



2011 Mid-Year Greentech M&A Review

PEACHTREE CAPITAL ADVISORS

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Peachtree Capital Advisors, Inc. is a New York-based investment bank providing M&A advisory services to growth and middle market technology, digital media, and green technology companies both in the U.S. and abroad. With 15 years of experience, Managing Director and founder John Doyle has closed and structured over 25 deals and possesses a strong knowledgebase of financial and strategic buyers in these sectors. If you are interested in learning more about valuation, positioning, preparation, or the merger and acquisition process, please visit www.peachtreecapitaladvisors.com or contact John Doyle at 212-570-1009.

2011 First Half U.S. Greentech M&A Activity

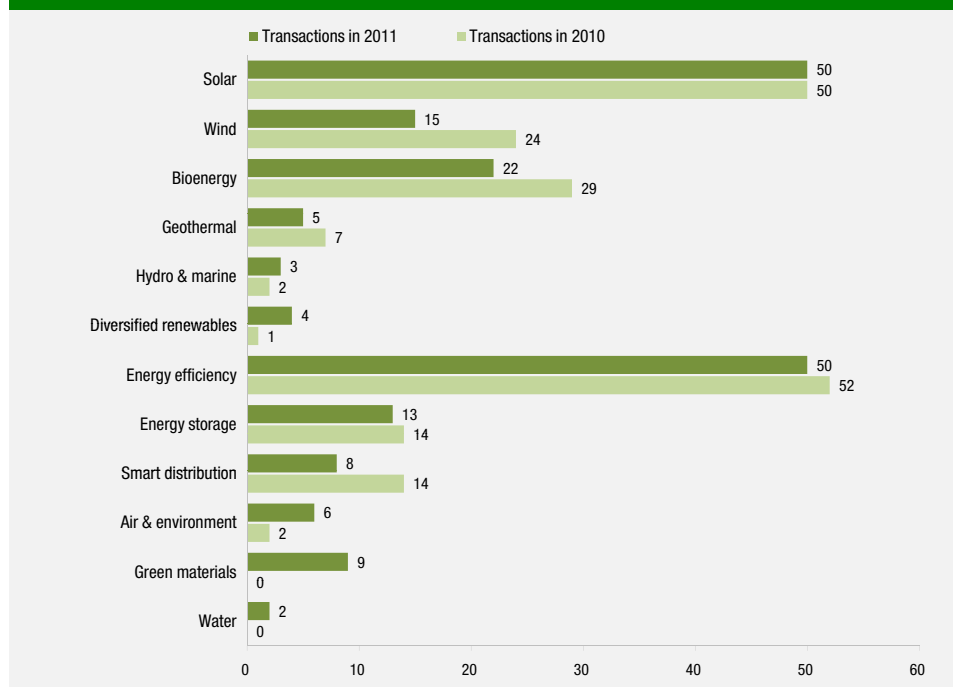
Despite facing a sluggish economy and continued uncertainty surrounding U.S. energy policy, U.S. greentech M&A grew to \$8.8 billion in the first half of 2011—8% higher than in the first half of 2010. Deal volume, however, declined 4% to 187 transactions during the same time period. Meanwhile, valuations proved less resilient as revenue multiples for publicly-traded cleantech companies plummeted from 2.9x to 1.9x in the span of six months. Cleantech valuations fell as investors focused more on the lack of short-term profitability than the long-term growth potential of the sector.

GREENTECH LANDSCAPE

Although first half numbers show stabilization, if not modest growth, in U.S. greentech M&A activity, further examination reveals a more complex outlook for the sector. The paralysis and cyclical shifts that have plagued U.S. energy policy have dampened investor sentiment while feared cuts in cleantech subsidies threaten to slow growth and innovation. Pessimism was reflected in the venture capital community, where capital raises dropped 12% from the same period last year. This cynicism was also reflected in the stock market, where the PowerShares Clean Energy ETF fell 13.4% in a first half that saw the broader S&P 500 rise 5.0%.

Recent growth in clean technology has largely been propelled by the infusion of federal funding into the sector. However, in the current economy, continued support at existing levels has become politically unsustainable. A 2009 U.S. government stimulus package allocated \$80 billion to cleantech development, but many of these subsidies are now set to expire while government funding cuts are also on the way. In Europe, the governments of Italy, France, and Germany have already reduced solar subsidies within the past year, which has caused a ripple effect through-

Figure 1: 1H2011 vs. 1H2010 Transaction Volume



out the solar industry. Solar growth slowed dramatically in each country following the cuts, resulting in a buildup of inventory. The oversupply of inventory led to a significant decrease in solar panel prices. Concurrently, this chain of events produced a significant drop in the stock prices of solar manufacturers, whose bottom lines were directly affected.

In the U.S., venture capital firms have responded to impending cuts and uncertain policy by either pulling out of greentech altogether or investing in safer technologies with more predictable returns and shorter time horizons, such as ENERGY EFFICIENCY. While many existing portfolio companies continue to raise capital, as witnessed by strong late-stage funding for SOLAR in the first half of 2011, early-stage funding has been nearly invisible. As a result of the lack of funding for early-stage ventures, innovation in the U.S. greentech market has been alarmingly sluggish. While the long-term attractiveness of renewable en-

Figure 2: Clean Technology Sectors

Renewable Energy

- Solar
- Wind
- Biopower
- Geothermal
- Hydro, ocean, and tidal
- Diversified renewables

Distribution, storage, and efficiency

- Smart grid and energy distribution
- Energy storage
 - » Hydrogen and fuel cell technology
- Energy efficiency
 - » Hybrid and electric vehicles
 - » Efficient lighting
 - » Demand response
 - » Green building

Other clean technology

- Air and environment
 - » Carbon capture and sequestration
- Green Materials
- Water

2011 First Half Greentech M&A Activity

ergy remains intact, many investors are shying away in the short term.

Despite the slowdown in venture capital activity, one group of investors assumed a more prominent role in the greentech sector in the first half. Corporate investors, perhaps willing to overlook concerns about short-term profitability for long-term potential, were active in making both investments and acquisitions in the first half of 2011. Google invested nearly a billion dollars in wind and solar projects; meanwhile, ABB, GE, Cisco, and IBM continued making acquisitions in the ENERGY EFFICIENCY and SMART DISTRIBUTION sectors. The first half also witnessed a spike in IPO activity, highlighted by the IPOs of Solazyme and KiOR in June. Although these exits are a welcome sign for the cleantech community, they may have been triggered in part by necessity in the absence of venture funding. As a result, post-IPO performance in the cleantech sector remains erratic with some companies, such as Amyris, trading up quite a bit and others, such as Codexis, faltering.

2011 FIRST HALF BY THE NUMBERS

First half greentech M&A was led by SOLAR and ENERGY EFFICIENCY, whose 50 transactions each far exceeded any other category and were virtually identical to the respective 50 and 52 transactions these categories posted in the first half of 2010. SOLAR also led all categories in reported transactions value with \$3.1 billion—64% higher than its 2010 first half total—followed by ENERGY EFFICIENCY with \$1.8 billion; together, they accounted for 55% of total transaction value in the greentech sector. Despite having the same number of deals, SOLAR outdistanced ENERGY EFFICIENCY in deal value due to Total's \$1.4 billion acquisition of SunPower and a heavier late-stage investment focus. GEOTHERMAL, mostly quiet over the past few years, surprisingly recorded the third-highest trans-

Figure 3: 1H2011 vs. 1H2010 Reported Transaction Value

Transaction Value (\$M)	1H2011	1H2010	% Change
Solar	3,051	1,857	64%
Wind	1,075	2,059	-48%
Bioenergy	857	814	5%
Geothermal	1,376	213	547%
Hydro & Marine	0	84	-100%
Diversified Renewables	36	40	-10%
Energy Efficiency	1,765	1,827	-3%
Energy Storage	231	177	30%
Smart Distribution	96	1,060	-91%
Air & Environment	99	25	294%
Green Materials	247	0	-
Water	3	0	-
Total	\$8,836	\$8,156	8%

Figure 4: 1H2011 Transaction Value by Sector

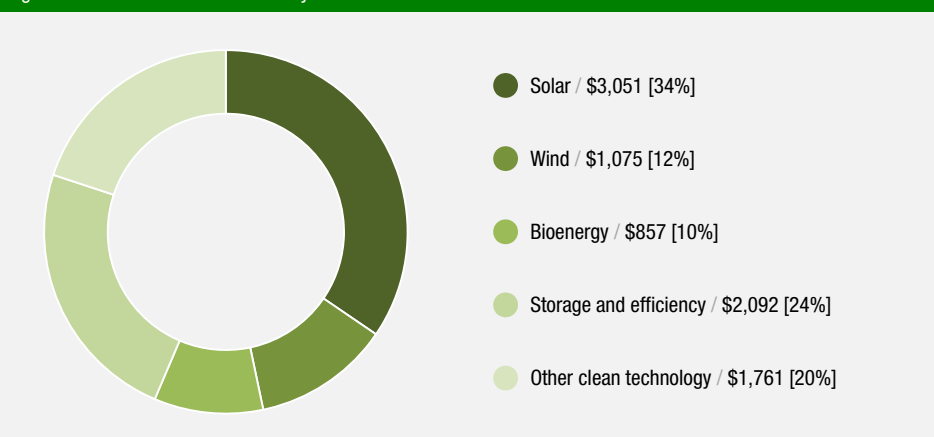
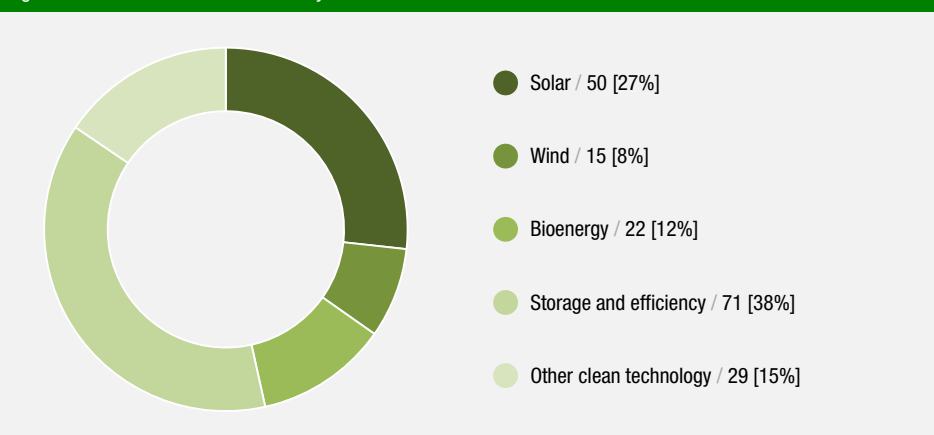


Figure 5: 1H2011 Transaction Volume by Sector

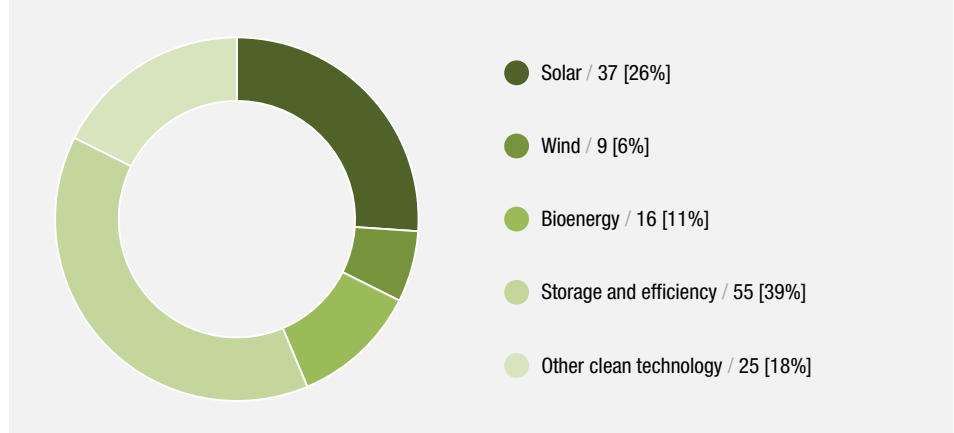


2011 First Half Greentech M&A Activity

action value with \$1.4 billion, almost all of which came from capital raises for LVestus Energy and the Patua Geothermal Project.

While SOLAR, ENERGY EFFICIENCY, and GEOTHERMAL performed well during the first half of 2011, other categories did not fare as well. After leading the sector with \$4.8 billion in 2010 reported deal value, WIND was unable to keep up its pace in the first half this year, only totaling 15 transactions for a reported \$1.1 billion. Project financing in WIND fell sharply as the continued decline in natural gas prices proved to be a difficult challenge to overcome. BIOENERGY also produced less-than-stellar results, dropping from 29 transactions in the first half of 2010 to 22 transactions this year; however, BIOENERGY did experience a slight 5% uptick in reported deal

Figure 6: 1H2011 Capital Raised by Sector



value. SMART DISTRIBUTION appears to have taken the largest dive, plummeting 91% from \$1.1 billion to \$96 million, but its 2010 first half numbers were skewed by ABB's \$1.0 billion acquisition of Ven-

tyx. In fact, SMART DISTRIBUTION funding actually rose 28% from \$50 million to \$63 million, though these figures still pale in comparison to many other categories. ■

Sector Breakdown

SOLAR

The U.S. SOLAR industry continued to grow rapidly in the first half with installations projected to grow from 887 megawatts in 2010 to 1.8 gigawatts in 2011. M&A and investment activity in SOLAR also enjoyed an impressive first half of 2011, rising 64% from \$1.9 billion in the first half of 2010 to \$3.1 billion.

Although a lack of early-stage funding hinted at slowing innovation in SOLAR, SOLAR investments grew 9% to \$1.6 billion on the strength of late-stage funding and a diversification of financing targets. Concentrated solar power, also known as solar thermal, exemplified the recent diversification of SOLAR financing targets by garnering a greater share of capital raises in the first half of 2011 than in the first half of 2010. Having taken a backseat to photovoltaics in recent years, solar thermal is now receiving renewed interest from investors. Most notably, BrightSource Energy raised \$291 million in funding while also scoring a \$168 million investment from Google for its Ivanpah Solar Power Plant project. First half SOLAR M&A outperformed the 2010 first half as well, climbing from \$398 million to over \$1.4 billion, although this figure was artificially inflated by Total's \$1.4 billion SunPower acquisition.

Second half performance in U.S. SOLAR M&A is expected to remain strong. SOLAR prices have dropped 15% over the past year after revisions to feed-in tariff systems in Europe this year created an oversupply of inventory. Due to shrinking demand in Europe, solar projects are also moving away from Europe and toward the U.S. and China. At the same time, the American solar pipeline, including both PV and solar thermal, surpassed a record 17 gigawatts

in the first half. Increasing SOLAR demand in the U.S. amid falling prices will likely continue to spur growth in the U.S. SOLAR M&A market through next year.

WIND

Last year, the growth of the U.S. WIND industry slowed substantially, evidenced by a 50% drop from 2009 levels in new wind installations. Despite the industry slowdown, financing and M&A activity in WIND remained high, leading all greentech categories in capital raised in 2010. However, the slowdown caught up with WIND this year as both funding and M&A activity declined in the first half. WIND investment fell sharply, stumbling 48% to \$1.1 billion in the first half of 2011, and M&A deal value and deal volume both fell over the same period as well. The sluggish activity in WIND resulted primarily from natural gas competition and lowered growth expectations due to the recent slowdown in wind installations.

Despite the sluggish activity in the WIND sector, the outlook for 2012 is strong. At the start of the second quarter of 2011, 5.6 gigawatts of WIND projects were under construction—more than twice the amount reported for the same time in 2009 and 2010. With WIND poised to enter a period of accelerating installation growth, project funding is expected to increase over the next five years.

BIOENERGY

The only category to witness a drop in M&A activity last year, BIOENERGY continued to experience slow growth through the first half of 2011. Investors remained wary of biofuel, still smarting from earlier investments that have produced little to

no return. With the entire biofuel industry still struggling to develop profitable technologies, total equity and debt investment decreased 47% from \$486 million in the first half of 2010 to \$256.8 million in the first half of 2011. One bright spot for BIOENERGY was a handful of successful biofuel IPOs—KiOR, Gevo, and Solazyme—that raised a combined \$484 million.

ENERGY EFFICIENCY & SMART DISTRIBUTION

After a strong showing in 2010, ENERGY EFFICIENCY and SMART DISTRIBUTION once again caught the attention of investors in the first half, totaling \$1.9 billion in M&A and investment activity. This figure almost precisely matched the \$1.9 billion from the first half of 2010 excluding ABB's billion-dollar acquisition of Ventyx, which inflated M&A totals for SMART DISTRIBUTION.

ENERGY EFFICIENCY was buoyed by growing interest in green transportation among investors, highlighted by Fisker Automotive's \$150 million capital raise in February. Building energy management and LED lighting also generated significant buzz, with a total of ten transactions between the two. In SMART DISTRIBUTION, the trend toward consolidation that began in 2010 continued through the first half of 2011 with three more acquisitions by large corporations. It is expected that ENERGY EFFICIENCY and SMART DISTRIBUTION will continue to grow at elevated rates over the next five years and continue to challenge SOLAR and WIND for leadership in the cleantech M&A market. ■

Select Transactions

Total acquires SunPower

In May, French oil giant Total S.A. acquired a 60% stake in US-based SunPower Corp. for \$1.4 billion. The largest green-tech transaction recorded in the first half, Total's acquisition of SunPower demonstrates that conventional energy companies are becoming more confident in the profitability of solar energy as solar costs continue to fall. The cash-dense Total will provide SunPower with a \$1 billion line of credit after the deal closes, which it hopes will give SunPower the capital to scale its operations and reduce costs even further. Although Total believes in the considerable potential of SOLAR, this deal is unlikely to spur other large solar acquisitions by oil companies. While Royal Dutch Shell, Exxon Mobile, and BP each made solar acquisitions during the 1980s, they have since departed SOLAR and have explored other sources of alternative energy such as ethanol.

Brightsource Energy lands funding

Prior to its IPO filing in April, solar thermal company BrightSource Energy raised \$291 million in the first quarter and then added a \$168 million investment from Google for its Ivanpah solar project. BrightSource, having thus far generated minimal revenue, plans to use the new equity to build new solar thermal power plants in the US and to expand internationally. The company's fundraising efforts and subsequent IPO filing provide confidence for U.S. solar thermal. They also reinforce the increasing diversity in solar technology as venture capital firms expand their vision beyond traditional photovoltaics and toward concentrated solar power, concentrated photovoltaics, and thin-film photovoltaics.

Corporations lead wind energy funding

WIND is one of the few clean energy sources close to reaching cost parity with traditional energy sources, and wind projects have also provided consistent returns for

Figure 7: Top 20 Transactions in 1H2011 by Deal Value

Buyer/Investor	Seller	Deal Type	Date	Price (\$M)
Total	SunPower	Acquisition	May-11	1,380.0
Sundance Capital Group	LVestus Energy	Capital Raise	Feb-11	750.0
BNP Paribas and 2 others	Patua Geothermal Project (Gradient Resources)	Capital Raise	May-11	600.0
GE	Lineage Power (Gores Group)	Acquisition	Jan-11	520.0
Google, Tyr Energy, and 1 other	Shepherds Flat Wind Farm	Capital Raise	Apr-11	500.0
Schneider Electric	Summit Energy	Acquisition	Mar-11	268.0
-	Solazyme	IPO	Jun-11	227.2
Google, Citibank	Alta Wind Energy Center (Terra-Gen Power)	Capital Raise	Jun-11	204.0
Existing Investors	BrightSource Energy	Capital Raise	Mar-11	200.0
U.S. Bancorp	SunRun	Capital Raise	May-11	200.0
Unique Capital	EPG Solar	Capital Raise	Mar-11	200.0
Bank of America	NextEra Energy Resources	Capital Raise	Jun-11	177.0
-	Zipcar	IPO	Apr-11	174.3
Google	Ivanpah (BrightSource Energy)	Capital Raise	Apr-11	168.0
Private Investors	Fisker Automotive	Capital Raise	Feb-11	150.0
-	KiOR	IPO	Jun-11	150.0
New Enterprise Associates	Suniva	Capital Raise	Apr-11	115.0
Google, Citibank	Alta Wind Energy Center (Terra-Gen Power)	Capital Raise	May-11	110.0
-	Gevo	IPO	Feb-11	107.0
Voyageur Mutual Funds III	MiaSole	Capital Raise	Feb-11	106.0

investors. Due to its lower risk profile, wind energy attracted a number of corporate investors in the first half of 2011; combined, they contributed \$814 million across five different raises. Sumitomo Corp. of America, Tyr Energy (subsidiary of ITOCHU), and Google invested \$500 million in the 845 megawatt Shepherds Flat wind farm in Eastern Oregon. Google also participated, along with Citibank, in two capital raises that generated a total of \$314 million for the Alta Wind Energy Center. Although currently looking to directly profit from the projected high returns of the Shepherds Flat wind farm and the Alta Wind Energy Center, Google hopes to one day use the energy from Shepherds Flat, Alta, and its other clean energy investments to power its large data centers.

Solazyme raises \$227.2M in its IPO

In June 2011, Solazyme announced that it had raised \$227.2 million in its initial public offering—a record for the advanced industrial biotech sector—beating expecta-

tations by more than 10% due to higher-than-expected demand for the stock. The biofuel company focuses on producing renewable oils from microalgae and was able to generate demand for its IPO due to the recent hype among investors who view algae as a highly efficient biomass source. Investors were also buttressed by the successful IPOs of BIOENERGY companies Gevo, Codexis, and Amyris in recent months. Solazyme's IPO highlights increased IPO activity in the BIOENERGY sector, which also saw Gevo and KiOR go public in the first half. With venture funding down, late-stage BIOENERGY companies are turning to IPOs as a means of raising needed capital.

LVestus Energy raises \$750M

In February, LVestus Energy raised \$750 million in initial project funding from Sundance Capital Group. LVestus Energy offers a purchase agreement program that allows building owners to install geothermal ground source heat pumps designed

Select Transactions

to replace a building's heating and cooling expenses. Offering to install these pumps for no money down, LVestus is positioning geothermal as a cost-effective way to heat and cool commercial buildings. It plans to use the funds to install geothermal loop fields that repel heat from the ground in the summer and extract it in the winter. LVestus' funding—the largest capital raise in the first half—shows investor interest in GEOTHERMAL even though it has largely remained out of the cleantech spotlight. In fact, the first half of 2011 witnessed another large GEOTHERMAL capital raise with the Patua Geothermal Project raising \$600

million in May from BNP Paribas, Dexia Credit Local, and Scotia Capital.

GE acquires Lineage Power

In January 2011, General Electric Energy acquired ENERGY EFFICIENCY company Lineage Power Holdings from The Gores Group for \$520 million. The acquired company had revenues of \$450 million last year, which places the acquisition price at approximately 1.2x revenue. Lineage Power makes equipment to increase the efficiency of data centers, offering high-efficiency power conversion equipment that converts alternating current to direct cur-

rent and vice versa. The company claims that their equipment can “reduce energy loss and lower cooling costs by 50-70%” in data centers. GE acquired Lineage Power in order to take advantage of the increasing energy demand in data centers that has resulted from the recent increase in cloud-computing and mobile-internet-voice activity. ■

Public Company Valuations

Figure 8: Public Company Valuations (\$M)									
Sector	Company	Market Cap	Total Debt	Cash	Enterprise Value	LTM Revenue	LTM EBITDA	REV Multiple	EBITDA Multiple
Solar	Energy Conversion Devices	63	260	162	162	246	(22)	0.7x	n/a
	Evergreen Solar Inc.	22	395	31	385	296	(95)	1.3x	n/a
	First Solar, Inc.	11,400	132	556	10,976	2,560	887	4.3x	12.4x
	GT Solar International, Inc.	2,040	120	363	1,798	899	287	2.0x	6.3x
	Suntech Power Holdings Co. Ltd.	1,420	2,390	783	3,027	3,190	380	0.9x	8.0x
							MEAN	1.8x	8.9x
Wind	Broadwind Energy, Inc.	155	13	22	147	159	(5)	0.9x	n/a
	Juhl Wind, Inc.	22	6	5	23	11	3	2.1x	7.5x
							MEAN	1.5x	7.5x
Biopower	Green Plains Renewable Energy	393	734	216	911	2,520	129	0.4x	7.1x
	BioFuel Energy Corp.	41	195	7	229	511	20	0.4x	11.7x
	Gushan Environmental Energy	29	16	22	23	90	2	0.3x	12.3x
	Covanta Holdings	2,421	2,280	328	4,374	1,590	416	2.8x	10.5x
	Amyris Biotechnologies Inc.	1,250	17	227	1,039	104	(94)	10.0x	n/a
	Gevo, Inc.	407	20	117	310	31	(34)	9.9x	n/a
	KiOR, Inc.	263	9	22	250	na	(36)	n/a	n/a
	Solazyme, Inc.	1,330	0	67	1,263	40	(17)	31.6x	n/a
							MEAN	1.0x	10.4x
Geothermal	Ormat Technologies Inc.	1,000	826	65	1,761	388	116	4.5x	15.2x
	Ram Power, Corp.	283	105	19	368	4	(18)	85.4x	n/a
	US Geothermal Inc.	60	17	8	69	3	(3)	23.4x	n/a
							MEAN	4.5x	15.2x
Hydro & Marine	Ocean Power Technologies	37	1	35	3	7	(22)	0.4x	n/a
							MEAN	0.4x	-
Diversified Renewable	GreenHunter Energy, Inc.	20	9	0	29	na	(4)	n/a	n/a
	Satcon Technology Corp.	285	41	34	292	221	0	1.3x	2047.0x
							MEAN	-	-
Energy Efficiency	Ameresco, Inc.	588	246	29	805	659	64	1.2x	12.6x
	Comverge, Inc.	74	24	27	71	125	(11)	0.6x	n/a
	Cree Inc.	3,663	0	1,070	2,593	1,010	321	2.6x	8.1x
	Lime Energy Co.	128	0	8	120	103	(3)	1.2x	n/a
	Orion Energy Systems, Inc	90	5	13	83	90	5	0.9x	15.1x
	PowerSecure International	136	9	15	130	101	(1)	1.3x	n/a
	SemiLEDs Corporation	176	10	94	92	40	12	2.3x	8.0x
	Universal Display Corp.	1,591	0	325	1,266	36	(6)	35.3x	n/a
	Nexxus Lighting, Inc.	48	2	5	45	6	(5)	8.2x	n/a
	Power-One Inc.	839	36	244	632	1,140	336	0.6x	1.9x
	Tesla Motors	3,000	103	101	3,003	145	(156)	20.7x	n/a
	Zipcar, Inc.	795	95	38	852	202	16	4.2x	54.4x
							MEAN	1.4x	10.9x
Energy Storage	A123 Systems, Inc.	670	37	137	570	91	(150)	6.3x	n/a
	Ener1, Inc.	186	96	19	263	90	(39)	2.9x	n/a
	EnerSys	1,730	259	109	1,880	1,960	235	1.0x	8.0x
	Polypore International Inc.	3,100	716	103	3,714	657	199	5.7x	18.7x
	Valence Technology Inc.	183	46	4	225	46	(7)	4.9x	n/a
	Advanced Battery Technologies	76	0	86	(11)	106	45	-0.1x	-0.2x
	Beacon Power Corporation	31	32	5	58	1	(18)	52.5x	n/a
							MEAN	4.1x	13.3x

Public Company Valuations

Figure 8: Public Company Valuations (\$M)

Sector	Company	Market Cap	Total Debt	Cash	Enterprise Value	LTM Revenue	LTM EBITDA	REV Multiple	EBITDA Multiple
Smart Distribution	PowerSecure International	136	9	15	130	101	(1)	1.3x	n/a
	EnerNOC, Inc.	406	0	103	304	284	24	1.1x	12.9x
							MEAN	1.2x	12.9x
Waste Management	Casella Waste Systems Inc.	163	465	2	626	466	84	1.3x	7.5x
	US Ecology Inc.	311	56	4	363	119	35	3.0x	10.5x
	Waste Management, Inc.	17,670	9,170	676	26,164	12,680	3,260	2.1x	8.0x
							MEAN	2.1x	8.7x
							RENEWABLE MEAN	2.2x	10.7x
							RENEWABLE MEDIAN	1.3x	10.5x
Diversified Energy	Avista Corp.	1,480	1,270	62	2,688	1,580	356	1.7x	7.5x
	Calpine Corp.	7,190	10,580	1,280	16,490	6,530	1,380	2.5x	11.9x
	Chevron Corp.	206,740	11,580	16,870	201,450	201,280	41,690	1.0x	4.8x
	ConocoPhillips	106,280	28,050	8,410	125,920	187,300	25,620	0.7x	4.9x
	Exelon Corp.	28,380	13,560	487	41,453	19,240	6,690	2.2x	6.2x
	IdaCorp, Inc.	1,960	1,560	94	3,426	1,030	338	3.3x	10.1x
	Integrus Energy Group, Inc.	4,040	2,380	195	6,225	4,930	805	1.3x	7.7x
	PNM Resources Inc.	1,530	1,790	13	3,307	1,530	469	2.2x	7.0x
	Progress Energy Inc.	14,130	12,540	172	26,498	9,820	3,010	2.7x	8.8x
	Sunoco Inc.	5,050	2,470	1,480	6,040	37,340	1,060	0.2x	5.7x
	The AES Corporation	9,960	19,770	3,720	26,010	16,990	4,750	1.5x	5.5x
	Valero Energy Corp.	14,580	7,830	4,130	18,280	89,150	3,600	0.2x	5.1x
	Xcel Energy Inc.	11,770	9,850	113	21,507	10,320	2,640	2.1x	8.1x
							MEAN	1.7x	7.2x