

Stock Index

Solar Energy

Q1 2017



Solar Energy Highlights

- Overall Solar Index decreased 1.7% from last quarter
- Wafers / Ingots Index increased 9.0% from last quarter
- Cells / Modules Index increased 6.8% from last quarter
- Vertically Integrated Index decreased 9.5% from last quarter
- EPC Integrators / Developers Index decreased 1.2% from last quarter

About the Solar Energy Stock Index

Similar to the S&P 500 Index, the Solar Stock Index is a market cap weighted composite index. The index is prepared by first selecting a base period, in this case, Q1 2009, and totaling the market caps of the companies in each sector in this period. This period and total market cap is set to a base index, in this case,

1000. Next, for each sector, the current period's total market cap is calculated, divided by the base period's total market cap and then multiplied by the base index (1000). The result is the index value used for plotting in the graph on the following page.

Solar Energy Index Underperforms S&P in Q1 2017

Winner's Circle		Sector
GCL-Poly Energy Holdings	11%	W
Solaria Energía y Medio Ambiente	43%	C
SolarWorld AG	50%	I
Capital Stage AG	(2%)	D
Worst Performers		Sector
ReneSola	(25%)	W
Hanwha Q CELLS	(11%)	C
Yingli Green Energy	(17%)	I
Real Goods Solar	(81%)	D

Based on quarter-over-quarter share price performance

EBITDA Margins	
Wafers / Ingots	21%
Cells / Modules	18%
Vertically Integrated	13%
EPC Integrators / Developers	70%

3 Year Revenue CAGR	
Wafers / Ingots	(8%)
Cells / Modules	14%
Vertically Integrated	8%
EPC Integrators / Developers	1%

Source: Capital IQ as of March 31, 2017 or latest available
Note: Average for each sector; CAGR stands for compound annual growth rate

Solar Energy Sector Guide

Wafers/Ingots Producers (W)

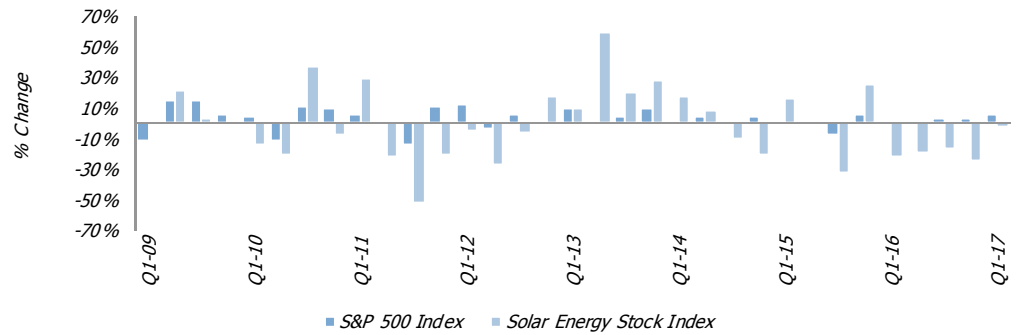
Cells/Modules Production (C)

Vertically Integrated Companies (I)

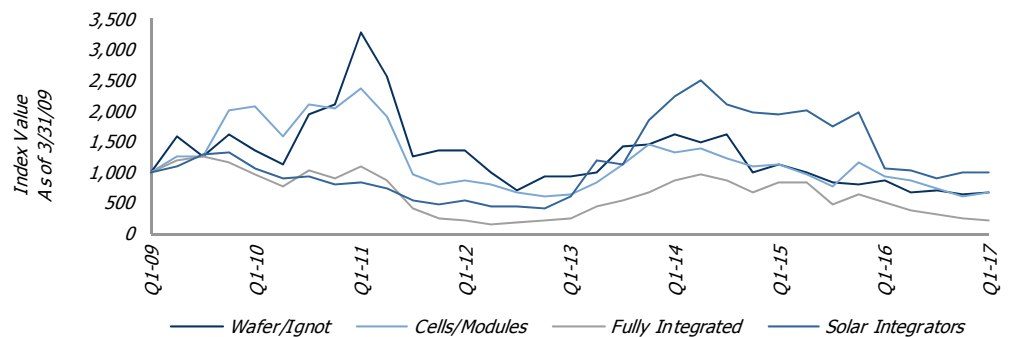
Engineering, Procurement and Construction ("EPC") Integrators / Developers (D)

S&P Index vs. Solar Energy Stock Index

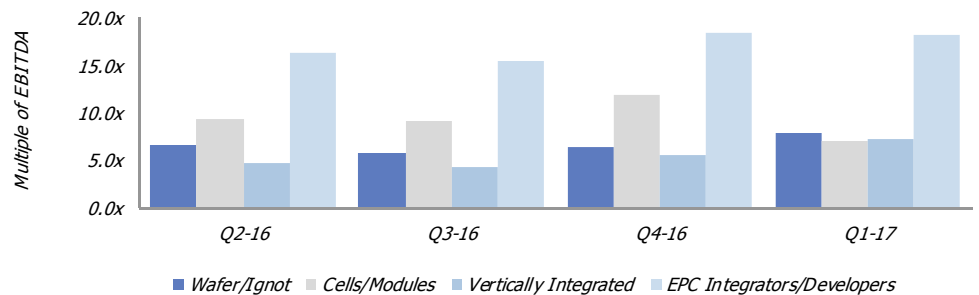
Quarter / Quarter Change



Solar Energy Stock Index by Sector



Enterprise Value⁽¹⁾ / EBITDA



(1) Enterprise Value is calculated as market cap on March 31, 2017 plus debt, preferred equity and minority interest less cash

Solar Energy Stock Index Data

Company	Exchange	Stock Price	LTM Sales (\$ in millions)	Diluted EPS	Current Ratio	EV/ EBITDA	EV/ Sales	Market Cap (\$ in millions)	Net Debt (\$ in millions)
Wafers / Ingots									
GCL-Poly Energy Holdings Ltd.	Hong Kong	\$0.13	\$3,172	\$0.02	0.8	6.9x	2.4x	\$2,464	\$4,860
PV Crystalox Solar plc	London	0.25	60	0.01	12.4	NM	0.1x	39	(30)
ReneSola Ltd.	New York	2.40	930	(1.72)	0.6	8.7x	0.7x	49	587
Average Wafers / Ingots			\$1,387		4.6	7.8x	1.1x	\$851	\$1,805
Cells / Modules									
E-Ton Solar Tech. Co. Ltd	Taiwan	\$0.30	\$121	(\$0.03)	2.1	NM	1.5x	\$236	(\$40)
Gintech Energy Corporation	Taiwan	0.58	524	(0.11)	2.5	NM	0.5x	302	(26)
Hanwha Q CELLS Co., Ltd.	New York	7.29	2,427	1.45	1.2	4.8x	0.6x	606	781
JA Solar Holdings Co., Ltd.	Nasdaq	6.54	2,268	1.88	1.2	3.6x	0.4x	311	546
Motech Industries, Inc.	Taiwan	0.92	894	(0.06)	1.4	7.8x	0.6x	451	52
Neo Solar Power Corporation	Taiwan	0.50	510	(0.20)	1.4	NM	1.5x	510	243
Solaria Energía y Medio Ambiente, S.A.	Madrid	1.15	17	0.08	1.3	19.3x	12.7x	125	86
Average Cells / Modules			\$966		1.6	8.8x	2.5x	\$363	\$235
Vertically Integrated									
Canadian Solar Inc.	Nasdaq	\$12.27	\$2,853	\$1.12	1.0	14.5x	0.9x	\$709	\$1,923
First Solar, Inc.	Nasdaq	27.10	2,951	(3.48)	4.2	1.5x	0.4x	2,820	(1,728)
JinkoSolar Holding Co., Ltd.	New York	16.57	3,082	8.09	1.1	5.5x	0.6x	525	1,259
REC Silicon ASA	Oslo	0.12	271	(0.06)	2.9	NM	1.5x	305	101
SolarWorld AG	Frankfurt	3.85	856	(6.52)	1.9	NM	0.4x	57	304
SunPower Corporation	Nasdaq	6.10	2,560	(3.41)	1.8	NM	1.0x	846	1,445
Trina Solar Ltd.	New York	0.25	18	(0.02)	2.3	7.6x	1.3x	26	(3)
Yingli Green Energy Holding Co. Ltd.	New York	2.17	1,266	(13.39)	0.5	NM	1.5x	39	1,615
Average Vertically Integrated			\$1,732		2.0	7.3x	0.9x	\$666	\$614
EPC Integrators / Developers									
Capital Stage AG	Frankfurt	\$6.61	\$150	\$0.13	1.6	18.3x	11.7x	\$836	\$1,379
Real Goods Solar, Inc.	Nasdaq	1.38	17	(183.54)	1.4	NM	0.5x	10	(2)
Average EPC Integrators / Developers			\$84		1.5	18.3x	6.1x	\$423	\$689
Average Solar Energy Index			\$1,247		2.2	8.9x	2.0x	\$563	\$668

Note: Data in table above is sourced from Capital IQ as of March 31, 2017 or latest available data.

Stock price adjusted for dividends and splits.

Stock Index does not include polysilicon producers and diversified multi-divisional electronics firms such as Bosch, Kyocera, Mitsubishi Electric, Sanyo and Sharp.

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Healthcare
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Packaging
Technology & Media

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Special Situations
JV & Partnering
Valuations & Opinions

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Lincoln's Renewable Energy Group

Lincoln International's Renewable Energy Group is led by a former CEO of a public company. The firm's Renewable Energy team provides transactional, financial and strategic advisory services to renewable energy companies and private equity groups. For more information, please contact:

North America

Jack Calderon
Managing Director (Chicago)
+1 (312) 580-6289
jcalderon@lincolninternational.com

Chaim Lubin
Director (Chicago)
+1 (312) 506-2753
clubin@lincolninternational.com

Asia

Tetsuya Fujii
Managing Director and
President - Japan (Tokyo)
+813-5549-7680
tfujii@lincolninternational.com

T.N. Giridhar
Managing Director and
President - India (Mumbai)
+91 (22) 4067-0300
tngiridhar@lincolninternational.com

Joe Chang
Managing Director and
CEO - China (Beijing)
+86 (10) 6468-6458
jchang@lincolninternational.com

South America

James Sinclair
Managing Director and
President - Brazil (São Paulo)
+55 (11) 3078-7579
jsinclair@lincolninternational.com

Europe

Phillip McCreanor
Managing Director (London)
+44 (207) 632-5257
pmmcreeanor@lincolninternational.com

Dr. Martina Ecker
Managing Director (Frankfurt)
+49 (0) 69-97-105-421
m.ecker@lincolninternational.de

Richard Floto
Managing Director (Frankfurt)
+49 (0) 69-97-105-435
r.floto@lincolninternational.de

Géraud Estrangin
Managing Director (Paris)
+33 (0) 1-53-53-18-24
g.estrangin@lincolninternational.fr

Eric Wijs
Managing Director (Amsterdam)
+31 (20) 7670-311
e.wijs@lincolninternational.nl

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