

DealReader Solar Energy

Q2 2018



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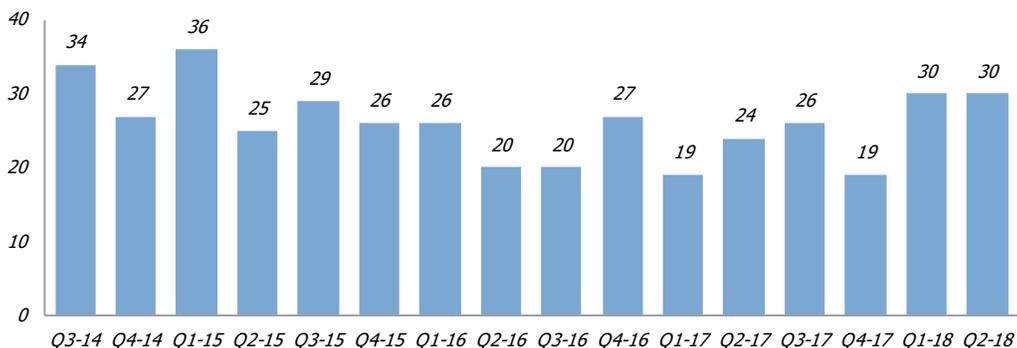
Announcements

- Contour Global has acquired Acciona Thermosolar S.A. (May-18)
- Trina Solar Limited has acquired NCLAVE Renewable (May-18)
- TerraForm Power has acquired Saeta Yield S.A. (June-18)
- Capital Dynamics has acquired 8point3 Energy Partners (June-18)

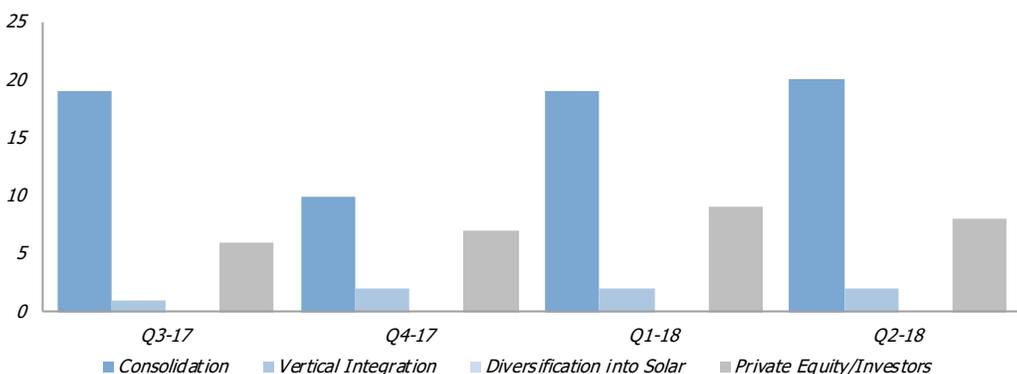
Sources: All information contained in this newsletter including the charts was obtained from company websites, Lincoln International's internal data and Capital IQ.

Q2 2018 Deal Volume Comparison

Completed Solar Energy Transaction Volume



Quarterly Comparison – M&A by Category



There were 30 completed solar energy M&A transactions in Q2 2018, which represents the same rate of activity as the 30 transactions recorded in Q1 2018. On a comparative basis, this represents an increase from the 24 transactions reported in Q2 2017.

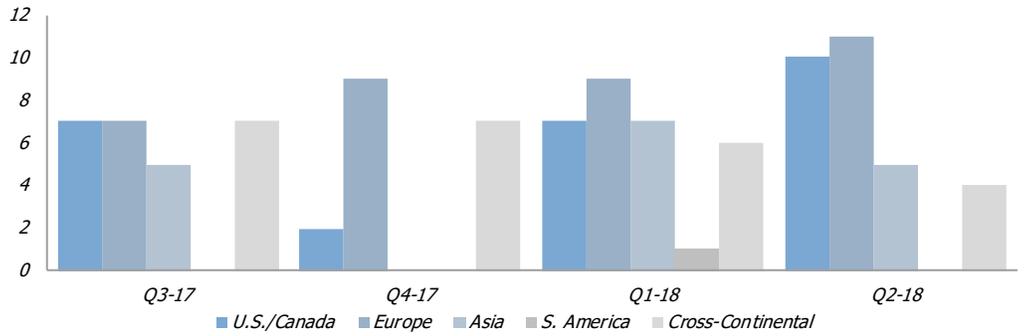
Within the solar M&A transactions, consolidation represented 67% of the volume, or 20 deals in Q2 2018. The next largest category was investment in the solar energy industry by private equity or private investors with 27% of transactions, or 8 deals this quarter. There were 2 transactions categorized as vertical integration and no transactions categorized as diversification into the solar energy industry.

In Q2 2018, 37% of the solar energy M&A volume, or 11 transactions, occurred within Europe. The U.S. and Canada also recorded 33% of the total volume, or 10 transactions, in the current quarter. Deals within Asia accounted for 5 transactions, or approximately 17% of the total for Q2 2018. Cross-continental deals accounted for 4 transactions in Q2 2018, while no deals within South America were recorded.

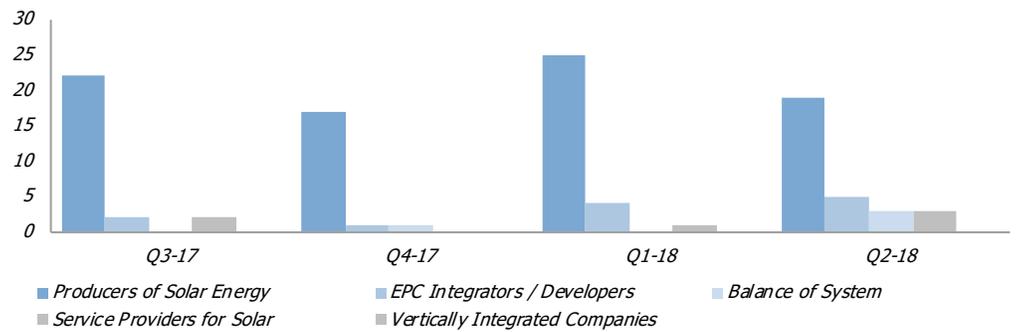
There were 19 acquisitions of companies categorized as producers of solar energy, representing the most common category of targets at 63% of the Q2 2018 total. This category primarily represents the acquisition of solar projects and solar farms. EPC integrators/developers were the next most frequent acquisition targets, accounting for 5 transactions, or 17% of the total. Acquisitions of companies categorized as balance of system providers accounted for 3 transactions in Q2 2018, which was the same amount recorded for service providers of solar companies. There were no acquisitions of vertically integrated solar companies in Q2 2018.

Consolidation for producers of solar power continued to be the primary source of deal activity in Q2 2018, in addition to continued volume from the private equity/investors category.

Quarterly Comparison – M&A by Geography



Quarterly Comparison – M&A by Sector of Target Company



Margin Performance in the Solar Energy Industry

The majority of sectors within the solar energy industry are exhibiting flat to declining margins.

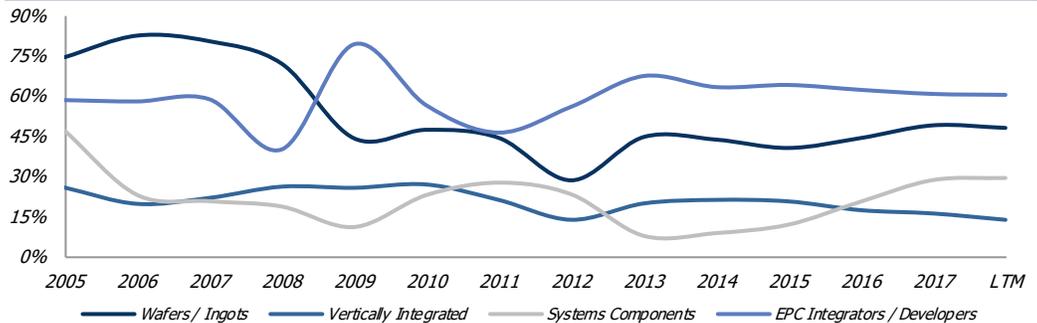
The three graphs on the following page provide an overview of gross margin, operating income margin, and EBITDA margin performance from 2005 through today. Each graph shows the margin performance by sector within the solar energy industry.

In terms of margin performance by sector, wafers/ingots companies saw little movement in gross, operating and EBITDA margins in LTM

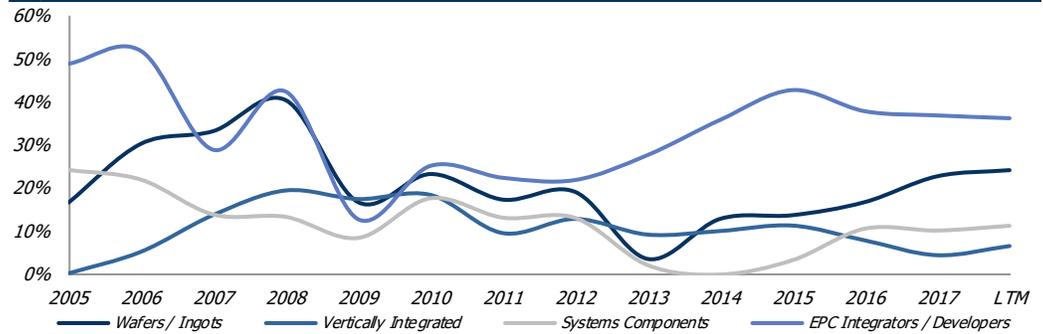
Q2 2018. Vertically integrated companies saw declining gross margins but steady operating and EBITDA margins. The systems components companies saw flat gross margins, operating and EBITDA margins during the LTM Q2 2018 period.

Overall, solar companies categorized as wafer/ingot producers experienced the strongest margin performance over the last year, while each sector generally exhibited flat or declining margins.

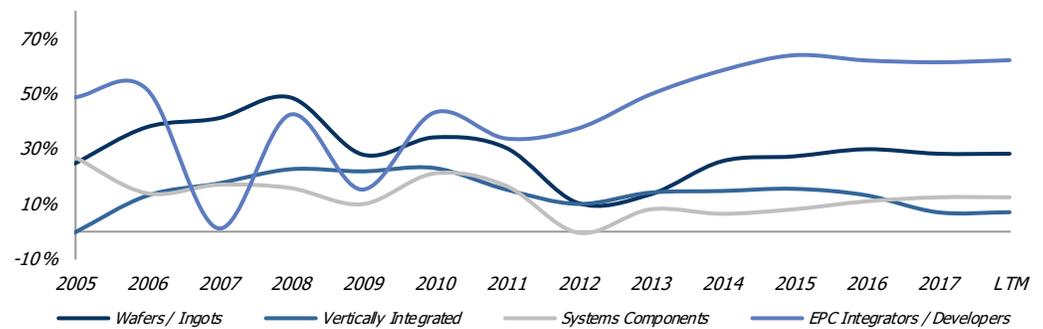
Average Gross Margin Performance



Average Operating Income Margin Performance



Average EBITDA Margin Performance



Solar Energy Margins by Sector

(LTM)	Gross Margin	Operating Margin	EBITDA Margin
Daqo New Energy Corp.	41.3%	38.0%	48.4%
GCL-Poly Energy Holdings Limited	34.5%	20.3%	36.2%
REC Silicon ASA	69.8%	-	7.3%
Sino-American Silicon Products Inc.	22.6%	14.4%	21.1%
Average Wafers / Ingots	42.1%	24.2%	28.2%
Gintech Energy Corporation	-	-	-
Motech Industries, Inc.	-	-	-
Neo Solar Power Corp.	-	-	-
SMA Solar Technology AG	22.9%	5.7%	9.0%
SolarEdge Technologies, Inc.	36.4%	17.1%	16.2%
Average Systems Components	29.7%	11.4%	12.6%
Canadian Solar Inc.	16.7%	7.1%	10.3%
First Solar, Inc.	24.4%	10.6%	11.2%
JinkoSolar Holding Co., Ltd.	11.9%	1.6%	3.6%
SunPower Corporation	2.3%	-	-
Average Vertically Integrated	13.8%	6.4%	8.4%
Azure Power Global Limited	91.0%	52.5%	76.8%
BCPG Public Company Limited	70.5%	50.0%	72.3%
Encavis AG	96.6%	24.2%	71.9%
China Singyes Solar Technologies Holdings Limited	20.1%	10.9%	14.1%
Scatec Solar ASA	-	52.9%	77.7%
SPCG Public Company Limited	59.9%	54.1%	67.0%
Sunrun Inc.	16.5%	-	-
TerraForm Power, Inc.	71.8%	9.8%	58.7%
Average EPC Integrators / Developers	60.9%	36.4%	62.6%

Global Industry Groups

Business Services
Consumer
Energy, Power & Infrastructure
Healthcare
Industrials
Technology, Media & Telecom

Global Locations

Amsterdam
Beijing
Chicago
Dallas
Frankfurt
London
Los Angeles
Madrid
Milan
Moscow
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