US Solar Flash
Rethinking the DevCo Model

Equities
Americas
Electric Utilities

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Following SUNE's credit woes, DevCo offense played with balance sheets
With expectations of tenfold growth put on the sideline following SUNE's credit woes, along with the YieldCo market decline more generally, focus has shifted to the lower-risk and credit worthy DevCos. We see FSLR and NEE as the beneficiaries here, with the companies benefitting from balance sheet strength, and more calculated growth strategies. We see lower-risk DevCos as becoming increasingly important to investors, but critically, utility counterparties as well, which don't want to take the development and PPA risk with lower-quality players. We include a full discussion of Devco credit quality merits below, but emphasize the staying power – and success of past installations play into the ability for NEE and FSLR to entertain repeat business with counterparties and gain their trust. Maintaining this defensive balance sheet positioning would appear an *offensive* strategic move, in our view.

SUNE: Latest risk pertains to execution on Hawaii solar contracts
With the market seemingly preferring the lower-risk DevCos amidst SUNE's downturn, a recent datapoint indicates that PPA counterparties continue to be concerned with SUNE's plight as well. Recently, HECO warned, via a letter, it may cancel a PPA with SUNE for the 49MW Kawailoa Solar Project (originally a First Wind project), as the company notes that SUNE has failed to meet a key milestone commitment. HECO is reportedly reviewing its rights and options, along with potential damages, given fears that SUNE will not be able to complete the project on schedule. It has been highlighted that the milestone in question is the failure to close financing on the project. If this proves to be the case, HECO has the right to immediately terminate the agreement. Adding further complexity to the story is the fact that the project in question is in a portfolio that is expected to be part of the D.E. Shaw sale (in exchange for the extinguishment of ~$336Mn in notes due 2020). Following reports that some commercial projects that SUNE reportedly won are now re-entering the market for bids, we note that the latest HECO news adds to our belief that SUNE will bring down MW backlog projections upon its next formal update.

Amendment introduced to eliminate the possibility of further PTC extensions
US Senator James Lankford of Oklahoma has offered an amendment to the Energy Policy Modernization Act of 2016 (S.2012), included in the full docket of amendments (S.Amdt.3209), in an effort to eliminate the renewable Production Tax Credits (PTCs) by the end of 2019. Under this amendment, PTC eligible projects would receive the credits until the end of 2031, with new projects not being eligible for PTCs after 2019. As part of the tax extenders bill, the PTC was extended through 2019, with the full value being applicable in 2015 and 2016, the credit dropping to 80% in 2017, 60% in 2018, and then to 40% in 2019. The critical takeaway is that the amendment calls for a comprehensive end to the PTC following 2031, with no extension after 2019 possible, whereas the current legislation is more open-ended. The Energy Policy Modernization Act of 2016 amendments are expected to be evaluated in Senate this week.

NEM language included in amendments as well… NV poised to undo impacts?
Also included in the amendment to the Energy Policy Modernization Act of 2016 is language (introduced by Senators Harry Reid and Angus King, from Nevada and Maine respectively) that would prevent states from retroactively making changes to net-energy-metering (NEM) legislation for existing customers. The amendment is specifically relevant to the ongoing issue in Nevada, where legislators originally removed grandfathering language from the recent NEM reform, but have since discussed plans to potentially add it back. It appears NV is back on track to grandfathering for up to 20-years following the latest developments in the state.

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What is on Clients' Minds

In an effort to keep all 'in the loop', we highlight our recent Alternative Energy reports below:

[SCTY: What's the Story? Financing Over Execution]
[Removing the 'Merchant Nose' from Solar Deals]
[Hedging Out Renewable Volatility]
[PURPA: The Backdoor Solar Answer Out West]
[Yet Another Sunny Day for NEM in California]
[What's Resi Really Worth? Deals Ahead]
[NJ SRECs: Pricing Staying High?]
[4Q15 Playbook: It's Bonus Time]
[Next Steps in the Solar Story]
[Squaring solar with rising rates]
[Sun Shine in Texas (Call Transcript)]
[Squaring solar with rising rates]
[Picking Up the Solar PACE (Call Transcript)]
[SUNE: Disclosing a Tough Outlook [Deciphering the 12/24 Presentation]]

Coming up in the Week Ahead

All earnings call times are Eastern Standard Time unless otherwise noted.

Tuesday (2/9)

- **SCTY 4Q15 Earnings Call: 5pm ET, 877-407-0784**
- **UBS Access: NEE Fieldtrip**

Wednesday (2/10)

- **UBS Access: Resi Solar economics call with GTM, 3pm ET**

Thursday (2/11)

- **UBS Access: Lunch with Own Energy, Renewable Developer on Wind/Solar Prospects**

Wednesday (2/17)

- **UBS Access: Tax Equity conf call with Cohn Reznick, 2pm ET**
- **SPWR 4Q15 Earnings Call: 4:30pm, Phone Number: 517-623-4618, Passcode: SunPower**

Analyzing the DevCo Model

Evaluating the 'Right' Devco model? There's consistency in the NEE-FSLR model.

We see a high credit quality development entity as a key ingredient to sucess

Upon reflection of recent developments, we are increasingly enamored by the renewable development model adopted by both utility-developer NEE and solar-developer FSLR. We see both companies employing a defensive balance sheet approach as their offensive positioning in receiving (repeat) contract awards. Following the experience in 2H15 with SUNE, we emphasize renewable development business models employing substantial leverage under-estimate their exposure to cyclical turns – and in turn –counterparty willingness concerns to engage them for contracts with protracted periods (PPA tenors are typically 20-years); we emphasize utilities are required to consolidate PPA obligations as debt under most credit rating approaches, making it all the more important to contract with an Investment Grade (IG) – or equivalent - counterparty. We emphasize FSLR's net cash balance may appear odd to those unfamiliar with recent extreme cyclicality in the solar sector, but lends itself as an attractive counterparty to utilities. While technically unrated, we suspect any hypothetical rating would indeed be IG. Further, we see NEE's decision to maintain a strong balance sheet, among the highest in the utility sector, as consistent with this development methodology. We emphasize with debt capital markets in disarray, we see both companies as poised to benefit from an even wider margin of competitive edge over peers as they attempt. We suspect the fruits of their respective development efforts may yet play out amidst 4Q opportunities. We see both NEE and FSLR as among the best positioned renewable development companies heading into 2016, with each likely to unveil substantial expansion plans this Spring: FSLR at its Analyst Day in ~early 2Q and NEE at its 1Q renewable update (4Q updates largely excluded any meaningful updates awaiting a more comprehensive update on its contemplated *doubling* of the renewable business touted with 3Q results).

Leverage however is not problematic at the project entity

While parent level leverage for NEE and FSLR is modest, project level leverage remains competitive with peers. Rather, maintaining a strict accounting for leverage against the developed 'PowerCo' portion of assets is key. We emphasize limited leverage remains against the devco for both NEE (via NEER) and FSLR. Additionally, this remains true for SunPower and Avangrid (majority-owned US subsidiary of Iberdrola) among others.

Debt imputation issues emerge too: among the chief issues NEE faces as well are issues pertaining to non-recourse project level debt *still* being imputed back to the parent as part of its consolidated FFO/Debt metrics due to the perception of a systemic relationship in which the entity would not truly be non-recourse if distressed (and NEE would presumably 'save' it). As such the rating agencies ascribe 25% leverage to NEE's balance sheet. It appears critical to structurally separate assets in order to limit the look-through on developed assets and remains a drawback to continued ownership of assets self-developed.

What's the biggest risk in the sector today? Getting pulled down by energy credit limitations.

We see the biggest risk to both the developers and existing YieldCo structures as the risk of being 'bitten' by the same contagion in the energy sector today. We emphasize spread differences between high-yield (uncontracted) merchant power

exposure remain quite stark on both levered and unlevered terms relative to either segment of the renewable sector. With these projects highly leveraged, equity value accretes/dilutes quickly with small shifts in interest rate assumptions.

What about Residential Development? Less Relevant.

We see good credit quality as less relevant in the resi and C&I solar DG space

We see the residential and C&I space as substantially <u>less</u> relevant for developers to maintain investment grade-like credit metrics. Rather, counterparties in residential deals and C&I are likely to perform more limited due diligence on solar counterparties – and are much more likely to go with the cheapest and/or best channel approach taken. As such, we *don't* see the issues raised for SUNE as necessarily spreading to the likes of SCTY.

<u>Brand recognition and marketing matters far more:</u> We see familiarity and successful brand familiarity as crucial in the residential space, particularly as it scales across markets *rather* than PPA counterparty credit quality. We suspect *scale* will be much more related to consistent execution of installation and marketing infrastructure than tied to high credit quality, although admittedly scale of residential operations would appear to drive improved capital market terms (and hence more IG-like borrowing costs).

Pushed into Residential Devco Model?

Among the key questions is whether the likes of SCTY and others in this new sector will be *forced* into effectively monetizing a portion of their developed assets to not only 'prove' out the equity value of their assets, but also to raise equity capital to fund any equity deficits for projects under development. We view the companies as effectively pushed into the equity markets given more restrictive terms on debt capital in today's market place. The question remains just how reduced debt capital access will reflect in equity bids for the underlying unlevered portfolios?

How much equity could be needed if *no* external equity were raised?

- **<u>How much would be necessary?</u>** For instance, with SCTY keen to avoid <u>*any public market equity issuances*</u>, we suspect management could yet be pushed to fund the existing delta today on its cost structure relative to total achievable financing ($1.75/W for Tax Equity and ~$0.80/W on ABS = $2.55/W), suggesting a ~$0.25/W delta today. Scaling this to the full ~1.3GW contemplated in 2016 and this would require a maximum of external equity of ~$300 Mn. However, assuming cost targets are able to achieve the $2.50/W target as contemplated by year-end 2016, we see SCTY as effectively *eliminating* external equity needs once more (Tax Equity and ABS would self-finance construction of projects, which had historically been the assumption when debt capital markets would permit more ABS at a cheaper rate). That said, execution on projects developed *prior* to achieving this new target would appear exposed to this funding deficit. In many respects, we suspect Street will be closely tracking achievability of this FCF guidance – as costs are critical to limiting outside capital additions.

- **<u>Defining what an equity issuance constitutes:</u>** Among the key lessons learned in the SUNE unwind from 2H15 was the use of straight *converts* as a defacto equity issuance. In times of distress the converts simply remain a vanilla liability and contribute to aggregate leverage. We emphasize the key difference in the utility sector relative to tech sectors (and corresponding solar mgmt teams) remains the use of *mandatory* convertibles, which remain disciplined on

eventually issuing the equity (rather than indefinitely deferring it under the conventional convert definition).

- **Poised to sell down assets:** We see the selldown of resi assets through the 4Q period into 1Q results as indicative of this wider trend in the sector. We expect investors to key their valuations off these deals – and suspect the companies may well use these as inaugural efforts to open up a new chapter of outright project monetization, rather than the historic use of ABS and bank aggregation facilities to achieve the capital market access and financing scale needed to finance operations.

Tax Equity Markets: A key risk to this all

We emphasize a further nuance to execution in the debt capital markets of late pertains to the availability of tax equity. While this specific market would appear to be *more* driven by wider corporate profitability (particularly in the financial sector), the wider question remains whether this could yet see tightening on terms. We note initial Tax equity capital is closer to ~$1.75/W today under the 30% ITC. While NEE reaffirmed on its call in recent weeks *continued strength* in the tax equity market, this remains a close subject for us to track.

How does SunRun compare?

Below we provide insight into RUN's recent financing; a full update on execution is reflected in in our recent solar preview:

RUN appears to have an advantage in financing over SCTY

In comparison to SCTY's recent financing datapoints, we provide further insight into RUN's recent $250Mn closing below. We illustrate the breakdown of the 'Advance Rate' against Retained Value (20-years contracted portion) at a 6% discount rate. The latest financing achieved a ~4.4% debt cost of capital for approximately ~$0.90/Watt of leverage. We caution that SCTY vs. RUN's PPA value and cost structures are marginally different. Our chief point is to illustrate better borrowing costs for RUN than SCTY despite the recent capital market access concerns in the wider markets.

We include a breakdown of assumptions employed below – showing the cost of borrowing, as well as LIBOR floor (1% for B) as well as swapped interest rate for the A-tranche. The B-tranche in the financing below represents the riskier, junior piece, however matures *earlier* than the A-piece and amortizes fully through its tenor.

Figure 1: RUN capital stack for latest issuance

	Capital Stack			
Equivalent $/W				
	L+250, 7-year LIBOR			
	1.7% = LIBOR			
	Tranche	Share	Rate	
	A	65%	4.20%	Total Borrowing Rate, A loan has no floor
	B	13%	6%	L+275, 1% Floor = is only the B-Loan
0.90/W		78% (RV @ 6%)	4.43%	Weighted Average Interest Rate

Source: Company Disclosures, UBSe

Any advantages in financing speak to the nasceny of the financing market

We emphasize the ability for similar companies to hammer out different terms (+/-100bp) within the same week with a similar group of lenders speaks to the

diversity of assumptions embedded within each development business – and specific financing relationships within this new niche. We suspect both lenders and borrowers continue to pursue 'price discovery' without firm sets of expectations on risks, historical results off which to drive analytics, and uncertainty on the 'right' mix of capital. Bottom line, we suspect the high spreads in the high yield market will largely force residential developers to remain in the IG market.

Figure 2: Solar & YieldCos Comps Table

	Ticker	Rating	Market Cap. ($ in millions)	Price 2/8/2016	Price Target	P/E Multiple 2015E	2016E	2017E	2018E	Earnings Per Share 2015E	2016E	2017E	2018E	EV / EBITDA Multiple 2015E	2016E	2017E
SOLARCOs																
First Solar Inc	FSLR	Neutral	6,477	64.18	68.00	14.5	16.6	18.0	15.6	4.42	3.86	3.57	4.11	5.2	7.8	6.4
SunPower Corp	SPWR	Neutral	3,196	23.40	31.00	18.0	12.7	10.3	10.7	1.30	1.84	2.28	2.18	10.6	7.1	6.5
SunEdison Inc.	SUNE	Sell	783	2.47	2.00	nm	nm	nm	5.6	-1.72	-0.53	-0.33	0.44	25.2	9.9	8.7
Canadian Solar Inc.	CSIQ	Not Rated	1,028	18.37	NA	7.4	7.5	6.0	na	2.47	2.44	3.04	na	8.3	6.7	na
Hanwha Q Cells Co.	HQCL	Not Rated	1,273	15.30	NA	19.9	10.7	8.9	na	0.77	1.43	1.71	na	na	na	na
JA Solar Holdings Co.	JASO	Not Rated	423	8.39	NA	5.3	5.1	5.0	na	1.57	1.65	1.68	na	3.2	2.9	na
JinkoSolar Holding Co.	JKS	Not Rated	581	18.62	NA	5.7	4.0	3.5	na	3.28	4.61	5.33	na	4.7	4.8	na
Real Goods Solar, Inc.	RGSE	Not Rated	6	0.48	NA	nm	na	na	na	-0.78	na	na	na	na	na	na
ReneSola Ltd.	SOL	Not Rated	120	1.38	NA	nm	nm	nm	na	-0.19	-0.04	0.00	na	5.5	4.8	na
SolarCityCorp	SCTY	Neutral	2,727	27.94	33.00	nm	nm	nm	nm	-3.84	-4.28	-2.01	-2.36	-14.9	-27.1	78.0
Average						13.6	9.4	8.5	11.4	-1.5	0.5	1.1	1.3	6.0	2.1	24.9

	Ticker	Rating	Market Cap. ($ in millions)	Price 2/8/2016	Price Target	Dividend Yield (%) 2015E	2016E	2017E	2018E	Dividend Growth Rate 2015E	2016E	2017E	2018E	EV / EBITDA Multiple 2015E	2016E	2017E
'PRIMARY' YIELDCOs																
8point3 Energy Partners	CAFD	Neutral	1,082	15.24	11.00	2.44%	6.15%	6.99%	7.87%	na	152%	14%	13%	na	17.6	12.6
Hannon Armstrong Sustainable Infi	HASI	Buy	674	17.61	22.00	6.06%	6.88%	7.89%	8.52%	0%	14%	15%	8%	na	na	na
NextEra Energy Partners LP	NEP	Neutral	2,787	29.03	25.00	4.20%	4.74%	5.46%	6.27%	63%	13%	15%	15%	na	5.9	5.5
NRG Yield	NYLD.A	Buy	4,260	11.20	15.00	7.63%	9.11%	10.27%	11.52%	21%	19%	13%	12%	9.7	7.8	7.4
Pattern Energy Group A	PEGI	Not Rated	1,251	16.75	N/A	8.53%	9.67%	10.83%	12.29%	0%	13%	12%	13%	17.6	13.4	12.3
TerraForm Power	TERP	Sell	671	8.38	9.00	16.11%	16.71%	16.71%	16.71%	386%	4%	0%	0%	14.3	9.5	8.5
Tranaslta Renewables	RNW-C	Not Rated	1,940	10.17	N/A	7.99%	8.65%	9.03%	9.24%	0%	8%	4%	2%	9.6	9.8	9.0
Average						8.1%	9.5%	10.3%	11.0%	78.2%	32.0%	10.3%	9.1%	12.0	9.6	8.7
'SECONDARY' YIELDCOs																
Algonquin Power & Utilities Corp.	AQN-C/	Not Rated	3,029	11.84	NA	4.13%	4.23%	4.11%	4.53%	5%	2%	-3%	10%	10.8	10.7	3.9
Brookfield Renewable Energy Par	BEP.UT	Not Rated	10,345	37.55	NA	4.80%	5.11%	5.33%	na	6%	7%	4%	na	na	11.3	5.1
Capital Power Corporation	CPX-C/	Not Rated	1,822	18.71	NA	8.00%	8.41%	8.34%	8.34%	7%	5%	-1%	0%	7.5	7.3	7.0
Capstone Infrastructure Corporatio	CSE-C/	Not Rated	467	4.78	NA	5.23%	4.46%	na	na	-17%	-15%	na	na	12.4	12.1	na
Greencoat UK Wind Plc	UKW-Gl	Not Rated	525	1.04	NA	5.92%	6.07%	6.17%	na	-1%	3%	2%	na	na	na	na
Innergex Renewable Energy Inc.	INE-CA	Not Rated	1,272	12.24	NA	5.13%	5.39%	na	na	1%	5%	na	na	16.7	12.8	13.6
Renewables Infrastructure Group I	TRIG-G	Not Rated	720	0.98	NA	6.62%	6.72%	na	na	5%	2%	na	na	na	na	na
Average						7.2%	7.7%	8.5%	9.7%	10.4%	6.7%	4.2%	6.2%	11.6	11.3	6.1
GLOBAL' YIELDCOs																
Abengoa Yield PLC	ABY	Not Rated	1,605	16.02	NA	9.93%	11.90%	13.93%	17.39%	34%	20%	17%	25%	8.8	8.0	5.5
Saeta Yield SA	SAY-ES	Not Rated	661	8.10	NA	9.53%	10.75%	11.36%	11.36%	36%	13%	6%	0%	8.3	8.6	8.5
TerraForm Global	GLBL	Not Rated	568	3.60	NA	30.56%	36.67%	44.00%	52.80%	100%	20%	20%	20%	5.5	4.5	13.1
Average						16.7%	19.8%	23.1%	27.2%	56.6%	17.6%	14.2%	14.9%	7.5	7.0	9.0

Source: UBS estimates for companies under coverage; all others are Factset

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Valuation Method and Risk Statement

Risks for Utilities and Independent Power Producers (IPPs) primarily relate to volatile commodity prices for power, natural gas, and coal. Risks to IPPs also stem from load variability, and operational risk in running these facilities. Rising coal and, to a certain extent, uranium prices could pressure margins as the fuel hedges roll off Competitive Integrateds. Further, IPPs face declining revenues as in the money power and gas hedges roll off. Other non-regulated risks include weather and for some, foreign currency risk, which again must be diligently accounted in the company's risk management operations. Major external factors, which affect our valuation, are environmental risks. Environmental capex could escalate if stricter emission standards are implemented. We believe a nuclear accident or a change in the Nuclear Regulatory Commission/Environment Protection Agency regulations could have a negative impact on our estimates.

Risks for regulated utilities include the uncertainty around the composition of state regulatory Commissions, adverse regulatory changes, unfavorable weather conditions, variance from normal population growth, and changes in customer mix. Changes in macroeconomic factors will affect customer additions/subtractions and usage patterns

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12-Month Rating	Definition	Coverage[1]	IB Services[2]
Buy	FSR is > 6% above the MRA.	48%	36%
Neutral	FSR is between -6% and 6% of the MRA.	39%	28%
Sell	FSR is > 6% below the MRA.	12%	22%
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.	<1%	<1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%

Source: UBS. Rating allocations are as of 31 December 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.

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

Company Disclosures

Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
First Solar Inc[16]	FSLR.O	Neutral	N/A	US$64.18	08 Feb 2016
NextEra Energy[4, 5, 6a, 6b, 7, 16]	NEE.N	Buy	N/A	US$114.17	08 Feb 2016
SolarCity Corp[16]	SCTY.O	Neutral	N/A	US$27.94	08 Feb 2016
SunEdison Inc.[5, 13, 16]	SUNE.N	Sell	N/A	US$2.47	08 Feb 2016

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

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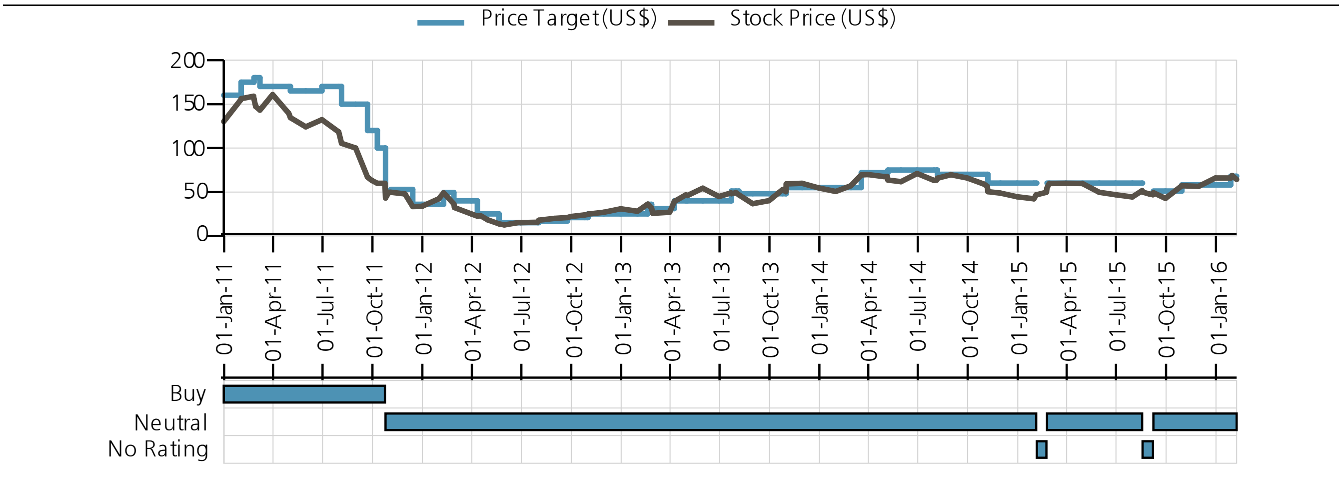
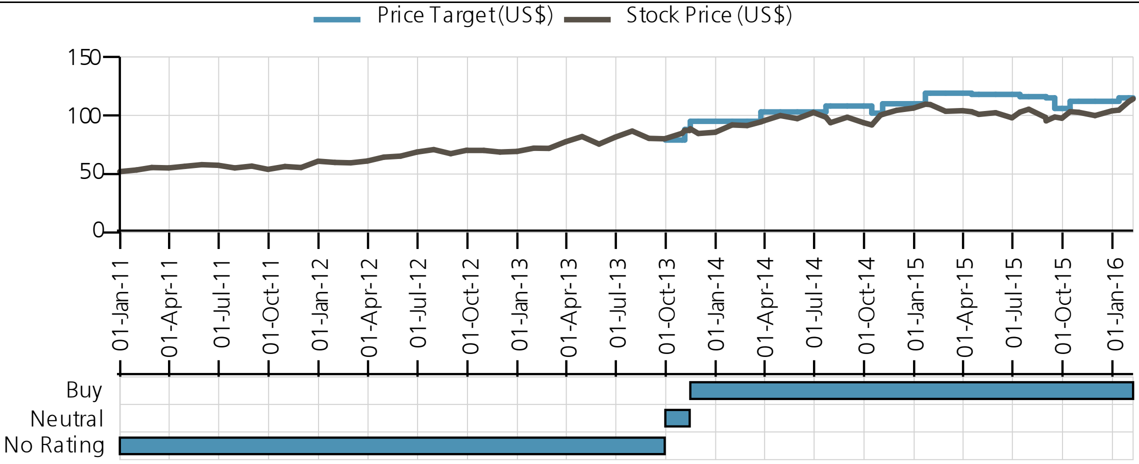
First Solar Inc (US$)



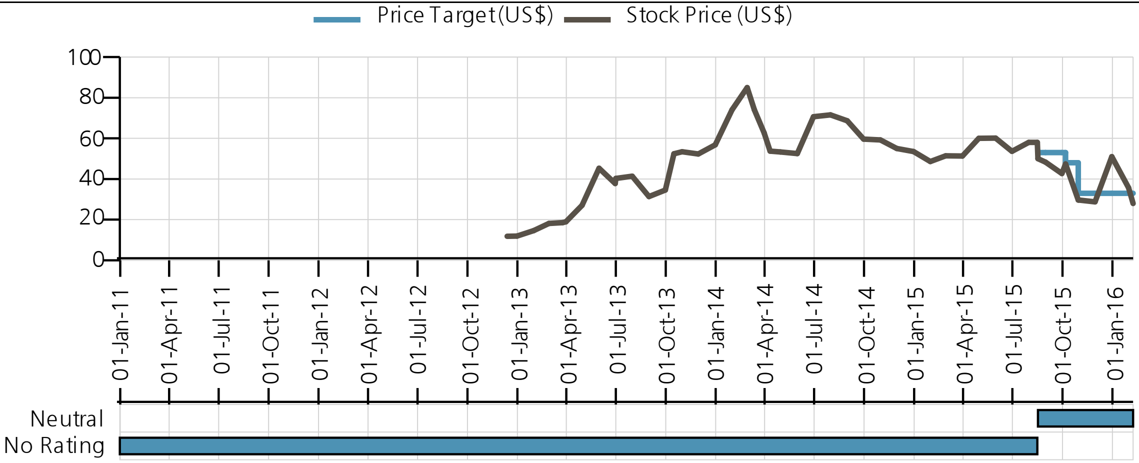
Source: UBS; as of 08 Feb 2016

NextEra Energy (US$)



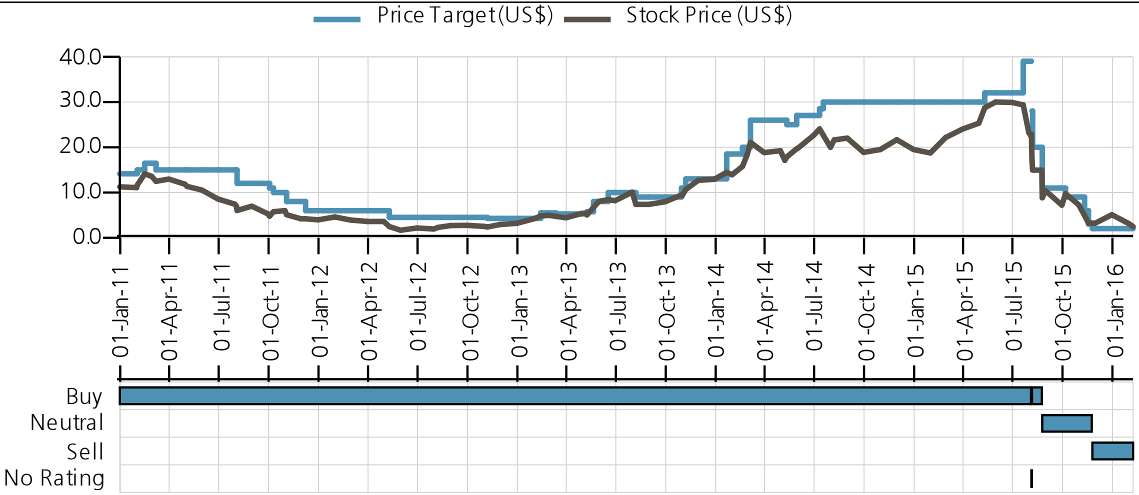
Source: UBS; as of 08 Feb 2016

SolarCity Corp (US$)



Source: UBS; as of 08 Feb 2016

SunEdison Inc. (US$)



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