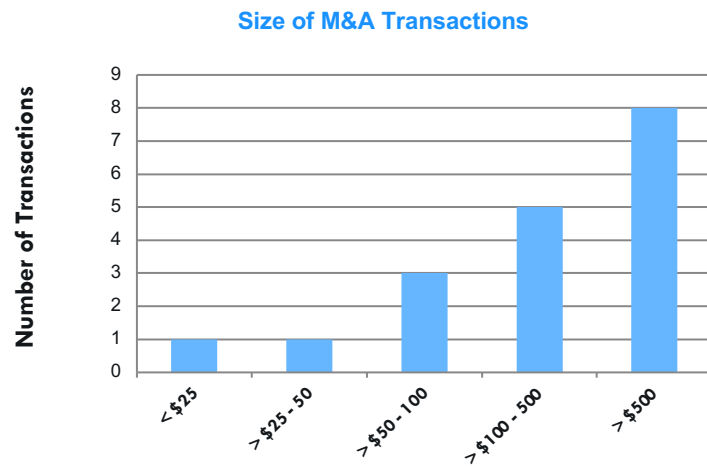
Comparable Public Company Market Price Returns as of December 31, 2023

	2023	1 Year	2 Year	3 Year	2022	2021	2020
Ascent Solar Technologies, Inc.	-44.4%	-68.8%	-98.0%	-97.2%	-69.0%	-99.9%	-86.4%
Canadian Solar Inc.	-3.5%	32.6%	-8.1%	-21.3%	38.4%	-57.9%	19.7%
China Sunergy Co., Ltd.	-14.9%	-34.9%	-67.0%	-72.7%	95.2%	-98.1%	-9.8%
Ellomay Capital Ltd.	-1.4%	10.2%	2.0%	1.4%	11.2%	-6.0%	-11.2%
Enphase Energy, Inc.	89.6%	233.6%	40.0%	-29.8%	138.6%	-71.2%	-75.4%
First Solar, Inc.	5.1%	161.9%	1.8%	5.9%	110.4%	-51.4%	48.0%
JA Solar Holdings Co., Ltd.	-12.1%	0.3%	-12.7%	-11.8%	56.7%	-50.9%	18.5%
JinkoSolar Holding Co., Ltd.	-24.1%	10.1%	-6.6%	-10.7%	57.9%	-45.0%	40.4%
Song Da Industry Trade	-15.6%	-7.6%	-15.6%	-7.9%	-6.1%	0.6%	-18.1%
SunPower Corporation	-5.3%	30.8%	-40.2%	-36.6%	27.5%	-78.0%	16.2%
ThinkSmart Limited	21.9%	-49.0%	N/A	N/A	-60.5%	N/A	N/A
Yingli Green Energy	-0.6%	-22.6%	-39.4%	-55.1%	-35.0%	-42.6%	-80.7%
Median of Industry Public Companies	-4%	5.2%	-12.7%	-21.3%	33.0%	-51.4%	-9.8%

Multiple year periods are calculated as the average annual return.

■ Highest Return
 ■ Lowest Return
 ■ Median Return

Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions) as of December 31, 2023



Size of Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions)

Transaction Date	Target	Acquirer	Transaction Size	% Bought	LTM Revenues	EV/ Revenues
12/22/23	SolarCity Corporation	Tesla Motors, Inc.	\$6,543.2	100%	\$139.30	6.6x
11/21/23	Human Energy Alliance Labs	MJP International Ltd. (nka:Bionovate Technologies Corp.)	\$4.4	100%	\$51.10	5.0x
8/20/23	Global Resource Options	EDF Renewable Energy	\$34.8	100%	\$77.6	7.5x
7/21/23	Desri Portal Ridge	Firstar Development, LLC	\$37.8	100%	\$10.0	6.1x
6/24/23	Caithness Energy	Global Infrastructure Partners	\$20.0	100%	\$544.0	5.3x
6/21/23	Gestamp Asetym Solar	KKR & Co. L.P.	\$800.0	100%	N/A	N/A
6/22/23	Aaron Services Ltd.	Lakehouse plc	\$15.4	100%	\$249.0	3.6x
5/30/23	Suniva Inc.	Shunfeng International	\$45.0	100%	\$483.8	7.0x
5/23/23	Energy Source Partners	Revolution Lighting Tech	\$30.1	100%	N/A	N/A
12/12/22	Solairedirect SA	ENGIE SA	\$275.3	81%	\$43.2	N/A
11/3/22	Solar Alliance of Amer.	Finavera Wind Energy	\$5.0	100%	\$41.4	N/A
8/28/22	Solar Juice Pty Ltd.	SPI China (HK) Limited	\$28.0	100%	N/A	N/A
8/15/21	REC Solar ASA	Bluestar Elkem Investment	\$634.4	100%	N/A	N/A
5/13/21	Recurrent Energy, LLC	Canadian Solar Inc.	\$265.0	100%	\$1.3	N/A
9/15/20	Next Phase Solar, Inc.	Enphase Energy, Inc.	\$2.5	100%	\$50.0	4.0x
6/22/20	Avacos Solar	ONEnergy Inc.	\$423.5	100%	\$193.7	1.9x
5/30/20	Hudson Energy Solar Corp.	SunEdison, Inc.; TerraForm Power, Inc.	\$57.0	81%	\$23.0	2.3x
5/23/20	Tripod Energy AB	Innotech Solar AS	\$2,216.2	100%	\$544.3	3.9x
Median of 18 M&A Transaction Targets			\$452.0	100%	\$160.0	5.0x

)

COGENT VALUATION is a nationally recognized full service business valuation firm that has provided independent valuation and financial advisory opinions in thousands of situations since 1991. These assignments include the valuation of companies and pass-through entities, their securities, and their intangible assets ranging in size from small, closely-held businesses and start-ups, to corporations with market values over a billion dollars, covering almost every industry and all types of transactions. With the collective backgrounds of our managing directors and professional staff, Cogent Valuation brings substantial large deal experience to bear on our middle market transaction opinions. Cogent Valuation utilizes proprietary research, intensive due diligence, and the experience and insights of its professionals to produce thoughtful, well-documented opinions that have consistently withstood the scrutiny of clients and their advisors, investors, regulators, and courts.

This industry research is provided at no charge. Further research or detailed information not covered in this report can be obtained for a fee. **Contact Steven Kam at 415-392-0888 or kam@kogentvaluation.com** for additional information or questions in connection with this research report.

Definitions of Financial Terms Used in this Quarterly Industry Update:

Enterprise Value (EV): Market Value of Equity + Market Value of Debt - Cash

Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA): Profitability metric sometimes also referred to as operating profit or operating earnings.

Gross Cash Flows: Net Income + Depreciation and Amortization Expense

Latest Twelve Months (LTM): Financial information is as of the latest twelve months through the date of this Quarterly Industry Update.

Market Value of Invested Capital (MVIC): Market Value of Equity + Market Value of Debt

Disclosures and Limitations: This research report is for informational and discussion purposes only. Information presented herein is not investment advice of any kind to any person and does not constitute a recommendation as to the purchase or sale of any interests or as to any other course of action. General, financial, and statistical information concerning the details of this report and related industry are from sources Cogent Valuation believes to be reliable. Cogent Valuation has accurately reflected such information in this research report; however, Cogent Valuation makes no representation as to the sources' accuracy or completeness and has accepted this information without further verification. Neither all nor any part of the content of this report may be conveyed to the public through advertising, public relations, news, sales, mail, direct transmittal, or other media without the prior written consent of Cogent Valuation. Cogent Valuation's research is as of the date reported herein. Cogent Valuation has no affiliation with any of the companies comprising the industry used as a basis for research in this report, nor does Cogent Valuation hold any investments in the companies listed herein. The content of this report may be used, in part, as a basis for any work that Cogent Valuation performs for you in the future at the sole discretion of Cogent Valuation. THIS REPORT IS NOT TO BE USED OR CONSIDERED UNDER ANY CIRCUMSTANCE BY ANYONE AS INVESTMENT ADVICE.