

# Solar Energy Index Underperforms S&P in Q4 2011

## Winner's Circle\* Sector

LDK Solar Co. Ltd.	34%	W
Motech Industries, Inc.	8%	C
Yingli Green Energy	23%	I
Premier Power Renewable	15%	D

## Worst Performers\* Sector

PV Crystalox Solar plc	(67%)	W
Solon AG	(74%)	C
Renewable Energy Corp.	(38%)	I
Phönix Solar AG	(75%)	D

\* Based on quarter-over-quarter share price performance

## Solar Energy Highlights

From last quarter:

- Overall Index decreased 26.7%
- Wafers / Ingots Index increased 12.2%
- Cells / Modules Index decreased 34.2%
- Vertically Integrated Index decreased 7.4%
- EPC Integrators / Developers Index decreased 20.1%

## EBITDA Margins\*

Wafers / Ingots	20%
Cells / Modules	9%
Vertically Integrated	17%
EPC Integrators / Developers	7%

## 3 Year Revenue CAGR\*

Wafers / Ingots	16%
Cells / Modules	13%
Vertically Integrated	25%
EPC Integrators / Developers	21%

\*Source: Capital IQ as of December 31, 2011 or latest available  
Note: Average for each sector; CAGR stands for compound annual growth rate

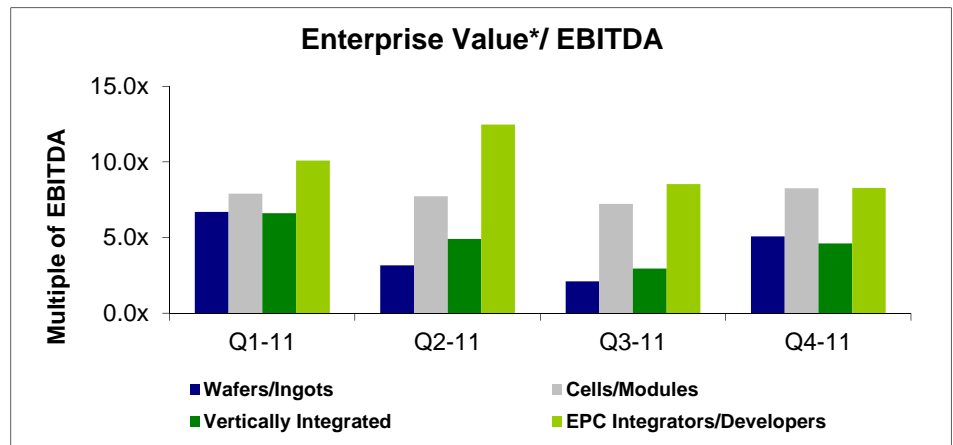
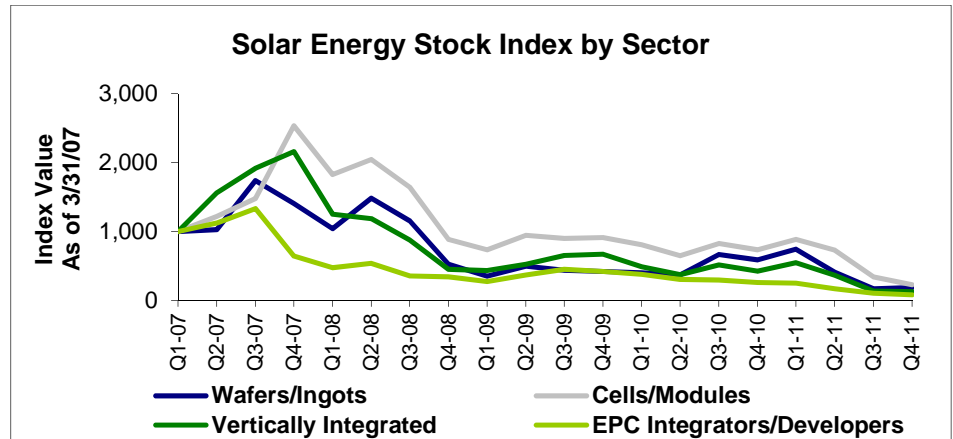
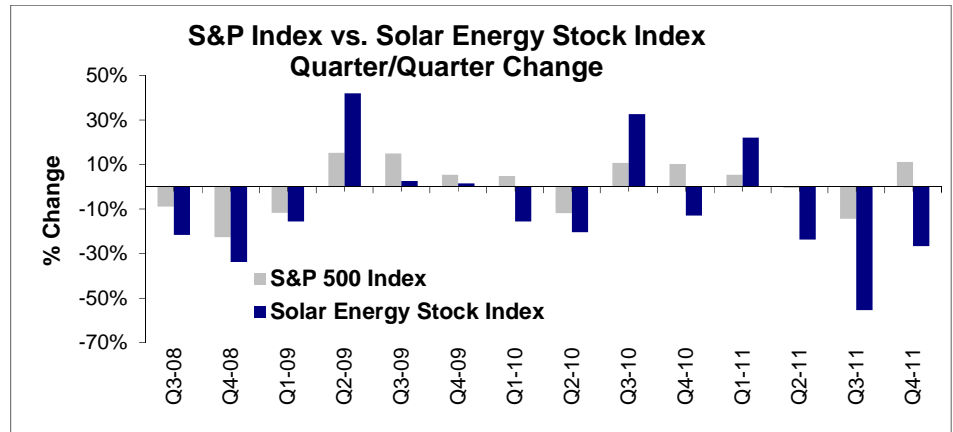
## Solar Energy Sector Guide

Wafers / Ingots Producers (W)

Cells / Modules Production (C)

Vertically Integrated Companies (I)

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



\* Enterprise Value is calculated as Market Cap on December 31, 2011 plus debt, preferred equity and minority interest less cash

## 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 2007, 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 above.

# Solar Energy Stock Index Data

Company	Exchange	Stock		Diluted		Ave. Cash		EV/ EBITDA	EV/ Sales	Market Cap	Net Debt
		Price	LTM Sales	EPS	Conversion	Current	Cycle				
		(\$M)				(days)				(\$M)	(\$M)
<b>Wafers / Ingots</b>											
LDK Solar Co.Ltd.	New York	\$ 4.19	\$ 2,659	\$ 0.67	78	0.7	7.7x	1.6x	\$ 616	\$ 3,353	
PV Crystalox Solar plc	London	0.07	393	0.12	146	2.0	NM	NM	28	(60)	
ReneSola Ltd.	London	1.53	1,184	1.03	33	1.0	2.5x	0.5x	133	414	
<b>Average Wafers / Ingots</b>		<b>1,412</b>		<b>85</b>		<b>1.2</b>	<b>5.1x</b>	<b>1.0x</b>	<b>259</b>	<b>1,236</b>	
<b>Cells / Modules</b>											
Aleo Solar AG	Frankfurt	\$ 27.80	\$ 653	\$ 0.66	45	2.2	21.9x	0.6x	\$ 362	\$ 27	
Canadian Solar Inc.	Nasdaq	2.66	1,878	(0.12)	54	1.1	7.2x	0.4x	115	672	
Centrosolar AG	Frankfurt	1.69	426	(0.39)	117	1.9	17.2x	0.4x	34	136	
China Sunergy Co. Ltd.	Nasdaq	1.12	625	(2.08)	67	1.5	NM	0.4x	17	209	
Delsolar Co. Ltd.	Taiwan	0.50	402	(0.22)	46	1.7	NM	0.4x	126	31	
Energy Conversion Devices, Inc.	Nasdaq	0.20	189	(7.15)	119	4.0	NM	0.8x	11	147	
E-Ton Solar Tech. Co. Ltd	Taiwan	0.42	432	(0.30)	48	0.7	NM	0.7x	203	96	
Evergreen Solar Inc.	Nasdaq	0.01	296	(13.69)	97	3.2	NM	1.2x	1	363	
First Solar, Inc.	Nasdaq	33.76	2,716	6.09	141	3.3	3.3x	1.0x	2,918	(153)	
Gintech Energy Corporation	Taiwan	1.08	739	0.07	67	1.3	9.7x	0.8x	365	245	
Hanwha SolarOne Co., Ltd	Nasdaq	0.98	1,180	0.64	55	1.4	4.2x	0.3x	83	278	
JA Solar Holdings Co., Ltd.	Nasdaq	1.34	1,981	0.65	39	2.7	3.5x	0.3x	229	343	
Motech Industries, Inc.	Taiwan	1.75	1,215	0.08	52	2.4	8.3x	0.7x	767	72	
Q-Cells SE	Frankfurt	0.67	1,421	(2.91)	176	1.3	NM	0.6x	125	682	
Solar-Fabrik AG	Frankfurt	2.01	285	(0.46)	62	2.5	2.9x	0.1x	26	(8)	
Solaria Energía y Medio Ambiente, S.A.	Madrid	1.25	202	0.08	NM	2.3	11.5x	1.6x	123	213	
Solon AG für Solartechnik	Frankfurt	0.48	784	(16.45)	93	0.7	NM	0.7x	8	533	
SunPower Corporation	Nasdaq	6.23	2,686	(3.73)	61	1.9	5.7x	0.5x	626	593	
Suntech Power Holdings Co. Ltd.	New York	2.21	3,463	0.08	97	0.9	3.5x	0.7x	398	1,912	
Sunways AG	Frankfurt	2.00	188	(1.17)	100	1.4	NM	0.3x	23	27	
<b>Average Cells / Modules</b>		<b>1,088</b>		<b>81</b>		<b>1.9</b>	<b>8.3x</b>	<b>0.6x</b>	<b>328</b>	<b>321</b>	
<b>Vertically Integrated</b>											
Renewable Energy Corporation ASA	Oslo	\$ 0.56	\$ 2,630	\$ (1.22)	122	2.3	2.1x	0.5x	\$ 555	\$ 908	
Solar Power, Inc.	OTC	0.33	56	(0.05)	54	2.6	NM	1.1x	61	(1)	
SolarWorld AG	Frankfurt	4.22	1,534	0.56	279	4.2	8.4x	0.9x	468	971	
Trina Solar Ltd.	New York	6.68	2,254	2.46	62	2.0	2.8x	0.4x	525	332	
Yingli Green Energy Holding Co. Ltd.	New York	3.80	2,534	1.06	49	1.0	5.2x	0.8x	601	1,235	
<b>Average Vertically Integrated</b>		<b>1,801</b>		<b>113</b>		<b>2.4</b>	<b>4.6x</b>	<b>0.8x</b>	<b>442</b>	<b>689</b>	
<b>EPC Integrators / Developers</b>											
Akeena Solar, Inc.	OTC	\$ 0.32	\$ 12	\$ (0.55)	19	1.3	NM	0.3x	\$ 5	\$ (2)	
Conergy AG	Frankfurt	0.41	1,102	(3.19)	67	1.4	NM	0.2x	65	161	
Kerself S.p.A.	New York	2.06	605	(1.27)	NM	0.3	4.8x	0.6x	36	313	
Phönix Solar AG	New York	2.79	585	(6.84)	156	1.4	NM	0.2x	21	79	
Premier Power Renewable Energy, Inc.	OTC	0.55	101	(0.20)	NM	1.0	NM	0.1x	14	(4)	
Real Goods Solar, Inc.	Nasdaq	1.43	89	(0.08)	47	1.4	NM	0.3x	37	(7)	
SAG Solarstrom AG	Frankfurt	4.27	369	0.66	133	2.2	11.8x	0.8x	54	249	
<b>Average EPC Integrators / Developers</b>		<b>409</b>		<b>84</b>		<b>1.3</b>	<b>8.3x</b>	<b>0.4x</b>	<b>33</b>	<b>113</b>	
<b>Average Solar Energy Index</b>		<b>1,082</b>		<b>87</b>		<b>1.8</b>	<b>7.2x</b>	<b>0.6x</b>	<b>279</b>	<b>410</b>	

Note: Data in table above is sourced from Capital IQ as of December 31, 2011 or latest available data.

Stock price adjusted for dividends and splits.

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

## Contact

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 with an interest in the renewable energy space.

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## About Lincoln International

About Lincoln International

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