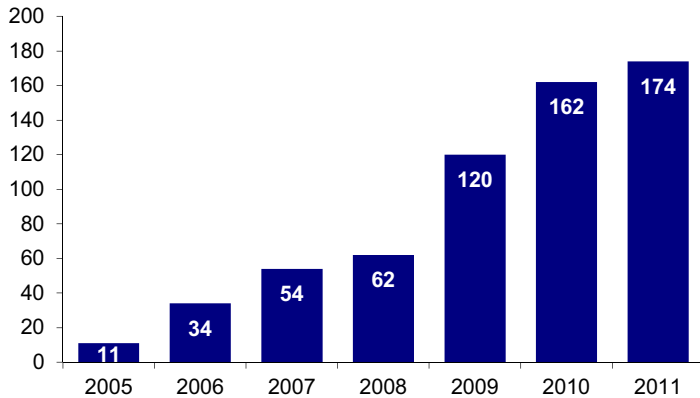
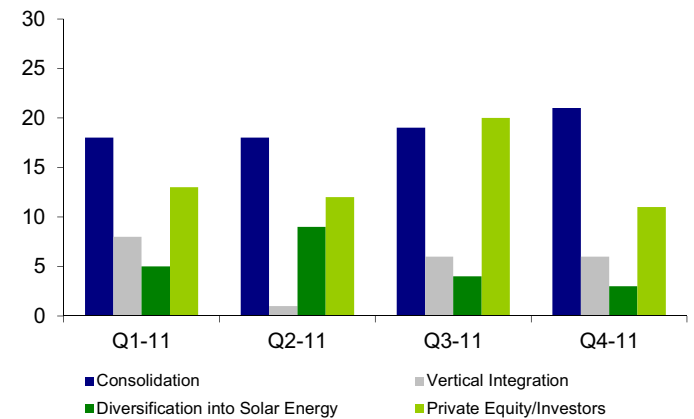


# 2011 Deal Volume Comparison

**Chart A: Annual Comparison - Completed Solar Energy Transactions**

**Chart B: Quarterly Comparison - M&A by Category**


## Announcements

- JA Solar Holdings Co., Ltd. (NasdaqGS:JASO) acquired Silver Age Holdings Limited from Jinglong Group Co., Ltd. (Dec.-11)
- NRG Solar LLC acquired Solar Power Partners, Inc. (Nov.-11)
- Canadian Solar Inc. (NasdaqGS:CSIQ) acquired SpectraWatt Inc. (Oct.-11)
- Total SA (ENXTPA: FP) acquired Tenesol SA from EDF Energies Nouvelles Réparties (Oct.-11)

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

There were 174 completed solar energy M&A transactions in 2011, approximately 7% more than the 162 recorded in 2010 and 45% more than the 120 recorded in 2009. The number of 2011 transactions represents approximately three times the number of total deals in 2008, over three times 2007 deals, over five times deals in 2006, and approximately 16 times the number of 2005 transactions, when Lincoln began tracking M&A activity in the industry.

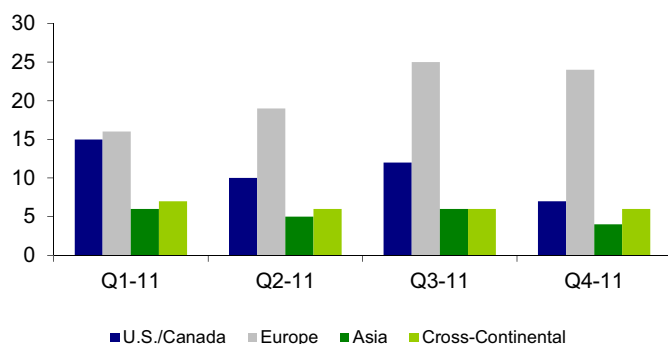
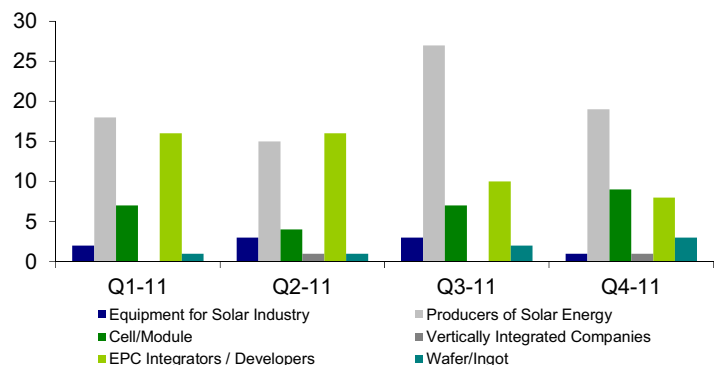
Within the solar M&A transactions, consolidation represented 44% of the volume, or 76 deals in 2011. The next largest category was investment in the solar energy industry by private equity or private investors with 32% of transactions, or 56 deals this year. Diversification into the solar energy industry and vertical integration each accounted for 12% of the total, or 21 transactions, respectively.

This year, 48% of M&A transactions occurred in Europe, which highlights the maturity of the European market within the solar energy industry. The number of transactions within the U.S./Canada in 2011 was 44, or 25% of the total. Cross-Continental transactions accounted for 25 transactions, or 14% of the total for 2011 while deals within Asia represented 21 transactions, or approximately 12%.

In 2011, there were 79 acquisitions of companies categorized as producers of solar energy,

representing the most common category of targets. EPC integrators/developers were the next most frequent acquisition targets, accounting for 50 transactions, or 29% of the total. Companies categorized as cell/module producers accounted for 27 transactions, or 16% of total deals in 2011. Next, companies categorized as providers of equipment for the solar industry had 9 transactions, or 5% of the yearly total. Finally, companies categorized as wafer/ingot manufacturers and vertically integrated companies represented 7 and 2 transactions, respectively.

The M&A transaction landscape of 2011 highlights the continued consolidation trend within the solar energy industry. Primarily, this consolidation occurred lower down the value chain with acquisitions of producers of solar energy and EPC integrators/developers. This trend is expected to continue as companies and investors look to increase their portfolios of completed solar projects and pipeline opportunities. Another driver of M&A activity in 2011 was the improved credit market, which has allowed private equity and private investors to become increasingly involved in transactions. Given these trends, there exists a significant opportunity for companies to continue building stronger business platforms to better face the challenges ahead in the maturing solar energy industry.

**Chart C: Quarterly Comparison - M&A by Geography**

**Chart D: Quarterly Comparison - M&A by Sector of Target Company**


# Select Q4 2011 Solar Energy Transactions

#	Date	Acquirer	Seller	Target	Type
1	Dec-11	wind 7 Aktiengesellschaft	Private	Two Roof-Top Photovoltaic Installations	1
2	Dec-11	Gestamp Asetym Solar, S.L.	EOS Ventures, LLC	2.2 Megawatt Solar Facility in Vermont	2
3	Dec-11	Solaria DTL Corporation SL	Solaria Energia y Medio Ambiente, S.A.	PV Plant in Germany	1
4	Dec-11	Urs Jost	Urs Muntwyler	Solarcenter Muntwyler AG	4
5	Dec-11	Jiangsu Shenlong Hi-Tech Group Co.,	Jiangsu Zijin Electronics Group Co., Ltd.	Hareon Solar Technology Co., Ltd.	3
6	Dec-11	Manz AG (XTRA:M5Z)	Würth Solar GmbH & Co. KG	CIGS Modules Innovation Line	2
7	Dec-11	Soitec SA (ENXTPA:SOI)	Sony Electronics, Inc.	PV Manufacturing Facility	1
8	Dec-11	ABB Ltd. (SWX:ABBN)	Private	Powercorp Pty Limited	1
9	Dec-11	EDF Energia Italia S.r.l.	Private	Gargano Energia S.r.l.	1
10	Dec-11	Platina Partners LLP	Private	Macchia Rotonda Solar Srl	4
11	Dec-11	Premier Solar Australia Pty. Ltd.	Harbert Management Corporation,	Solar Shop Australia Pty Ltd.	1
12	Dec-11	JA Solar Holdings Co., Ltd.	Jinglong Group Co., Ltd.	Silver Age Holdings Limited	2
13	Nov-11	Holding Fotovoltaica S.p.A.	Novenergia Italia S.p.A.	Novenergia Salentina S.r.l.	1
14	Nov-11	Akuo Energy SAS	Private	Solar Farms in France	1
15	Nov-11	White Owl Capital AG	Gehriicher Solar AG	Two Solar Parks in France	4
16	Nov-11	Shanghai Chaori Solar Energy Science	Shanghai Zhenyin Venture Capital	Luoyang Yindian Photovoltaic Material Co.	1
17	Nov-11	Atrya SAS	Private	European Solar Engineering S.A.	1
18	Nov-11	Murphy&Spitz Green Capital AG	Private	Buzzing Purple Lines s.r.o.	4
19	Nov-11	NRG Solar LLC	Globespan Capital Partners; EIF	Solar Power Partners, Inc.	1
20	Nov-11	Max Era Properties Limited	Evergreen Solar Inc. (OTCPK:ESLR.Q)	Core Assets	4
21	Nov-11	Duke Energy Renewables	ESA Renewables, LLC	Portfolio Of 3 Projects	1
22	Nov-11	Gazprom Marketing & Trading Limited	Shira Verwaltungs-GmbH	envacom Service GmbH	1
23	Nov-11	LUXCARA GmbH	Q-Cells SE (XTRA:QCE)	60 MW solar park in Briest	4
24	Oct-11	EVONIK SOLAR NORGE AS	FESIL AS; Sunergy Investco B.V.	Solsilc Project	1
25	Oct-11	Sloan Global Holdings, LLC	Regal Resources, Inc. (DB:R7P1)	Aztec Solar Power, LLC	3
26	Oct-11	The Fishman Group	Private	Gsystems Solar Solutions Ltd.	4
27	Oct-11	Haitong Food Group Company Limited (SHSE:600537)	Private	Changzhou EGing Photovoltaic	3
28	Oct-11	Stadtwerke Aachen AG	Solar-Konzept GmbH	15 Mega-Watt Solar Plant in Giebelstadt	1
29	Oct-11	MEAG MUNICH ERGO	Banco Santander, S.A. (CATS:SAN)	6.7 Megawatt Solar Park	4
30	Oct-11	EAM Solar AS	Solon SE (XTRA:SOO1)	1.5 Megawatt Solar Power Plant	4
31	Oct-11	Plain Energy GmbH	juwi Holding AG	2 Photovoltaic Power Plants	1
32	Oct-11	Rete Rinnovabile S.r.l.	Suntergrid S.p.A.	Nuova Rete Solare S.r.l.	1
33	Oct-11	Schüco International KG	Sunfilm AG	Site in Großröhrsdorf	1
34	Oct-11	Hareon Solar GmbH	Greenvision ambiente Photo Solar s.r.l.	Societa Agricola Cassano Energia Srl	2
35	Oct-11	Canadian Solar Inc. (NasdaqGS:CSIQ)	Intel Capital; Cogentrix Energy, LLC;	SpectraWatt Inc.	1
36	Oct-11	Total SA (ENXTPA:FP)	EDF Energies Nouvelles Réparties	Tenesol SA	1
37	Oct-11	Principal Solar, Inc. (OTCPK:PSWW)	Talmage Solar Engineering Inc.	SunGen Mill 77 Solar Facility	4

Type Key: 1=Consolidation, 2=Vertical Integration, 3=Diversification into Solar Energy, 4=Private Equity/Investors

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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

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