

Initiation of Coverage

SolarCity Corp

Entering a Bold New World

Initiating on SolarCity at Neutral: Poised to capture disruptive opportunity

We see a particularly rosy future for continued growth of residential and C&I solar even through the step-down in the investment tax credit (ITC), as the sub-sector should actually prove the most resilient through the 2017 'trough' given its reliance on more state-level subsidies in the form of net metering. Moreover we see SCTY's cost edge as enabling disproportionate volumetric growth and keeping competition at bay.

Competition keeps us on sidelines for now – execution remains critical

Latest datapoints at SCTY and NRG among others illustrating both rising marketing costs to address modestly disappointing volume execution amidst growing friction between companies keeps us on the sidelines. While SCTY is the clear name-brand leader in the sector, we suspect ramp in marketing spend from peers will put pressure on SCTY to follow suit and could pressure wider industry margins. Our valuation for DevCo off 2017 applies \$2.50/W target, but assumes modest exit margins of \$0.28/W. Further we see pace of MW growth to hit 1mn customers by 2018 as still quite ambitious, implying cont'd growth YoY in 2017 despite step-down in ITC.

We are not worried about reforms either – change will be incremental

With many investors fearful of the drastic impact of potential cuts to solar subsidies, we maintain that any changes will be incremental and designed to simply reduce compensation in tandem with declining costs. With SCTY the leader, this may eventually prove a competitive edge vs. less efficient peers. In contrast, we see wider policy backdrop as encouraging more renewables, with base demand driven by state RPS targets – and bolstered by the EPA's latest climate change program, effectively 'doubling down' on renewables through the 2030 period.

Valuation: Initiate coverage with Neutral and \$53 Price Target

Our \$53 price target is based on our SOTP model, which examines the firm's combined theoretical DevCo (~\$24/sh) and PowerCo (~\$31/sh) 'consolidated YieldCo', as well as PV manufacturing (~\$6/sh) and net liabilities (~\$7/sh). Our focus remains principally on execution amidst a more challenging environment, rather than policy backdrop. We suspect shares could remain under wider pressure amidst a pullback in the sector given focus on cost rationalization.

Equities

Americas
Electric Utilities

12-month rating **Neutral**
Prior: Not Rated

12m price target **US\$53.00**
Prior: -

Price **US\$48.81**

RIC: SCTY.O BBG: SCTY US

Trading data and key metrics

52-wk range	US\$74.01-47.53
Market cap.	US\$4.71bn
Shares o/s	96.5m (COM)
Free float	56%
Avg. daily volume ('000)	2,326
Avg. daily value (m)	US\$130.5
Common s/h equity (10/15E)	US\$1.76bn
P/BV (10/15E)	2.6x
Net debt / EBITDA (10/15E)	NM

EPS (UBS, diluted) (US\$)

	10/15E			
	From	To	% ch	Cons.
Q1	-	(0.22)	-	-
Q2	-	(0.23)	-	-
Q3E	-	(0.99)	-	-
Q4E	-	(1.99)	-	-
10/15E	-	(3.49)	-	-
10/16E	-	(6.49)	-	-
10/17E	-	(8.47)	-	-

Julien Dumoulin-Smith

Analyst

julien.dumoulin-smith@ubs.com

+1-212-713 9848

Michael Weinstein

Associate Analyst

michael.weinstein@ubs.com

+1-212-713 3182

Paul Zimbardo

Associate Analyst

paul.zimbardo@ubs.com

+1-212-713 1033

Highlights (US\$m)	10/12	10/13	10/14	10/15E	10/16E	10/17E	10/18E	10/19E
Revenues	127	164	255	476	1,013	1,313	1,845	2,474
EBIT (UBS)	(91)	(149)	(336)	(613)	(819)	(906)	(857)	(790)
Net earnings (UBS)	(99)	(56)	(56)	(331)	(635)	(859)	(974)	(1,089)
EPS (UBS, diluted) (US\$)	-	-	(0.60)	(3.49)	(6.49)	(8.47)	(8.94)	(9.21)
DPS (US\$)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net (debt) / cash	(111)	(80)	(1,025)	(2,442)	(4,684)	(8,555)	(12,643)	(16,971)
Profitability/valuation	10/12	10/13	10/14	10/15E	10/16E	10/17E	10/18E	10/19E
EBIT margin %	-71.7	-91.2	-131.6	-128.8	-80.9	-69.0	-46.5	-31.9
ROIC (EBIT) %	-	(22.4)	(20.4)	(17.1)	(12.0)	(8.1)	(5.4)	(3.8)
EV/EBITDA (core) x	-	-	-28.8	-16.4	-18.3	-29.6	-94.9	>100
P/E (UBS, diluted) x	-	-	NM	(14.0)	(7.5)	(5.8)	(5.5)	(5.3)
Equity FCF (UBS) yield %	-	(10.4)	(23.8)	(54.0)	(91.8)	(103.4)	(113.3)	(123.2)
Net dividend yield %	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Company accounts, Thomson Reuters, UBS estimates. UBS adjusted EPS is stated before goodwill-related charges and other adjustments for abnormal and economic items at the analysts' judgement. Valuations: based on an average share price that year, (E): based on a share price of US\$48.81 on 14 Aug 2015 19:37 EDT

www.ubs.com/investmentresearch

This report has been prepared by UBS Securities LLC. **ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 74.** UBS does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Investment Thesis

SolarCity Corp

Investment case

The key to success for SCTY's residential solar business lies in reducing upfront installation costs (which include direct install costs, as well as associated sales and G&A costs). With mgmt guiding for total install cost reduction to \$2.50/W for 2017e (from \$2.94/W in 2014). In turn, lower costs should enable continued competitiveness vs. peers and sustained deployment despite drop-off in ITC in 2017.

Upside scenario

Our upside scenario is based on our 2017e SOTP analysis for SolarCity's theoretical DevCo and PowerCo businesses, with lower yields on monetization for both segments arriving at a \$102 valuation.

Downside scenario

Our downside case assumes modestly higher yields, driving a \$23 valuation.

Upcoming catalysts

Expanded CAFD disclosures with 3Q earnings results
MyPower ABS Issuance (2015e)
Silevo manufacturing expansion (2017e)

12-month rating

Neutral

12m price target

US\$53.00

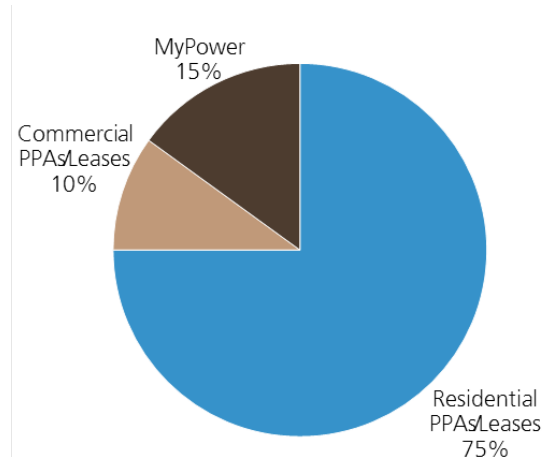
Business description

The company is engaged in the deployment of rooftop solar installations using leases, loans, and direct sales to both commercial and residential customers. Sales are principally oriented in California; however, it is rapidly expanding across states ahead of the ITC step-down at year-end 2016 as well as contemplating international expansion, including the latest acquisition in Mexico.

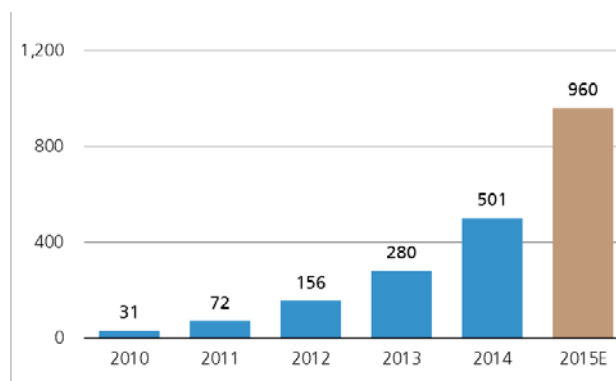
Industry outlook

We remain bullish on the renewable energy sector, and expect solar to continue to gain market share, benefiting from trends in installation cost declines, improvements in energy efficiency, and government subsidies at federal and state levels. However, we expect some industry headwinds following the 2016 ITC expiration/reduction from 30% to 10%/ 0% for commercial and residential solar, respectively.

MW Deployed by Product Type (1Q:15)



SCTY Installation Guidance (MW)



Source: Company data, UBS

Contents

What Are The Key Debates?	5
1. Can Growth Continue Through ITC Step-Down?	5
2. Is The Market Maturing? Competitors Ahead	9
3. How Will Industry Evolution Impact Valuations?	14
Valuation: \$53 Price Target (Neutral)	16
DevCo: The Resi Engine (\$24/sh)	16
Liabilities: Accounting for the Debt (-\$7/sh)	18
PowerCo: The YieldCo Side of the Equation (\$31/sh)	19
Sailing into Solar Panel Manufacturing with Silevo (\$6/sh)	21
Valuation vs. Peers: Getting Some Traction	22
Retained Value- Previous Approach	24
Other Key Investment Considerations	28
Financing the Growth: Limited Equity in 2017	28
The YieldCo Potential: Is It an Option?	34
Moving Upstream	35
Opportunities for Expansion	37
Company Overview	39
Introducing MyPower: The Loan Product	48
Appendix	56
Brief Introduction to Renewables Industry	56
Overview of Solar Securitizations	63
Battery Prospects	65
Another look at peer comps: Unlevered CAFD to EV analysis	67
Financial Projections	68

Julien Dumoulin-Smith
Analyst
julien.dumoulin-smith@ubs.com
+1-212-713 9848

Michael Weinstein
Associate Analyst
michael.weinstein@ubs.com
+1-212-713 3182

Paul Zimbardo
Associate Analyst
paul.zimbardo@ubs.com
+1-212-713 1033

Our Take on SCTY

We rate shares with a Neutral rating as we launch coverage. While we do not necessarily doubt meaningful volumetric growth in the industry, as penetration is likely to accelerate through Investment Tax Credit (ITC) stepdown at the end of 2016. While SCTY's specific volume targets implied by its goal to get to 1Mn customers are lofty (as illustrated by recent challenges to hit quarterly targets), we suspect they can largely maintain execution through the near-term (at least through 2016).

We see many investors as exaggerating the existential risk of a reduction in government subsidies. If anything, we are relatively comfortable that net metering will in fact not be reversed wholesale, with the wider lag involved a renewed regulatory process to adjust tariffs (likely embedded in rate case cycle) largely trailing adoption in states. Conversely, we expect barriers to residential participation to continue to be torn down, enabling entry into other key regions. While a wider trend towards a reduction in residential sector solar subsidies is inevitable and to be expected, the pace of such reforms will resemble in no way the experience seen elsewhere globally (specifically Europe) with unilateral reduction in tariffs.

Rather, our key point of caution on shares relates simply to the low barriers of entry in the business, with numerous competitors ramping up spending to enter the business quickly prior to the end of 2016. We flag NRG's latest efforts, with \$175Mn of 2015 cash burn including a sizable portion of its latest \$75Mn increase on a marketing blitz to increase brand awareness in Western markets to complement its core Northeastern ad spending. In turn, we flag cost trends in recent quarters for SCTY have proven flat to slightly inflationary as marketing costs appear to be inflating here as well. In turn, a deceleration in management's ability to hit its own quarterly (and now annual) targets as another cautionary datapoint on the wider trend. We think we may be early to this trend – but with the potential for customer education and awareness to increase – we suspect acumen on selecting a 'good deal' will become harder than the current status quo of door-to-door sales. Key examples of this risk include proliferation of online platforms (EnergySage) among others that have meaningfully brought down margins in the equivalent Retail electricity marketing world, a key parallel business, with cautionary lessons to be learned.

Ultimately, we suspect shares could be well positioned to continue to benefit from both improved disclosures, providing investors with an apples-to-apples cash flow analogy to other contracted renewable segments, even if a YieldCo structure is not ultimately pursued. Moreover, we see the proliferation of (public) peers as a positive datapoint- providing a better sense of valuation and cost comparisons – and reaffirming SCTY's leading position.

Bottom line, we see a maturing sector enabling greater investor comfort coupled with an exceptionally accommodative policy backdrop amidst reinvigorated renewable targets bolstered by Obama administrations carbon objectives. We simply caution that volumes are intermediated by margins, requiring a reasonable return on assets.

What Are The Key Debates?

1. Can Growth Continue Through ITC Step-Down?

Fundamental outlook for renewables sector remains strong

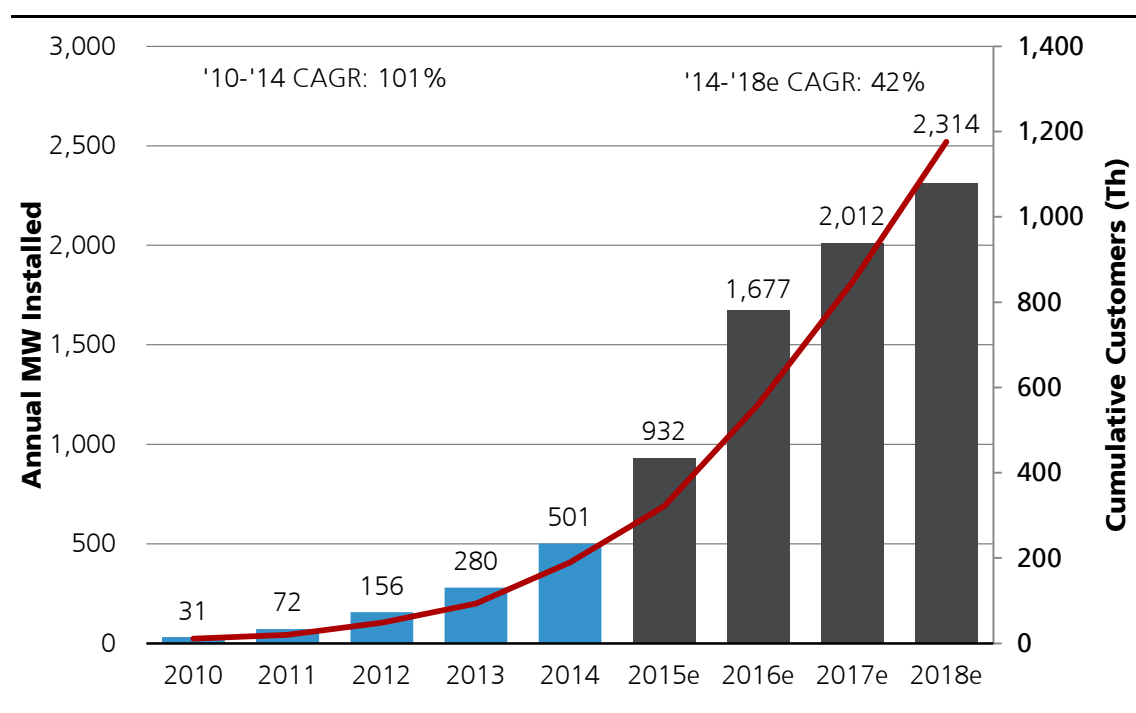
We remain bullish on the renewable energy sector, specifically for rooftop residential solar. We expect the benefiting from trends in installation cost declines, historical inflation in utility bills, and government subsidies at federal and state levels (Clean Power Plan most recently). We certainly expect some industry headwinds following the year-end 2016 Federal Investment Tax Credit (ITC) reduction from 30% to 10%/0% for commercial/residential solar. State subsidies are also highly variable across different territories, while also being dependent on the priorities of legislators in power, which leads to uncertainty in policy over the medium and long term. Additionally, net metering reforms, as recently seen in Arizona, may occur on a larger scale throughout the US. All of this policy uncertainty has led to mixed forecasts on the growth of the solar market in the US over the next 5 years. Taking many European countries as examples, the removal of major subsidies resulted in significant slow-down in solar installation, so the uncertainty of U.S. policy has substantial implications for SCTY and also the market, more generally.

Regulatory risk not as real as perceived and DevCo prospects still look quite bright

Expected growth is significant

SCTY guides for 920-1,000MW of newly installed capacity by YE15, and we expect them to install ~1.7 GW in 2016. SCTY has set a goal to reach 1M customers by mid-2018 as indicated in the chart below.

Figure 1: SCTY Annual MW Additions & Cumulative Customers



Source: Company Filings, UBSe

Leadership on install costs gives a buffer vs reduced ITC

A critical issue for SCTY, and for other resi installers, is the total install cost/Watt, which represents the upfront cost associated with installation, and ultimately translates into long-term earnings potential for the firm. While we see it as a positive that mgmt continues to take efforts to reduce total install costs (from ~\$2.91/W last quarter to \$2.50/W in 2017e), we think that the winners in the space will consistently be at the forefront of the cost race, a position that SCTY currently maintains.

For example, under the MyPower product a 6kW system would increase to ~\$28,300 from ~\$19,800 due to the loss of the ~\$8,500 tax credit. This will certainly cause a slow-down in the rate of adoption but by having a lower cost offering SolarCity has an advantage versus peers.

Figure 2: Comparing cost structures across peers

Installation Costs per Watt	
VSLR	
Installation Costs per Watt	2.12
Sales Cost	0.53
G&A Cost	0.35
Total Installation Cost	3.00
SCTY	
Installation Costs per Watt	2.10
Sales Cost	0.47
G&A Cost	0.21
Total Installation Cost	2.78
NYLD	
Total Costs per Watt	3.20-3.30
Total Installation Cost	3.20-3.30

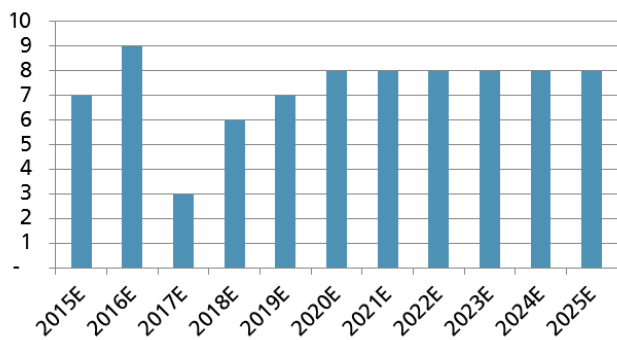
Source: Company sources, UBS estimates

Reduction of Government Subsidies

Among the chief concerns for investors remains the step-down of the solar ITC at the end of 2016 to 10% for non-residential projects, from 30% today. While this has been widely seen as a major stumbling block for the industry, we remain confident that between a continued deflationary cost trajectory and improving cost trend. We include our formal breakdown of incremental C&I and residential installations below— we maintain an upside bias in our overall deployment estimates, particularly on resi. The key question is to what extent SCTY will be able to maintain its substantial market dominance?

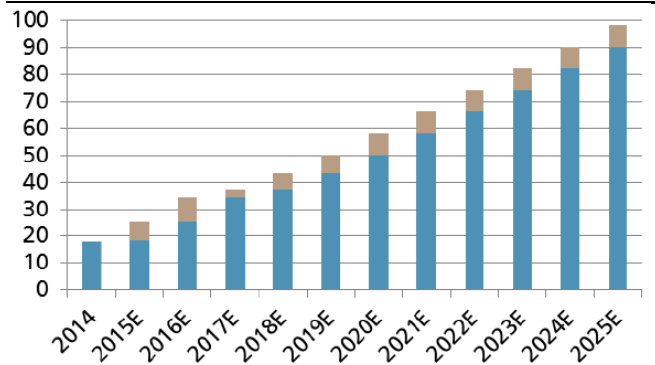
Below we show our own UBS forecast for MW capacity additions, as well as forecasts made by Bloomberg New Energy Finance (BNEF). Even at the conservative end compared to BNEF, we still expect significant PV installs. We expect SCTY to make up a huge portion of market share for expansion of solar expectations for 2017.

Figure 3: UBS estimates for Annual US Solar Additions



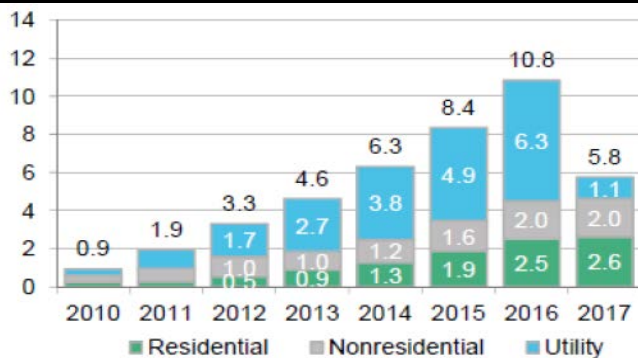
Source: UBS estimates

Figure 4: UBS estimates for Cumulative US Solar Additions



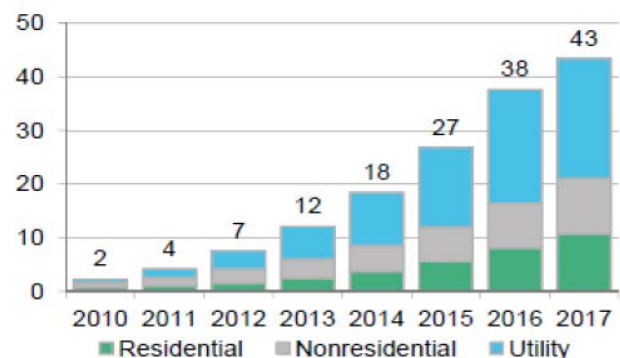
Source: UBS estimates

Figure 5: BNEF's Annual US Solar Additions



Source: BNEF estimates (from slides used on UBS conference call)

Figure 6: BNEF's Cumulative US Solar Additions



Source: BNEF estimates (from slides used on UBS conference call)

The Yin and yang of the expiring ITC:

Among the most controversial elements of the story is the forthcoming 2016 reduction/expiration of the Federal Investment Tax Credit (ITC), to 10% for commercial and 0% for residential. While this is clearly an impediment to the industry, growth is still quite achievable in SCTY's core markets, in our view. We encourage many investors to think of the ITC expiration within the context of positives and negatives:

- **Limiting geographic territory:** Most importantly, the expiration of the ITC will entirely eliminate the feasibility of residential and commercial solar across a number of states in which the economics currently make sense.
- **Reducing the economics:** We emphasize the ITC is effectively a 3c/kWh reduction to the economics of solar on a levelized basis vs. the avg 13c-14c/kWh that the company has been collecting (ex-ITC) in recent quarters.
- **Expect heightened competition in residential solar:** Given the scale-back in the geographic territory for solar, we see a risk of competition becoming even fiercer in the remaining markets, namely California, in which the bulk of the marginal players will remain limited to competing. The key question to watch in this sector is to what extent customers will increasingly comparison shop for solar offerings, rather than simply accepting a discounted price vs. their current bill.

PPAs: Pre- and Post-ITC Expiration

We have modelled the economics of SCTY's power purchase agreements in an effort to quantify the impact of the ITC reduction. We present our analysis below. We note that we have illustratively shown a 6% discount rate (Using SCTY's rate) and a 90% renewal rate (eg. PPA price declines to 90% of 20th year) at the end of Year 20. We see unlevered returns for pre-ITC expiration as exceptionally attractive, particularly when compared to 4.5% cost of securitized ABS debt.

We also assume a lower \$0.13/kWh vs. existing \$0.14/kWh.

Figure 7: Pre- & Post-ITC Estimates of PPA's Value to SCTY

Example Residential Lease PPA: Return to SCTY												
Year	0	1	2	3	4	5	6	7	8 ...	20	21 ...	30
Avg annual unit production (kWh/kW)	1,400	1,393	1,386	1,379	1,372	1,365	1,359	1,352		1,273	1,266	1,211
\$/kWh - posted rate	\$0.13	\$0.13	\$0.14	\$0.14	\$0.15	\$0.15	\$0.15	\$0.16		\$0.22	\$0.20	\$0.20
Revenue (\$/W)		\$0.18	\$0.19	\$0.19	\$0.20	\$0.20	\$0.20	\$0.21	\$0.21	\$0.28	\$0.26	\$0.24
Installation cost (\$/W)	\$2.50											
O&M costs (\$/W)		\$0.021	\$0.022	\$0.022	\$0.023	\$0.023	\$0.024	\$0.024	\$0.025	\$0.034	\$0.034	\$0.043
Inverter replacement cost (\$/W)										\$0.120		\$0.09
Gross project cash flow	(\$2.50)	\$0.16	\$0.16	\$0.17	\$0.17	\$0.18	\$0.18	\$0.19	\$0.19	\$0.13	\$0.22	\$0.11
30% ITC (\$4.50 FMV)	1.35											
10% ITC (\$4.50 FMV)	0.45											
Project cash flow (30% ITC)	(\$1.15)	\$0.16	\$0.16	\$0.17	\$0.17	\$0.18	\$0.18	\$0.19	\$0.19	\$0.13	\$0.22	\$0.11
Project cash flow (10% ITC)	(\$2.05)	\$0.16	\$0.16	\$0.17	\$0.17	\$0.18	\$0.18	\$0.19	\$0.19	\$0.13	\$0.22	\$0.11

Assumptions		Model Output	
Price escalator	2.9%	NPV - 30% ITC	\$1.42
Degradation	-0.5%	Unlevered IRR - 30% ITC	15.3%
O&M escalator	2.5%	NPV - 10% ITC	\$0.52
Post 20-year PPA Assumption (% of)	90%	Unlevered IRR - 10% ITC	8.1%
Discount rate for NPV Calculation	6%	NPV - 0% ITC	\$0.07
		Unlevered IRR - 0% ITC	

Source: Company data, UBSe

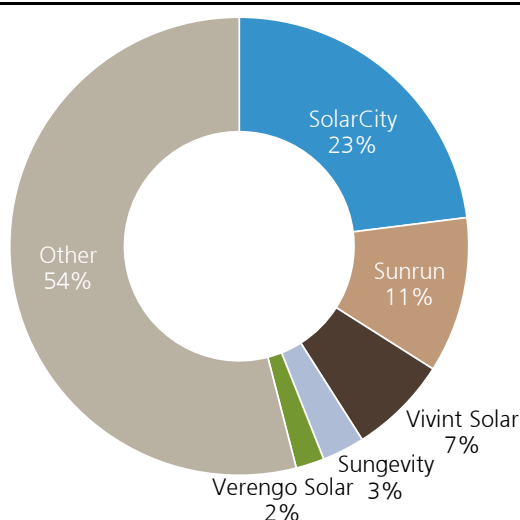
2. Is The Market Maturing? Competitors Ahead

While we have some concerns about volume growth, we see more of a focus on margin compression from increasing competition as barriers to entry fall.

Market share: Which companies are doing resi solar?

The U.S. residential solar installation market is highly fragmented, with about half of total installations performed by thousands of installers. SolarCity has captured a significant portion of the market (at 23% of cumulative installed capacity) and has been expanding its share over the last five years. Sunrun was the second-largest player, with 11% share. Vivint Solar (SUNE acquisition pending) followed closely behind as the third-largest, with 7% share. Sungevity and Verengo, combined, make up ~5% of the market, according to our estimates.

Figure 8: Leading U.S. Residential Solar Installers – 2014 Cumulative MW



Source: GTM/SEIA, UBSe

In a scenario without a Federal ITC at the residential level, this would further reduce barriers to entry.

The resi solar market is highly fragmented, with thousands of installers comprising ~54% of total share.

But where is our caution coming from? Execution stumbles.

We flag the company's Full Year Guidance for 2015 of 920-1,000MW has become more of a challenge. While management acknowledges the target was ambitious relative to FY deployment of 502 MWs in 2014, shifting this range to 'deployed' rather than 'installed' (generally a 3-week lag, implying a -55MW reduction in the midpoint of the range). That said, even at an apples-apples basis, the 905MW implicit installed guidance, still represents 80% YoY improvement.

We include the trend in mgmt's quarterly guidance in the margin text; we emphasize a slowing relative to targets. Note 2Q was indeed 'back' on track, installing 189MW vs. guidance of 180MW.

While we continue to assume execution of mgmt's MW targets through 2017 for the purpose of our valuation, we flag there is indeed clearly some degree of risk associated with these targets amidst both growing competition and amidst the scaled back economics beyond the ITC step-down in 2016.

What is mgmt's long-term guidance today? Mgmt's goal of hitting 1 mn customers in 2018 is consistent with cumulative deployed MWs of 6-7GW.

Figure 9: Management Guidance vs. Actual Results for MW Deployed

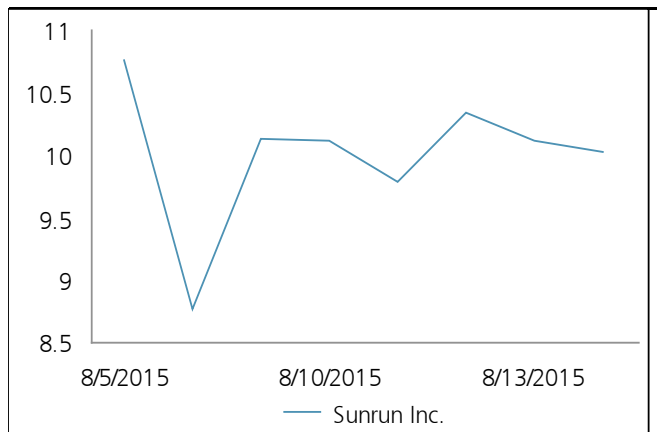
	Guidance	Results
1Q 13	41	46
2Q 13	48-53	53
3Q 13	70-77	78
4Q 13	101	103
1Q 14	78-82	82
2Q 14	105-110	107
3Q 14	135-150	137
4Q 14	179-194	175
1Q 15	145	143
2Q 15	180	189

Source: Company reports

SunRun: Another competitor comes public

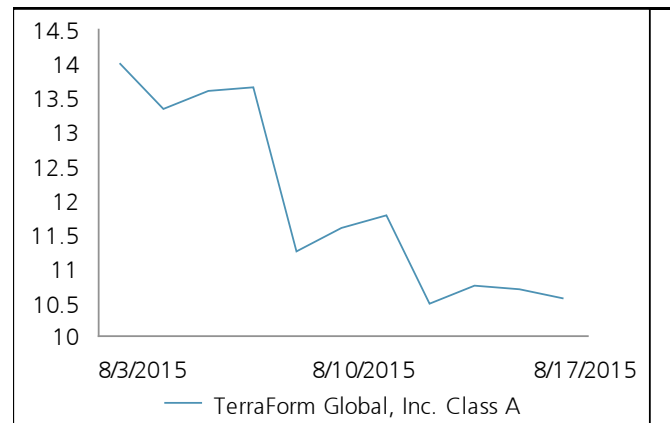
Following on the latest IPO of peer SunRun, we see the nascent sector growing, with aims of peers to continue to scale up with meaningful volumes. We flag the market performance of the latest IPO as another cautionary datapoint on investor sentiment following the Vivint deal.

Figure 10: Price performance since IPO - SunRun



Source: Fact Set

Figure 11: Price performance since IPO – TERP Global



Source: Fact Set

Putting Vivint in Context – How to think about cost and growth

We see VSLR as following closely behind the two frontrunners in the space, SCTY and SunRun. We understand cost structure is estimated to decline substantially through the course of 2015, with targets of ~\$2.70-80/Watt, on its way towards ~\$2.50/W in 2017. While margins are likely robust in the near term (\$0.50/W margins assuming YieldCo monetizations at comparable levels vs. the TERP deal), we see a step-down to ~\$0.25-0.50/Watt margin range in 2017+ as the ITC step-down occurs (30% to 10%).

NRG Solar: and one more spin-off coming?

Finally, we expect further residential IPOs, including NRG Solar, which we believe is more likely to be spun given the lower share price of NYLD despite recent challenges on execution. We see NRG's challenges in the sector as among the more cautious datapoints of late in the sector, as the company has scaled back its 2015 targets with 2Q results. It suspects a FY15 target of 40k would be sufficient to spin the business.

Declining Cost Curves: Reaching Grid Parity

Cost structure of resi solar: What does it mean to have an advantage?

A critical issue to the success of the SolarCity story is the total install cost/watt, which represents the upfront cost associated with installation, and ultimately translated into long-term earnings potential for the firm. Total install cost is a composite of installation cost (direct costs, essentially the cost of revenue), sales cost (primarily sales & marketing), and G&A cost. According to company reports, total install cost declined to \$2.91/W in 2Q15, with mgmt guiding for further declines to ~\$2.50 by 2017 (with ~\$1.90 installation cost). In comparison, Vivint Solar (recently acquired by SUNE), reported an install cost/watt of \$3.21 in 1Q15

(\$2.32 installation cost, \$0.54 sales & marketing, \$0.35 G&A). Sunrun recently reported an installation cost per watt of \$2.52 for 1Q15. SCTY's low cost structure may allow it to have a slight buffer versus peers, which will become more important as additional competition enters the space and margins for installers tighten.

To what extent will a decline in cost structure offset the ITC impact?

While many investors in the industry remain confident on this front, we're less comfortable that the lost ~20% ITC from the \$4.50/watt IRS Fair Market Value (FMV) of the system can be replaced. We estimate that as much as \$1.50/watt could be readily offset by other cost savings.

What are the sources of solar savings?

Through the medium term, we emphasize Balance of System (BoS) and panel costs as clear sources of incremental savings in the overall cost structure of the industry. We estimate panel costs could yet decline by ~\$0.20/watt by the end of 2017, with a further ~\$0.20/watt in BoS, driving down resi solar costs from the high-\$2/watt range today to the mid-\$2/watt range through the ITC expiration period.

With that said, it appears that cost structure could further decline on account of even further amortizing direct sales & marketing costs (specifically, commissions) and sales costs on select channels (i.e. referrals).

Mgmt guides for total install cost to decline to \$2.50/W by 2017 (with \$1.90 for installation cost). We estimate the majority of the cost reduction will come from installation cost, with some minor declines in sales and G&A costs, as well.

Figure 12: Historical & Projected Installation Costs

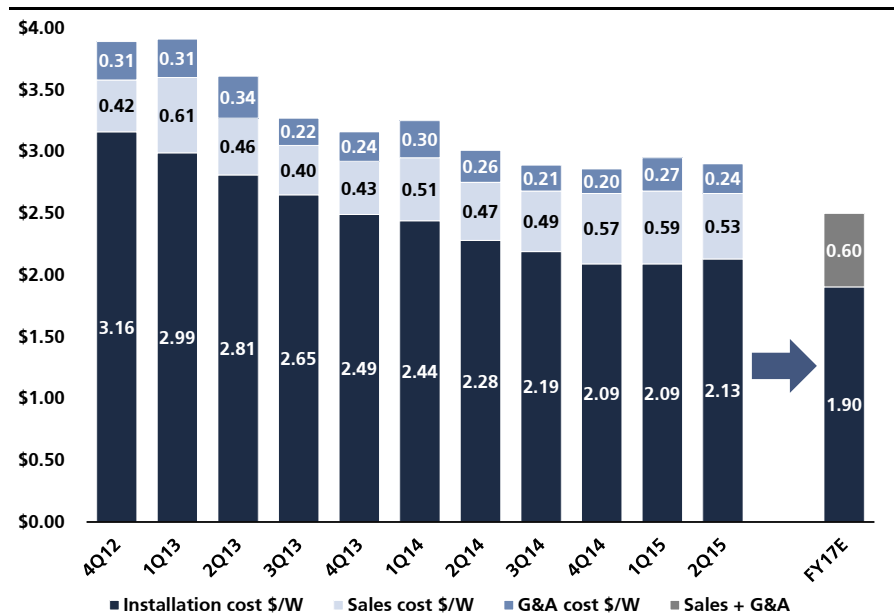
	2012A	2013A	2014A	2015E	2016E	2017E	2018E	2019E	2020E
Install Cost Per Watt									
Installation cost \$/W	\$3.97	\$2.96	\$2.21	\$2.10	\$2.00	\$1.90	\$1.81	\$1.72	\$1.63
Y/Y % change	0.0%	-25.4%	-25.3%	-5.0%	-4.8%	-4.8%	-5.0%	-5.0%	-5.0%
Sales cost \$/W	\$0.49	\$0.45	\$0.50	\$0.47	\$0.41	\$0.40	\$0.39	\$0.38	\$0.38
Y/Y % change	0.0%	-8.2%	11.1%	-6.0%	-12.8%	-2.4%	-2.0%	-2.0%	-2.0%
G&A cost \$/W	\$0.27	\$0.26	\$0.23	\$0.21	\$0.20	\$0.20	\$0.19	\$0.19	\$0.18
Y/Y % change	0.0%	-3.7%	-11.5%	-8.7%	-4.8%	-2.0%	-2.0%	-2.0%	-2.0%
Total install cost \$/W	\$4.73	\$3.67	\$2.94	\$2.78	\$2.61	\$2.50	\$2.39	\$2.29	\$2.19
Y/Y % change		-22.4%	-19.9%	-5.5%	-6.2%	-4.2%	-4.3%	-4.3%	-4.3%
Total Install Cost									
Installation cost	\$619.3	\$828.8	\$1,107.2	\$1,955.7	\$3,351.3	\$3,828.6	\$4,182.7	\$4,569.6	\$4,992.3
Y/Y % change		33.8%	33.6%	76.6%	71.4%	14.2%	9.3%	9.2%	9.2%
Sales cost	\$76.4	\$126.0	\$250.5	\$437.8	\$687.2	\$804.8	\$907.1	\$1,022.3	\$1,152.1
Y/Y % change		64.8%	98.8%	74.8%	57.0%	17.1%	12.7%	12.7%	12.7%
G&A cost	\$42.1	\$72.8	\$115.2	\$195.6	\$335.2	\$394.2	\$444.3	\$500.7	\$564.3
Y/Y % change		72.8%	58.3%	69.8%	71.4%	17.6%	12.7%	12.7%	12.7%
Total install cost (\$M)	\$737.9	\$1,027.6	\$1,472.9	\$2,589.2	\$4,373.7	\$5,027.6	\$5,534.0	\$6,092.5	\$6,708.6
YoY % change		39.3%	43.3%	75.8%	68.9%	15.0%	10.1%	10.1%	10.1%

Source: Company data, UBSe

We caution that there may be some additional future costs related to SCTY's excellent warranty/performance guarantee policies. The firm provides warranties of 10-30 years on the generating and non-generation parts of the solar energy systems they sell, together with a pass-through of the inverter and module manufacturers' warranties, which usually last for 5-30 years. For PPAs, if system production in a certain period is less than stated in the initial agreement, SCTY will compensate customers.

Cost Structure: breaking it down

Figure 13: SCTY Historic & Projected Cost Structure



SCTY's cost structure has declined to \$2.91/W in 2Q15, from \$3.89/W in 4Q12.

Source: Company data

Increased pressure to drop costs will be placed on resi installers in 2017

Survival for residential developers/installers in a post-ITC world will depend on a relentless focus of reducing total install costs over the next ~1.5 years. Additionally, the success of U.S. resi solar will be predicated on installers' abilities to continue dropping costs post-2017. SCTY is projecting their costs will decrease ~5% annually to \$2.50/W by 2017, which is a much softer reduction from the respective ~22% and ~20% declines in 2013 and 2014. We suspect that balance-of-system (BoS), modestly lower panel costs, and even some minor marketing expense savings will contribute to this overall trajectory.

Can the panel costs continue to decline? We think so.

We believe panels still have room to decrease, with increased efficiencies and scaling of manufacturing being the main drivers. We believe panels have the potential to decrease ~20c/Watt over the next 5-10 years, with efficiencies on the polysilicon side reaching ~30% in the same time period.

The Developing Margin Story

While SCTY has shown robust revenue growth, margins have shown a different story. For one, annual gross margins for direct system sales have been slightly negative for the last three years. For '15e-'17e, we project significant improvement in system sale margins, to 7.1%, 30.9%, and 29.9%, respectively, largely due to mix shift, as MyPower (which is classified as a system sale) takes up greater share.

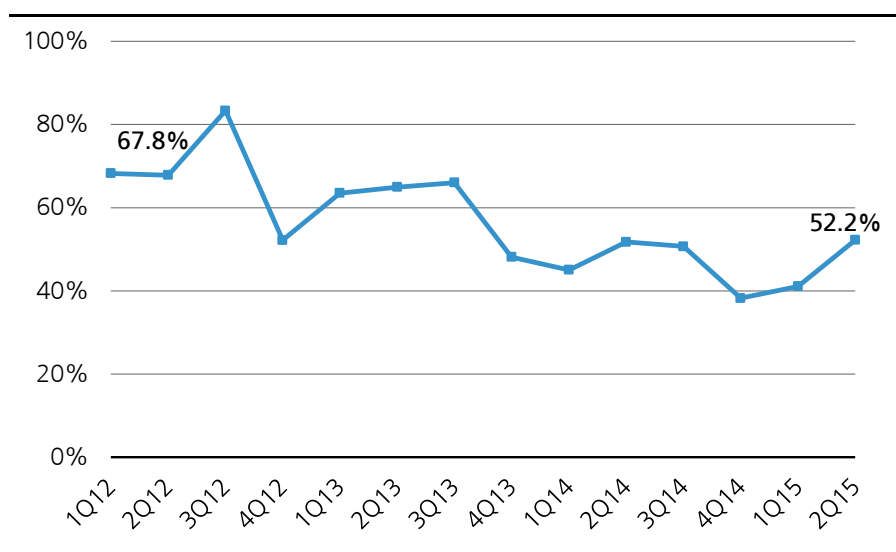
Figure 14: Gross Margin Projections for Operating Leases & Direct System Sales

	2014A	2015E	2016E	2017E	2018E	2019E
Operating leases & gov't incentives revenue	173.6	362.3	788.5	1,017.2	1,449.8	1,960.6
yly % change	109.6%	108.7%	117.6%	29.0%	42.5%	35.2%
Solar energy system sales	81.4	114.0	224.4	295.9	395.6	513.1
yly % change	0.5%	40.1%	96.8%	31.9%	33.7%	29.7%
Total revenue	255.0	476.4	1,012.8	1,313.1	1,845.4	2,473.8
Cost of revenue - operating leases & gov't incentives revenue	92.9	233.2	433.7	559.5	797.4	1,078.3
Gross margin - operating leases and gov't incentives revenue	46.5%	35.6%	45.0%	45.0%	45.0%	45.0%
Cost of revenue - solar energy system sales	83.5	108.4	169.2	212.9	268.8	334.1
Gross margin - solar energy systems sales	(2.6%)	4.9%	24.6%	28.1%	32.1%	34.9%
Total cost of revenue	176.4	341.6	602.8	772.4	1,066.2	1,412.4
Gross profit	78.6	134.8	410.0	540.8	779.3	1,061.3
Gross margin	30.8%	28.3%	40.5%	41.2%	42.2%	42.9%

Source: Company filings, UBS

While gross margins for operating leases (including PPAs) have been much stronger, we note that they have declined from 67.8% in 1Q12 to 52.2% in 2Q15. This may potentially be the result of pricing declines, particularly as SCTY enters states with increasingly competitive economics (e.g. New Mexico, with relatively low retail electricity rates) as well as states with lower production rates due to snowy climates, low irradiation, etc. (e.g. New Hampshire, Rhode Island). In 2Q15, the average annual production rate for blended deployments declined to 1,380 kWh/kW, from 1,412 kWh/kW in the prior quarter.

Figure 15: Historical Gross Margins for Leases/PPAs



Source: Company data

Final Note: How is cost of revenue recognized for operating leases and solar energy system incentives?

Solar energy systems and components sales cost of revenue: The direct costs associated with leases and PPAs are, similar to lease/PPA revenue, amortized over the length of the (typically 30-year) contract. In addition to installation costs of the systems, also included here are maintenance costs as well as some initial direct costs (such as contract administration costs, some personnel costs, sales commissions, and customer acquisition referral fees). The direct costs associated with MyPower are also included here, and amortized over a 30-year period.

3. How Will Industry Evolution Impact Valuations?

The proliferation of YieldCos and perceived investor dissatisfaction around retained value metrics has pushed solar companies towards increasing their disclosures around cash. As the industry matures we anticipate an increasing ability to comp solar companies against each other will raise investor confidence in valuating these equities.

The focus on cash flow is quite relevant – providing a wider comp to sector

Despite scaled back expectations for any separate YieldCo structure, we suspect the renewed focus on cash flow for the residential sector will help bring the niche into the mainstream as PPAs as evaluated on the basis of IRRs of FCF generated through project life. We suspect continued improvement – and more public transactions on both

What's the problem today? Few comps and mistrust of negative FCF

Among the critical questions companies such as SolarCity (and SunEdison) continue to address are projections for continued negative FCF, as reinvestment in Devco to buildout projects requires substantial capital (largely funded through debt financing). With a historically more tech-oriented investor base, we suspect the substantial projected cash losses (without any foreseeable turnaround) funded with leverage is a particularly unique story. Rather, we see SolarCity's financing as effectively a niche infrastructure development story.

Addressing recent YieldCo issues –creates credibility hurdles

We highlight recent developments in the YieldCo market, given the recent volatility in the space, specifically solar side of the sector. While neither TERP Global nor SunRun's IPOs have appreciated since their offerings, NYLD's guidance reduction in its home solar business raised further concerns among the investors engaged into the YieldCo market. *Bottom line, we don't expect SolarCity – or any other entity to pursue a YieldCo structure any time soon given the pushback on equity capital market raises.*

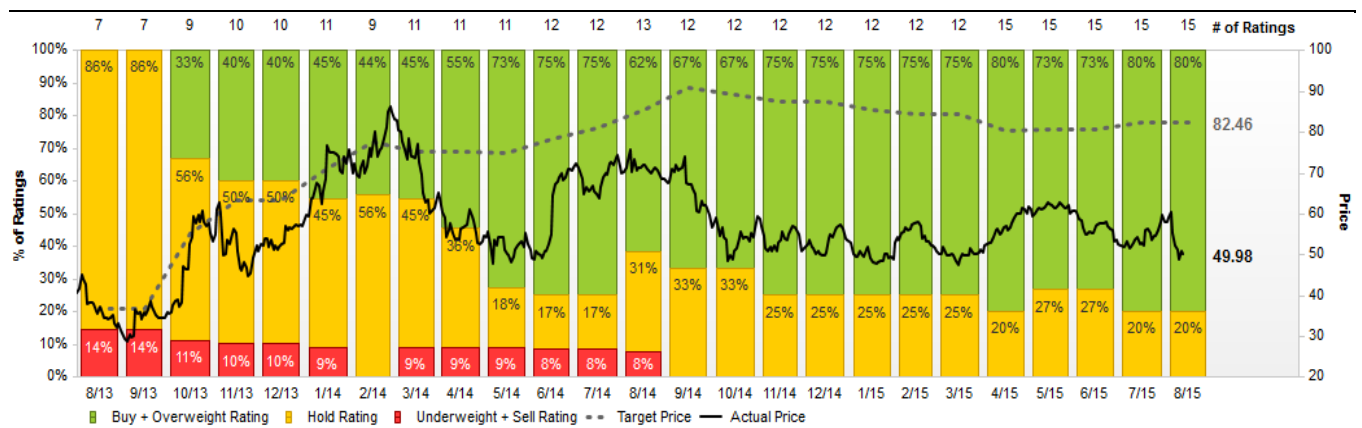
But under what context would SolarCity still potentially pursue a deal?

We suspect management could still yet pursue a YieldCo structure in the event it saw a need to fund capital deficiencies in 2017 arising from the ITC step-down. Rather than raising equity directly at SolarCity to fund the projected \$0.20/Watt needs. Management continues to weigh options as to how to think about any future independent YieldCo (PowerCo) structure.

How is the Street positioned on the name?

With the Street largely in favor of the name, we see relatively little skew upwards in terms of possible upgrades to bolster shares. We see the discrepancy between buy-side investors in shorting shares relative to constructive sell-side views as particularly wide in this instance. We note that since September 2014 the Sell Side consensus Target Price (currently \$82/sh) has remained elevated versus the trading range.

Figure 16: SolarCity Rating Two-Year Distribution



Source: FactSet

What are we versus consensus?

Below we show UBS EPS estimates vs consensus, and also our latest comps vs. peer companies. We see EPS as a less meaningful figure as we reflect scaling up of tax-equity distributions through our income statement. We see scaling of FCF as among critical items.

Figure 17: UBS estimates vs. street consensus

		FY '15E	FY '16E	FY '17E
EPS - Non GAAP	Consensus	(\$6.97)	(\$7.52)	(\$5.20)
	UBSe	(\$7.18)	(\$10.25)	(\$12.28)

Source: Factset, UBS estimates

Comps vs. peers: entire sector has few multiples that make sense

Amidst an entire industry that has few metrics that are consistent, nor make sense without EBITDA and EPS for many companies, we see few obvious conclusions in looking at the sector (aside that SCTY is *not* alone in having challenging financials).

Figure 18: Comps vs peers: Key multiples

SOLARCOs	Ticker	Rating	Market Cap. (\$ in millions)	Price 8/14/2015	Price Target	Dividend Yield	P/E multiple					EV / EBITDA Multiple						
							2014E	2015E	2016E	2017E	2018E	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Resi																		
SolarCityCorp	SCTY	Neutral	4,744	48.81	53	0.00%	nm	nm	nm	nm	nm	-12.7	-14.0	-12.7	-14.0	43.3	na	na
Vivint Solar Inc.	VSLR	Not Rated	1,452	13.64	NA	0.00%	nm	nm	nm	nm	nm	-5.9	-4.5	-5.9	-4.5	-6.2	na	na
Sunrun	RUN	Not Rated	974	10.04	NA	0.00%	na	na	na	na	na	na	na	na	na	na	na	na
Integrated																		
First Solar Inc	FSLR	Not Rated	5,197	51.51	60.00	0.00%	19.8	10.3	11.2	12.6	13.7	4.9	4.8	6.0	3.9	4.1	4.5	4.8
SunPower Corp	SPWR	Not Rated	3,422	25.09	31.00	0.00%	19.5	19.3	13.6	11.0	11.5	20.0	10.8	14.5	9.8	7.1	5.7	5.7
SunEdison Inc.	SUNE	Buy	4,455	14.14	29.66	0.00%	nm	nm	nm	nm	23.1	36.6	249.3	-56.9	19.2	8.3	5.8	4.4
Canadian Solar Inc.	CSIQ	Not Rated	1,378	24.74	NA	0.00%	6.0	8.9	9.8	6.2	na	5.1	4.1	5.1	4.1	2.4	na	na
Manufacturers																		
Hanwha Q Cells Co.	HOCL	Not Rated	110	11.05	NA	0.00%	na	nm	na	na	na	na	na	na	na	na	na	na
JA Solar Holdings Co.	JASO	Not Rated	406	8.05	NA	0.00%	8.3	7.0	5.5	5.0	na	2.5	2.2	2.5	2.2	2.0	na	na
JinkoSolar Holding Co.	JKS	Not Rated	699	22.49	NA	0.00%	9.0	6.9	5.8	5.2	na	4.7	3.8	4.7	3.8	3.2	na	na
ReneSola Ltd.	SOL	Not Rated	112	1.29	NA	0.00%	nm	nm	nm	nm	na	7.7	6.5	7.7	6.5	5.8	na	na
Trina Solar Ltd.	TSL	Not Rated	842	9.88	NA	0.00%	12.2	10.0	7.4	5.3	na	4.6	3.5	4.6	3.5	2.7	na	na
SolarEdge Technologies Inc.	SEDG	Not Rated	1,068	27.28	NA	0.00%	50.5	19.9	13.9	14.1	14.4	16.9	11.2	16.9	11.2	8.3	na	na
Enphase	ENPH	Not Rated	245	5.50	NA	0.00%	nm	55.0	10.3	8.9	36.7	39.7	6.0	39.7	6.0	3.3	na	na
Yingli Green Energy Holding Co.	YGE	Not Rated	156	0.86	NA	0.00%	nm	nm	nm	nm	na	9.2	6.6	9.2	6.6	na	na	na
Average							17.9	17.2	9.7	8.5	19.9	13.8	28.1	4.9	7.0	4.7	5.4	5.0

Source: Factset, UBS estimates. Consensus estimates for Not Rated companies.

Figure 19: Comps vs peers: EPS and EBITDA

SOLARCOs	Ticker	Market Cap. (\$ in millions)	Price 8/14/2015	Dividend Yield	Earnings Per Share						EBITDA					
					2013E	2014E	2015E	2016E	2017E	2018E	2013	2014	2015	2016	2017	2018
Resi																
SolarCityCorp	SCTY	4,744	48.81	0.00%	-3.88	-3.77	-6.97	-7.52	-5.20	-6.38	-403	-442	-403	130	na	na
Vivint Solar Inc.	VSLR	1,452	13.64	0.00%	-1.99	-0.81	-2.15	-2.73	-2.69	-3.11	-288	-220	-288	-210	na	na
Sunrun	RUN	974	10.04	0.00%	na	na	na	na	na	na	na	na	na	na	na	na
Integrated																
First Solar Inc	FSLR	5,197	51.51	0.00%	4.36	2.60	5.00	4.60	4.10	3.76	690	558	854	804	737	695
SunPower Corp	SPWR	3,422	25.09	0.00%	1.67	1.29	1.30	1.84	2.28	2.18	344	256	379	523	646	653
SunEdison Inc.	SUNE	4,455	14.14	0.00%	-0.87	-0.95	-1.66	-0.93	-0.34	0.61	42	-183	543	1,260	1,784	2,362
Canadian Solar Inc.	CSIQ	1,378	24.74	0.00%	4.11	4.12	2.77	2.54	3.99	na	442	359	442	761	na	na
Manufacturers																
Hanwha Q Cells Co.	HQCL	110	11.05	0.00%	na	na	-2.48	na	na	na	na	na	na	na	na	na
JA Solar Holdings Co.	JASO	406	8.05	0.00%	0.88	0.97	1.15	1.47	1.62	na	276	246	276	301	na	na
JinkoSolar Holding Co.	JKS	699	22.49	0.00%	2.48	2.51	3.26	3.89	4.34	na	374	299	374	443	na	na
ReneSola Ltd.	SOL	112	1.29	0.00%	-0.40	-0.38	-0.52	-0.43	-0.07	na	110	94	110	125	na	na
Trina Solar Ltd.	TSL	842	9.88	0.00%	0.74	0.81	0.99	1.33	1.87	na	408	311	408	530	na	na
SolarEdge	SEDG	1,068	27.28	0.00%	0.77	0.54	1.37	1.96	1.94	1.90	96	64	96	129	na	na
Enphase	ENPH	245	5.50	0.00%	0.06	0.00	0.10	0.53	0.62	0.15	34	5	34	62	na	na
Yingli Green Energy	YGE	156	0.86	0.00%	-1.21	-0.85	-0.74	-0.32	-0.75	na	335	238	335	na	na	na

Source: Factset, UBS estimates. Consensus estimates for Not Rated companies.

Valuation: \$53 Price Target (Neutral)

Our valuation is based on Sum-of-the-Parts analysis. We include our SOTP summary model below, which effectively breaks the business into separate DevCo and PowerCo segments, adds value for the Silevo manufacturing, and deducts for the liabilities outstanding. We note that the majority (~58%) of the value is derived from the PowerCo segment.

Our SOTP analysis yields a \$53 price target in our base-case scenario

Consolidated SOTP Valuation

Figure 20: Consolidated SCTY Valuation : Breaking down the value drivers

SolarCity Valuation UBSe			
DevCo	Bear	Base	Bull
Value of DevCo to SCTY	\$2.00	\$24.00	\$59.00
Value of Liabilities to SCTY		-\$7.16	
PowerCo	Bear	Base	Bull
Value of PowerCo to SCTY	\$21.00	\$31.00	\$43.00
Silevo	Bear	Base	Bull
Value of Silevo to SCTY	-\$0.57	\$5.62	\$10.82
SCTY Equity Value Per Share- Pre Discount	\$23	\$53	\$102
Upside/(Downside)	-53%	10%	109%

Source: Company data, UBSe

DevCo: The Resi Engine (\$24/sh)

Our DevCo valuation is based on **2017, post-ITC expiration** cash flows, during which period we assume SCTY will install ~2.0 GW in our base-case. Per mgmt. guidance, we input total install costs of \$2.50/W. In the post-ITC case, we calculate that the DevCo will produce unlevered CAFD of ~\$0.21/W through 10-year average (not directly comparable to pre-ITC CAFD of \$0.14/W post-tax equity and \$0.19/Watt pre-tax equity financing as we assume modest PPA inflation back to more profitable segments in 2017, amidst pullback in markets served). The model below summarizes our CAFD derivation.

Figure 21: DevCo Project Returns Analysis- Visual Derivation of the Margin

DevCo	Bear	Base	Bull
DevCo CAFD- Illustrative			
10-Year Avg. Unlevered Gross Margin (\$/W)		0.22	
10-Year Avg. Tax Equity (\$/W)		(0.03)	
10-Year Avg. Unlevered CAFD (\$/W)		0.20	
Unlevered IRR (30 yr.)		11%	
2017 CAFD (Post Tax Equity)	364	405	445
2017 Cash Flows (Post ITC) Devco			
Annual Capacity Additions (MW)	1,812	2,012	2,212
\$/watt installation costs	\$2.50	\$2.50	\$2.50
Unlevered CAFD \$/W - 10-year Average	\$0.19	\$0.21	\$0.23
Monetization Yield - VSLR	8.42%	8.42%	8.42%
Monetization Yield - Premium to Deal	1.00%	1.00%	1.00%
	9.42%	9.42%	9.42%
Exit Valuation for Unlevered Project (post-Tax Equity)	\$1.96	\$2.18	\$2.39
Tax Equity	\$0.60	\$0.60	\$0.60
Total System Sale Price (\$/W)	\$2.56	\$2.78	\$2.99
Implied Margin (\$/W)	\$0.07	\$0.28	\$0.49
Implied Margin (%)	3%	11%	20%
\$/watt DevCo Monetization	\$2.78	\$2.78	\$2.99
Value Creation per Watt	\$0.28	\$0.28	\$0.49
Gross Margin (\$M)	118	558	1,084
Opex (\$M) - not reflected in Cost Build Up (\$/W)	0.04	0.04	0.04
Opex (\$M) - not reflected in Cost Build Up	(72)	(80)	(88)
EBITDA	46	478	995
EV/EBITDA (4-6x Range for Solar & Marketing Co's)	4.0x	5.0x	6.0x
Implied Value	183	2,390	5,971
Implied Value (\$/W)	0.10	1.19	2.70
Value of DevCo to SCTY	\$2.00	\$24.00	\$59.00

Source: Company Filings, UBSe

What yield to apply to a Resi cash flow?

Deriving a monetization yield of 8.42% from the TERP-VSLR acquisition (implied from cash flows disclosed by management) we add a 1% premium for SCTY to reach 9.42% assumed market 'monetization' value for the assets developed in 2017 and beyond. We assume a 1% premium to 8.42% to account for the added risk.

By dividing the total yield by the unlevered CAFD, and adding \$0.60/W for tax equity, we come up with \$2.78/W for a total system sale price, which equates to \$0.28/W of margin on the \$2.50 install cost, or ~11%. We suspect this could indeed be conservative, but given the wider malaise in solar market over desire for increasing returns— and greater competition putting some execution risk on margins, we suspect \$0.28/Watt is reasonable margin. We note that a contributing factor to our Neutral rating is the fact that we see margins compressing in the resi space due to increased competition. When the ITC expires, there will be even less

barriers to entry for installers, as they will not need to handle the tax rebate. While SCTY's cost structure due to their scale is undoubtedly an advantage, we believe that enhanced competition will have an impact on margins.

Breaking down the post-ITC development engine:

The total gross margin on the 2.0 GW of expected installations equates to \$558M. We have derived \$0.04/W of Opex not reflected in the \$2.50/W (mainly R&D), which brings EBITDA to \$444M. Applying a 5x multiple on EV/EBITDA, consistent with what we have done on SUNE, brings the implied value of the DevCo to \$2.4b or \$24/sh.

Breaking down our assumptions:

- EV/EBITDA: We assume 5x, consistent with our view of value embedded across solar equities in the sector, as well as consistent with lower development visibility of energy marketing businesses. Should investors gain greater confidence on continued *acceleration* beyond ITC expiration, this multiple could well expand
- Development targets: We derive the 1.87GW off mgmt's implied target of reaching 1 Mn customers in 2018. The question is whether mgmt can actually *grow* its development penetrations scale amidst a pullback in overall regions with positive net economics (largely bringing the industry back to the core markets in the northeast and California). We see comfort on this as a further key indicator of value for shares.

Liabilities: Accounting for the Debt (-\$7/sh)

We have given the value for the \$796M of converts, \$420M in aggregation facility, which are offset by the cash on hand of \$489M, as disclosed during 2Q15 earnings. That brings total current liabilities to \$727M, or \$7/sh.

What about other liabilities? Already accounted for via PowerCo. While other liabilities exist, we reflect the interest and principal amortization of these borrowings through our PowerCo model (principally the ABS borrowings and the tax equity arrangements).

Figure 22: 2017 Liabilities

<u>Other Medium Term Liabilities</u>	<i>As of June 30, 2015</i>
Converts	796
Aggregation Facility	420
Cash	<u>(489)</u>
Total Liabilities	727
<u>Value of Liabilities to SCTY</u>	<u>-\$7.16</u>

Source: Company data, UBS

PowerCo: The YieldCo Side of the Equation (\$31/sh)

In an effort to break up the valuation of the business between the prospective capacities of the company (post-ITC) expiration, and value of the assets leading into the expiration of the ITC, we break up the company's opportunity set into two discrete buckets. We estimate all assets built through the 'gold rush' into ITC expiration as being part of the PowerCo – or YieldCo subsidiary.

We assume the majority of assets (upwards of ~90%+ over-time) are levered with ABS at \$1.70/Watt.

Applying a **7%** peer group yield for YieldCo structures and **+1%** discount, we value the PowerCo at \$32/sh.

We built the PowerCo based on projects installed through 2016, leading up to the expiration of the ITC.

Why do we apply a 1% premium?

- Reflects assumed 100% payout of CAFD (no reserve assumed). Comparable income structures tend to reflect a 60-90% payout depending on the structure.
- Investor uncertainty over residential model, particularly technology and re-contracting risk beyond the 20-year PPA. Inflation-adder elevates risk of future contract reset upon PPA conclusion.
- Execution risk on achieving 3.7GW of residential DG (~1/2 of this is in place today).
- Levered equity yield of the TERP-VSLR deal was acquired at implied 9.5% yield.

What's understated about this analysis?

We see several caveats to this methodology worth highlighting that could eventually lead to greater upside than what we have enclosed

- Increasing cash flow profile: Notably, CAFD from existing assets should continue to inflate over time, particularly as tax equity obligations expire after the 7th year of each new asset. In aggregate, this creates a growing profile of the portfolio CAFD through the next ~10-year period. We expect management to attempt to illustrate the growing CAFD profile in subsequent quarters in an effort to illustrate this value in the story through the medium-term, at least on existing projects.

Figure 23: 2017 PowerCo Valuation

PowerCo	Bear	Base	Bull
2017 Cumulative Cash Flows			
Cumulative MW Installed		5,492	
2017 Gross cash available for distribution (CAFD) \$M	724	924	1,124
Corporate interest (post-tax)	(266)	(339)	(413)
Corporate principal payment	(185)	(236)	(288)
Tax equity lease distributions	(77)	(98)	(119)
Total net CAFD (pre-reserve) (\$M)	196	251	305
Distribution reserve (1 - payout) - Assume None			
Net CAFD	196	251	305
GP take - 2017E - Assume None			
CAFD available for LP unit holders	196	251	305
Haircut			
CAFD distributed to LP unit holders	196	251	305
Est. share count	101	101	101
CAFD per share	\$1.93	\$2.47	\$3.00
Peer Group Yield	8%	7%	6%
(Premium) / Discount - Account for Higher Risk Resi	1%	1%	1%
Assumed Terminal Yield	9%	8%	7%
Value of PowerCo to SCTY	\$21.00	\$31.00	\$43.00

Source: Company data, UBSe

Sailing into Solar Panel Manufacturing with Silevo (\$6/sh)

Value Contribution of the Silevo Acquisition

Additionally, we note that we may see some potential upside from the Silevo acquisition. SCTY guides for panel production at \$0.55/W, which can be monetized at least at \$0.75/W—equating to 36% margins; we assume -\$0.10/W of deflationary trend by the time production scales up by the end of next year, amidst current sales prices in the \$0.85-0.90/W context suggesting upside to our gross margin estimates. We estimate gross margin for 1 GW of annual production of \$200Mn, flowing through to an implied value of \$720M on 4x EV/EBITDA and \$20M in opex. **After taking state subsidies into account, the total value to SCTY is ~\$6/sh.**

Don't read too much into decision to go vertical: While nominally a move to integrate vertically into the panel sector, we see the move as principally motivated by an opportunity to invest in manufacturing at a highly subsidized rate. Total costs to build are estimated at \$900 Mn, however the deal with the state requires SCTY to invest just \$150 Mn of equity capital. We see the returns to SCTY as quite attractive in this particular instance. We don't believe management would have opted to go vertical without such meaningful subsidies.

Panels will help in edge towards more power per house: Seeing the technology as more akin to Sunpower, with higher average cell efficiency, the panels will enable space constrained households to support greater aggregate power output.

Figure 24: Silevo SOTP Analysis – real value accretes back to SolarCity

Silevo	Bear	Base	Bull
2017 Cash Flows			
Annual Capacity Additions (MW)	900	1,000	1,100
\$/watt installation costs	\$0.60	\$0.55	\$0.50
Margin (%)	8%	36%	60%
\$/watt Silevo Monetization	\$0.65	\$0.75	\$0.80
Value Creation per Watt	\$0.05	\$0.20	\$0.30
Gross margin (\$M)	45.0	200.0	330.0
Opex (\$M)	(22.0)	(20.0)	(18.0)
EBITDA	23.0	180.0	312.0
EV/EBITDA	4.0x	4.0x	4.0x
Implied Value	92	720	1,248
Implied Value (\$/W)	0.10	0.72	1.13
Gross Implied Value/Share	\$0.91	\$7.10	\$12.30
Total cost	900	900	900
NY state subsidies	750	750	750
Cost to SCTY	150	150	150
Net Value Creation	(58.0)	570.0	1098
Value of Silevo to SCTY	-\$0.57	\$5.62	\$10.82

Source: Company data, UBSe

Projected FCF – How is the Company Financing Itself?

We project meaningful growth in the FCF, with CAFD shifting meaningfully positive as projects are developed. We suspect rolloff of tax equity obligations will further accelerate CAFD growth organically, irrespective of Devco development.

The key question remains scaling up of the business cost structure in tandem with the expansion to other states and larger Devco engine; while we include some additional working capital in the CFO, it remains unclear how much further capital to grow the business will be required – nor what precisely the trajectory of I/S cost inflation will be.

Figure 25: FCF growth in CFO driven by continued reinvestment

CASH FLOW STATEMENT					
	2015E	2016E	2017E	2018E	2019E
OPERATING ACTIVITIES:					
Net CAFD	84	162	251	336	454
Add: Direct Sales	<u>92</u>	<u>107</u>	<u>123</u>	<u>134</u>	<u>146</u>
Cash received from projects	177	269	373	470	600
Subtract: SG&A, O&M (not in capex)	(61)	(109)	(131)	(150)	(173)
Tax	0	0	0	0	0
Other corporate expense (R&D)	(42)	(42)	(50)	(58)	(60)
Changes in W/C	(28)	(68)	(38)	(67)	(79)
Other					
Net cash used in operating activities	46	51	155	195	288
INVESTING ACTIVITIES:					
Payments for cost of solar energy systems, leased & to be leased	(2,589)	(4,374)	(5,028)	(5,534)	(6,093)
Net cash used in investing activities	(2,589)	(4,374)	(5,028)	(5,534)	(6,093)
FINANCING ACTIVITIES:					
Borrowings under long-term debt	1,697	1,762	3,381	3,749	4,193
Proceeds from Tax Equity	1,125	2,081	1,002	1,083	1,245
<i>Net cash provided by financing before equity & convert issuances</i>	<i>2,822</i>	<i>3,843</i>	<i>4,383</i>	<i>4,832</i>	<i>5,439</i>
Proceeds from issuance of common stock	0	0	0	169	231
Proceeds from convertible senior notes	0	0	400	400	100
<i>Net cash provided by equity and convertible notes issuances</i>	<i>0</i>	<i>0</i>	<i>400</i>	<i>569</i>	<i>331</i>
Net cash provided by financing activities	2,822	3,843	4,783	5,400	5,770
Net decrease in cash and equivalents	279	(480)	(90)	61	(35)
Cash and equivalents, beginning of period	504	784	304	213	274
Cash and equivalents, end of period	784	304	213	274	240

Source: UBS estimates

Valuation vs. Peers: Getting Some Traction

We include our latest primary and secondary YieldCo comp group, illustrating that US YieldCos (with meaningful growth from drop-downs) now trade only 50bp wide of Canadian 'secondary' YieldCo peers. **For the purpose of our valuation, we apply a 7% yield, consistent with the average yield off 2017 peers (and what we apply for peer YieldCo entities).** As such, we see the sector as poised to find a near-term floor relative to other more retail-oriented income sectors. In

contrast to MLPs, we see a strong bid from retail investors in Canada for renewable assets as providing a real valuation proxy; that said, it's still a low bar. We further flag that Canadian comps could also add further support to the extent the sector is driven by a more benign rate environment, given the disproportionate impact of the lower commodity environment on the Canadian economy.

Figure 26: YieldCo Comp Sheet

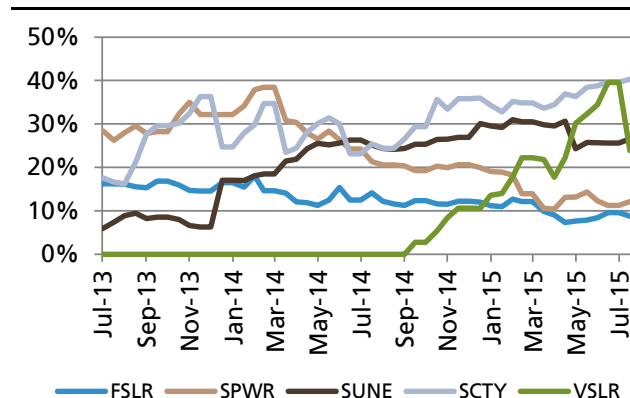
		Rating	Market Cap. (\$ in millions)	Price 8/17/2015	Price Target	% Public Float	Dividend Yield (%)				
							2014E	2015E	2016E	2017E	2018E
PRIMARY YELDCOs											
8point3 Energy Partners	CAFD	Neutral	1,108	15.60	21.00	28.1%	na	3.26%	6.00%	7.03%	8.43%
Hannon Armstrong Sustainable Inf	HASI	Buy	632	19.44	22.00	93.5%	5.44%	5.44%	6.34%	7.46%	8.90%
NextEra Energy Partners LP	NEP	Neutral	2,908	30.29	33.00	21.9%	2.48%	4.02%	4.73%	5.56%	6.53%
NRG Yield	NYLD.A	Neutral	4,050	15.97	27.00	36.9%	4.41%	4.98%	5.89%	6.95%	8.20%
Pattern Energy Group A	PEGI	Not Rated	1,719	23.02	N/A	76.0%	6.26%	6.22%	7.13%	8.04%	9.38%
TerraForm Power	TERP	Buy	3,665	26.13	34.00	43.3%	3.32%	5.17%	6.70%	7.85%	9.11%
Transtia Renewables	RNW-CA	Not Rated	2,270	11.90	N/A	27.2%	6.82%	6.81%	7.06%	7.34%	7.56%
Average							4.8%	5.1%	6.3%	7.2%	8.3%
SECONDARY YELDCOs											
Algonquin Power & Utilities Corp.	AQN-CA	Not Rated	2,205	9.23	NA		4.81%	5.10%	5.63%	na	na
Brookfield Renewable Energy Par	BEP.UT-CA	Not Rated	10,323	37.44	NA		4.33%	4.61%	4.98%	5.29%	5.61%
Capital Power Corporation	CPX-CA	Not Rated	2,102	20.68	NA		6.74%	7.14%	7.36%	na	na
Capstone Infrastructure Corporatio	CSE-CA	Not Rated	286	3.05	NA		9.84%	9.84%	9.84%	9.84%	na
Greencoat UK Wind Plc	UKW-GB	Not Rated	528	1.15	NA		5.38%	5.35%	5.51%	5.59%	na
Innergex Renewable Energy Inc.	INE-CA	Not Rated	1,086	10.69	NA		5.80%	5.85%	5.80%	na	na
Renewables Infrastructure Group I	TRIG-GB	Not Rated	677	1.04	NA		6.06%	6.25%	6.35%	na	na
Average							6.2%	6.5%	6.7%	7.1%	6.6%

Source: FactSet and UBS estimates. Consensus estimates for Not Rated companies.

Short interest is relatively high however

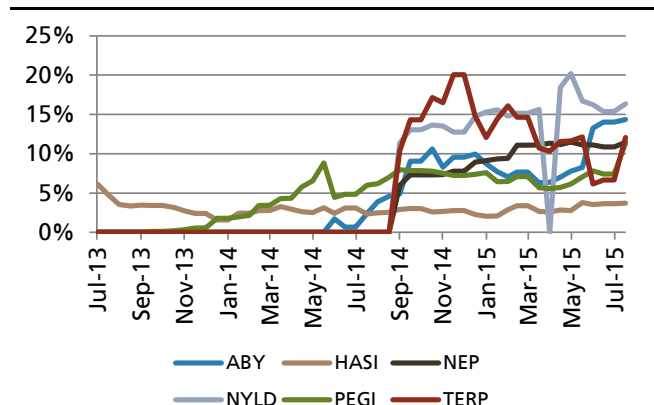
We include trends on short interest across the two related renewable sectors. SCTY maintains its place as the stock with the greatest short interest, albeit the latest volatility in SUNE would suggest this could well take the lead. We flag 40% Short interest would lend itself to risk of a meaningful short squeeze.

Figure 27: Solar Cos



Source: Factset

Figure 28: Primary YieldCos



Source: Factset

Retained Value- Previous Approach

Management has historically used a metric known as 'Retained Value', which is effectively an NPV proxy for the total cash flow generated from contracts it has signed. While this has been the metric many investors have relied upon to derive their valuations of SCTY, we see this as increasingly less informative to a wider audience paying attention to the YieldCo sector in particular—as breaking apart SCTY between its PowerCo and DevCo provides a useful comp against the corresponding YieldCo-Parent breakdown. We also flag that management has received scrutiny of the assumptions embedded within this metric—particularly the 6% discount rate and 90% forecasted renewal rate for PPAs and leases.

Is the retained value metric less approachable? We think so.

We continue to see a transformation towards FCF metrics as more consistent for many investors. We emphasize that the adoption of a metric which has wider appeal remains a critical aspect of the story overall. We have noticed that investors are moving away from the net retained value metric, and beginning to value the firm more on a CAFD basis, similar to a YieldCo model.

What is the Projected Retained Value?

In order to test our 'cash' valuation against retained value, we have created the following analysis to reflect how the retained value changes with modifications to the renewal and discount rates.

In an effort to understand how much retained value can be created through the expiration of the ITC, we have estimated projected retained value for '15e-'17e.

Base case: using mgmt's assumptions

Using the assumptions disclosed by SCTY, consisting of a 90% customer renewal rate and 6% discount rate, we come up with \$4.6b of gross retained value in 2015, \$8.9b in 2016, and \$13.2b in 2017. In net retained value terms, this equates to \$4.2b in 2015, \$6.8b in 2016, and \$8.1b in 2017. Bottom line, this metric would appear to backstop current valuations of shares seemingly better than a comparable YieldCo framework we have adopted.

Figure 29: Retained Value, Base Case-Full Model (6% Discount Rate, 90% Renewal Rate)

	Discount rate		6%			
	Renewal rate		90%			
	4Q14	1Q15	2Q15	2015E	2016E	2017E
PPA/Lease Energy Contract	1,685	1,946	2,381	2,789	4,839	7,571
PPA Lease Renewal	738	800	941	833	1,450	2,293
MyPower	166	328	495	1,005	2,633	3,688
Gross Retained Value	2,589	3,074	3,817	4,627	8,922	13,552
Gross Retained Value/W	2.42	2.54	2.80	2.32	2.43	2.38
- Solar Asset-Backed Loans Outstanding	(319)	(313)	(1,156)	(1,115)	(2,830)	(6,127)
- Aggregation and Other Non-Recourse Debt Outstanding	(157)	(296)	(420)	(200)	(200)	(200)
- Solar Bonds Debt and Other Debt Outstanding	(23)	(118)	(202)	(204)	(251)	(335)
- Revolver Debt Outstanding	(130)	(175)	(215)	(700)	(700)	(700)
- Forecasted Net Cash Costs to Deploy Backlog	(30)	(30)	(94)	(30)	(30)	(30)
+ Cash and Short-Term Investments	643	576	489	700	700	700
Net Retained Value	2,576	2,721	3,057	4,182	6,762	8,095
Net Retained Value/W	2.41	2.24	2.24	2.09	1.84	1.42
<i>SCTY Reported Net Retained Value</i>	<i>2,423</i>	<i>2,718</i>	<i>3,057</i>			
	4Q14	1Q15	2Q15	2015E	2016E	2017E
SCTY share price (\$)	\$48.61	\$60.05	\$48.81	\$48.81	\$48.81	\$48.81
Shares (m)	93	97	97	95	98	101
Gross retained value/share	\$27.74	\$31.80	\$39.35	\$48.72	\$91.12	\$133.56
Price/GRV	1.8x	1.9x	1.2x	1.0x	0.5x	0.4x
Net retained value/share	\$27.60	\$28.14	\$31.51	\$44.03	\$69.05	\$79.78
Price/NRV	1.8x	2.1x	1.5x	1.1x	0.7x	0.6x

Source: Company data, UBSe

Assuming a higher discount rate, and lower renewal rate

Among the most commonly debated elements of SolarCity is their decision to assume a generic discount rate of 6% for retained value derivation. If we adjust the discount rate to 8% or 10%, reflecting the higher risk associated with residential solar, we see value that is more comparable to our CAFD-equivalent valuation. Generally, a 1% move in the discount rate is reflected in a roughly ~\$500M move in retained value.

Figure 30: Retained Value, Condensed Model (8% Discount Rate, 90% Renewal Rate)

			Discount rate		8%	
			Renewal rate		90%	
	4Q14	1Q15	2Q15	2015E	2016E	2017E
Gross Retained Value	2,589	3,074	3,817	3,699	7,138	10,798
Gross Retained Value/W	2.42	2.54	2.80	1.85	1.94	1.90
Net Retained Value	2,576	2,721	3,057	3,254	4,978	5,340
Net Retained Value/W	2.41	2.24	2.24	1.63	1.35	0.94
<i>SCTY Reported Net Retained Value</i>	<i>2,423</i>	<i>2,718</i>	<i>3,057</i>			
	4Q14	1Q15	2Q15	2015E	2016E	2017E
SCTY share price (\$)	\$48.61	\$60.05	\$48.81	\$48.81	\$48.81	\$48.81
Shares (m)	93	97	97	95	98	101
Gross retained value/share	\$27.74	\$31.80	\$39.35	\$38.94	\$72.89	\$106.42
Price/GRV	1.8x	1.9x	1.2x	1.3x	0.7x	0.5x
Net retained value/share	\$27.60	\$28.14	\$31.51	\$34.26	\$50.83	\$52.63
Price/NRV	1.8x	2.1x	1.5x	1.4x	1.0x	0.9x

Source: Company data, UBS

What else is key to retained value? Recontracting.

SolarCity assumes a 90% renewal rate when calculating retained value. While high, we note that based on how their contracts work, the 90% renewal would be better defined as a 10% cancellation rate, as customers must cancel their contract after 20yrs, or will automatically default to the 10yr remaining contract life. As seen in the models below, we have tested the impacts of lowering the renewal rate, and as a rule of thumb, a 10% change in renewal rate impacts retained value by ~\$100M.

We don't see this as a SCTY issue in particular, but as applicable to the residential solar industry more generally, as the value derived post year-20 is largely unknown given the infancy of the market. On one hand, if customers can still achieve savings over their utility bills in years 20-30, renewal seems to be a no-brainer. The complexities arrive surrounding the recent evolution of panel efficiencies and new technologies, which might make 20 yr old systems seem relatively unproductive once the renewal period emerges— influencing customers to upgrade rather than renew.

Figure 31: Retained Value, Condensed Model (6% Discount Rate, 80% Renewal Rate)

	Discount rate		6%			
	Renewal rate		80%			
	4Q14	1Q15	2Q15	2015E	2016E	2017E
Gross Retained Value	2,589	3,074	3,817	4,534	8,761	13,297
Gross Retained Value/W	2.42	2.54	2.80	2.27	2.38	2.34
Net Retained Value	2,576	2,721	3,057	4,089	6,601	7,840
Net Retained Value/W	2.41	2.24	2.24	2.05	1.80	1.38
SCTY Reported Net Retained Value	2,423	2,718	3,057			
	4Q14	1Q15	2Q15	2015E	2016E	2017E
SCTY share price (\$)	\$48.61	\$60.05	\$48.81	\$48.81	\$48.81	\$48.81
Shares (m)	93	97	97	95	98	101
Gross retained value/share	\$27.74	\$31.80	\$39.35	\$47.74	\$89.47	\$131.05
Price/GRV	1.8x	1.9x	1.2x	1.0x	0.5x	0.4x
Net retained value/share	\$27.60	\$28.14	\$31.51	\$43.06	\$67.41	\$77.27
Price/NRV	1.8x	2.1x	1.5x	1.1x	0.7x	0.6x

Source: Company data, UBSe

How many customers and how much capacity?

On a MW basis, SCTY's total installations grew at a ~101% CAGR from 2010-2014.

Management guides for 920-1000 MW installed in 2015, and has set a goal to reach 1m cumulative customers by mid-2018 (implying a CAGR of ~60%). We forecast 2015 installations to come in on the low end of the range.

Figure 32: Solar City MW and Customer estimates

	2013A	2014A	2015E	2016E	2017E	2018E
MW deployed - leases/PPAs	260	472	662	1,224	1,670	1,805
y/y % change	91%	82%	40%	85%	36%	8%
MW deployed - MyPower	0	7	242	419	302	463
y/y % change	na		3360%	73%	-28%	53%
MW deployed - direct sales	20	22	27	34	40	46
y/y % change	0%	10%	24%	23%	20%	15%
Lease/PPA share	93%	94%	71%	73%	83%	78%
MyPower share	0%	1%	26%	25%	15%	20%
Direct sales share	7%	4%	3%	2%	2%	2%
Total MW deployed (in period)	280	501	932	1,677	2,012	2,314
Y/Y increase	79%	79%	86%	80%	20%	15%
Cumulative MW deployed - leases/PPAs	494	966	1,628	2,852	4,522	6,327
Cumulative MW deployed - MyPower	0	7	249	668	970	1,433
Cumulative MW deployed - direct sales	72	94	122	155	195	242
Total cumulative MW deployed	566	1,067	1,999	3,675	5,687	8,001
Cumulative customers	92,998	189,657	321,825	560,350	846,575	1,175,728
Y/Y % increase	92%	104%	70%	74%	51%	39%
Customers added (in period)	44,579	96,659	132,168	238,525	286,225	329,153

Source: Company Filings and UBS Estimates

Other Key Investment Considerations

Financing the Growth: Limited Equity in 2017

Following recent investor concerns about SunEdison's ability to finance its ambitious growth targets, we specifically focus on SolarCity's balance sheet and financing strategy. A unique characteristic of SolarCity is its ability to grow without equity needs, at least through the step-down in ITC value. With the development costs of solar in the mid-to-high \$2/Watt, we expect ITCs under the current 30% context to yield ~\$1.50/W, with ABS issuances readily able to raise proceeds to solve for the 'balance' of total capital needs (in fact, assets could actually be levered >100% and still maintain Debt Service Coverage Ratios metrics). Even beyond the ITC stepdown, ABS of ~\$1.70/Watt, coupled with tax equity proceeds of \$0.60+/Watt largely fill in equity capital needs of \$2.50/Watt. We would expect issuance of converts to fill any financing gap. Beyond just these ABS and converts, small solar bond issuances could fill in incremental needs as well with ~\$0.20/Watt of leverage (implying ~\$400 Mn of needs in 2017 at a ~2GW/yr deployment pace). Tax equity funds, which represent another significant source of funding for the firm, are similarly complex structures, but are expected to decline post-2016 along with the ITC expiration/reduction. Our estimates assume deployment to this level in the form of convertible notes (more likely than straight equity).

Given SolarCity's rapid pace of growth, liquidity remains a very real focus.

SCTY could face challenges in securing sufficient funding to meet its aggressive installation growth targets given the pace of ABS issuances and higher level of complexity vs straight debt.

We present SolarCity's total debt balance as of 3/31/15 below. As of 2Q15, the firm had increased its total outstanding debt to ~\$1.9bn (up ~14% from the prior quarter).

Figure 33: Total Debt Outstanding, 3/31/15 (\$M)

	Carrying Value, Net of Fees							
	Unpaid Principal Balance	Current	Long Term	Unused Borrowing Capacity	Interest Rate	Maturity Dates	% of Total Debt	Annual Interest Expense
Recourse debt:								
Revolving credit facility	175.0	—	172.3	5.7	3.4%	Dec '16	10.3%	6.0
Vehicle loans	9.0	2.6	6.4	—	1.9%-7.5%	Apr '15 - Jun '19	0.5%	0.5
2.75% Convertible senior notes due 2018	230.0	—	230.0	—	2.8%	Nov '18	13.5%	6.4
1.625% Convertible senior notes due 2019	566.0	—	566.0	—	1.6%	Nov '19	33.3%	9.1
Solar Bonds	9.7	1.7	8.0	—	1.6%-5.8%	Oct '15 - Mar '30	0.6%	0.5
Solar Bonds issued to related parties	90.5	90.3	0.2	—	2.0%-4.0%	Oct '15 - Oct '21	5.3%	3.2
Total recourse debt	1,080.2	94.5	982.9	5.7			63.6%	25.6
Non-recourse debt:								
Term loan assumed from Silevo acquisition	9.2	9.2	—	—	7.8%	Jun '15	0.5%	0.7
Term loan due in September 2015	79.0	—	77.0	—	3.7%	Sep '15	4.7%	2.9
Term loan due in May 2016	34.6	—	32.8	90.4	3.2%	May '16	2.0%	1.1
Term loan due in December 2016	182.4	—	179.3	67.6	3.4%-3.5%	Dec '16	10.7%	6.4
MyPower revolving credit facility	—	—	—	200.0		Jan '17	—	0.0
Solar Asset-backed Notes, Series 2013-1	48.8	3.3	45.5	—	4.8%	Nov '38	2.9%	2.3
Solar Asset-backed Notes, Series 2014-1	67.1	2.8	64.2	—	4.6%	Apr '44	4.0%	3.1
Solar Asset-backed Notes, Series 2014-2	196.3	6.4	189.9	—	4.0%-Class A 5.4%-Class B	Jul '44	11.6%	9.8
Total non-recourse debt	617.4	21.7	588.6	358.0			36.4%	26.4
TOTAL DEBT	1,697.6	116.2	1,571.6	363.6			100.0%	52.0

Source: Company filings, UBSe

Financing: Our Projections

We detail our projections for SCTY's total debt balance through 2017E. In order to fuel its rapid growth, the company will need to increase its total debt at a CAGR of

~81% through 2017E. According to our estimates, this would cause interest expense to quadruple from ~\$56m to ~\$309m.

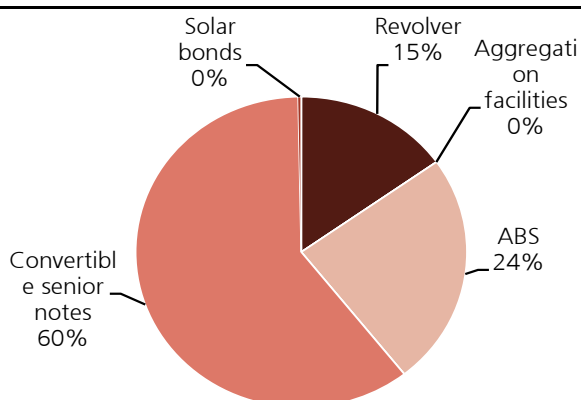
Figure 34: Historical & Projected Debt (\$M), 2012-2017E

Ending Debt Balance	2012A	2013A	2014A	2015E	2016E	2017E	2018E	2019E
Revolver	75	200	200	700	700	700	700	700
MyPower revolver	0	0	0	200	200	200	200	200
Aggregation facilities	84	239	0	0	0	0	0	0
Solar ABS (term loans)	0	50	319	846	2,009	4,651	7,395	10,447
MyPower ABS	0	0	0	269	821	1,476	2,481	3,622
Solar bonds	0	0	4	204	251	335	335	335
Additional ABS	0	0	0	0	0	0	0	0
Convertible senior notes	0	230	796	796	796	1,196	1,596	1,696
Total Debt	159	718	1,319	3,015	4,777	8,558	12,707	17,000
YoY % Change				129%	58%	79%	48%	34%
Total Interest Expense	20	26	56	78	186	339	507	691
YoY % Change				40%	138%	82%	49%	36%

Source: Company filings, UBS

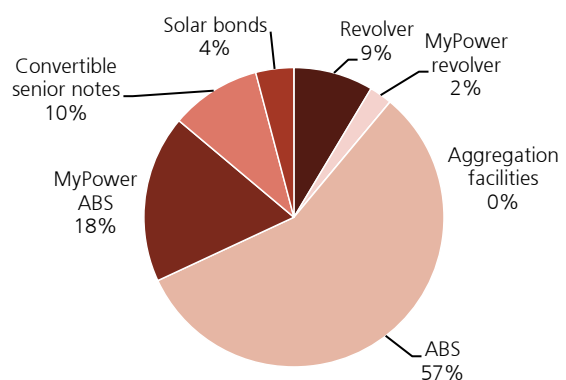
As of YE'14, the majority of SCTY's debt was convertible notes (53%), ABS (21%), and agg facilities (12%). By 2017, we anticipate ~38% of debt will be ABS (along with ~6% in MyPower ABS), with 26% in agg facilities. We expect the total debt to increase to ~\$8bn by 2017 (from ~\$1.9bn last quarter) as the firm continues to cover rapid cash outflows from its installation growth.

Figure 35: Total Debt Balance – 2014A



Source: Company data

Figure 36: Total Debt Balance – 2017E



Source: UBS

We see multiple sources of liquidity: asset-backed solar (ABS) notes, tax equity, aggregation facilities (2-3 year term loans), convertible debt, Solar Bonds, revolving credit facilities, and cash.

Asset-backed solar (ABS) notes: Past, Present, and Future

Through July SCTY management has issued three separated securitizations thus far, totaling ~\$326m with more anticipated. We note that the fourth securitization reversed the trend of rising debt monetization, which fell from \$1.71/W for LMC III to \$1.14/W for LMC IV. We suspect this may be related to the slight drop in weighted average FICO score, which declined from the ~760s range to 742 with the fourth issuance. Over time, we expect ~100% of eligible projects (non-direct sales) to be securitized including MyPower (likely greater leverage) and even Commercial leases (despite greater credit pressures).

ABS are currently the lowest-cost long-term source of financing for solar companies that use them, but issuance costs are expensive due to the latest suite of financial reforms. As a result, a \$50m securitization may make much less economic sense than one for \$100m.

Credit Rating Agencies on ABS

Asset securitization, while not a new concept (for example, mortgage-backed securities), is relatively novel in the power space. Asset-backed securitization (ABS) involves taking a pool of financial assets and issuing securities financed specially by those assets without reliance on the sponsor. Securitization separates the underlying assets from the sponsor and thus provides the opportunity for the debt to have lower risk/higher credit rating than the sponsor does. To date, Moody's does not rate solar offerings, but does have experience in other bespoke types of securitization transactions. Moody's believes that the industry has the ability to be rated and could warrant investment-grade on a securitization, but would note that developers such as SCTY are cash-flow negative.

Expect regular issuances of ABS

Management suggests it could see upwards of regular (quarterly) issuances of ABS structures to feed what appears to be a projected pipeline of \$1bn+ per annum of ABS for resi and commercial solar structures.

Figure 37: Historical ABS Issuances

	LMC I	LMC II	LMC III	LMC IV
Date	Nov-13	Apr-14	Jul-14	
Securitization Issuance (\$M)	\$54.40	\$70.10	\$201.50	\$123.50
/Aggregate MW Collateralized	44	47	118	108
= Debt Monetization (\$/W)	\$1.24	\$1.48	\$1.71	\$1.14
Number of PV systems	5,033	6,596	15,915	16,400
Contract Price – Weighted Average (\$/kWh)	\$0.15	\$0.15	\$0.15	\$0.14
Wtd avg. customer agreement fee escalator (\$/kWh)	2.07%	1.58%	1.61%	2.02%
Wtd avg. FICO score (residential customer)	762	767	763	742
Spread over the Benchmark Rate (bps)	265	230 80 (Tranche A)		
Residential / Commercial Mix (% of ADSB)	71% / 29%	87% / 13%	86% / 14%	
Contract Price – Weighted Average (\$/kWh)	\$0.15	\$0.15	\$0.15	\$0.14
FICO Score – Weighted Average	762	767	763	742
Pool Characteristics:				
Number of PV systems	5,033	6,596	15,915	16,400
ADSAB (aggregate discounted solar asset balance) \$r	88	106	276	214
Aggregate PV system size (MW DC)	44	47	118	108
Wtd avg. customer agreement initial term (mths)	223	237	240	240
Range of customer agreement initial terms (mths)	120-240	168-240	156-240	
Wtd avg. customer agreement remaining initial term	201	225	233	230
Range of customer agreement remaining initial term:	78-238	120-239	148-240	
Wtd avg. price per kWh (\$)	0.15	0.15	0.15	0.14
Wtd avg. customer agreement price/kWh fee escalato	2.07	1.58	1.61	2.02
% of ADSAB related to residential customers (%)	71	87	86	
Wtd avg. FICO score (residential customer)	762	767	763	742
% of ADSAB related to non-residential customers (%)	29	13	14	

Source: S&P, Kroll's, company data

Competitive edge today – but not tomorrow – in capital market access

While creating a 'norm' around ABS should reduce the cost of capital and improve investor familiarity with such structures, we see access to the ABS market as expanding to both top-tier competitors as well as secondary players. We see use of ABS as critical to remaining competitive in a post-ITC framework.

Solar Bonds: Another Source of Liquidity

We flag the recent loan for \$90m from peer SpaceX (through the purchase of SCTY asset-backed Solar Bonds) as yet another source of unexpected liquidity which is helping to maintain the overall cash balance of the company. While it may be an unorthodox source of cash, we see any incremental source of liquidity as beneficial, especially given the firm's rapid cash deployment. In addition, we note a wave of solar bond offerings which arrived throughout 2Q15 (roughly \$400m worth). The Solar Bonds are being executed with interest rates of 1.6-5.75% and maturities ranging from 1 to 15 years. SolarCity launched the Solar Bonds program in October 2014, in an effort to attract retail investors to the market via issuances with minimum denominations of \$1,000. While exceptionally cheap capital, we don't expect these to make a significant dent in the prospective capitalization of the company given limited demand for the paper.

Aggregation Facilities: Short-Term Asset-Backed Financing

The aggregation facilities are another source of short-term financing for SCTY. Similar to the ABS, they are backed by the firm's solar assets. However, these term loans are executed through the banks with a relatively short tenor (2-3 years), effectively bridging the gap between asset-backed securitizations (ABS) in the medium term. SCTY's latest \$500m aggregation facility is their largest to-date. The facility covers 500 MW, which equates to \$1/W in medium-term project debt. We see access to capital as a key factor in the ability for the DevCo to continue growing at a competitive rate.

Given the rapid pace of capital deployment in the solar sector, we see the ability to use term loans to act as bridges between ABS issuances as critical to leveraging assets on a timely basis and reducing upfront equity capital needs. If potential investors become increasingly comfortable with the concept of solar ABS issuances, it is possible that the waiting period that comes with securing ABS financing on a portfolio of residential solar loans could compress over time.

Ultimately, comfort with C&I credit risk is another eventual avenue for diversification of funding. In addition, the total amount of leverage that firms could be eligible for, under both the working capital facilities and the ABS, could continue to climb on a \$/W basis. (For SCTY, these are currently at ~\$0.80/W for aggregation facilities and up to \$1.70/W for ABS.)

Tax Equity remains on the table of course

One of the most cost-effective ways in which SCTY has been able to raise funding has been through tax equity. While the firm initially pursued lease pass-throughs and sale leasebacks, it has lately been focusing on partnership flips as its main source of capital via this avenue. At a high level, tax equity allows SCTY to source the 30% Federal ITCs it receives from solar energy system installations in order to provide returns to investors (typically at ~9% IRR) while simultaneously receiving funding for installation projects. With partnership flips, SCTY and tax equity investors form a joint venture partnership, in which the investors essentially take ownership of profits, cash flows, and tax benefits of a certain proportion of SCTY's business (including the assets associated with it) for a certain period of time (for SCTY, it's typically 5-8 years – we model 7 years). At the end of the period, ownership and assets are transferred back to the developer (SCTY, in this case).

Given the longer track record relative to peers of SCTY's tax equity funds, many of its projects will begin to flip within 3-4 years. As of 7/27/15, the firm had undeployed tax equity financing capacity of 447 MW. Total remaining distributions to JV partnerships are projected to be valued at \$1.1bn, as of 2Q15. SCTY guides for issuance of tax equity at \$1.70-\$1.75/W until YE'16, and at \$0.60-\$0.70/W in 2017+, following the ITC expiration/reduction.

What's the risk? We see cheaper financing coming.

Among the key risks to the SolarCity story is the potential for the disaggregation of the installation of the product (rooftop solar) from the financing structures (be it lease or owned). We suspect specialty and retail banks will increasingly be willing to make secured loans against the assets to enable direct home ownership as well as enable independent parties to make such financing available. The question is how much more competitive will this niche become?

We emphasize that in many other global markets, there is *not* the equivalent of SolarCity precisely because most households *own* their panel structures –and do not make use of a specialized lease/loan product.

What is particularly appealing about the MyPower offer? No money down. We suspect others will yet try to copy this structure to entice customers to sign up without upfront costs to them, allowing them to immediately recognize benefits while paying down debt from cash cost savings.

A look at near term funding options

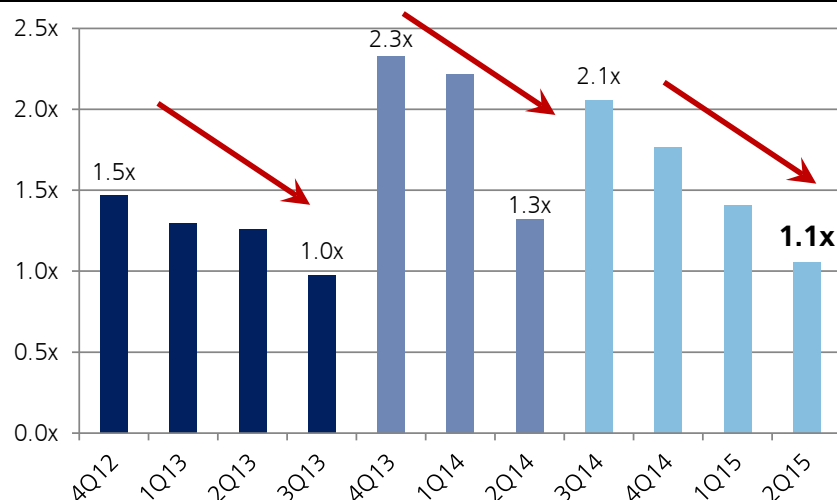
As of 2Q15, the firm's quick ratio was ~1.1x, while current liabilities stood at \$877m (+71.5% y/y). While this is not the first time the quick ratio has declined to this level, we note that SCTY is burning cash at a much higher pace than in prior years in order to meet its growth target for 920-1000 MW of installations by YE'15.

Given the complexities associated with tax equity financing, many investors will only join in funds with minimum sizes of ~\$100m/yr. Consequently, SCTY's larger scale gives it an advantage relative to other smaller residential players. It seems that there are a limited number of counterparties engaging in these deals – typically, blue-chip corporations and banks.

Story is effectively 100% levered today

While there is much debate about the exact value of SCTY's retained value per watt, we emphasize that the projects are largely 100% levered under the current structure with the ITC, effectively producing an *infinite* IRR with equity used, effectively the time-value of the capital employed prior to the use of the ITC.

Figure 38: Declining quick ratios, revitalized by new funding...



Source: Company data, UBS

SolarCity's maturity schedule as of 12/31/14 shows that the majority of the firm's debt will mature in 2019. Additionally, 21% of total outstanding debt will mature in 2016. Among the key risks to the company is the potential for future and existing ABS to re-price at significantly higher levels. Deals of late have had tenors of ~8-years despite the 20-year life of the (fixed) PPA. This exposes the company to potential refinancing risk.

Figure 39: Debt Maturity Schedule

Schedule of Principal Maturities of Debt as of Dec. 31, 2014 (\$ in thousands)					
Year	Recourse Debt Excluding Convertible Senior Notes	Non-Recourse Debt	Convertible Senior Notes	Total	% of Total
2015	3,787	22,733	—	26,520	2%
2016	133,137	169,855	—	302,992	21%
2017	3,442	13,609	—	17,051	1%
2018	2,876	13,892	230,000	246,768	17%
2019	425	14,474	566,000	580,899	41%
Thereafter	—	250,110	—	250,110	18%
Total	143,667	484,673	796,000	1,424,340	100%
% of Total	10%	34%	56%	100%	

Source: Company filings

Sales that aren't securitized: Direct Sales

How to think about margins?

We flag a small segment of SCTY's sales are conducted on a direct sale basis (mostly commercial systems), with prices typically achieved in the low \$3/W range. Cash margins pre-G&A imply a low 20% rate, with all-in margins in the low double-digits (~11%). This would appear consistent with industry peers with ~20% seemingly the target from SunPower and others. The question remains to what extent the step-down in ITC will pressure margins.

The YieldCo Potential: Is It an Option?

SCTY has been hinting at YieldCo potential for several quarters now (and recently released the associated CAFD metrics to that effect) but we think it is unlikely that SCTY will create a drop-down YieldCo anytime in the near future – particularly after the recent weakness in the market. For one, we think that SCTY may need to build up more of a backlog before it makes the move. Additionally, we suspect that the current YieldCo climate will not entice SCTY to make a decision soon following 8Point3 Energy [CAFD] and TerraForm Global [GLBL] trading down following their respective IPOs. Another key difference is that residential focused developers naturally have less drop-down visibility given the shorter development and construction timeframes.

We are biased to believe the company will *not* pursue such a structure in the near future.

Does mgmt have enough CAFD to create a YieldCo?

Meanwhile, we suspect management will opt *not* to contribute these assets to any prospective structure, seeing as the firm lacks sufficient cash flow to pay a consistent dividend. In particular, we raise concerns about years 2015-2020 as significant in the amount of debt payments and tax equity distributions that would be required at the PowerCo level (following outsized growth that mgmt guides for in yrs '15/'16).

With at least \$50 Mn in CAFD necessary to kick-start such a vehicle, we see management as having enough CAFD, but wouldn't be surprised if management staggers any formal decision a bit further. Moreover, with a significant portion of the revenue in the vehicle tied to tax-equity flip structures and asset-backed debt, the uptick in CAFD 7 years after expiration (~\$0.05/Watt uplift) suggests cash flow would remain limited off the assets for the initial period. Moreover, exact structure of the financing remains unclear.

Post-ITC, YieldCo is more readily implementable

Once tax equity structures become less of a headache in a post-2016 world, we suspect management will more readily consider alternate structures such as the YieldCo model. We see the 7-year cash flip structure as creating an awkward cash flow profile for many of the firm's assets.

Does the roll-off of legacy tax equity obligations enable a YieldCo?

In addition to providing for an 'easier' capital structure, the roll-off of legacy tax equity could also enable the drop-down of assets into a YieldCo structure. While details on how the roll-off of these legacy structures will occur, exactly, are a bit opaque, the initial YieldCo would be quite limited in terms of aggregate MW deployments (particularly if limited only to assets without tax equity structures).

CAFD should grow significantly as each year's tax-equity obligations roll-off

Thinking through the WACC between YieldCo and Integrated Co alternatives

Among the key questions to mgmt is what is the differential in the overall cost of capital between a YieldCo and the integrated cost of a solar developer. Under today's capitalization, with the bulk of the cap structure debt (issued at ~4.5%) and tax equity (net of ITC, with ~1-3%), mgmt. argues the WACC under its current structure more competitive than a YieldCo, even if the cost of equity under the integrated structure is well into the teens. In turn, the bigger question a YieldCo structure remains to what extent the equity piece of the WACC becomes a larger portion of the cap-stack beyond the ITC step-down (would be ~\$0.20/Watt

under current guidance). We flag that commentary from peer SunRun would appear to agree that the public equity cost of capital for the stand-alone solar structure is preferable over the YieldCo.

Moving Upstream

SCTY is swimming upstream

SCTY acquired Silevo (a high-efficiency solar cell and module manufacturer) in 2014 for \$168m in stock, \$23m liabilities, and \$9m cash, in combination with its announcement of ambitious module manufacturing plans. The move signaled the company's intent to become vertically integrated, confirming that its previous acquisition of Zep was not a one-off.

SCTY is building a 1 GW solar cell and module manufacturing plant in upstate NY, and expects to build one or more even larger plants in subsequent years.

With its decision to acquire Silevo and build out a solar panel production business in New York, management is shifting gears towards asset ownership. While module manufacturing may be a lower-margin business (from a gross margin perspective), SCTY's decision appears to be motivated by the availability of subsidies from the state (\$750m of the total \$900m cost will be paid for by the state). Furthermore, the addition of a 1 GW self-supply option to feed SolarCity will not only allow for panel consistency, but will also provide leverage over outside vendors in the sense of panel acquisition costs.

But is upstream integration the way to go? Not so clear

The acquisition allows for comparisons to be drawn between SCTY and the three other fully-integrated U.S. solar companies – SUNE, SPWR, and FSLR; however, we note the *move is in contrast to SUNE's strategy*, which has been downsizing its upstream solar semiconductor business. Similarly, SPWR and FSLR are focusing more on development and ownership of projects and less on manufacturing.

However, the NY deal provides significant– and clear value proposition

Currently, solar module manufacturing is a low-margin endeavor. With the number of voluntary and involuntary exits in the space over the course of the past few years, SCTY's entrance is all the more intriguing. We see significant subsidies playing a large role in the decision to build a \$900m 1-GW panel manufacturing factory in upstate NY, with ~\$750m in upfront costs defrayed by the state. Additionally, the firm plans to add one or more larger plants in subsequent years. SCTY's bet is that it will achieve lower costs on scale and efficient manufacturing processes. In that vein, SCTY will compete with FSLR, SPWR, and a number of large Chinese manufacturers in the fight for market share and product efficiency, which could be a potentially risky prospect. Silevo notes that they currently have above 22% efficiency cells, with headroom to reach 24% in the next few years. SPWR has announced efficiencies of roughly 21.5% with plans to reach 23% by 2015.

SCTY's earlier acquisition of Zep had enabled the company to lower its system installation costs by reducing racking costs (~40% of total residential installation costs). Additionally, through the use of Zep's system, a crew could install a 6 kW system 2-3x faster than through the use of conventional mounting (leading to savings in labor costs).

A downstream focus would seemingly add more value

Our bias remains that others will not follow SCTY's integration up the supply chain. Rather, the focus will be for manufacturers to integrate downwards, particularly given the lower barriers to entry on the development business model. We suspect this will be an additional source of competition as others continue to capitalize on the ~20% developer margins.

Our bias remains that others will *not* follow SCTY's integration up the supply chain.

What about moving upstream into inverter manufacturing?

Inverters and other specialty equipment may offer better prospects than poly or modules. We see new players entering the solar equipment manufacturing segment in the next ~5-10 year, but not in modules. Enphase (ENPH), SolarEdge (SEDG), and Tigo currently dominate the inverter, microinverter, and optimizer spaces, which seem to be less competition-dominated relative to the module-manufacturing business. On the residential side, we think the microinverter market could see new entrants in the next 5-10 years, becoming increasingly competitive, perhaps with lower-cost foreign operations.

Inverters and other specialty equipment may offer better prospects than poly or modules.

Higher-efficiency panels are the focus for success in resi solar

As an attempt to improve the product offering – and sell a more attractive product to residential consumers – selling higher-efficiency panels is clearly an ideal solution to providing a more aesthetically pleasing option for rooftops. Of course, there are risks involved in that biz given the fate of several manufacturers in recent years. We see the dearth of major solar manufacturing companies stationed in the U.S. to be indicative of the difficulties in matching Chinese costs.

Going upstream? Not unlike Musk

Consistent with SCTY's decision to move upstream, TSLA made an equally meaningful commitment to pursue a 1 GW battery plant to serve the burgeoning storage market, for both utility-scale and vehicular purposes. Given the rapid evolution of the respective technologies, along with meaningful overseas competition, the competition remains whether *either* is a worthwhile investment. From a high level, SCTY's and TSLA's large manufacturing capacity of silicon- and li-ion-based technologies, respectively, could leave them hamstrung if more efficient technologies enter the market and replace incumbents. While silicon and li-ion may continue to be the main technologies for the next ~10 years, it's highly plausible that they could be substituted for better-performing equipment.

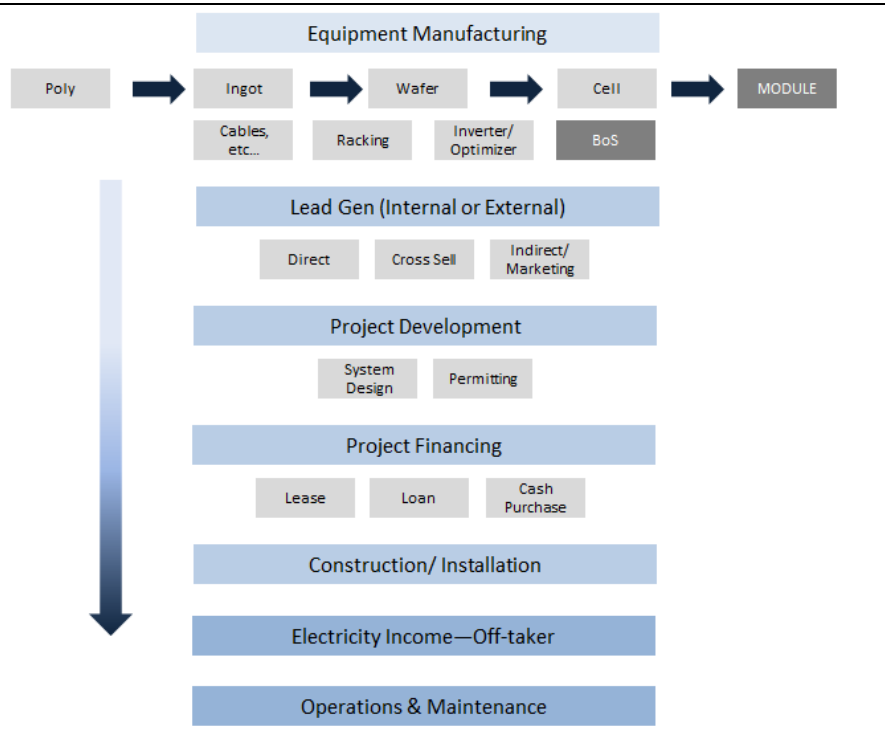
Why not keep suppliers off-balance-sheet and let them compete?

SCTY's future manufacturing-related projections are strong indications that it is looking to become autonomous in the panel manufacturing process in order to cut costs and increase product quality. It is less clear, however, why the firm is not willing to simply purchase the lowest priced modules and let the incumbent panel manufacturers to compete on producing panels with the highest efficiencies. While we acknowledge a risk of supply disruption in 2016 ahead of the ITC expiration cliff, we tend to see a surplus of supply, overall. SCTY's undersupply bet depends on several unknowns, including the future of the US/China trade case, potential capacity expansions by current manufacturers, and the possibility of new entrants.

SCTY's undersupply bet depends on several unknowns, including the future of the US/China trade case, potential capacity expansions by current manufacturers, and the possibility of new entrants.

Given those factors, SCTY's decision to start manufacturing seems very risky in our view, as many solar developers/installers will be entering the space in the next ~5 years, and market share will largely be determined by installation costs.

Figure 40: Solar Vertical Integration Diagram



Source: UBS

Opportunities for Expansion

Commercial could be new frontier

Following 2Q results, management has reengaged its commitments on the C&I business, committing to grow this segment in a step-function fashion following the integration of the government's PACE program. While management has thus far been unable to crack success on serving this higher credit risk niche (serving small and mid-sized companies is among the costly segments, seeing default rates and credit risk as particularly high – and with limited ability to readily distill credit quality, evaluating each business prospect remains tricky). The latest shift towards utilizing government subsidy programs such as PACE and GEMS would effectively allow for SCTY to reduce the credit risk of counterparty risk, typically securitizing payments through property tax assessments. While a discrete state-by-state opportunity, this remains a chief angle of growth in California.

How big could this be? While unclear today, we suspect this could well be used to help 'plug' the hole in any volume concerns to hitting the company's overall targets.

Prospects for Overseas Expansion? Down the Line.

In August, SCTY announced plans to acquire ILIOSS, a Mexico-based commercial and industrial (C&I) solar developer, for \$10m cash plus potentially \$5m more based on the company's installation performance. ILIOSS will continue operating as an independent business unit. While management is bullish on the U.S. market and views it as the firm's core space for the foreseeable future, they have always been open to international expansion. We raise concerns regarding the complexities of monetizing lease/PPA payments and conducting business in a

foreign country. However, we think SCTY may try to address these issues via the acquisition route, similar to the Mexico deal, as they enter new markets.

What's the opportunity in Mexico?

Mgmt estimates this market could indeed scale rapidly, with 50-100 MWs for next year (2016), with potential for this market to contribute upwards of 500MWs in a best case into 2017. While we hadn't necessarily thought this would be SCTY's first jaunt abroad, we look to understand how this complements the overall growth target articulated by mgmt.

Where else will SCTY go?

Given the origins of the CEO and Chairman in South Africa, we understand this could well be among the first markets to which the company diversifies. We expect global residential players to emerge in coming years, as the Australian and European markets continue to grow.

That said, with installation contractors ultimately a local business, we expect there will always be a predominantly local business.

Company Overview

SolarCity is the largest residential installer of solar panels in the United States. The company offers solar energy systems to residential, commercial, and government customers via power purchase agreements (PPAs), leases, loan product offerings (MyPower), and direct sales. Through its vertically integrated strategy, the firm markets, finances, manufactures, installs, monitors, and maintains solar energy systems, and also provides system components, related software, and energy storage services. In 2014, operating leases and solar energy systems incentives comprised ~68% of revenue, with solar energy systems and component sales making up the remaining ~32%. Customers are located in 18 states plus Washington, D.C., with over 75% of customers in California, Arizona, Colorado, Hawaii, and New York. SolarCity is headquartered in San Mateo, CA.

History

SolarCity was founded by brothers Lyndon Rive (current CEO) and Peter Rive (current Chief Technology Officer) in June 2006. In 2008, the company introduced the SolarLease, offering customers fixed monthly fees for solar energy production. A year later, SolarCity launched the SolarPPA, a power purchase agreement charging customers a fee per kilowatt hour based on the amount of electricity produced. In December 2012, SolarCity completed its IPO and started trading on NASDAQ under SCTY at \$8/sh. As part of its vertical integration strategy, the company has made three acquisitions (Paramount Solar, ZepSolar, Silevo) over the past three years, each paid for primarily with SCTY stock. The firm has also issued convertible debt, solar asset-backed notes (ABS), tax equity funds, and solar bonds in order to cover the costs of solar panel installation. In August 2014, CFO Robert Kelly retired at age 56, to be replaced by Brad Buss. In October 2014, SCTY introduced MyPower, a loan product structured similarly to the PPA, which allows customers to purchase solar energy systems via 30-year loan agreements.

Figure 41: SolarCity Timeline

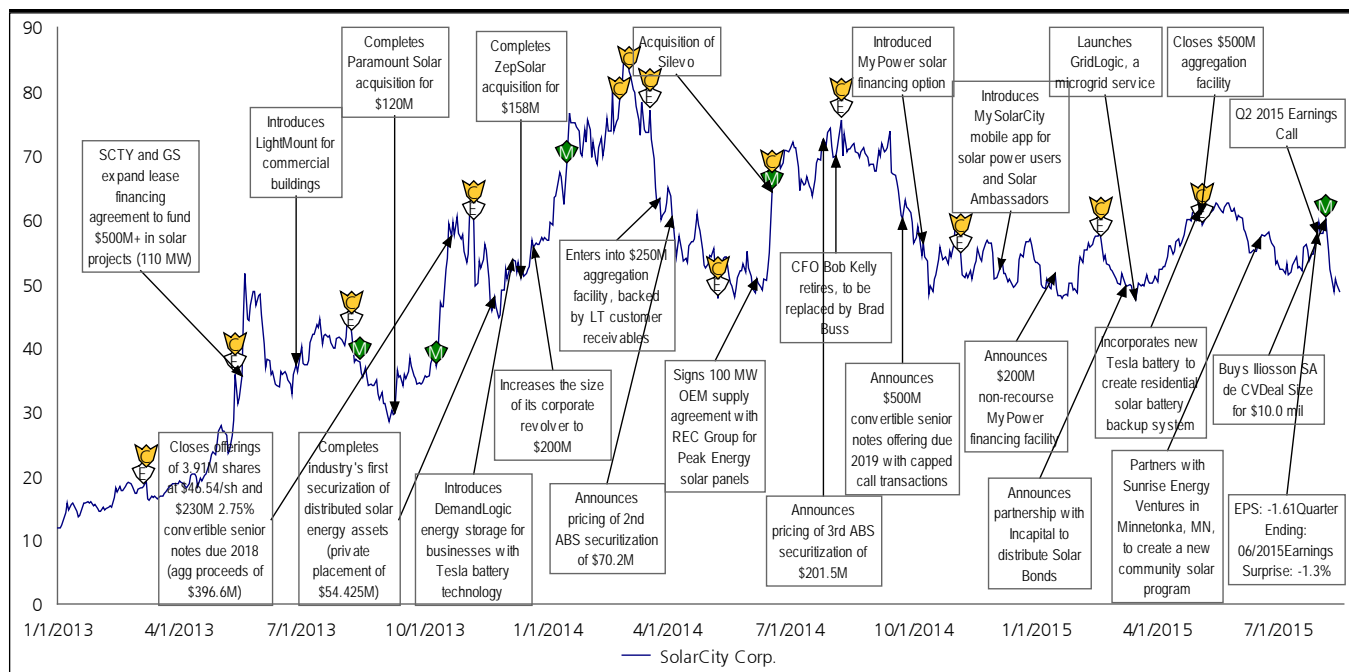
Date	Event
Jun 2006	Lyndon Rive and Peter Rive co-found SolarCity
2008	Launches SolarLease product
2009	Launches SolarPPA product
Dec 2012	SCTY completes IPO and starts trading on NASDAQ at \$8/share
Sep 2013	Completes Paramount Solar acquisition for \$120M (3,674,565 shares & \$3.7M cash)
Sep 2013	Paramount Equity CEO Hayes Barnard joins SCTY as Chief Revenue Officer
Oct 2013	Closes offerings of \$230M 2.75% convertible senior notes due 2018
Nov 2013	Completes first solar ABS securitization
Dec 2013	Introduces DemandLogic™ energy storage for businesses with Tesla battery technology
Dec 2013	Completes ZepSolar acquisition for \$158M (2,751,782 shares)
Apr 2014	Announces pricing of second solar ABS securitization
Jun 2014	Signs agreement to acquire Silevo
Jul 2014	Announces pricing of third solar ABS securitization
Aug 2014	CFO Bob Kelly retires, to be replaced by Brad Buss
Sep 2014	Introduced ZS Peak flat roof solar mounting solution
Sep 2014	Announces \$500M convertible senior notes offering due 2019
Oct 2014	Introduces MyPower solar financing option
Oct 2014	Announces first public offering of solar bonds, up to \$200M
Oct 2014	Appoints Jonathan Beamer as Chief Marketing Officer
May 2015	Incorporates new Tesla battery to create residential solar battery backup system

Source: Company reports

Stock Price History

We present a historical stock price chart outlining key events over SCTY's history since its IPO in December 2012.

Figure 42: Historical Stock Price Performance Chart

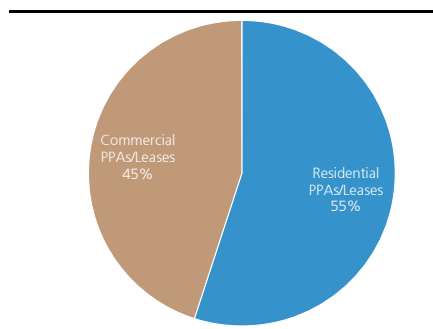


Source: Company reports

Historical Customer Breakdown

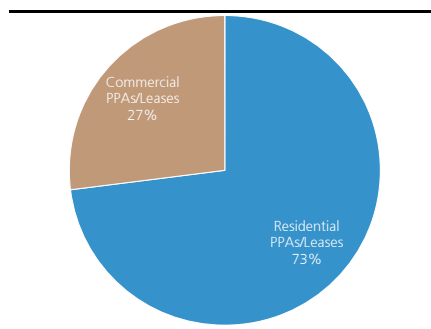
Primarily as a consequence of rapid growth in the overall U.S. residential market (in combination with stagnating commercial installations), SCTY's resi/commercial mix, in terms of newly installed capacity, has been moving towards an increasingly residential share over the past three years. From 2012 to 2014, the firm's resi/commercial installation mix has shifted from 55%/45% to 84%/16%.

Figure 43: MW Deployed – 2012



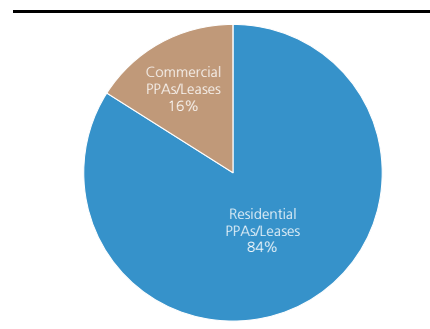
Source: Company data

Figure 44: MW Deployed – 2013



Source: Company data

Figure 45: MW Deployed – 2014



Source: Company data

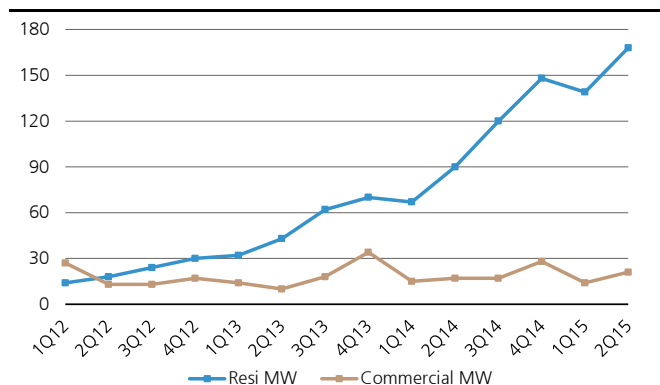
How has revenue growth looked historically?

Rapid installation growth, but seems to be slowing slightly

Below, we provide our analysis on installation growth. Every quarter for the past few years, residential installed capacity has, on average, slightly more than doubled from the year-ago quarter. However, it appears that y/y growth rates have been softening.

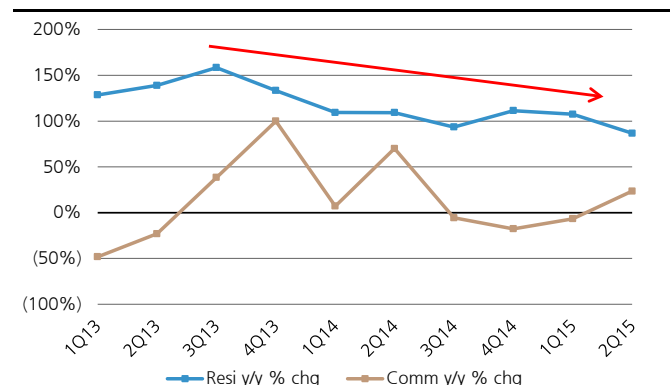
Commercial installations (while not as significant of a driver, comprising 16% of '14 newly installed capacity) have remained roughly flat (though volatile due to lumpier demand patterns of businesses) on an absolute basis, similar to trends in the overall commercial/government market. (See "Industry Overview" for further details on non-residential installations.)

Figure 46: Resi & Commercial Quarterly Installations



Source: Company data

Figure 47: Resi & Commercial Growth Trends



Source: Company data

Slowing installation growth is understandable as doubling growth levels over the long-term are not sustainable, and increased levels of competition mean that there are several players competing for every sale.

Figure 48: Residential and Commercial Installation Growth

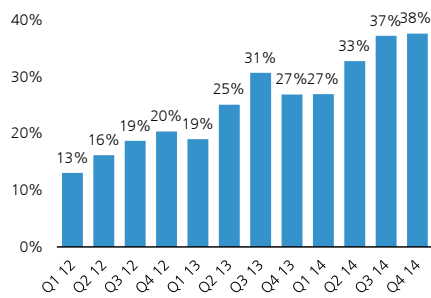
	1Q12	2Q12	3Q12	4Q12	1Q13	2Q13	3Q13	4Q13	1Q14	2Q14	3Q14	4Q14	1Q15	2Q15
Residential MW installed	14	18	24	30	32	43	62	70	67	90	120	148	139	168
Resi Y/Y % change	NA	NA	NA	NA	129%	139%	158%	133%	109%	109%	94%	111%	107%	87%
Commercial MW installed	27	13	13	17	14	10	18	34	15	17	17	28	14	21
Comm Y/Y % change	NA	NA	NA	NA	(48%)	(23%)	38%	100%	7%	70%	(6%)	(18%)	(7%)	24%
Total MW installed	41	31	37	47	46	53	80	104	82	107	137	176	153	189
Y/Y % change	NA	NA	NA	NA	12%	71%	116%	121%	78%	102%	71%	69%	87%	77%

Source: Company reports

Market Share Trends

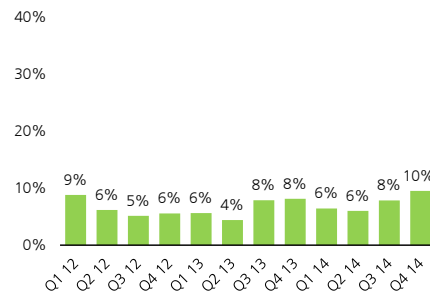
In the last three years, SCTY has gained market share in both the residential and non-residential (commercial, government, and public) sectors. SCTY's residential installations, which account for over 80% of its total installed capacity, have risen from ~17.4% to ~34.4% of total annual U.S. residential installations in the last three years. Over the same period, the firm's non-residential installations have also seen market share growth, but at a slower and more irregular pace: from ~6.5% to ~7.5% of annual installations.

Figure 49: SCTY's Market Share of U.S. Residential Installations



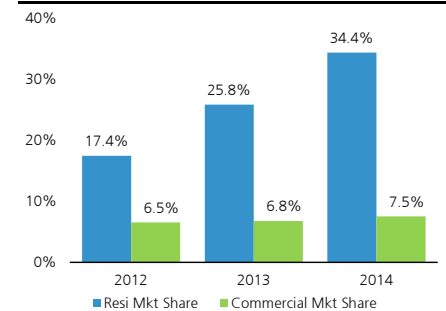
Source: Company data, GTM/SEIA

Figure 50: SCTY's Market Share of U.S. Non-Residential Installations



Source: Company data, GTM/SEIA

Figure 51: SCTY's Market Share of U.S. Installations (Annual)

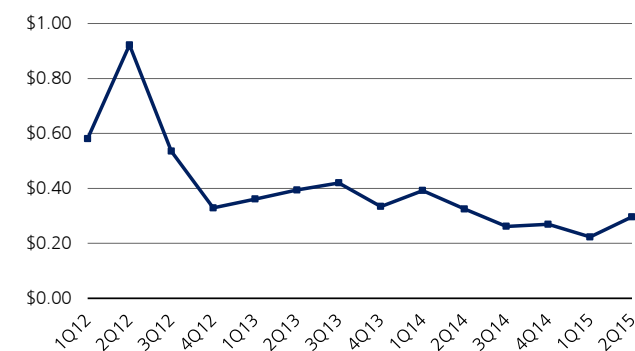


Source: Company data, GTM/SEIA

Revenue

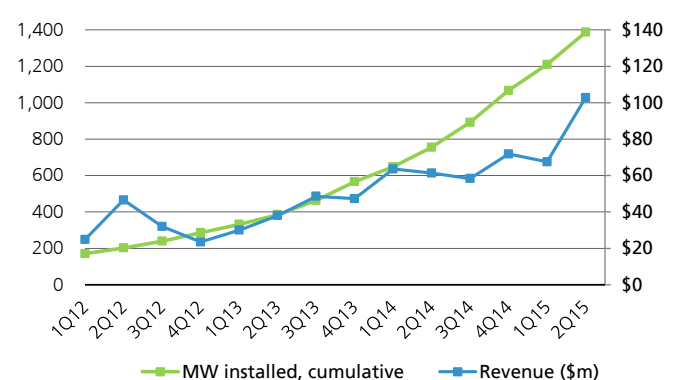
Over the past three years, SCTY's installations have grown at a ~95% CAGR. However, as SCTY's newly installed capacity rises, total revenue per cumulative watts deployed has been declining. We attribute this to the gradual mix shift over time from direct sales to leases and PPAs.

Figure 52: Total Revenue per Cumulative Watts Deployed



Source: Company data

Figure 53: MW Deployed (Cumulative) vs. Revenue (\$M)

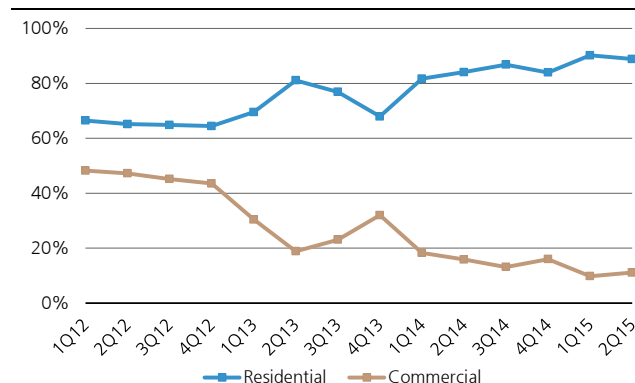


Source: Company data

Residential vs. Commercial Mix

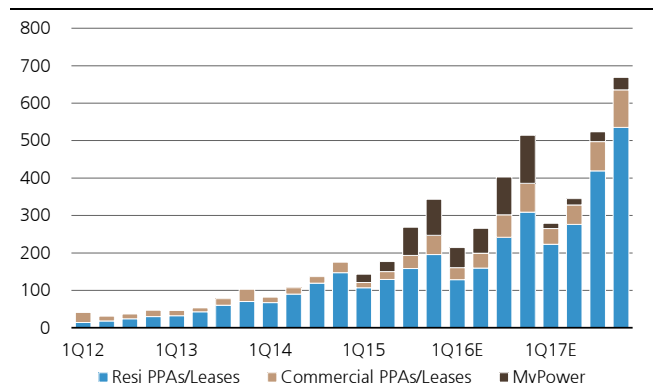
Since 2012, residential share of newly installed capacity has been rising, while commercial has been declining. We see this partly due to SCTY's advantage in the residential space and also due to the overall lag of commercial installations in the market relative to residential. Going forward, we expect this to level off to an 85%/15% split between residential and commercial installations (Note, MyPower is included as part of residential).

Figure 54: Resi vs. Commercial Share (MW Deployed)



Source: Company data

Figure 55: MW Deployed by Product Type



Source: Company data, UBS

Below, we display our forecasts for power purchase agreement and lease revenue. SCTY guides for 1m cumulative customers by mid-2018.

Figure 56: PPA & Lease Revenue Forecasts

	2012A	2013A	2014A	2015E	2016E	2017E	2018E	2019E	2020E
PPA & Lease Revenue									
Avg annual unit production (kWh/kW)	1,400	1,400	1,400	1,298	1,233	1,233	1,233	1,233	1,233
Average price (\$/kWh)	\$0.13	\$0.13	\$0.14	\$0.14	\$0.14	\$0.14	\$0.15	\$0.15	\$0.15
YoY % change		2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
PPAs & leases: Total cumulative deployed MW	234	494	966	1,628	2,852	4,522	6,327	8,402	10,789
PPAs & leases: Total annual production (MWh)	327,269	691,269	1,352,069	1,944,336	3,516,468	5,575,781	7,801,328	10,360,706	13,303,991
Total customer PPA & lease revenue (\$M)	\$42.5	\$91.8	\$183.6	\$269.8	\$498.7	\$808.2	\$1,155.6	\$1,568.5	\$2,058.4
YoY % change		115.9%	99.9%	47.0%	84.8%	62.1%	43.0%	35.7%	31.2%
PPA & lease revenue/deployed watts	\$0.31	\$0.35	\$0.39	\$0.41	\$0.41	\$0.48	\$0.64	\$0.76	\$0.86
YoY % change		12.9%	10.1%	4.8%	0.0%	18.8%	32.3%	18.0%	14.1%

Source: Company data, UBS

Marketing Cost Trends: A key point of focus

According to SCTY, customer acquisition costs cited in the \$500-\$1,000/ customer range are not fully-loaded, and don't reflect the current marketplace. Some of SCTY's channels have fully-loaded acquisition costs of close to \$1,500/customer. They note that the cost of referrals is substantially lower, as well.

SCTY's customer acquisition costs will likely remain flat until the investments they've made in the space reach maturity/ramp up

As the firm continues to scale and increase its salesforce, customer acquisition costs remain a key point of focus for investors. SCTY is addressing customer acquisition costs by ramping up sales-team hiring, increasing channel partnerships and acquisitions, and improving their web presence. On a per-watt basis, sales costs have risen from \$0.45 to \$0.50 from 2013 to 2014.

What are the concerns around acquisition costs?

A main theme for the competing residential players is the necessity of bringing down acquisition costs. Currently, acquisition costs in the U.S. are high, as skilled sales teams must be assembled to educate and sell customers on solar, as compared to more mature markets like Germany where customers are more knowledgeable about solar offerings.

As we have seen recently, installation costs have actually spiked quite a bit as sales teams ramp up. But the key issue is finding the most efficient route to acquisition. SCTY has mentioned that they are looking to retool their website to have that act as a lead generator. As web-based acquisition methods are less costly than direct-

sales and call center approaches, we think the firm may be able to realize some incremental savings in this area, if they happen to be successful in their efforts.

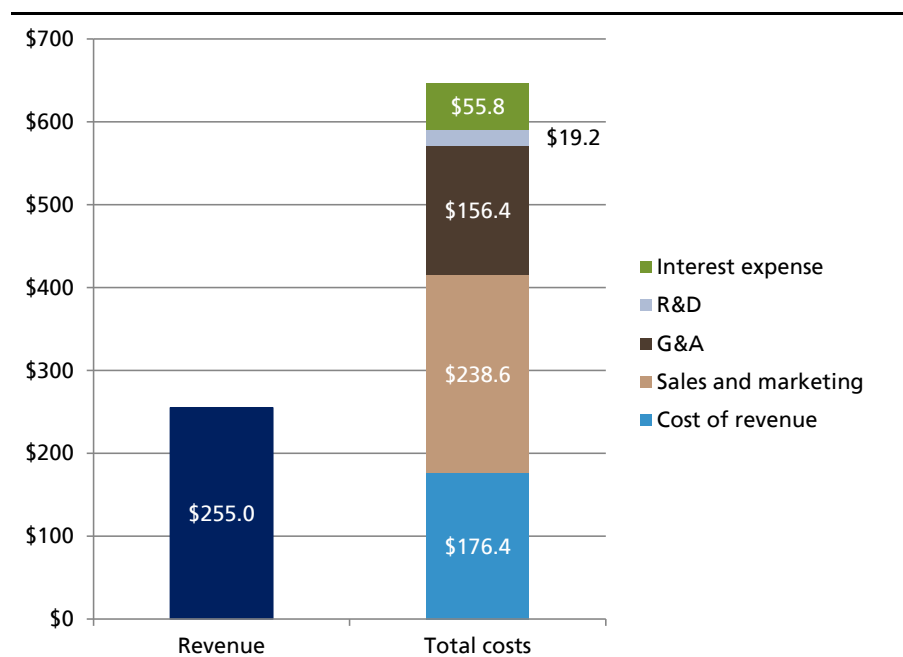
- **High cost of acquisition remains largely tied to reaching the 'marginal customer':** This includes door-to-door direct marketing, cross-marketing with retail stores, and other high-touch engagement. These opportunities will remain the highest-margin contracts, depending on success rates for closing customers (assuming customers opt not to shop to evaluate their options).
- *While SCTY may well continue to garner market share, this is an opportunity for others to continue to enter the market. We suspect these sales will prove particularly tricky under a post-ITC regime in which the 'extra' marketing cost will no longer prove palatable while also attempting to provide customers a tangible savings opportunity.*

Cost structure is relatively flat, and further decreases will be smaller

With the expected ITC stepdown, we anticipate installers and developers will place a greater focus on cost structures. SCTY anticipates a ~12% decrease in total installation cost over the 2-year period. In comparison with the previous two years, this has flattened, but it is important to note how much more mature the PV space is than even four years ago. Over the next several years, significant changes will need to be made to drive costs even further down: i.e. technological breakthroughs, soft cost decreases, and consistent policy. If these changes aren't seen, the high costs associated with residential solar may pose a significant challenge.

Below, we display the 2014 cost breakdown for SCTY, on a GAAP basis, relative to total revenue for the year. GAAP costs adjust for relevant direct installation costs via amortization over the estimated 30-year life of the lease, PPA, or loan (including those associated with sales commissions and some stock-based comp). Note, sales & marketing expenses comprised 94% of revenue in 2014. In 1H15, sales & marketing expenses exceeded revenue by ~17.4%. On a similar note, we continue to patiently wait for economies of scale to appear in G&A: these expenses made up ~61% of total revenue in 2014 (~58% in 1H15).

Figure 57: GAAP Cost Breakdown (2014)



Source: Company data

SG&A: Scale Matters

We present a table of SCTY's historical SG&A (combined GAAP sales & marketing and general & administrative expenses, adjusted for relevant stock-based compensation). In 2014, the company spent \$1.32 on SG&A for every \$1 of revenue generated, up 30% from the prior year's \$1.02. In addition, SG&A/watt deployed has remained relatively consistent in the \$0.60-\$0.70 range over the past four years. Scale matters: as SCTY has expanded its business, SG&A costs have grown almost proportionately with the number of new installations. *We expect this figure to compress as the business continues to scale.*

Figure 58: SG&A Analysis 2011-2014

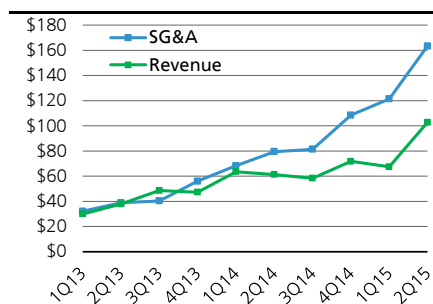
	2011	2012	2013	2014
GAAP SG&A (\$M)	42.0	118.5	187.2	395.0
SG&A stock-based comp	0.0	8.0	19.9	57.3
Adjusted SG&A	42.0	110.5	167.3	337.7
Y/Y % change		163%	51%	102%
Adj. SG&A/Revenue	\$0.71	\$0.87	\$1.02	\$1.32
Y/Y % change		23%	17%	30%
Adj. SG&A/Watt	\$0.58	\$0.71	\$0.60	\$0.67
Y/Y % change		21%	-16%	13%

Source: Company filings

Below, we present SCTY's historical SG&A for 1Q13-2Q15. On an absolute basis, SG&A spending has begun to eclipse revenue growth. While investors remain anxious of cost structure creep, we suspect this is simply a forward indication of continued contemplated growth. SG&A will become a more relevant focus in

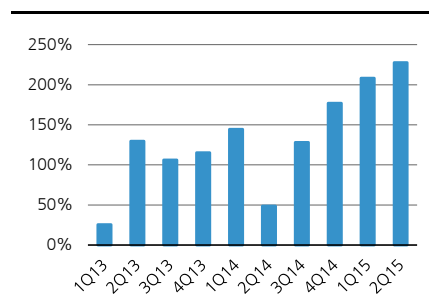
~2H16 as scaling begins to slow (and with re-entrenchment across less economic states) associated with step-down of the ITC.

Figure 59: Adj. SG&A vs. Revenue



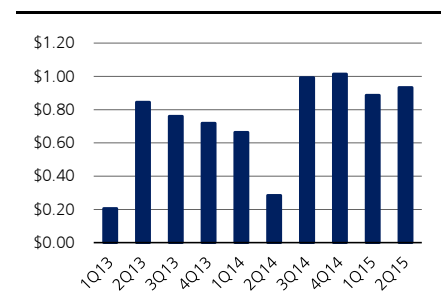
Source: Company filings

Figure 60: Adjusted SG&A/Revenue



Source: Company filings

Figure 61: Adjusted SG&A/Watt



Source: Company filings

Figure 62: SG&A Cost Analysis, 1Q13-2Q15 – Leading Indicator of future growth

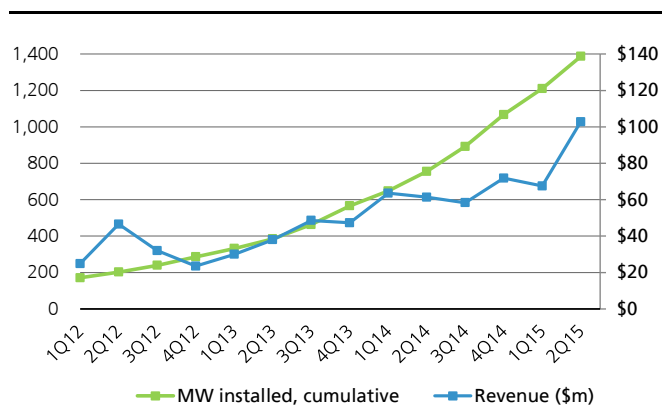
	1Q13	2Q13	3Q13	4Q13	1Q14	2Q14	3Q14	4Q14	1Q15	2Q15
GAAP SG&A (\$M)	34.5	42.5	46.2	64.0	79.9	94.2	96.1	124.9	135.3	163.4
SG&A stock-based comp	2.3	3.7	5.9	8.0	11.5	14.6	14.7	16.4	13.9	0.0
Adjusted SG&A	32.1	38.9	40.3	56.0	68.3	79.5	81.4	108.5	121.4	163.4
Y/Y % change	38%	57%	41%	64%	113%	105%	102%	94%	78%	105%
Adj. SG&A/Revenue	25%	130%	106%	115%	144%	49%	128%	177%	208%	228%
Y/Y % change	-73%	145%	19%	-21%	470%	-63%	21%	53%	44%	369%
Adj. SG&A/Watt	\$0.21	\$0.84	\$0.76	\$0.72	\$0.66	\$0.28	\$0.99	\$1.01	\$0.89	\$0.93
Y/Y % change	-64%	6%	-1%	-1%	222%	-66%	31%	41%	34%	229%
Revenue	30.0	37.9	48.6	47.3	63.5	61.3	58.3	71.8	67.5	102.8

Source: Company data, UBS

High Operating Costs and Free Cash Outflows

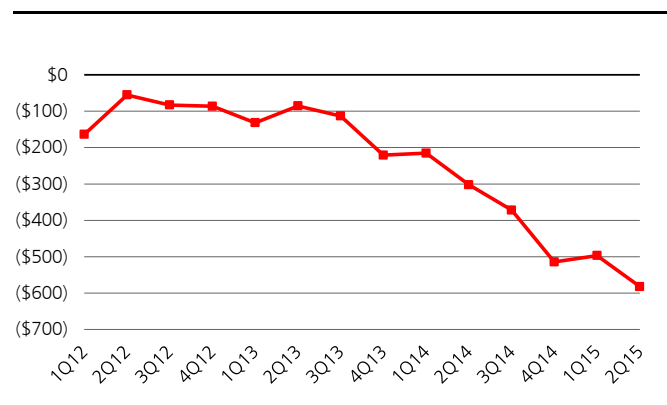
We raise concerns that free cash outflows (which include direct installation costs and PP&E purchases) have historically been correlated to installation growth for SCTY:

Figure 63: Cumulative Installed Capacity vs. Revenue (\$M)



Source: Company data

Figure 64: Free Cash Outflows (\$M)



Source: Company data

Understanding revenue: How is it recognized?

Operating leases and solar energy systems incentives: Revenue from leases and power purchase agreements (PPAs) are recognized as the customer makes payments, either on a straight-line basis over the lease term or at a set \$/kWh energy production rate for a PPA. Also included are any state and local government incentives, such as state ITCs and SRECs.

Solar energy systems and components sales: This primarily includes revenue associated with outright cash sales of systems, long-term system sales contracts, MyPower contracts, and energy-related products and services (for example, Tesla batteries). For outright sales, revenue is recognized upon installation of the system. For long-term sales contracts, it is recognized on a percentage-of-completion basis. And for MyPower contracts, it is recognized on a cash basis as the customer pays off the loan's principal and interest.

State by State: SolarCity's Geographic Expansion

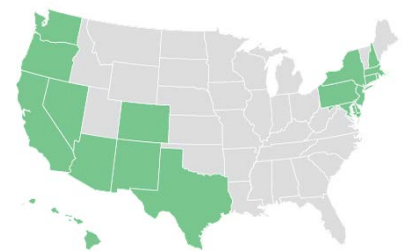
SCTY currently operates in 19 states and Washington, D.C. The top five states – California, Arizona, Colorado, Hawaii, and New York – make up over 75% of the firm's revenue.

There seems to be a recent trend of accelerating expansion into new states, with SCTY moving into New Mexico, New Hampshire, Vermont, and Rhode Island, in just the last six months. The firm's new MyPower loan product (announced October 2014) is also currently being introduced on a state-by-state basis.

Growth over the last few years has come largely in tandem with the construction of operations and maintenance facilities to enter new communities. As of the end of 2014, the firm had 60 centralized O&M facilities, along with a fleet of 2,500 trucks and vehicles. Most of these appear to be in CA, where they have O&M facilities within a 30-mile radius of 95% of the state's population. Field teams at these operations centers complete residential solar systems installations, while project management teams oversee the projects through the various stages of engineering, permitting, installation, and monitoring. *If SCTY is not in a geography by year-end 2015, we don't expect entry for a protracted period seeing little value in entering a new region for a partial year (prior to 2016YE ITC step-down). Thereafter, we expect new market entry to become a focus for ~2018/19.*

SCTY reports revenue in two segments:

Figure 65: Currently Operational in 19 States and D.C.



Source: Company reports

Figure 67: Market Expansion Timeline

Date	State	Description
Jan 2013	NY	Solar services in Long Island
Mar 2013	NV	100+ solar projects in LV area
Apr 2013	CO	22 Walgreens stores in 14 cities
Apr 2013	CA	35,000 sq ft operations center
Aug 2013	CA	16,800 sq ft operations center
Nov 2013	CA	10 new operations centers
Dec 2013	NJ	8,000 sq ft operations center
Feb 2014	DE	9,600 sq ft operations center
May 2014	NV	Solar services in greater LV area
May 2014	MA	7,500 sq ft operations center
Aug 2014	NV	18,000 sq ft operations center
Sep 2014	Multiple	AZ, CA, DE, MD, MA, NV, NY (20 operations centers)
Nov 2014	NY	22,000 sq ft operations center
Dec 2014	MA	Operations center in western MA
Jan 2015	TX	Solar services in El Paso
Feb 2015	NV	Operations center in Reno, NV
Mar 2015	NV	Operations center in north LV
Mar 2015	PA	MyPower, PPAs in Southeastern PA
Mar 2015	MD	MyPower
Mar 2015	CA	Roseville office expansion
Mar 2015	NM	Operations center for Albuquerque * 16th state
Apr 2015	DE	Operations center
Apr 2015	NH	Solar services and operations center * 17th state
Jun 2015	RI	MyPower and operations center * 18th state
Jun 2015	NV	MyPower

Source: Company reports

Figure 66: SCTY Operational States--

California	Texas
Arizona	Washington
New York	Oregon
Massachusetts	New Mexico
Hawaii	New Hampshire
New Jersey	Delaware
Colorado	Nevada
Maryland	Pennsylvania
Connecticut	Washington, D.C.
	Rhode Island

Source: Company reports

Introducing MyPower: The Loan Product

In October 2014, SolarCity introduced MyPower, a solar loan financing option which imitates the structure of a PPA but allows for individuals to retain ownership of the systems. With MyPower, the customer receives the ITC and then has the option of applying the credit toward the principal, effectively reducing monthly payments, or taking it upfront. Rates are fixed at 4.50% to 5.49% over a 30-year period, and the product is marketed to those with a minimum FICO score of 680. Prospective customers are typically presented with a preliminary design proposal which offers a side-by-side comparison of the PPA and MyPower products.

Figure 68: We suspect MyPower may be cannibalizing lease/PPA sales...

	1Q:14	2Q:14	3Q:14	4Q:14	1Q:15
MW deployed (in quarter)					
Residential Share	82%	84%	87%	84%	75%
Commercial Share	18%	16%	13%	16%	10%
MyPower Share	0%	0%	0%	0%	15%
Total MW deployed (in period)	82	107	137	175	143
Y/Y increase	78%	102%	76%	70%	74%

Source: Company data

Is MyPower profitable?

Without the benefit of the ITC tax credit, there is considerable controversy surrounding the profitability of the firm's new loan product. We conducted a gross cash flow analysis and concluded that the product yields a positive NPV of ~\$1.33/W (9.4% unlevered IRR). We list our underlying assumptions, based on mgmt guidance:

- Total install cost of \$2.91/W
- 6% discount rate
- No customer attrition over the 30-year period
- \$0.19/kWh initial energy contract price, 2.9% annual escalator
- 1,400 kWh/kW production, 0.5% degradation
- \$0.021/w operations & maintenance costs, 2.5% escalator

Figure 69: MyPower Forecasted *Unlevered* Returns to SCTY

Year	0	1	2	3	4	29	30
Avg annual unit production (kWh/kW)	1,400	1,393	1,386	1,379			1,217	1,211
\$/kWh - posted rate		\$0.19	\$0.20	\$0.20	\$0.21		\$0.42	\$0.44
Revenue (\$/watt)		\$0.27	\$0.27	\$0.28	\$0.29		\$0.51	\$0.53
Installation cost (\$/watt)	\$2.91							
O&M costs (\$/watt)		\$0.021	\$0.022	\$0.022	\$0.023		\$0.042	\$0.043
Inverter replacement cost (\$/watt)								\$0.09
Gross project cash flow (\$/w)	(\$2.91)	\$0.25	\$0.25	\$0.26	\$0.26	\$0.47	\$0.39

Price escalator	2.9%
Degradation	-0.5%
O&M escalator	2.5%
R&D escalator	2.0%

Discount rate	6.0%
NPV (\$/W)	\$1.33
Unlevered IRR	9.4%

Source: Company data, UBSe

What's the MyPower worth?

We have included a sensitivity analysis table for MyPower's NPV, focusing on two key factors influencing profitability. Management guides for total install cost per watt to decline to \$2.50 by 2017; we view this as a reasonable target which should drive returns in the given time frame. At a 10% discount rate, this would imply an NPV of **\$0.26/W**. *This is not too dissimilar from the value proposition offered by leases in the same 2017 context.*

Figure 70: MyPower NPV (\$/W) Sensitivity Analysis

		Discount rate				
		6%	8%	10%	12%	14%
Installation cost	\$3.30	\$0.94	\$0.08	(\$0.54)	(\$0.99)	(\$1.33)
	\$3.10	\$1.14	\$0.28	(\$0.34)	(\$0.79)	(\$1.13)
	\$2.90	\$1.34	\$0.48	(\$0.14)	(\$0.59)	(\$0.93)
	\$2.70	\$1.54	\$0.68	\$0.06	(\$0.39)	(\$0.73)
	\$2.50	\$1.74	\$0.88	\$0.26	(\$0.19)	(\$0.53)
	\$2.30	\$1.94	\$1.08	\$0.46	\$0.01	(\$0.33)

Source: Company data, UBSe

SCTY management sees limited competition with MyPower

Management expects MyPower to take a low- to mid-20% share of total sales in future quarters, and views the product as the clear leader in the solar loan space.

SCTY believes (and we concur) that photovoltaic loans will become commoditized in the future. More generally, we see a greater share of the PV market seeking loans as firms look to benefit from the revenue streams that the systems generate.

Below we display our forecasts for MyPower revenue. We expect sales to grow rapidly in 2015 and 2016, and then to slow down post-2016 after the commercial ITC falls to 10% (from 30%).

Solar loan products will likely become commoditized in the near future. And cost of capital for companies should converge, as well.

MyPower: How to think about funding now?

Mgmt intends to fund its MyPower business largely with ABS leverage. While the economics remain similar to the conventional leasing structure, the key question remains to what extent customers will decide to pre-pay their loans with the ITC receipts. For the time being mgmt finances its build of this product with a revolving credit facility of \$2.65/W from Credit Suisse; the balance of the funding need at ~\$0.30/Watt of equity (to back into the \$2.95/W total cost).

Creeping up pricing on MyPower

While we remain broadly worried about competitive pressures from financing alternatives, mgmt. appears poised to raise pricing on MyPower products up to 5-5.5% on its loan products, up from the 4.5% initially assumed. Recall that SCTY offers a 50bp discount for customers who opt to pay monthly via auto-pay with ACH, amounting to a significant savings. That said, prices remain discrete to individual utility tariffs and states (albeit it seems the bulk of MyPower product remains in California).

Will consumers opt to paydown debt with the ITC?

While mgmt. had assumed that consumers would opt to use their ITCs to pay down solar debt balances, anecdotal evidence thus far would suggest this is not the case. While the product remains relatively nascent, this remains a key question. As a reminder, the loan cost (without leveraging the ITC) is meaningfully above the cost of the lease upwards of 19c/kWh in certain jurisdictions.

The meaning of megawatts: How does SCTY define them?

SolarCity provides a number of MW-related metrics. "MW booked" are associated with customer contracts that have been signed, "MW installed" are related to systems for which installation of panels has been completed, and "MW deployed" refers to systems which have had all required building department inspections completed, but have not yet been installed. This is essentially the midpoint between installed and booked. Customers have the ability to cancel at no charge at any point up until construction has begun (construction typically takes about 4 hours for residential customers). While cancellation rates for MW booked are relatively high, cancellation rates drop significantly for MW deployed/ installed. We note that, in 1Q15, SCTY changed its guidance to report for "MW installed" rather than "MW deployed."

Figure 71: SCTY's MW Booked, Installed, and Deployed

	2Q14	3Q14	4Q14	1Q15	2Q15
MW booked	219	230	206	237	395
MW installed	107	137	176	153	189
MW deployed	107	137	176	143	177

Source: Company data

Sales & Marketing Strategy

Residential Solar: Still Really a Customer Channel Question

We view residential solar largely as a marketing venture, with the commoditized nature of products and inverters increasingly suggesting that sales are tied predominantly to enticing residential customers in new and innovative ways. What are the sales channels used today?

- Retail Partners: SCTY has been using these less and less as it gradually brings everything in-house
- Referrals: These are seen as the most inexpensive way to bring in new customers, and remain a key focus of SCTY's
- Door to Door: While this strategy is largely pursued by Vivint through its existing business model, we see this as a relatively higher-cost, but still successful model in pursuing sales
- Mailers: Among the simplest and lowest-cost options is to pursue sales to customers via flyers

Co-marketing the product?

Among the possible upside avenues for SCTY, we see the potential for mgmt to announce efforts to co-market products and offerings, as they have done with the TSLA Powerwall.

Is there sufficient brand affinity to SolarCity to create pricing power?

Among the questions that we increasingly have regarding SolarCity is whether their brand (along with differentiating factors for panels, installation teams, and sales process) can garner a premium over peers. While we are beginning to observe this trend in CA, brand awareness is not as high across other parts of the US for what is perceived as a commodity product.

Parallels from Retail Energy Marketing

We see a variety of angles from the retail energy marketing space resonating with solar, particularly in regard to the door-to-door tactics employed by solar developers *and* retail marketers. In many instances, we think the growing trend of retail energy marketers leveraging their existing sales networks to cross-sell solar products may lead to a growing source of competition and partnership in states that have existing laws around competition. We expect those states with existing market restructuring to prove much more difficult than California – and other non-competitive states largely experienced thus far.

Shopping online? This remains a holy grail

Getting back to the topic of customer acquisition costs we touched upon a bit earlier, we explore the online shopping potential here. Solar remains a relatively opaque industry, with supply pushing demand, rather than vice versa: many potential customers are "sold" solar rather than pursuing solar themselves. This essentially allows vendors to dictate savings for consumers. While offers vary widely by jurisdiction, shopping online produces 10-15% greater savings for consumers; with most deals today offering ~20% discounts vs. utility bills. EnergySage, an online marketplace which allows consumers to compare quotes across various pre-screened installers, appears to offer upwards of a ~30% discount. Interestingly, the savings for those pursuing 'community solar' are the lowest, at only ~10%. This option is typically marketed to those ineligible for rooftop solar (e.g. renters).

Bottom line, we remain concerned about structural margin pressures on residential solar vendors as customer awareness of offerings increases, particularly with the increasing prevalence of price-shopping platforms such as EnergySage.

Which firms has SolarCity partnered with thus far?

With solar supply expanding at a meaningful pace, we flag continued strong growth in cross-marketing partnerships. Below, we list business partnerships with SCTY that have been announced in recent years.

Figure 72: SCTY's Business Partnerships

Date Announced	Partner	Value Chain
Jun 2015	Sunrise Energy Ventures	Community solar
Apr 2015	Nest	Smart monitoring/efficiency
Apr 2015	Tesla	Battery Backup
Mar 2015	DIRECTV	Cross Selling
Mar 2015	MP2	Retail Electricity
Mar 2015	Incapital	Solar Bonds
Nov 2014	NREL	Research agreement
Jul 2014	K. Hovnanian Homes	Homebuilding
May 2014	Groupon	Solar deal
May 2014	Carrier	Solar-powered air conditioning
Mar 2014	KirE Builders	Homebuilding
Feb 2014	Oakwood Homes	Homebuilding
Jan 2014	Taylor Morris	Homebuilding
Jan 2014	Brookfield Homes Hawaii	Homebuilding
Jan 2014	20 Oregon Homebuilders	Homebuilding
Nov 2013	Coventry Homes	Homebuilding
Nov 2013	CastleRock Communities	Homebuilding
Nov 2013	LifeStyle Homes	Homebuilding
Nov 2013	PSW Real Estate	Homebuilding
Nov 2013	BMW	Offering for car owners
Oct 2013	De Young Properties	Homebuilding
Oct 2013	Pacific Honda	Discount to Honda owners
Sep 2013	Viridian	Retail Electricity
Jul 2013	Del Webb	Homebuilding
Feb 2013	Honda & Acura US	Discount to Honda/Acura owners
Jan 2013	BASF	Homebuilding consulting
May 2012	Campus Crest Communities	Student housing installations
May 2012	Clean Currents	Retail electricity
Jun 2011	Google	Funding
Jul 2010	City of Lancaster	Community installations

Source: Company reports

Management Biographies

We present the biographies of SCTY's executive officers and directors.

Lyndon Rive – Co-Founder and Chief Executive Officer

Lyndon Rive is the co-founder of SCTY and has served as CEO and as a member of its board of directors since July 2006. Lyndon has led the company's efforts to raise funds sufficient to finance more than \$4 billion on solar projects from a range of investors, including Bank of America Merrill Lynch, Google, PG&E Corporation and U.S. Bancorp. Prior to SolarCity, from October 1999 to July 2006, Mr. Rive co-founded and served as vice president and a member of the board of directors of Everdream Corporation, a leading provider of distributed computer management software and services. Lyndon negotiated the company's partnership with Dell Computer, which acquired Everdream in 2007. Prior to this, Mr. Rive founded LRS, a distributor of health products in South Africa.

Peter Rive – Co-Founder and Chief Technology Officer

Peter Rive is SolarCity's co-founder and has served as CTO and as a member of the firm's board of directors since July 2006. Mr. Rive oversees the development of SolarCity's next-generation software and hardware technologies, including battery systems and solar mounting hardware. Mr. Rive also served as Chief Operations Officer from July 2006 until February 2014. Prior to SolarCity, from April 2001 to June 2006, Mr. Rive served as chief technology officer of Everdream Corporation, a provider of distributed computer management software and services. Mr. Rive holds a bachelor's degree in computer science from Queen's University, Canada.

Brad Buss – Chief Financial Officer

Brad W. Buss has served as Chief Financial Officer since August 2014 and oversees SolarCity's global finance, accounting, structured finance and investor relations organizations. Prior to SolarCity, Mr. Buss served as Chief Financial Officer and Executive Vice President of Finance and Administration of Cypress Semiconductor Corp., a semiconductor design and manufacturing company, from August 2005 until June 2014. Mr. Buss also served as Vice President of Finance at Altera Corp., a semiconductor design and manufacturing company, from March 2000 to March 2001 and from October 2001 to August 2005. Mr. Buss is currently a member of the board of directors of Tesla Motors and CafePress. He began his finance career as an auditor with Arthur Andersen in Toronto and Los Angeles. He holds a B.A. in economics from McMaster University and an honors business administration degree in finance and accounting from the University of Windsor.

Hayes Barnard – Chief Revenue Officer

Hayden D. Barnard has served as SolarCity's Chief Revenue Officer since September 2013. Prior to joining SolarCity, Mr. Barnard served as founder and CEO of Paramount Equity, LLC, a consumer finance company specializing in mortgage, insurance, and residential solar, from September 2003 until September 2013. Prior to Paramount Equity, Mr. Barnard served as an account manager of Oracle Corporation from 1995 to 2003. Mr. Barnard holds a bachelor's degree in business management and marketing from the University of Missouri.

Tanguy Serra – Chief Operating Officer

Tanguy V. Serra has served as Chief Operations Officer of SolarCity since February 2014, and prior to that, served as the firm's Executive Vice President of Operations

from May 2013 to February 2014. As COO, Tanguy Serra oversees every facet of SolarCity's residential solar service delivery, from installation and maintenance to customer account management. Prior to joining SolarCity, Mr. Serra served as chief executive officer and president of Vivint Solar, Inc., a solar energy system installer, from April 2011 to April 2013. From April 2004 to September 2011, Mr. Serra served as vice president at TPG Capital, L.P., a global private investment firm. Mr. Serra holds a bachelor's degree in accounting from ESCP Europe in Paris.

John Stanton – Executive Vice President, Policy & Markets

John Stanton oversees SolarCity's work with federal and state government organizations on a wide range of renewable energy policy issues. Prior to SolarCity, Stanton was executive vice president and general counsel for the Solar Energy Industries Association (SEIA), where he oversaw legal and government affairs for the solar industry's pre-eminent trade association. Prior to SEIA, Stanton acted as vice president for energy, climate and transportation programs at the National Environmental Trust (NET). Prior to NET, he served as legislative counsel for the U.S. Environmental Protection Agency, where he advised Congress on the Clean Air Act. Stanton has served as a deputy attorney general for the state of New Jersey, where he focused on environmental litigation and regulation. He also served as counsel and director of the energy and environment committee at the National Conference of State Legislatures. Stanton earned his bachelor's degree from Tulane University, and his J.D. from Georgetown University Law School.

Seth Weissman – Executive Vice President, General Counsel & Secretary

Seth Weissman has served as Executive Vice President since May 2013, as Vice President from September 2008 to May 2013, as General Counsel since September 2008 and as Secretary since June 2009. Seth Weissman is responsible for all aspects of SolarCity's legal affairs including transactional, governance, intellectual property, real estate, and employment matters. Prior to joining SolarCity, Mr. Weissman was Vice President, General Counsel, and Chief Privacy Officer of Coremetrics, Inc., a digital marketing company, from June 2004 to August 2008. Mr. Weissman also practiced employment and corporate law at Wilson Sonsini Goodrich & Rosati Professional Corporation; at Stoneman, Chandler and Miller LLP; and at Hutchins, Wheeler, Dittmar Professional Corporation. Mr. Weissman holds a bachelor's degree in political science from The Pennsylvania State University and a J.D. from Boston University School of Law.

Elon Musk – Chairman

Elon Musk has served as the chairman of SolarCity's board of directors since July 2006. Mr. Musk has served as the chief executive officer of Tesla Motors, Inc., a high-performance electric vehicle developer and manufacturer, since October 2008, and as chairman of the board of directors of Tesla since April 2004. Mr. Musk has also served as chief executive officer, chief technology officer and chairman of Space Exploration Technologies Corporation, a space launch vehicle company, since May 2002. Mr. Musk co-founded PayPal, Inc., an electronic payment system, which was acquired by eBay Inc. in October 2002, and Zip2 Corporation, a provider of internet enterprise software and services, which was acquired by Compaq Computer Corporation in March 1999. Mr. Musk holds a bachelor's degree in physics from the University of Pennsylvania and a bachelor's degree in economics from the Wharton School of the University of Pennsylvania.

Appendix

Brief Introduction to Renewables Industry

Renewable Energy

Over the long term, we expect renewable energy to revolutionize the electric power industry, as the introduction of new technologies leads to improvements in energy efficiencies and declines in installation costs. In the near term, we also remain bullish on the sector: we anticipate that government incentives will continue to spur demand response, breaking the historical correlation between GDP and electrical demand growth. We have already seen this occur, in its most extreme forms, in Germany as well as in California and Hawaii. And industry sources expect the trend to continue as renewables become increasingly cost-competitive and energy-efficient.

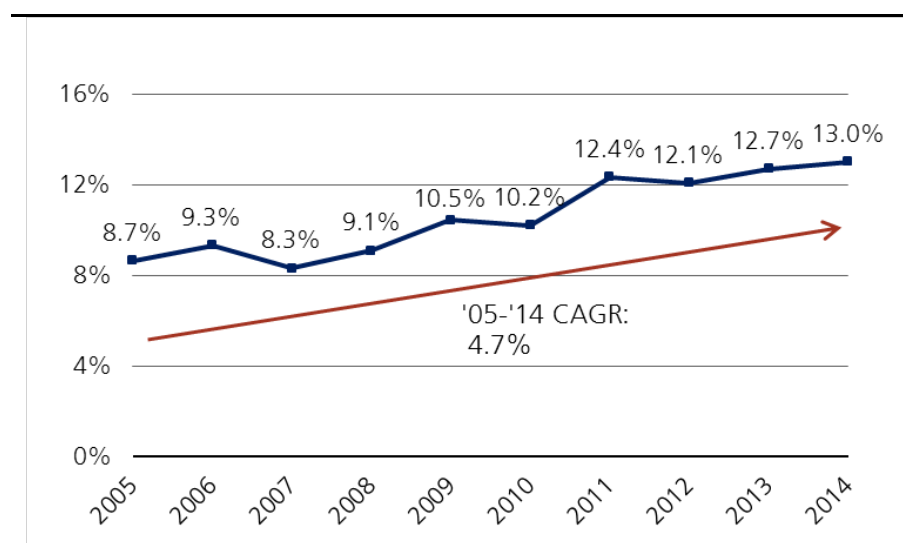
We continue to be bullish on renewables due to declining cost curves and government incentives.

Renewable market share is growing steadily...

Over the past ten years, net renewable energy generation in the U.S. has increased from ~351.1 to ~533.6 TWh, with market share of total net generation growing from ~8.7% to ~13.0%.

Figure 73: U.S. Renewable Energy Generation Market Share (incl. hydro), '05-'14

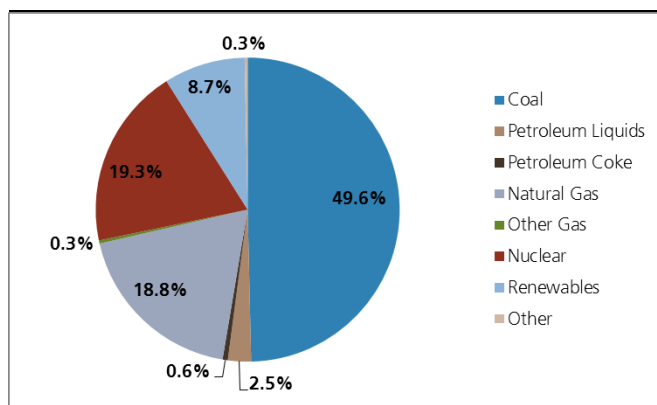
Market share of renewable energy generation in the U.S. has grown at a CAGR of ~4.7% over the past ten years



Source: EIA

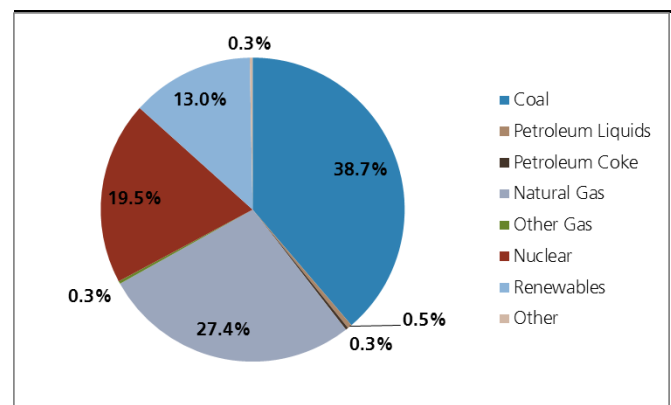
As seen below in from 2005 to 2014, renewable energy's market share has risen from 8.7% to 13.0%. Also notable is the coal-to-gas switching trend: over the last ten years, natural gas's share has increased from 18.8% to 27.4%, as coal's share has declined from 49.6% to 38.7%. In a time during which inexpensive gas has rapidly been replacing coal electricity generation, solar appears to not only have staying power but has even claimed a greater proportional share of total electricity generation.

Figure 74: Net Generation in U.S. by Energy Source - 2005



Source: EIA

Figure 75: Net Generation in U.S. by Energy Source - 2014



Source: EIA

...but supportive fiscal policy is key to continued growth

The economics of renewables are still largely driven by tax credits and incentives:

- **Solar:** Investment Tax Credit (ITC): 30% tax credit through '16; 10% in '17
- **Wind:** Production Tax Credit (PTC): 2.3¢/kWh with grandfathering for YE14
- State incentives also exist (e.g. Renewable Energy Credits in NJ and MA)

While the expiration or step-down of federal incentives will most likely lead to slower growth in the intermediate term, we expect this to be offset, at least partially, by continued technological improvements (lower costs, improved generation efficiency, etc.).

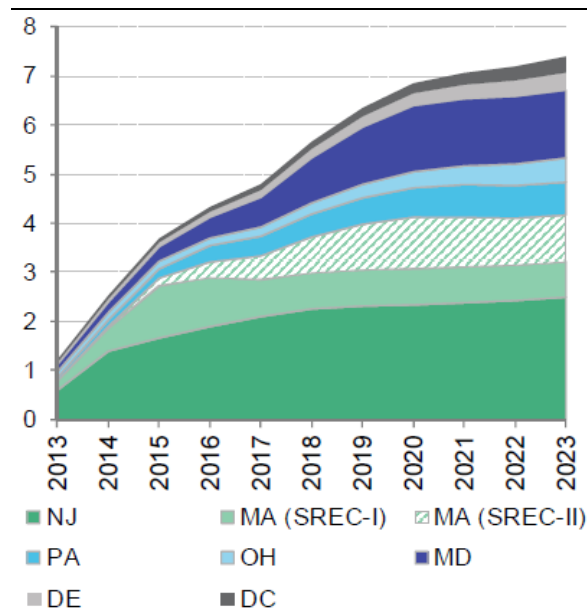
In particular, recent growth in renewables has stemmed from environmental policies seeking to curb carbon and other emissions. Most states have Renewable Portfolio Standards (RPS) - for example, California has a 33% RPS by 2020 and Michigan has a 10% RPS by 2015. States can choose to apply the RPS requirement to all utilities or only the investor-owned utilities.

Further details are available in our [Global Q-Series: Can Utilities Survive in Their Current Form?](#)

States will often design Renewable Portfolio Standards with certain "carve-out" provisions mandating that a certain percentage of generated electricity come from a particular technology (e.g. solar or wind).

New technologies and lower costs should help to at least partially offset lower demand from government incentive reductions.

Figure 77: Solar Carve-Out RPS Demand (TWh) – 2013-2023E



Source: Bloomberg New Energy Finance & EIA – reflects RPS legislation as of January 2015

Figure 76: Solar Carve-Outs by State (% of total energy generation)

State	Carve-Out
New Mexico	4% by 2020
Delaware	3.5% by 2027
Washington DC	2.5% by 2023
New York	2.5% by 2015
Arizona	2.25% by 2025
Maryland	2.0% by 2022
Nevada	1.5% by 2025
Illinois	1.5% by 2025
Minnesota	1.5% by 2020
Ohio	0.5% by 2026
Pennsylvania	0.5% by 2021
Massachusetts	0.5% by 2020
New Hampshire	0.3% by 2025
Missouri	0.3% by 2021
North Carolina	0.2% by 2019

Source: SEIA

Across the board, renewables are becoming more economical

The Levelized Cost of Energy (LCOE), which represents the per-kWh cost (in real dollars) of building and operating a generating plant over an assumed financial life and duty cycle, is calculated by looking at capital costs, fuel costs, fixed and variable operations and maintenance (O&M) costs, financing costs, and assumed utilization rates for plant types. It is the most frequently cited metric used to compare cost competitiveness of different generating technologies, and shows that renewables are rapidly approaching grid parity.

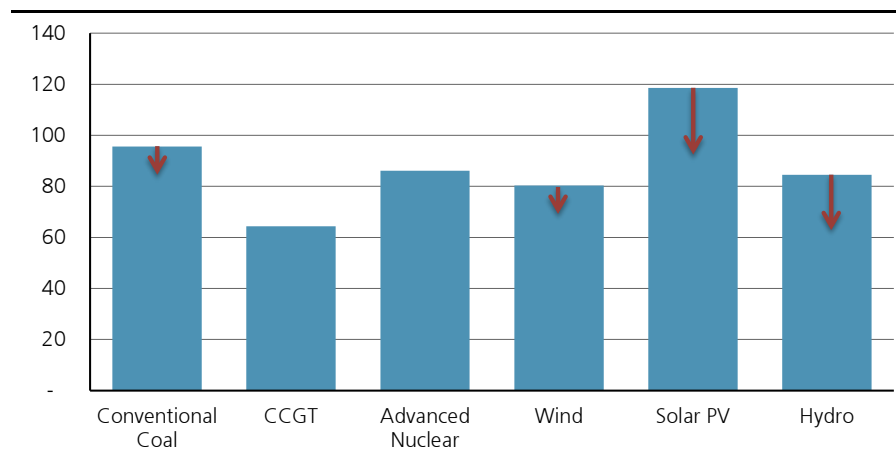
The U.S. Energy Information Administration (EIA) estimates that by 2019, the levelized cost of wind will be lower than the costs of coal and nuclear, but still higher than a combined cycle gas turbine (CCGT) plant. Without the 30% ITC, the projected LCOE of solar PV is well above the average.

Most importantly, we note that the EIA expects 6-10% levelized cost reductions for all renewables from 2018 to 2019, with solar PV showing the greatest gains.

Below, we present the EIA's 2019 expectations for average U.S. subsidized levelized costs (given in 2012 \$/MWh). The data assumes that neither the PTC nor the ITC is extended in any form.

Even though conventional generation is projected to have lower levelized costs, renewable costs are expected to decline rapidly through 2019.

Figure 78: Average Expected Subsidized Levelized Costs (2012 \$/MWh) for U.S. Utility-Scale Plants Entering Service in 2019

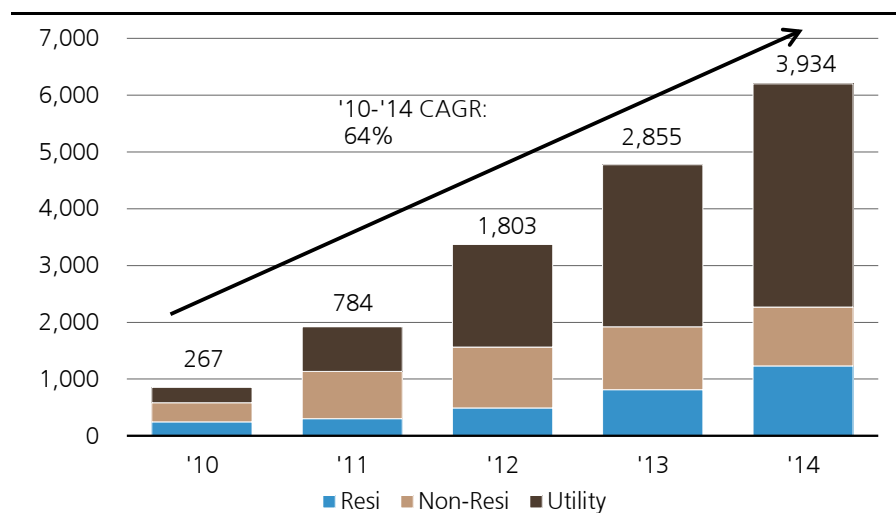


Source: EIA (2014) & UBSe

Solar Energy

Total photovoltaic installations in the U.S. (residential, non-residential, and utility-scale) have grown at a ~64% CAGR over the last five years.

Figure 80: Total U.S. PV Installations Forecast, by Type, 2010-2014



Source: GTM/SEIA

PV installations in the U.S. have grown ~64% annually since 2010, with utility-scale taking greater share

Figure 79: PV Installations, by Type, as % of Total U.S. Installations, 2010-2014

	Resi	Non-Resi	Utility
2010	29%	40%	31%
2011	16%	43%	41%
2012	15%	32%	54%
2013	17%	23%	60%
2014	20%	17%	63%

Source: GTA/SEIA

Putting Pen to Paper: U.S. Market Sizing for Solar

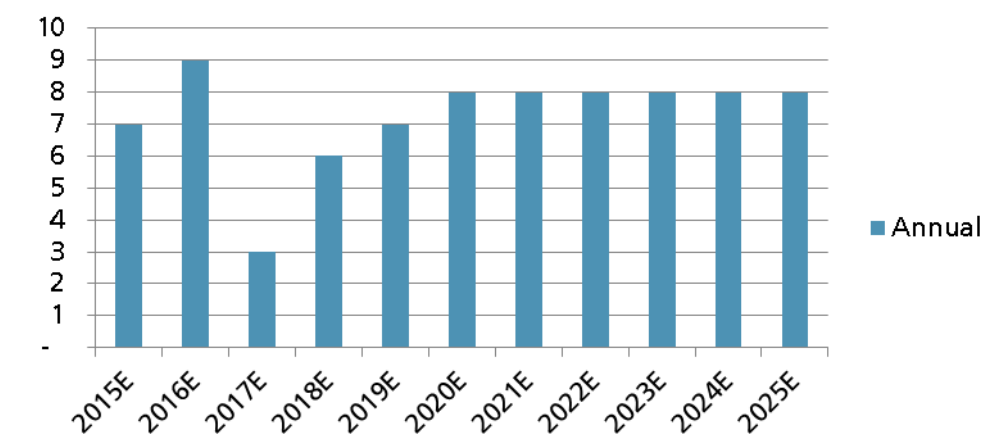
Below, we given an indication of where we see the U.S. solar market headed by 2025. The base cumulative GW installations for 2014 have been approximated at ~18.3 GW, based on published SEIA data. We believe the market can grow to ~60 and ~100 GW installed by 2020 and 2025, respectively (representing a ~17% CAGR over the next 11 years). This scenario is predicated on the assumption that the ITC tax credit drops to 10% for utility/commercial customers and 0% for residential customers at the end of 2016.

More specifically, we expect to see accelerating growth over the next couple of years, with 7 GW and 9 GW of installations for 2015 and 2016, up from 6.2 GW

We put together an initial estimate of our projections for the U.S. solar market.

in 2014. Following the ITC expiration, we project 3 GW of newly installed capacity for 2017 (~67% decline from the previous year). Longer term, we see annual installations rising to 7 GW by 2019, and flattening at 8 GW/yr from 2021 to 2025.

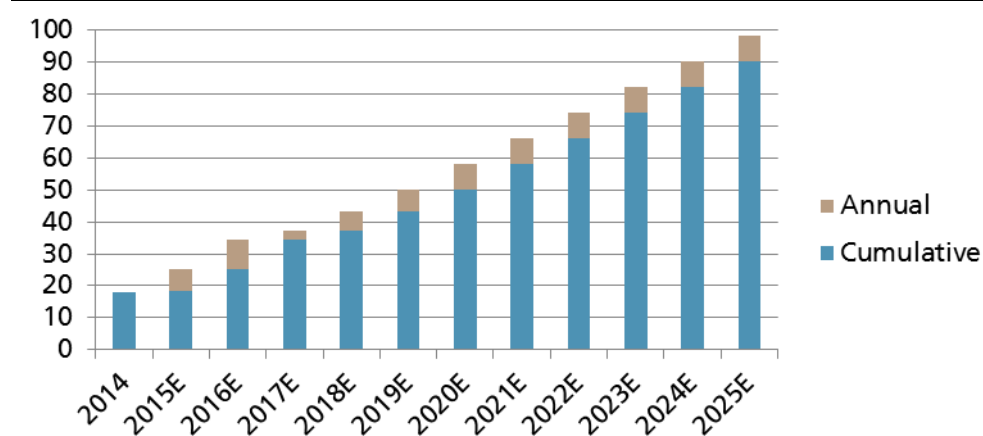
Figure 81: US Annual PV Installations (GW), 2015-2025E



Source: UBSe

We expect that the bulk of the 2017 procurement will be driven by rooftop and other distributed solar installations, depending on state benefits (in SREC markets) as well as on selective utility-scale procurements (e.g. Georgia).

Figure 82: U.S. Cumulative PV Installations (GW), 2014-2025E – Climbing Substantially...



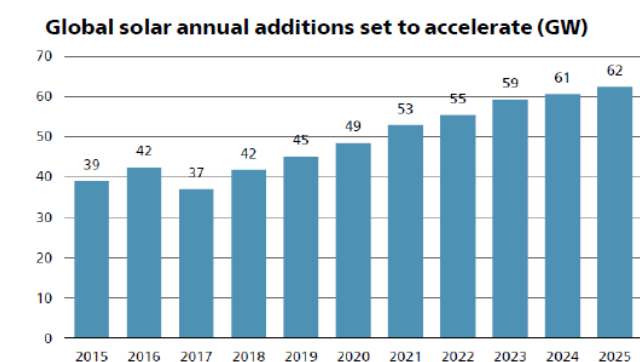
Source: SEIA, UBSe

Please see our recent note for further details: **Sizing up the U.S. Solar Market**.

What about international solar growth?

Long-term, we are optimistic about global solar potential – we believe there could be over 3x the amount of global PV cumulative installed capacity by 2025 as there will be in 2015. Currently, solar energy accounts for 4% of global capacity (1% of production). Over the following 10 years, this could rise to 10%, according to UBS estimates. By 2050, solar could make up 25% of the global installed base, with global solar investments in 2050 amounting to \$3.4 trillion.

Figure 83: Global Solar Installation Projections '15E-'25E



Source: UBSe

Figure 84: Global Solar Capacity Penetration '15E-'50E

Solar could account for 10% of capacity by 2025, and 25% by 2050

	2015E	2025E	2050E Mid
Global installed base (GW)	5,694	7,880	12,159
Solar global capacity (GW)	218	721	2,980
Solar capacity penetration	4%	9%	25%
Global output (TWh)	24,061	28,200	40,917
Solar global output (TWh)	255	896	4,092
Solar output penetration	1%	4%	10%

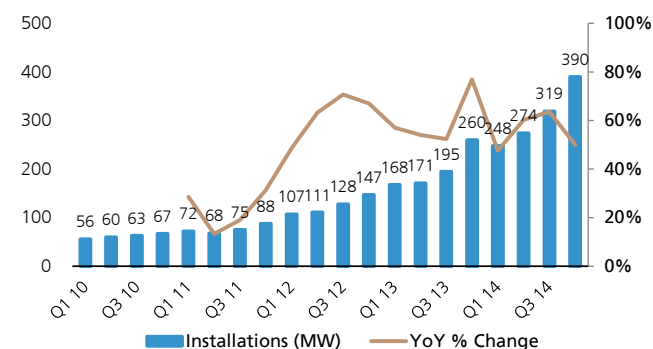
Source: UBSe

Please refer to our Champagne Supernova Solar Primer for more information.

Residential Solar

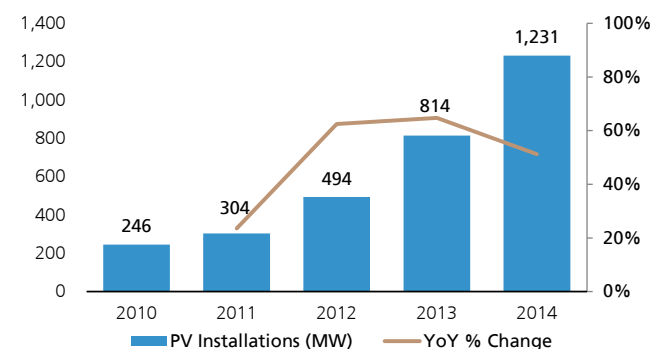
Residential PV solar, which includes projects where the end-user is a single-family household, accounted for 20% of all PV installations in 2014. U.S. residential installations have increased at a CAGR of ~50% from 2010 through 2014, although growth has begun to decline slightly in the past couple years. We expect resi installations to continue to increase in '15E and '16E, strengthened by government incentives and low-priced leases/PPAs vs. retail electricity prices, and to decline in '17E, following the expiration of the residential ITC.

Figure 85: U.S. Residential PV Installations (MW), Q1 2010 – Q4 2014



Source: GTM/SEIA

Figure 86: U.S. Residential PV Installations (MW), 2010-2014



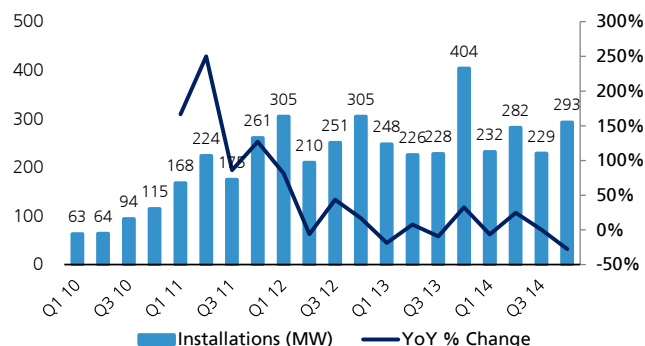
Source: GTM/SEIA

Non-Residential Solar

Non-residential PV solar, which includes commercial and industrial (58% of total 2014 non-resi installations) as well as school, government, and non-profit (42%), made up the smallest share of U.S. solar demand in 2014, at 17% of total PV installations. While non-residential installations posted respective increases of 146% and 29% in 2011 and 2012, growth has since stagnated. Difficulties can be attributed to lack of standardization (e.g. companies lacking credit ratings, burdensome project requirements) and also to the relatively high costs of smaller commercial projects (1 MW or less). Recently, several states introduced small

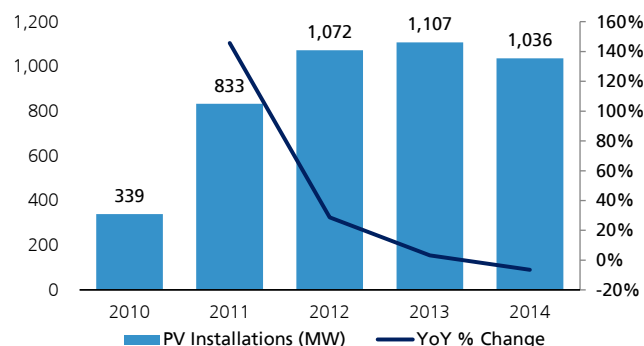
commercial carve-outs (SREC II program in MA), and we suspect some potential uplift in the market could come from these new incentives.

Figure 87: U.S. Non-Residential PV Installations (MW), 2010-2014



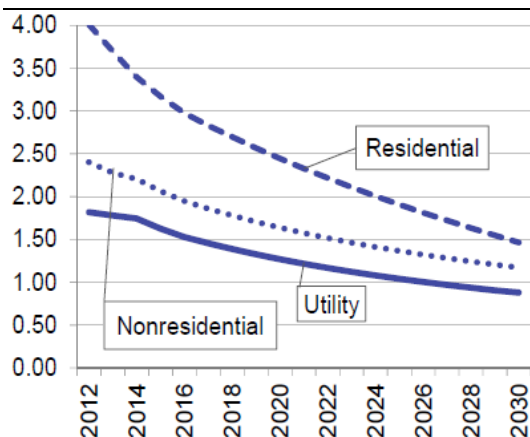
Source: GTM/SEIA

Figure 88: U.S. Non-Residential PV Installation Forecast (MW), 2010-2020E



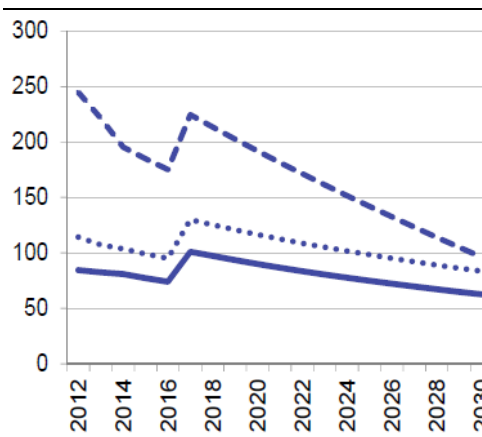
Source: GTM/SEIA

Figure 89: BNEF Projections on Cost (\$/Watt)



Source: BNEF Presentation

Figure 90: BNEF Projections on Cost (LCOE on \$/MWh)



Source: BNEF Presentation

Further details are available in the full note with transcript, ['Warming Up to the Solar Potential'](#)

Overview of Solar Securitizations

What are the securitization risks?

Moody's broadly categorizes the risks of solar securitization in three ways: operational risk, default risk, and technological risk. Additionally, regulatory risk is a fourth consideration, particularly in regard to such issues as local net metering and other solar incentives.

- **Operational Risk:** Solar panels have lower operational risks than other forms of generation, given the lack of moving parts; but they are still not without risk. In a scenario where the sponsor is unable to perform routine O&M activities, a replacement would be needed. This risk can be mitigated via arrangements for a back-up servicer, which could step in, in the event of a sponsor bankruptcy. The absence of a robust national maintenance platform is a credit risk for SCTY, but there is a chance this could evolve over time. Other bankruptcy-related concerns include the potential for diminished collection and monitoring activities, which would directly impact cash collection levels.
- **Default/Credit Risk:** The probability of default is based upon a variety of factors, including specific lease/loan terms, creditworthiness of the counterparty, and attractiveness of the purchase power agreement (PPA) relative to utility pricing. As with other securitizations, the objective is to determine the ability and likelihood of the counterparty making payments in full.

ABS agreements need to be very clear about what happens operationally and financially

Figure 91: Diversification of Credit Pool

Solar Type	Number of Assets or Obligors	Counterparties	Credit Metrics	Geography
Commercial	Concentrated	Commercial or government	Credit Ratings	Concentrated in certain states
Residential	Diversified	Homeowners	FICO Scores	Concentrated in certain states

Source: Moody's Investor Service

- **Technological/Renegotiation Risk:** Given the continued technological improvements expected in the solar space, this is perhaps the greatest risk. The underlying contracts do not permit renegotiations, per se, but there is the risk that consumers will request a lower PPA rate after they see lower advertised rates. Consumer protection laws could make it uneconomical for cash-strapped solar developers to pursue litigation against consumers who threaten default. At a more basic level, there is the possibility that the solar panels degrade faster than forecasted, resulting in lower power production and reduced cash flows.
- **Political/Regulatory Risk:** It is difficult to assess the probability of changes in this arena, but adjustments to local net metering and minimum bill laws could reduce the cash flow profile of investments. To date we have seen existing solar users have their investments grandfathered in, but there is no guarantee that this will continue in the future. The step-down in the ITC will not impact the current ABS, but could unfavorably alter future assets.

How much renegotiation risk will the credit rating agencies embed?

How can credit rating agencies get comfortable with risk?

The credit enhancement tactics utilized for other ABS can be applied to the solar industry to bifurcate and mitigate the risks. Tools such as lockboxes, reserve

accounts, overcollateralization, and subordination can be applied to make investors and credit rating agencies more comfortable with the assumed risks.

YieldCos with corporate debt have their own challenges

Turning to YieldCo credit considerations more broadly, many entities rely upon corporate debt in the capital structure to enhance dividend accretion. YieldCos benefit from long-term contracts with high-quality offtakers but face risk if overburdened with debt. In general, equity holders face greater risk, with dividend cuts predating solvency concerns in most scenarios. For example, with most YieldCos having ~85% payout ratios, there is latitude for reductions to utility levels (~65%) if chances of default increase.

Elevated dividend payouts mean that YieldCo equity investors face disproportionately more risk.

Other Moody's Datapoints

- **How big is the ABS market?** It seems that Moody's is expecting the trend towards increasing securitizations to continue. While SCTY was the first to securitize its assets (having achieved critical size to do so), we look for VSLR and NYLD to follow suit once their product offerings are of sufficient size.
- **How big must a deal be?** Minimum scale on these deals is typically in the ~\$80m range, given the fees involved. Despite the initial size of SCTY's deals at ~\$50m, Moody's sees these as sub-scale.
- **Can the subsidiary ABS deal be investment-grade?** Despite clear below-investment-grade ratings for all of the parent sponsors among existing solar companies, Moody's appears confident that the credit for securitization deals could receive investment grade ratings. We suspect the trend toward cheaper financing, at leverage of ~65%, will increasingly become the norm.
- **Need for backstops to the developer credit.** As part of forthcoming ABS deals, we look for creditors to provide backstops to servicing the loans and panels in the event that the developers themselves go under. We suspect such arrangements are entirely achievable.
- **Tenor of the debt?** While recent deals have been done in the 10-year context, we suspect the tenor on these products will gradually shift toward the standard seen in utility-scale project finance, where tenors are typically 2-3 years *ahead* of contract life expiration.
- **C&I products:** These will remain challenging without formal FICO scores, as it remains cost prohibitive to loan against small businesses. We look for some diversification in ABS deals with C&I products, but don't expect C&I-specific ABS products anytime soon.
- **Lease vs. Loan?** Doesn't seem to matter for ABS markets – rather, loans would appear *easier* for ABS markets to swallow, suggesting that the ongoing transition in the solar industry in this direction will not be problematic.
- **But what is the quality of the loan? Typically unsecured.** We emphasize that many loans in the sector remain unsecured to residential buyers. The key emerging question is whether buyers of residential solar products will shift towards secured-type offerings to save on interest costs.
- **Exotic ABS? What are the comps?** We suspect other unsecured loans to consumers, such as Home Equity Loans, as well as loans in sectors (airplane

leases, rental car fleet leases, etc.) could well prove to be comps as this nascent sector establishes its forms.

Battery Prospects

How does storage fit into the equation? A look at recent TSLA & SCTY Powerwall offering

Residential offering is cheaper than competing batteries...

TSLA/ SCTY's residential backup offering, the 10kW product that can be tethered to numerous additional batteries, runs at \$3,500 for the battery alone, and the installed cost with BoS equipment and labor totals \$7,140. A 10kWh system can also be leased for \$5,000 for a 9 year contract. Bottom line, this appears meaningfully cheaper than what many had contemplated a residential system could cost, but remains well outside of the context

...But backup thermal generators still provide more value/ reliability

In the example below, we attempt to compare a TSLA 10kWh system and an 8kW natural gas generator. An 8kW conventional NG generator is in the lowest kW range that you can purchase for a residential stationary system. Comparatively, TSLA is offering a 10kWh battery as their residential backup system.

With a cost of \$7,140, and a continuous output of 2kW, it is significantly more expensive than a NG generator, installed at ~\$4,400 and having a continuous output of 8kW— and a theoretically unlimited continuous run time (contingent on the availability of the fuel source). The fuel cost over a 9-year span will run the total to ~\$5,300, assuming flat NG pricing. TSLA's lease product will run for \$5,000 over 9 years, which is cheaper than the 8kW generator, but with much less generator capacity.

TSLA backup product isn't competitive in the current market

The underlying conclusion here is that comparing a stationary fuel generator to TSLA's battery backup unit isn't apples-to-apples; fuel generators are much more reliable, can handle significantly longer run times, and are cheaper from an ownership perspective. As a backup option, we see TSLA's offering as more of a luxury item for homeowners not concerned with reliability or long-term power outages. For individuals with PV systems, the TSLA product can offer some hedging against outages, at a higher cost than competing products. The product may be an attempt to offload some of the large fleet of Panasonic batteries the company has in stock, but we look for more value and innovation from future offerings coming out of the giga-factory.

TSLA's 10kW backup storage system is not cost or output-competitive with incumbent generator offerings

How extreme of a residential backup are customers looking for?

Perhaps a true 'backup' context, customers would desire to leverage batteries to address a lack of fuel, because presumably an extended electrical outage has limited the ability for regional suppliers to provide constant diesel or natural gas. Bottom line, we see the simple answer here as maintaining an adequate inventory of fuel to address.

Figure 92: TSLA 10kWh Backup

Battery Size (kWh)	10
Battery Price (\$/kWh)	\$350
Total Battery Price	\$3,500
Total Installed Cost (\$/kWh)	\$714
Total Storage System Installed Cost	\$7,140
Total Cost over 9 Years (Own)	\$7,140
Total Lease Price (\$/10kWh)	\$5,000
Continuous Run Time	5 Hours
Continuous Output (kW)	2

Source: TSLA, UBS Estimates

Figure 93: NG Generator 8kW Backup

Generator Size (kW)	8
Generator Price (\$/kW)	\$ 275
Total Generator Cost	\$ 2,200
Total Installed Generator Price (\$/kW)	\$ 550
Total Installed Generator Cost	\$ 4,400
Fuel Type	Natural Gas
Fuel Consumption	169 ft ³ /hr
Fuel Cost (\$/ft ³)	\$ 0.011
Fuel Consumed/ Year (ft ³)	8,619
Fuel Cost/ Year	\$ 95
Total Cost Over 9 years	\$ 5,253
Continuous Run Time	Unlimited
Continuous Output (kW)	8

Source: GE, EIA, Eaton, UBS Estimates

SCTY battery offering economics enhanced dramatically

As we noted in [The Real Battery Storage Opportunity](#), TSLA/SCTY's residential storage offering did not make economic sense when launched. This week, Elon Musk offered new pricing, but not without pointing some of the initial blame at SCTY for previously pricing the units too high. Musk announced that the revised Powerwall offering would remain at the \$3,000 price point for the 7kWh system, but the output would increase from 2kW to 5kW at steady use. Additionally, Musk noted that all-in systems are less expensive when combined with solar systems as one central inverter can be used for the solar system and battery (also extending battery system eligible for solar ITC in certain circumstances).

Bottom line, we see C&I opportunity for batteries as real depending on the exact tariff offered; in contrast, we see residential offerings today as still meaningfully 'off' the market from being economically competitive given the existence of net metering.

Another look at peer comps: Unlevered CAFD to EV analysis

Below we show the unlevered CAFD to EV multiple for peers. For SCTY, we consider only our estimates for Power Co CAFD so as to make the comparison with RUN and VSLR more viable. Our net debt and CAFD numbers for RUN are based on their recent S1 filing; while we use numbers disclosed in quarterly presentations for VSLR.

Figure 94: Unlevered CAFD to EV

	RUN	VSLR	SCTY
Market Cap	981.4	1,448.1	4,565.7
Debt	249.0	220.8	2,933.0
Minority Interest	103.5	93.3	
Cash	393.7	152.2	935.8
EV	940.2	1,610.0	6,562.9

Source: Company sources, Factset, UBS estimates

We also show below our debt considerations used in our estimates:

Figure 95: Debt considered in EV calculation

	RUN	VSLR	SCTY
Unlevered CAFD	19.9	81.0	207.4
Market Cap	981.4	1,448.1	4,565.7
Enterprise Value	940.2	1,610.0	6,562.9
Unlevered CAFD / EV	0.02x	0.05x	0.03x

Source: Company sources, Factset, UBS estimates

Financial Projections

Figure 96: Installation Cost Forecast

	2014A	2015E	2016E	2017E	2018E	2019E
Install Cost Per Watt						
Installation cost \$/W	\$2.21	\$2.10	\$2.00	\$1.90	\$1.81	\$1.72
Y/Y % change	-25.3%	-5.0%	-4.8%	-4.8%	-5.0%	-5.0%
Sales cost \$/W	\$0.50	\$0.47	\$0.41	\$0.40	\$0.39	\$0.38
Y/Y % change	11.1%	-6.0%	-12.8%	-2.4%	-2.0%	-2.0%
G&A cost \$/W	\$0.23	\$0.21	\$0.20	\$0.20	\$0.19	\$0.19
Y/Y % change	-11.5%	-8.7%	-4.8%	-2.0%	-2.0%	-2.0%
Total install cost \$/W	\$2.94	\$2.78	\$2.61	\$2.50	\$2.39	\$2.29
Y/Y % change	-19.9%	-5.5%	-6.2%	-4.2%	-4.3%	-4.3%
Total Install Cost						
Installation cost	\$1,107.2	\$1,955.7	\$3,351.3	\$3,828.6	\$4,182.7	\$4,569.6
Y/Y % change	33.6%	76.6%	71.4%	14.2%	9.3%	9.2%
Sales cost	\$250.5	\$437.8	\$687.2	\$804.8	\$907.1	\$1,022.3
Y/Y % change	98.8%	74.8%	57.0%	17.1%	12.7%	12.7%
G&A cost	\$115.2	\$195.6	\$335.2	\$394.2	\$444.3	\$500.7
Y/Y % change	58.3%	69.8%	71.4%	17.6%	12.7%	12.7%
Total install cost (\$M)	\$1,472.9	\$2,589.2	\$4,373.7	\$5,027.6	\$5,534.0	\$6,092.5
YoY % change	43.3%	75.8%	68.9%	15.0%	10.1%	10.1%

Source: Company data, UBSe

Figure 97: Debt Forecast

Ending Debt Balance	2012A	2013A	2014A	2015E	2016E	2017E	2018E	2019E
Revolver	75	200	200	700	700	700	700	700
MyPower revolver	0	0	0	200	200	200	200	200
Aggregation facilities	84	239	0	0	0	0	0	0
Solar ABS (term loans)	0	50	319	846	2,009	4,651	7,395	10,447
MyPower ABS	0	0	0	269	821	1,476	2,481	3,622
Solar bonds	0	0	4	204	251	335	335	335
Additional ABS	0	0	0	0	0	0	0	0
Convertible senior notes	0	230	796	796	796	1,196	1,596	1,696
Total Debt	159	718	1,319	3,015	4,777	8,558	12,707	17,000
YoY % Change				129%	58%	79%	48%	34%
Total Interest Expense	20	26	56	78	186	339	507	691
YoY % Change				40%	138%	82%	49%	36%

Source: Company data, UBSe

Figure 98: DevCo Cash Flow Forecast

DevCo Cash Flow Forecast	2015E	2016E	2017E	2018E	2019E
Project Cash Flow Forecast:					
Total installation costs	(2,589.2)	(4,373.7)	(5,027.6)	(5,534.0)	(6,092.5)
R&D costs	(35.6)	(64.1)	(77.0)	(88.5)	(101.8)
State rebates and prepayments	93.8	176.0	91.5	129.3	172.8
Gross Project Cash Flows	(2,530.9)	(4,261.8)	(5,013.0)	(5,493.2)	(6,021.5)
Project Financing:					
Tax Equity PPA/Lease Issuance	1,125.3	2,080.8	1,002.0	1,082.9	1,245.3
Unlevered Project Cash Flows	(1,405.6)	(2,181.0)	(4,011.0)	(4,410.3)	(4,776.2)
Debt Issuance	1,741.6	1,873.5	3,617.1	4,132.6	4,752.5
Net Project Cash Flows	336.0	(307.5)	(393.9)	(277.7)	(23.7)
# of shares outstanding	95.0	97.9	101.5	108.9	118.2
Net CAFD per share	\$3.54	(\$3.14)	(\$3.88)	(\$2.55)	(\$0.20)

Source: Company data, UBSe

Figure 99: PowerCo Cash Flow Forecast

PowerCo Cash Flow Forecast	2015E	2016E	2017E	2018E	2019E
Project Cash Flow Forecast:					
Lease/PPA Revenue	269.8	498.7	808.2	1,155.6	1,568.5
MyPower Revenue	26.8	116.9	173.4	261.8	366.9
PBI Revenue	21.4	43.4	33.9	47.8	63.9
SREC Revenue	38.9	70.3	83.6	117.0	155.4
Operations & Maintenance Costs	(42.0)	(78.9)	(124.7)	(179.4)	(244.3)
Inverter Replacement Cost	(18.5)	(33.2)	(50.1)	(68.7)	(89.3)
Gross Project Cash Flows	296.4	617.3	924.2	1,334.1	1,821.1
Project Financing:					
Tax Equity Lease/PPA Distributions (Payments)	(89.1)	(157.4)	(97.8)	(107.1)	(117.8)
Unlevered Project Cash Flows	207.4	459.8	826.4	1,227.0	1,703.3
Debt Interest & Principal Repayment	(122.9)	(297.9)	(575.8)	(890.7)	(1,249.6)
Net Project Cash Flows	84.4	162.0	250.5	336.3	453.7
# of shares outstanding	95.0	97.9	101.5	108.9	118.2
Net CAFD per share	\$0.89	\$1.65	\$2.47	\$3.09	\$3.84

Source: Company data, UBSe

Figure 100: State Incentive Revenue Forecast

	2014A	2015E	2016E	2017E	2018E	2019E
Est. Government Incentives Per Unit						
PBI revenue, production-based (\$/kWh)	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01
SREC revenue, production-based (\$/kWh)	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02
Upfront state rebates, installation-based (\$/W)	\$0.05	\$0.05	\$0.05	\$0.02	\$0.02	\$0.02
Est. Government Incentives						
PBI revenue	\$13.5	\$21.4	\$43.4	\$33.9	\$47.8	\$63.9
SREC revenue	\$27.0	\$38.9	\$70.3	\$83.6	\$117.0	\$155.4
Upfront state rebates	\$48.6	\$93.8	\$176.0	\$91.5	\$129.3	\$172.8
Est. government incentive revenue (\$M)	\$89.2	\$154.1	\$289.7	\$209.0	\$294.2	\$392.1
YoY % change	96.4%	72.7%	88.0%	-27.9%	40.7%	33.3%

Source: Company data, UBSe

SolarCity Corp (SCTY.O)

Income statement (US\$m)	10/12	10/13	10/14	10/15E	% ch	10/16E	% ch	10/17E	10/18E	10/19E
Revenues	127	164	255	476	86.8	1,013	112.6	1,313	1,845	2,474
Gross profit	27	39	79	135	71.5	410	204.2	541	779	1,061
EBITDA (UBS)	(70)	(108)	(238)	(428)	-80.1	(486)	-13.5	(403)	(168)	106
Depreciation & amortization	(21)	(41)	(98)	(185)	89.3	(333)	79.7	(503)	(690)	(895)
EBIT (UBS)	(91)	(149)	(336)	(613)	-82.8	(819)	-33.5	(906)	(857)	(790)
Associates & investment income	0	0	0	0	-	0	-	0	0	0
Other non-operating income	(3)	(1)	(11)	(19)	-79.6	(41)	-112.6	(53)	(74)	(99)
Net interest	(20)	(26)	(56)	(78)	-40.1	(186)	-138.5	(339)	(507)	(691)
Exceptionals (incl goodwill)	0	0	0	0	-	0	-	0	0	0
Profit before tax	(114)	(177)	(402)	(711)	-76.8	(1,046)	-47.2	(1,298)	(1,438)	(1,579)
Tax	0	25	27	28	6.3	42	47.2	52	58	63
Profit after tax	(114)	(152)	(375)	(682)	-81.8	(1,004)	-47.2	(1,246)	(1,380)	(1,516)
Preference dividends	0	0	0	0	-	0	-	0	0	0
Minorities	14	96	319	351	10.0	369	5.0	387	406	427
Extraordinary items	0	0	0	0	-	0	-	0	0	0
Net earnings (local GAAP)	(99)	(56)	(56)	(331)	NM	(635)	-91.9	(859)	(974)	(1,089)
Net earnings (UBS)	(99)	(56)	(56)	(331)	NM	(635)	-91.9	(859)	(974)	(1,089)
Tax rate (%)	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0
Per share (US\$)	10/12	10/13	10/14	10/15E	% ch	10/16E	% ch	10/17E	10/18E	10/19E
EPS (UBS, diluted)	-	-	(0.60)	(3.49)	NM	(6.49)	-86.1	(8.47)	(8.94)	(9.21)
EPS (local GAAP, diluted)	-	-	(0.60)	(3.49)	NM	(6.49)	-86.1	(8.47)	(8.94)	(9.21)
EPS (UBS, basic)	(6.98)	(0.70)	(0.60)	(3.49)	NM	(6.49)	-86.1	(8.47)	(8.94)	(9.21)
Net DPS (US\$)	0.00	0.00	0.00	0.00	-	0.00	-	0.00	0.00	0.00
Cash EPS (UBS, diluted)*	-	-	0.45	(1.53)	-	(3.09)	-101.1	(3.51)	(2.61)	(1.64)
Book value per share	2.51	7.51	7.77	18.53	138.6	37.03	99.8	42.56	47.21	51.51
Average shares (diluted)	14.24	79.78	93.33	94.97	1.8	97.92	3.1	101.47	108.91	118.22
Balance sheet (US\$m)	10/12	10/13	10/14	10/15E	% ch	10/16E	% ch	10/17E	10/18E	10/19E
Cash and equivalents	160	577	504	784	55.4	304	-61.3	213	274	240
Other current assets	154	211	498	732	47.0	1,300	77.5	1,618	2,181	2,847
Total current assets	314	788	1,002	1,516	51.2	1,604	5.8	1,831	2,456	3,086
Net tangible fixed assets	1,003	1,705	2,899	5,303	82.9	9,343	76.2	13,868	18,713	23,910
Net intangible fixed assets	1	278	540	540	0.0	540	0.0	540	540	540
Investments / other assets	25	39	146	146	0.0	146	0.0	146	146	146
Total assets	1,342	2,810	4,586	7,504	63.6	11,632	55.0	16,384	21,853	27,681
Trade payables & other ST liabilities	167	278	502	709	41.1	1,209	70.6	1,489	1,985	2,571
Short term debt	47	60	65	65	0.00	65	0.00	65	65	65
Total current liabilities	214	338	567	773	36.4	1,274	64.7	1,554	2,050	2,636
Long term debt	224	597	1,464	3,161	115.9	4,923	55.7	8,704	12,852	17,146
Other long term liabilities	611	1,025	1,213	1,213	0.0	1,213	0.0	1,213	1,213	1,213
Preferred shares	0	0	0	0	-	0	-	0	0	0
Total liabilities (incl pref shares)	1,049	1,960	3,244	5,147	58.7	7,409	44.0	11,470	16,115	20,994
Common s/h equity	184	618	746	1,760	136.0	3,626	106.1	4,318	5,142	6,090
Minority interests	110	232	597	597	0.0	597	0.0	597	597	597
Total liabilities & equity	1,342	2,810	4,586	7,504	63.6	11,632	55.0	16,384	21,853	27,681
Cash flow (US\$m)	10/12	10/13	10/14	10/15E	% ch	10/16E	% ch	10/17E	10/18E	10/19E
Net income (before pref divs)	(99)	(56)	(56)	(331)	NM	(635)	-91.9	(859)	(974)	(1,089)
Depreciation & amortization	21	41	98	185	89.3	333	79.7	503	690	895
Net change in working capital	259	596	109	(28)	-	(68)	-142.4	(38)	(67)	(79)
Other operating	(14)	(96)	(319)	220	-	421	91.3	549	546	561
Operating cash flow	166	485	(168)	46	-	51	10.0	155	195	288
Tangible capital expenditure	(429)	(726)	(1,186)	(2,589)	-118.3	(4,374)	-68.9	(5,028)	(5,534)	(6,093)
Intangible capital expenditure	0	0	0	0	-	0	-	0	0	0
Net (acquisitions) / disposals	0	(4)	2	0	-	0	-	0	0	0
Other investing	0	0	(161)	0	-	0	-	0	0	0
Investing cash flow	(429)	(730)	(1,345)	(2,589)	-92.5	(4,374)	-68.9	(5,028)	(5,534)	(6,093)
Equity dividends paid	0	0	0	0	-	0	-	0	0	0
Share issues / (buybacks)	94	198	(45)	0	-	0	-	400	569	331
Other financing	114	124	(2)	0	-	0	-	0	0	0
Change in debt & pref shares	291	651	1,537	1,697	10.41	1,762	3.84	3,381	3,749	4,193
Financing cash flow	498	972	1,490	1,697	13.9	1,762	3.8	3,781	4,317	4,525
Cash flow inc/(dec) in cash	236	728	(23)	(846)	NM	(2,561)	-202.7	(1,092)	(1,022)	(1,280)
FX / non cash items	-	(311)	(50)	1,125	-	2,081	84.9	1,002	1,083	1,245
Balance sheet inc/(dec) in cash	-	417	(73)	279	-	(480)	-	(90)	61	(35)

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.*Cash EPS (UBS, diluted) is calculated using UBS net income adding back depreciation and amortization.

SolarCity Corp (SCTY.O)

Valuation (x)	10/12	10/13	10/14	10/15E	10/16E	10/17E	10/18E	10/19E
P/E (local GAAP, diluted)	-	-	NM	NM	NM	NM	NM	NM
P/E (UBS, diluted)	-	-	NM	(14.0)	(7.5)	(5.8)	(5.5)	(5.3)
P/CEPS	-	NM	NM	NM	NM	NM	NM	NM
Equity FCF (UBS) yield %	-	(10.4)	(23.8)	(54.0)	(91.8)	(103.4)	(113.3)	(123.2)
Net dividend yield (%)	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P/BV x	-	4.0	8.1	2.6	1.3	1.1	1.0	0.9
EV/revenues (core)	-	-	NM	NM	8.8	9.1	8.6	8.1
EV/EBITDA (core)	-	-	-28.8	-16.4	-18.3	-29.6	-94.9	>100
EV/EBIT (core)	-	-	NM	NM	NM	NM	NM	NM
EV/OpFCF (core)	-	-	NM	NM	NM	NM	NM	NM
EV/op. invested capital	-	-	4.1	2.0	1.3	1.1	1.0	1.0
Enterprise value (US\$m)	10/12	10/13	10/14	10/15E	10/16E	10/17E	10/18E	10/19E
Market cap.	-	2,304	5,686	4,711	4,711	4,711	4,711	4,711
Net debt (cash)	-	-	552	1,733	3,563	6,620	10,599	14,807
Buy out of minorities	110	232	597	597	597	597	597	597
Pension provisions/other	0	-	0	0	0	0	0	0
Total enterprise value	-	-	6,835	7,041	8,871	11,927	15,907	20,115
Non core assets	0	0	0	0	0	0	0	0
Core enterprise value	-	-	6,835	7,041	8,871	11,927	15,907	20,115
Growth (%)	10/12	10/13	10/14	10/15E	10/16E	10/17E	10/18E	10/19E
Revenue	-	29.1	55.7	86.8	112.6	29.6	40.5	34.0
EBITDA (UBS)	-	-53.7	-120.3	-80.1	-13.5	17.0	58.5	-
EBIT (UBS)	-	-64.1	-124.7	-82.8	-33.5	-10.7	5.4	7.9
EPS (UBS, diluted)	-	-	-	NM	-86.1	-30.5	-5.6	-3.0
Net DPS	-	-	-	-	-	-	-	-
Margins & Profitability (%)	10/12	10/13	10/14	10/15E	10/16E	10/17E	10/18E	10/19E
Gross profit margin	21.6	24.0	30.8	28.3	40.5	41.2	42.2	42.9
EBITDA margin	NM	NM	NM	NM	NM	NM	NM	4.3
EBIT margin	-71.7	-91.2	-131.6	-128.8	-80.9	-69.0	-46.5	-31.9
Net earnings (UBS) margin	NM	NM	NM	NM	NM	NM	NM	NM
ROIC (EBIT)	-	(22.4)	(20.4)	(17.1)	(12.0)	(8.1)	(5.4)	(3.8)
ROIC post tax	-	NM	NM	NM	NM	NM	NM	NM
ROE (UBS)	-	(13.9)	(8.2)	(26.4)	(23.6)	(21.6)	(20.6)	(19.4)
Capital structure & Coverage (x)	10/12	10/13	10/14	10/15E	10/16E	10/17E	10/18E	10/19E
Net debt / EBITDA	(1.6)	(0.7)	(4.3)	(5.7)	(9.6)	(21.2)	(75.4)	NM
Net debt / total equity %	37.8	9.5	76.3	103.6	110.9	174.1	220.3	253.8
Net debt / (net debt + total equity) %	27.4	8.6	43.3	50.9	52.6	63.5	68.8	71.7
Net debt/EV %	-	-	15.0	34.7	52.8	71.7	79.5	84.4
Capex / depreciation %	NM	NM	NM	NM	NM	NM	NM	NM
Capex / revenue %	NM	NM	NM	NM	NM	NM	NM	NM
EBIT / net interest	NM	NM	NM	NM	NM	NM	NM	NM
Dividend cover (UBS)	-	-	-	-	-	-	-	-
Div. payout ratio (UBS) %	-	-	-	-	-	-	-	-
Revenues by division (US\$m)	10/12	10/13	10/14	10/15E	10/16E	10/17E	10/18E	10/19E
Others	127	164	255	476	1,013	1,313	1,845	2,474
Total	127	164	255	476	1,013	1,313	1,845	2,474
EBIT (UBS) by division (US\$m)	10/12	10/13	10/14	10/15E	10/16E	10/17E	10/18E	10/19E
Others	(91)	(149)	(336)	(613)	(819)	(906)	(857)	(790)
Total	(91)	(149)	(336)	(613)	(819)	(906)	(857)	(790)

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.

Forecast returns

Forecast price appreciation	+8.6%
Forecast dividend yield	0.0%
Forecast stock return	+8.6%
Market return assumption	5.7%
Forecast excess return	+2.9%

Statement of Risk

Key risks to the story remain risk of reform of net metering and other state and federal subsidies for rooftop solar. The pace of such reform could substantially impede both future growth but could also imperil existing customers. Risks of failure to renew contracts at termination of 20-year life remain a key risk around terminal value. Lastly, uncertainty over competitive framework and growing array of peers remains a meaningful risk to future margins.

Required Disclosures

This report has been prepared by UBS Securities LLC, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS.

For information on the ways in which UBS manages conflicts and maintains independence of its research product; historical performance information; and certain additional disclosures concerning UBS research recommendations, please visit www.ubs.com/disclosures. The figures contained in performance charts refer to the past; past performance is not a reliable indicator of future results. Additional information will be made available upon request. UBS Securities Co. Limited is licensed to conduct securities investment consultancy businesses by the China Securities Regulatory Commission.

Analyst Certification: Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers and were prepared in an independent manner, including with respect to UBS, and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

UBS Investment Research: Global Equity Rating Definitions

12-Month Rating	Definition	Coverage ¹	IB Services ²
Buy	FSR is > 6% above the MRA.	45%	36%
Neutral	FSR is between -6% and 6% of the MRA.	42%	32%
Sell	FSR is > 6% below the MRA.	13%	20%
Short-Term Rating	Definition	Coverage ³	IB Services ⁴
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%

Source: UBS. Rating allocations are as of 30 June 2015.

1:Percentage of companies under coverage globally within the 12-month rating category. 2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.

3:Percentage of companies under coverage globally within the Short-Term rating category. 4:Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

KEY DEFINITIONS: **Forecast Stock Return (FSR)** is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months. **Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium). **Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation. **Short-Term Ratings** reflect the expected near-term (up to three months) performance of the stock and do not reflect any change in the fundamental view or investment case. **Equity Price Targets** have an investment horizon of 12 months.

EXCEPTIONS AND SPECIAL CASES: **UK and European Investment Fund ratings and definitions are:** **Buy:** Positive on factors such as structure, management, performance record, discount; **Neutral:** Neutral on factors such as structure, management, performance record, discount; **Sell:** Negative on factors such as structure, management, performance record, discount. **Core Banding Exceptions (CBE):** Exceptions to the standard +/-6% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Company Disclosures table in the relevant research piece.

Research analysts contributing to this report who are employed by any non-US affiliate of UBS Securities LLC are not registered/qualified as research analysts with the NASD and NYSE and therefore are not subject to the restrictions contained in the NASD and NYSE rules on communications with a subject company, public appearances, and trading securities held by a research analyst account. The name of each affiliate and analyst employed by that affiliate contributing to this report, if any, follows.

UBS Securities LLC: Julien Dumoulin-Smith; Michael Weinstein; Paul Zimbardo.

Company Disclosures

Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
SolarCity Corp ¹⁶	SCTY.O	Not Rated	N/A	US\$48.81	14 Aug 2015

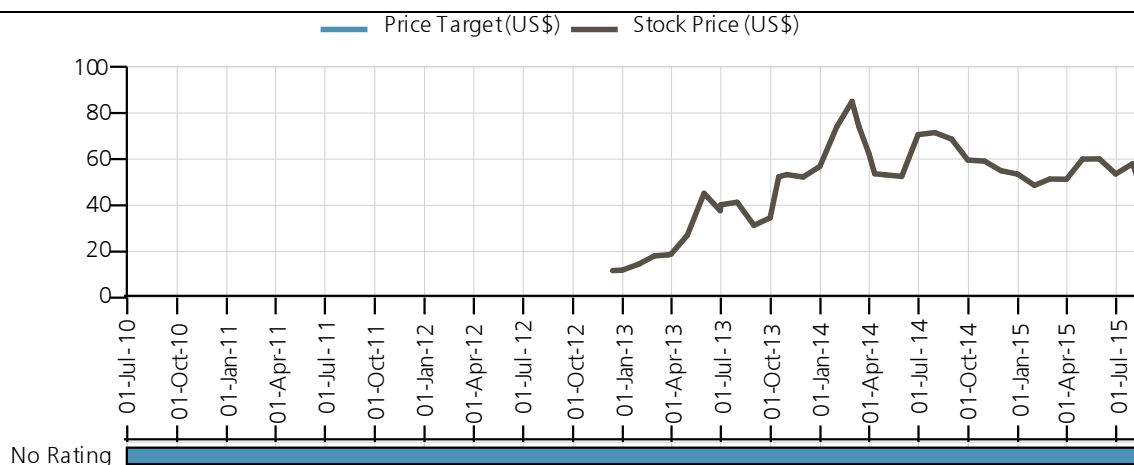
Source: UBS. All prices as of local market close.

Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date

16. UBS Securities LLC makes a market in the securities and/or ADRs of this company.

Unless otherwise indicated, please refer to the Valuation and Risk sections within the body of this report.

SolarCity Corp (US\$)



Source: UBS; as of 14 Aug 2015

Global Disclaimer

This document has been prepared by UBS Securities LLC, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS.

Global Research is provided to our clients through UBS Neo, the UBS Client Portal and UBS.com (each a "System"). It may also be made available through third party vendors and distributed by UBS and/or third parties via e-mail or alternative electronic means. The level and types of services provided by Global Research to a client may vary depending upon various factors such as a client's individual preferences as to the frequency and manner of receiving communications, a client's risk profile and investment focus and perspective (e.g. market wide, sector specific, long-term, short-term, etc.), the size and scope of the overall client relationship with UBS and legal and regulatory constraints.

When you receive Global Research through a System, your access and/or use of such Global Research is subject to this Global Research Disclaimer and to the terms of use governing the applicable System.

When you receive Global Research via a third party vendor, e-mail or other electronic means, your use shall be subject to this Global Research Disclaimer and to UBS's Terms of Use/Disclaimer (<http://www.ubs.com/global/en/legalinfo2/disclaimer.html>). By accessing and/or using Global Research in this manner, you are indicating that you have read and agree to be bound by our Terms of Use/Disclaimer. In addition, you consent to UBS processing your personal data and using cookies in accordance with our Privacy Statement (<http://www.ubs.com/global/en/legalinfo2/privacy.html>) and cookie notice (<http://www.ubs.com/global/en/homepage/cookies/cookie-management.html>).

If you receive Global Research, whether through a System or by any other means, you agree that you shall not copy, revise, amend, create a derivative work, transfer to any third party, or in any way commercially exploit any UBS research provided via Global Research or otherwise, and that you shall not extract data from any research or estimates provided to you via Global Research or otherwise, without the prior written consent of UBS.

For access to all available Global Research on UBS Neo and the Client Portal, please contact your UBS sales representative.

This document is for distribution only as may be permitted by law. It is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or would subject UBS to any registration or licensing requirement within such jurisdiction. It is published solely for information purposes; it is not an advertisement nor is it a solicitation or an offer to buy or sell any financial instruments or to participate in any particular trading strategy. No representation or warranty, either expressed or implied, is provided in relation to the accuracy, completeness or reliability of the information contained in this document ('the Information'), except with respect to Information concerning UBS. The Information is not intended to be a complete statement or summary of the securities, markets or developments referred to in the document. UBS does not undertake to update or keep current the Information. Any opinions expressed in this document may change without notice and may differ or be contrary to opinions expressed by other business areas or groups of UBS. Any statements contained in this report attributed to a third party represent UBS's interpretation of the data, information and/or opinions provided by that third party either publicly or through a subscription service, and such use and interpretation have not been reviewed by the third party.

Nothing in this document constitutes a representation that any investment strategy or recommendation is suitable or appropriate to an investor's individual circumstances or otherwise constitutes a personal recommendation. Investments involve risks, and investors should exercise prudence and their own judgement in making their investment decisions. The financial instruments described in the document may not be eligible for sale in all jurisdictions or to certain categories of investors. Options, derivative products and futures are not suitable for all investors, and trading in these instruments is considered risky. Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates or other market conditions. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument referred to in the document. For investment advice, trade execution or other enquiries, clients should contact their local sales representative.

The value of any investment or income may go down as well as up, and investors may not get back the full (or any) amount invested. Past performance is not necessarily a guide to future performance. Neither UBS nor any of its directors, employees or agents accepts any liability for any loss (including investment loss) or damage arising out of the use of all or any of the Information.

Any prices stated in this document are for information purposes only and do not represent valuations for individual securities or other financial instruments. There is no representation that any transaction can or could have been effected at those prices, and any prices do not necessarily reflect UBS's internal books and records or theoretical model-based valuations and may be based on certain assumptions. Different assumptions by UBS or any other source may yield substantially different results.

This document and the Information are produced by UBS as part of its research function and are provided to you solely for general background information. UBS has no regard to the specific investment objectives, financial situation or particular needs of any specific recipient. In no circumstances may this document or any of the Information be used for any of the following purposes:

- (i) valuation or accounting purposes;
- (ii) to determine the amounts due or payable, the price or the value of any financial instrument or financial contract; or
- (iii) to measure the performance of any financial instrument.

By receiving this document and the Information you will be deemed to represent and warrant to UBS that you will not use this document or any of the Information for any of the above purposes or otherwise rely upon this document or any of the Information.

Research will initiate, update and cease coverage solely at the discretion of UBS Investment Bank Research Management. The analysis contained in this document is based on numerous assumptions. Different assumptions could result in materially different results. The analyst(s) responsible for the preparation of this document may interact with trading desk personnel, sales personnel and other parties for the purpose of gathering, applying and interpreting market information. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS into other areas, units, groups or affiliates of UBS. The compensation of the analyst who prepared this document is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues; however, compensation may relate to the revenues of UBS Investment Bank as a whole, of which investment banking, sales and trading are a part.

For financial instruments admitted to trading on an EU regulated market: UBS AG, its affiliates or subsidiaries (excluding UBS Securities LLC) acts as a market maker or liquidity provider (in accordance with the interpretation of these terms in the UK) in the financial instruments of the issuer save that where the activity of liquidity provider is carried out in accordance with the definition given to it by the laws and regulations of any other EU jurisdictions, such information is separately disclosed in this document. For financial instruments admitted to trading on a non-EU regulated market: UBS may act as a market maker save that where this activity is carried out in the US in accordance with the definition given to it by the relevant laws and regulations, such activity will be specifically disclosed in this document. UBS may have issued a warrant the value of which is based on one or more of the financial instruments referred to in the document. UBS and its affiliates and employees may have long or short positions, trade as principal and buy and sell in instruments or derivatives identified herein; such transactions or positions may be inconsistent with the opinions expressed in this document.

United Kingdom and the rest of Europe: Except as otherwise specified herein, this material is distributed by UBS Limited to persons who are eligible counterparties or professional clients. UBS Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. **France:** Prepared by UBS Limited and distributed by UBS Limited and UBS Securities France S.A. UBS Securities France S.A. is regulated by the ACPR (Autorité de Contrôle Prudentiel et de Résolution) and the Autorité des Marchés Financiers (AMF). Where an analyst of UBS Securities France S.A. has contributed to this document, the document is also deemed to have been prepared by UBS Securities France S.A. **Germany:** Prepared by UBS Limited and distributed by UBS Limited and UBS Deutschland AG. UBS Deutschland AG is regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin). **Spain:** Prepared by UBS Limited and distributed by UBS Limited and UBS Securities España SV, SA. UBS Securities España SV, SA is regulated by the Comisión Nacional del Mercado de Valores (CNMV). **Turkey:** Distributed by UBS Limited. No information in this document is provided for the purpose of offering, marketing and sale by any means of any capital market instruments and services in the Republic of Turkey. Therefore, this document may not be considered as an offer made or to be made to residents of the Republic of Turkey. UBS AG is not licensed by the Turkish Capital Market Board under the provisions of the Capital Market Law (Law No. 6362). Accordingly, neither this document nor any other offering material related to the instruments/services may be utilized in connection with providing any capital market services to persons within the Republic of Turkey without the prior approval of the Capital Market Board. However, according to article 15 (d) (ii) of the Decree No. 32, there is no restriction on the purchase or sale of the securities abroad by residents of the Republic of Turkey. **Poland:** Distributed by UBS Limited (spółka z ograniczoną odpowiedzialnością) Oddział w Polsce regulated by the Polish Financial Supervision Authority. Where an analyst of UBS Limited (spółka z ograniczoną odpowiedzialnością) Oddział w Polsce has contributed to this

document, the document is also deemed to have been prepared by UBS Limited (spółka z ograniczoną odpowiedzialnością) Oddział w Polsce. **Russia:** Prepared and distributed by UBS Bank (OOO). **Switzerland:** Distributed by UBS AG to persons who are institutional investors only. UBS AG is regulated by the Swiss Financial Market Supervisory Authority (FINMA). **Italy:** Prepared by UBS Limited and distributed by UBS Limited and UBS Italia Sim S.p.A. UBS Italia Sim S.p.A. is regulated by the Bank of Italy and by the Commissione Nazionale per le Società e la Borsa (CONSOB). Where an analyst of UBS Italia Sim S.p.A. has contributed to this document, the document is also deemed to have been prepared by UBS Italia Sim S.p.A. **South Africa:** Distributed by UBS South Africa (Pty) Limited (Registration No. 1995/011140/07), an authorised user of the JSE and an authorised Financial Services Provider (FSP 7328). **Israel:** This material is distributed by UBS Limited. UBS Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. UBS Securities Israel Ltd is a licensed Investment Marketer that is supervised by the Israel Securities Authority (ISA). UBS Limited and its affiliates incorporated outside Israel are not licensed under the Israeli Advisory Law. UBS Limited is not covered by insurance as required from a licensee under the Israeli Advisory Law. UBS may engage among others in issuance of Financial Assets or in distribution of Financial Assets of other issuers for fees or other benefits. UBS Limited and its affiliates may prefer various Financial Assets to which they have or may have Affiliation (as such term is defined under the Israeli Advisory Law). Nothing in this Material should be considered as investment advice under the Israeli Advisory Law. This Material is being issued only to and/or is directed only at persons who are Eligible Clients within the meaning of the Israeli Advisory Law, and this material must not be relied on or acted upon by any other persons. **Saudi Arabia:** This document has been issued by UBS AG (and/or any of its subsidiaries, branches or affiliates), a public company limited by shares, incorporated in Switzerland with its registered offices at Aeschenvorstadt 1, CH-4051 Basel and Bahnhofstrasse 45, CH-8001 Zurich. This publication has been approved by UBS Saudi Arabia (a subsidiary of UBS AG), a Saudi closed joint stock company incorporated in the Kingdom of Saudi Arabia under commercial register number 1010257812 having its registered office at Tatweer Towers, P.O. Box 75724, Riyadh 11588, Kingdom of Saudi Arabia. UBS Saudi Arabia is authorized and regulated by the Capital Market Authority to conduct securities business under license number 08113-37. **Dubai:** The information distributed by UBS AG Dubai Branch is intended for Professional Clients only and is not for further distribution within the United Arab Emirates. **United States:** Distributed to US persons by either UBS Securities LLC or by UBS Financial Services Inc., subsidiaries of UBS AG; or by a group, subsidiary or affiliate of UBS AG that is not registered as a US broker-dealer (a 'non-US affiliate') to major US institutional investors only. UBS Securities LLC or UBS Financial Services Inc. accepts responsibility for the content of a document prepared by another non-US affiliate when distributed to US persons by UBS Securities LLC or UBS Financial Services Inc. All transactions by a US person in the securities mentioned in this document must be effected through UBS Securities LLC or UBS Financial Services Inc., and not through a non-US affiliate. **Canada:** Distributed by UBS Securities Canada Inc., a registered investment dealer in Canada and a Member-Canadian Investor Protection Fund, or by another affiliate of UBS AG that is registered to conduct business in Canada or is otherwise exempt from registration. **Brazil:** Except as otherwise specified herein, this material is prepared by UBS Brasil CCTVM S.A. to persons who are eligible investors residing in Brazil, which are considered to be: (i) financial institutions, (ii) insurance firms and investment capital companies, (iii) supplementary pension entities, (iv) entities that hold financial investments higher than R\$300,000.00 and that confirm the status of qualified investors in written, (v) investment funds, (vi) securities portfolio managers and securities consultants duly authorized by Comissão de Valores Mobiliários (CVM), regarding their own investments, and (vii) social security systems created by the Federal Government, States, and Municipalities. **Hong Kong:** Distributed by UBS Securities Asia Limited and/or UBS AG, Hong Kong Branch. **Singapore:** Distributed by UBS Securities Pte. Ltd. [MCI (P) 016/09/2014 and Co. Reg. No.: 198500648C] or UBS AG, Singapore Branch. Please contact UBS Securities Pte. Ltd., an exempt financial adviser under the Singapore Financial Advisers Act (Cap. 110); or UBS AG, Singapore Branch, an exempt financial adviser under the Singapore Financial Advisers Act (Cap. 110) and a wholesale bank licensed under the Singapore Banking Act (Cap. 19) regulated by the Monetary Authority of Singapore, in respect of any matters arising from, or in connection with, the analysis or document. The recipients of this document represent and warrant that they are accredited and institutional investors as defined in the Securities and Futures Act (Cap. 289). **Japan:** Distributed by UBS Securities Japan Co., Ltd. to professional investors (except as otherwise permitted). Where this document has been prepared by UBS Securities Japan Co., Ltd., UBS Securities Japan Co., Ltd. is the author, publisher and distributor of the document. Distributed by UBS AG, Tokyo Branch to Professional Investors (except as otherwise permitted) in relation to foreign exchange and other banking businesses when relevant. **Australia:** Clients of UBS AG: Distributed by UBS AG (Holder of Australian Financial Services License No. 231087). Clients of UBS Securities Australia Ltd: Distributed by UBS Securities Australia Ltd (Holder of Australian Financial Services License No. 231098). Clients of UBS Wealth Management Australia Ltd: Distributed by UBS Wealth Management Australia Ltd (Holder of Australian Financial Services License No. 231127). This Document contains general information and/or general advice only and does not constitute personal financial product advice. As such, the Information in this document has been prepared without taking into account any investor's objectives, financial situation or needs, and investors should, before acting on the Information, consider the appropriateness of the Information, having regard to their objectives, financial situation and needs. If the Information contained in this document relates to the acquisition, or potential acquisition of a particular financial product by a 'Retail' client as defined by section 761G of the Corporations Act 2001 where a Product Disclosure Statement would be required, the retail client should obtain and consider the Product Disclosure Statement relating to the product before making any decision about whether to acquire the product. The UBS Securities Australia Limited Financial Services Guide is available at: www.ubs.com/ecs-research-fsg. **New Zealand:** Distributed by UBS New Zealand Ltd. The information and recommendations in this publication are provided for general information purposes only. To the extent that any such information or recommendations constitute financial advice, they do not take into account any person's particular financial situation or goals. We recommend that recipients seek advice specific to their circumstances from their financial advisor. **Korea:** Distributed in Korea by UBS Securities Pte. Ltd., Seoul Branch. This document may have been edited or contributed to from time to time by affiliates of UBS Securities Pte. Ltd., Seoul Branch. **Malaysia:** This material is authorized to be distributed in Malaysia by UBS Securities Malaysia Sdn. Bhd (Capital Markets Services License No.: CMSL/A0063/2007). This material is intended for professional/institutional clients only and not for distribution to any retail clients. **India:** Prepared by UBS Securities India Private Ltd. (Corporate Identity Number U67120MH1996PTC097299) 2/F, 2 North Avenue, Maker Maxity, Bandra Kurla Complex, Bandra (East), Mumbai (India) 400051. Phone: +912261556000. It provides brokerage services bearing SEBI Registration Numbers: NSE (Capital Market Segment): INB230951431, NSE (F&O Segment) INF230951431, NSE (Currency Derivatives Segment) INE230951431, BSE (Capital Market Segment) INB010951437; merchant banking services bearing SEBI Registration Number: INM000010809 and research services. UBS AG, its affiliates or subsidiaries may have debt holdings or positions in the subject Indian company/companies. Within the past 12 months, UBS AG, its affiliates or subsidiaries may have received compensation for non-investment banking securities-related services and/or non-securities services from the subject Indian company/companies. The subject company/companies may have been a client/clients of UBS AG, its affiliates or subsidiaries during the 12 months preceding the date of distribution of the research report with respect to investment banking and/or non-investment banking securities-related services and/or non-securities services. With regard to information on associates, please refer to the Annual Report at: http://www.ubs.com/global/en/about_ubs/investor_relations/annualreporting.html

The disclosures contained in research documents produced by UBS Limited shall be governed by and construed in accordance with English law.

UBS specifically prohibits the redistribution of this document in whole or in part without the written permission of UBS and UBS accepts no liability whatsoever for the actions of third parties in this respect. Images may depict objects or elements that are protected by third party copyright, trademarks and other intellectual property rights. © UBS 2015. The key symbol and UBS are among the registered and unregistered trademarks of UBS. All rights reserved.

