

SunEdison Inc.

SUNE Side-Up

Transferring coverage of SUNE to reflect shift to YieldCo methodology

We are assuming coverage of SunEdison with a Buy rating and a \$30 price target. Our sum-of-the-parts is comprised primarily of the interests in TerraForm Power (TERP) and the pending Emerging Markets YieldCo. We value the interest in TERP at \$22 (\$13/sh for the Incentive Distribution Rights [IDRs] and \$9/sh for common stock). In addition, we ascribe \$4/sh to the ownership of the EM YieldCo (at a conservative yield). Our DevCo estimate offsets the \$5/sh parent drag and the other small components (servicing, SEMI stake, etc.) round out our PT. The outlook for shares skews favorably but we see this as a high risk/reward name (\$55 upside/\$9 downside [2Yr low is ~\$6/sh]) with IDR fees contingent on hitting installation goals.

Preeminent renewable developer set to transform biz via FCF turnaround

We view the transformation of the company towards large-scale global diversified developer as putting the company in an incredibly effective position to both compete with scale amidst an increasingly competitive outlook – and consolidate a largely private and fragmented industry. Ongoing execution of this strategy in '15 remains key with the company on the precipice of generating real FCF by late '15, with an accelerating trend through '19 (~50% CAGR) reaching near ~\$1 Bn/yr (13% FCF yield). In turn, we look for a formal div in next ~24-months (~2% yield) to further expand shareholder base beyond solar/tech focused to wider utility, income, and infra investors. Lastly, with expensive capital tied to biz expansion, refi into cheaper capital is a future tailwind.

EM YieldCo next upside catalyst as investors have yet to reflect in SOP

With a public S1 expected within weeks, and launch this summer (~June), we attribute an initial \$4/sh to this biz (split between LP and GP). We emphasize existing assets are worth at least \$1-2/sh. We employ a conservative 9% terminal yield (vs TERP at 6%).

Valuation: Transfer SUNE with Buy and SoTP PT of \$30/sh with EM Value

Our entirely revised model and valuation now reflects an explicit uplift for the EM YieldCo efforts, and also models out the GP in detail (similar assumptions to those used for comparable MLP universe). EM YieldCo & warehouse financing are key catalysts.

Equities

Americas

Electric Components & Equipment

12-month rating **Buy**
12m price target **US\$30.00**
Price **US\$26.71**
RIC: SUNE.N **BBG:** SUNE US

Trading data and key metrics

52-wk range	US\$27.07-14.30
Market cap.	US\$7.27bn
Shares o/s	272m (COM)
Free float	99%
Avg. daily volume ('000)	1,431
Avg. daily value (m)	US\$32.6
Common s/h equity (12/15E)	US\$1.45bn
P/BV (12/15E)	5.0x
Net debt / EBITDA (12/15E)	NM

EPS (UBS, diluted) (US\$)

	12/15E			
	From	To	% ch	Cons.
Q1E	(0.27)	(0.37)	-36.12	(0.38)
Q2E	(0.29)	(0.34)	-17.21	(0.34)
Q3E	(0.22)	(0.29)	-33.75	(0.33)
Q4E	(0.14)	(0.31)	-116.38	(0.32)
12/15E	(0.92)	(1.31)	-42.16	(1.38)
12/16E	(0.17)	(1.13)	-565.01	(1.01)
12/17E	0.91	(0.76)	-183.77	(0.11)

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)	12/12	12/13	12/14	12/15E	12/16E	12/17E	12/18E	12/19E
Revenues	2,870	2,556	2,484	1,403	1,663	1,906	2,530	2,996
EBIT (UBS)	40	(226)	(540)	125	330	694	1,166	1,513
Net earnings (UBS)	64	(210)	(255)	(355)	(363)	(245)	(93)	(16)
EPS (UBS, diluted) (US\$)	0.28	(0.87)	(0.95)	(1.31)	(1.13)	(0.76)	(0.29)	(0.05)
DPS (US\$)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net (debt) / cash	(279)	414	27	183	407	690	1,421	2,482
Profitability/valuation	12/12	12/13	12/14	12/15E	12/16E	12/17E	12/18E	12/19E
EBIT margin %	1.4	-8.9	-21.8	8.9	19.8	36.4	46.1	50.5
ROIC (EBIT) %	1.7	(8.2)	(10.3)	1.4	2.5	3.6	4.6	4.9
EV/EBITDA (core) x	3.0	44.3	-27.1	11.5	7.3	5.1	3.8	3.0
P/E (UBS, diluted) x	11.0	(8.8)	(20.2)	(20.4)	(23.6)	(35.2)	(93.0)	NM
Equity FCF (UBS) yield %	(68.2)	(44.6)	(17.7)	(58.9)	(76.1)	(92.3)	(80.3)	(70.8)
Net dividend yield %	0.0	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\$26.71 on 21 Apr 2015 19:48 EDT

www.ubs.com/investmentresearch

This report has been prepared by UBS Securities LLC. **ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 75.** 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

SunEdison Inc.

Investment case

We have a Buy rating and a \$30 price target on SunEdison. SunEdison (SUNE) is a solar development growth company that currently sponsors one YieldCo, Terraform Power (TERP), with another, EM YieldCo to be launched mid-2015. SUNE still has a small hand in solar-grade semiconductor manufacturing through its ~39% ownership in its manufacturing arm, SEMI, and a small poly manufacturing plant within SUNE, SMP. Additionally, SUNE is active in third-party M&A and has completed three deals since the July 2014 IPO, most notably 521MW from First Wind, and more recently 521MW again from Atlantic Wind (at the TERP level). As of the First Wind deal, SunEdison and First Wind had visibility into 10.7GW of conversion-weighted renewable assets with 4.5GW in its pipeline and backlog.

Upside scenario

Our upside scenario is premised on SUNE's ability to: meet its development expectations, fulfil its working capital requirements, maintain its development margins, and potentially most importantly—grow its EM YieldCo and offer consistent project flow via this vehicle. In our upside scenario, we see shares rising to \$55.

Downside scenario

We see downside to shares if SUNE is not able to develop assets consistently in the future, development margins compress greatly due to competition, SUNE isn't able to meet working capital requirements—curtailing growth, and EM YieldCos target markets don't develop as expected. We see shares struggling to gain traction and falling to \$9 (two-year low is ~\$6.30).

Upcoming catalysts

Mid-2015	Announcement of EM YieldCo structure
4Q14	Sale of stake in SEMI Expected
2015	Project acq. and project backlog growth
2015	US/Chinese trade dispute resolution

12-month rating

Buy

12m price target

US\$30.00

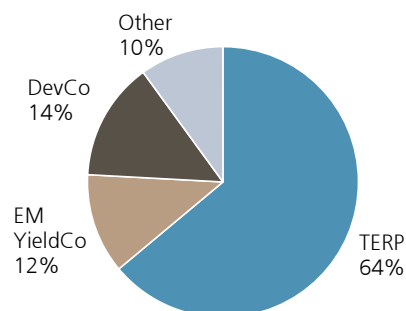
Business description

SunEdison is a global player in the development and manufacturing of semiconductor wafers and a seller of photovoltaic energy solutions. The company operates in two segments: semiconductor materials and solar energy. The semiconductor materials segment includes manufacturing silicon wafers needed for semiconductor production and contributes ~35% of revenues. The solar energy segment includes providing solar energy services that integrate design, installation, and operations, accounting for 65% of revenues.

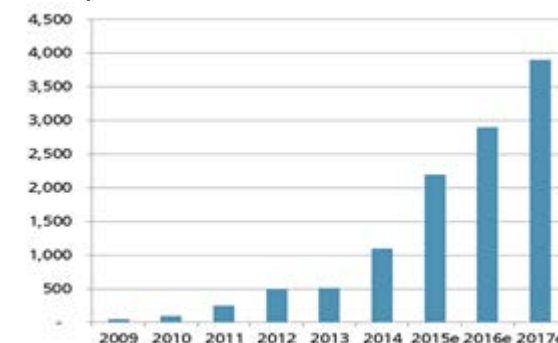
Industry outlook

The renewable energy market in the US received an initial push by the government via Renewable Portfolio Standards and the ITC, along with other jurisdictional incentives like Net Energy Metering and tax breaks for renewable adoption. As a result of declining equipment costs in the solar sector, the growth of solar is not expected to be thwarted in the long term as a result of the ITC's anticipated removal. Conversely, the solar market is projected to grow substantially in the next 10 years as a result of the expected continued cost declines. Utilities will have a significant impact on the pace and sustainability of renewable growth in the long-term as the viability of the DG sector is predicated by decisions surrounding Net Energy Metering. Post-2016, we see many utilities entering residential solar and benefitting from system ownership, as well as developing utility-scale projects in-house.

Share of SOP by Segment (Base Case)



Development Guidance (MW)



Source: Company Filings and UBS Estimates

Contents

Contents.....	3
Executive Summary: Clouds Are Parting	4
Investment Thesis: Five Themes From Unique Perspective.....	5
Valuation: \$30 Price Target (Buy).....	6
Key Value Drivers	7
Secondary Value Drivers and Parent Drag	13
Full Sum-of-the-Parts Valuation.....	18
Downside Case: \$9/sh	20
Upside Case: \$55/sh	20
Catalysts.....	20
Projections: Turning the Ship Around.....	24
Overview of SunEdison	25
SunEdison Ownership Structure and Affiliates.....	25
Development Pipeline	25
Key Considerations	30
Key Risk Considerations	34
Overview of TerraForm Power and EM YieldCo.....	41
Appendix	46
Historic Stock Performance	46
Projected Financials.....	50
Industry Overview: Renewables on the Road to Grid Parity	53
YieldCo: Debunking the Myth.....	59
Management.....	71
Independent Directors on TERP Board.....	73

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

Executive Summary: Clouds Are Parting

We are assuming coverage of SUNE with a Buy rating and \$30 PT. We see SunEdison as well positioned to capitalize on growing solar ambitions both domestically and internationally, targeting 4GW/yr of development by 2017 (off a 1GW in 2014). We expect a litany of positive datapoints around both organic execution and deal generation throughout 2015 from one of the most diverse renewables developer in the sector.

Given the meaningful targets delineated by management at its Capital Markets Day earlier this year, we see the story as one of quarterly execution. We believe the stock will continue to grind higher as management delivers on their targets, particularly for 2015, where promises of 2.1-2.3GW appear quiet ambitious over just the last couple years (backend weighted). In discussing these targets with management we note a strong degree of confidence (and hence comfort in shares to continue their recent upward trend). We emphasize 1H15 should also continue to see the 'last' rush of contracts signed for development with US federal tax credits (both ITC and PTC) before they end in late 2016; the full cycle is 12-18 months suggesting much will be delivered in coming quarters. Execution on contracts through 2015 will help firm up the 2.75-3.0GW backlog of projects anticipated for 2016.

Rather, real upside is on incremental execution into 2017, as management targets 3.75-4GW/yr (we assume this is the long-term new run-rate) despite the rolling off of tax credits in the US. This would tactically involve a considerably greater degree of foreign development vs. domestic opportunity set given the diminished opportunity set likely in the 2017-19 period. As such, the development effort ongoing – and nascent Emerging Market YieldCo is critical to outperforming domestic peers through this temporary slowing prior to implementation of carbon targets in the US. We reiterate EPA's pending finalization of 111(d) this summer and ultimate translation of these into increased formal RPS requirements is of the utmost importance to future growth prospects – and a core to our differentiated view on continued renewable deployment through the decade and beyond.

Financing flexibility remains a real opportunity, with details on the development 'warehouse' substantially reducing future working capital needs to achieve growth targets. Given premium on capital- we see warehouse expansion from \$1.5 Bn to \$2.5 Bn+ in next year as a further critical element. Moreover, we wouldn't doubt future iterations of the structure shift towards lower costs of capital, leveraging the company's improving overall credit quality rather than utilizing non-recourse entities. Investors should pay close attention to improving balance sheet.

Framing the upside? We see upside to shares to well north of its current valuation at TERP shares improve on greater visibility of backlog (worth a further ~\$5/sh in our SOP), as well as roll-forward the valuation on our General Partnership. Assuming management can effectively build-out an international renewables platform, this could readily shift our GP valuation for TERP (and the EM YieldCo) to north of \$20/sh. Altogether, executing on management's growth targets could provide upside to the ~\$50/sh context. Our baseline \$30 PT effectively assumes execution through its stated plan at high discount rates to account for execution risk.

Stage is set for SunEdison to execute on all new fronts in 2015, namely wind and residential solar, along with its core solar competencies.

Install growth targets are ambitious and we believe that investors need to see management hit its intermediate targets before getting more comfortable with the upside thesis.

In contrast, this is no normal development company and its development risks are real- both with respect to increasing competition and limited balance sheet flexibility. The risks embedded in this business are not trivial as the company contemplates hitting its 4GW/year development target globally. We emphasize translating development capital into successful projects will be particularly key as a shift in the backlog towards international business requires execution today. Anecdotally, we appreciate the company's constant inflow of businesses.

Altogether, this is a high-risk, but high-reward stock. That said we prefer its YieldCo subsidiary TerraForm Power over SUNE, affording much of the same benefits on the upside around execution, while protected from some of the competitive pressures around project development. We see SUNE & TERP as particularly well positioned to capitalize on US- and soon to be – significant international development. SUNE's targets promise to make it the largest global renewable developer full-stop, capable of leveraging a scaled balance sheet and business model to all flavors of renewable and increasingly geographies too.

Investment Thesis: Five Themes From Unique Perspective

The Advantage of a Utility Angle on Solar Stock

If there is any way to differ our approach to this story versus sell-side peers, we emphasize our utility background places a greater focus on the demand side – and opportunity set for not just solar, but renewables of all flavors. We suspect many investors hereto have been largely focused on the declining cost curve (which has admittedly been impressive), but a greater focus on the industry penetration opportunity is warranted following the proposed carbon reforms.

(1) Demand growth is *better* than many anticipate – carbon coming.

Renewables, including solar, have a very bright future in the US and elsewhere under the guise of carbon mandates. Many investors have been too focused on the near-term expiration of the tax credits to appreciate the groundswell of regulatory concern, providing support for continued utility-scale and DG procurement of solar beyond the 2017 ITC step-down. Similarly wind build expectations will be driven by the same dynamic. Moreover, oil is not as relevant as many investors assume, with little penetration existing already in most markets that remain 'economic' for solar. The oil reframe is a 'long-term' opportunity argument, rather than impacting the existing size of the pool of economics today.

(2) Renewables consolidation is key part of upside thesis

The last two big deals in the YieldCo space have been on the wind side and both involved SunEdison. Neither is a surprise as management looks to diversify its portfolio and provide additional visibility into its growth guidance. If nothing else, the YieldCo vehicle will serve to consolidate the renewable sector, with TERP's advantaged cost of capital serving as among the pre-eminent platforms for assets to be eventually dropped. We expect other portfolios of operating will come to market and offer accretive opportunities for YieldCo sector, with those with the tightest equity yields able to win the bids. Specifically, we see a credible argument for TERP to partner with **large-cap US utilities** to enable the drop of their own eventual renewable assets into the entity, improving the sustainability of the drop-

SUNE could run into liquidity risks along the way to its run-rate if growth stumbles.

The declining cost is just part of the story – investors should avoid getting lost in the forest and missing the trees.

We're less nervous about ITC expiration given nascent datapoints on carbon regs in US

Knowledge of renewable portfolios that will be available for sale gives a leg-up.

Expect growing focus on partnerships with developers –

beyond just straight sector consolidation

downs into the structure. Due to the IDR relationship, deals at the YieldCo levels (such as Atlantic Power) are accretive to SunEdison.

(3) GP is the real value, not just a 'kicker'

With ~65% of our valuation relating to the GP ownership of TERP and EM YieldCo vs only 14% from the development gross margin, monetizing into the YieldCo is the most important aspect of the valuation. We have seen utility-oriented investors struggle with this MLP concept and perceive even greater reluctance from legacy solar investors. It appears there are a wide variety of expectations and a deeper understanding here can help unlock further value.

Mgmt spent a significant amount of time at its recent Capital Markets day on the GP valuation for a reason.

(4) Going out on the Emerging Markets limb

Pulling together the themes above, we are one of the first on the Street to explicitly detail assumptions for the forthcoming EM YieldCo, putting a \$4 value on shares (upwards of \$6/sh if we assume mgmt's soft assumptions). We estimate that EM YieldCo is worth \$4/sh to SunEdison, representing a value of \$1.3Bn (~\$750Mn LP and ~\$600Mn GP) for its 18% eventual ownership expectation.

(5) Focus on Cash Flow and Not Retained Value

With the company having historically traded and focused on EPS, we see investors as increasingly focused on cash flow. Picking up the name today, we are simply focused on understanding how a fast-growing infrastructure company finances itself. While total addressable market (TAM) matters, we emphasize organizing these cash flows is also of the utmost importance. Migrating to a better understood and more sound investment metric in cash yield is a step in the right direction in our mind.

Company is poised to become FCF positive – in a big way

Valuation: \$30 Price Target (Buy)

We include an abbreviated version of our sum-of-the-parts valuation below, reflecting all of SUNE's segments. The bulk of the value comes from the TERP (OECD) and Emerging Markets YieldCos as well as the underlying development business. We elaborate on the primary and secondary value components below:

Figure 1: SUNE: Putting it all together with an abbreviated sum of the parts*

SunEdison Summary Valuation UBSe	Value per Sh.	Percent
1. TerraForm Power		
Common Ownership	\$8.95	30%
Incentive Distribution Rights	\$13.06	44%
2. EM YieldCo		
Common Ownership	\$2.32	8%
Incentive Distribution Rights	\$1.80	6%
3. DevCo	\$4.87	16%
4. Servicing	\$1.56	5%
5. SEMI, Manufacturing, and Other	\$1.89	6%
6. Parent Drag	(\$4.79)	-16%
Total SunEdison Valuation	\$29.66	

Source: Company reports, FactSet and UBS estimates *Percentages are based on gross value (i.e. parent drag is a negative percent)

Key Value Drivers

(1) OCED YieldCo (TerraForm Power): \$22/sh

TERP and the EM YieldCo provide value for SUNE in two ways: (1) SunEdison owns a direct common equity owner interest in the YieldCo and; (2) An incentive distribution right [IDR] that gives SUNE a portion of future cash flows based upon the YieldCos rate of growth.

a. Common 'LP' Ownership: \$9/sh

We include our updated valuation **\$46** price target below for TERP, revised up from \$38 previously. Our valuation of TERP is predicated on assuming a 6% yield on the post-backlog and pipeline CAFD. Our latest update incorporates a lower acquisition multiple (now 11.5x from 12.0x previously), a higher equity issuance assumption (now \$40 from \$30 previously), and the incorporation of the Atlantic Power deal. We admittedly still see this valuation methodology as conservative, but pause given the meaningful execution risks in delivering the pace of stated renewable development. Please see our accompanying note today for additional background as well as our interactive model.

Figure 2: TerraForm Power Valuation

TerraForm Power (TERP) Valuation - 2018E	Downside	Base Case	Upside
Run-Rate CAFD 2015	\$219	\$219	\$219
Sponsor Drop Down			
Leads (5% Prob.)	\$0	\$0	\$222
Qualified Leads (20% Prob.)	\$0	\$0	\$252
Pipeline (60% Prob.)	\$0	\$292	\$292
Backlog (90% Prob.)	\$513	\$513	\$513
Acquisitions and Other ROFOs	\$44	\$44	\$44
Total Call Right Projects & ROFO	\$557	\$849	\$1,323
Gross Cash Available for Distribution (CAFD)	\$775	\$1,067	\$1,541
Corporate Interest (Post Tax)	(\$98)	(\$135)	(\$195)
Total Net CAFD (Pre-Reserve)	\$677	\$932	\$1,346
Distribution Reserve (1-Payout)	15.0%	15.0%	15.0%
Net CAFD	\$576	\$792	\$1,144
CAFD Distributed to LP Unit holders	\$394	\$549	\$784
Est. Shares Count (Mn)	197	202	237
Net CAFD per Share, pre IDRs	\$2.92	\$3.92	\$4.83
Dividend Per Share (DPS)	\$2.00	\$2.71	\$3.31
Peer Yield	6.0%	6.0%	6.0%
(Premium) / Discount	33.6%	0.0%	-16.8%
Assumed Yield for TERP	8.0%	6.0%	5.0%
Valuation	\$25.00	\$46.00	\$67.00
Upside/Downside to Current Price	-40%	11%	62%

Source: Company Filings, FactSet, and UBS Estimates

How much of TERP does SUNE own?

We currently value SUNE using the value implied from our current price target for shares. We continue to expect SUNE will sell down its ownership interest in shares as it pursues third-party acquisitions and other drop-downs. As a reminder, SUNE will continue to consolidate TERP through the 50% ownership level on account of its GP structure. We see this as obfuscating the underlying development business at SUNE.

Figure 3: TERP LP Value to SUNE – Baseline value

TERP LP Ownership Interest	Downside	Base Case	Upside
Ownership in TerraForm Power (NYSE: TERP), using Price Target			
Shares Owned (Mn), 2015e	63.0	63.0	63.0
UBSe Price Target	\$25.00	\$46.00	\$68.00
Equity Value (\$ Mn)	\$1,575	\$2,898	\$4,284
TERP LP Value to SUNE	\$4.87	\$8.95	\$13.24
<i>Current Share Price (for Comparison) - and Corresponding Value/sh</i>	<i>\$41.00</i>	<i>\$7.98</i>	

Source: Company Filings, FactSet, and UBS Estimates

b. TERP GP (\$13/sh)

As is the case with other General/Limited Partner relationships at both MLPs and YieldCos such as NextEra (NEE), the GP collects a disproportionate share of distributable cash flow (DCF) to TERP LP units. Through the Incentive Distribution Rights (IDR) formula, the GP is set to collect up to 50% of all CAFD as a reward for growing the LP distribution past various breakpoints.

The General Partner (GP) is designed to *align* the incentives of SUNE to sell down its projects to TERP in an effort to ensure that drops are always sold to this subsidiary rather than to a third-party peer. In addition, this provides an incentive for management to quickly grow its dividend. With far fewer GP shares and owners (only SUNE), GP distributions per unit therefore grow significantly faster than their LP counterparts. Valuing the GP stream thus entails a higher terminal growth rate (we assume 2.5%) than the LP (we assume 2%). However, our cost of capital assumption for the GP is higher too (we assume GP at 9.5%-10.0% vs LP at 8.0-8.5%) to account for the increased risk and potential volatility associated with an exponential growth rate.

Nevertheless, our current \$13/sh discounted cash flow valuation implies a 20x multiple of our UBS 2019E DCF, at the low end of the peer range. We then discount this value back to 2016E (base year of our SOP) at a 10% rate to reflect the higher risk profile of these cash flows.

Figure 4: TERP IDR Distributions to SUNE – an Emerging GP

CAFD Projections	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimated Cash Available for Distribution	\$214	\$299	\$402	\$775	\$1,006	\$1,257	\$1,476	\$1,625	\$1,848	\$2,106	\$2,370
CAFD/Share	\$1.64	\$2.05	\$2.28	\$3.28	\$3.58	\$3.99	\$4.30	\$4.50	\$4.75	\$5.09	\$5.40
% Growth		25%	11%	44%	9%	12%	8%	5%	6%	7%	6%
Total Distribution (\$MM)	\$170	\$229	\$371	\$678	\$992	\$1,253	\$1,476	\$1,668	\$1,921	\$2,177	\$2,450
Payout	79%	77%	92%	87%	99%	100%	100%	103%	104%	103%	103%
Less: IDR (\$MM)	\$0	\$5	\$37	\$139	\$258	\$361	\$448	\$529	\$632	\$739	\$854
LP Distribution (\$MM)	\$170	\$225	\$335	\$538	\$733	\$893	\$1,028	\$1,139	\$1,289	\$1,438	\$1,596
Unit Outstanding (MM)	130	146	176	236	281	315	343	361	389	414	439
LP Distribution/Unit	\$1.31	\$1.54	\$1.90	\$2.28	\$2.61	\$2.84	\$3.00	\$3.16	\$3.32	\$3.48	\$3.64
% Growth		18%	23%	20%	14%	9%	6%	5%	5%	5%	5%
Payout	79%	75%	83%	69%	73%	71%	70%	70%	70%	68%	67%
Coverage	1.3x	1.3x	1.1x	1.1x	1.0x	1.0x	1.0x	1.0x	1.0x	1.0x	1.0x
Terminal value											\$52
PV of LP Distribution/Unit	1.31	1.54	1.76	1.95	2.07	2.08	2.03	1.98	1.93	1.87	1.81
Terminal PV											\$25
TERP Equity Value per Unit											\$45
SUNE GP Value											
PV of GP Distribution/SUNE Share	\$0.00	\$0.01	\$0.09	\$0.31	\$0.52	\$0.67					
Terminal Value (Undiscounted)				8.70	16.15	22.54					
Terminal PV (Discounted Back)				7.19	12.13	15.39					
Estimated Value of IDRs to SUNE per Share				\$8	\$13	\$17					

Source: Company Filings and UBS Estimates

We include the company's projected guidance for IDRs through 2019 in comparison to the guidance embedded in our model. Our baseline valuation assumes an NPV of the GPs through 2019 valued at a 20x CF multiple, in-line with the GP peer group ('15e). We flag the substantial improvement in valuation as we shift out our GP valuation to future years. We opt for 2019 seeing this as the terminal year of management's current guidance projections.

Figure 5: We contrast our assumptions relative to SUNE guidance

SUNE GP Guidance (2015 Analyst Day)	2015	2016	2017	2018	2019
TERP Dividends	82	96	119	143	164
UBSe (Assuming conversion)	84	99	123	147	168
TERP IDRs	2	9	46	142	280
UBSe	0	5	37	139	258
Total Cash Flows to SUNE from TERP	84	105	165	285	444
UBSe	84	104	159	286	427
Delta vs UBSe	0	(1)	(6)	1	(17)
Dividend per Share Guidance	\$1.30	\$1.53	\$1.90	\$2.28	\$2.61
UBSe	\$1.31	\$1.54	\$1.90	\$2.28	\$2.61
Implied Sponsor Shares (Mn)	63.1	62.7	62.6	62.7	62.8

Source: UBS estimates and Company reports.

What are underlying assumptions in the GP Valuation?

We include details on the discount rates embedded in our GP DCF to arrive at our values. We emphasize the 9.5% cost of equity is modestly higher than the LP discount rate, but consistent with the rate at which we discount peers.

We also emphasize that we discount the long-term at a yet higher 10% terminal growth rate seeing greater risk in the long-term. We see the premium as necessary

to reflect the risk of an eventual slowing in the growth rate – and need potentially to reset the IDRs in the long-term to ensure continued growth.

Some pushback could come from our relatively modest assumption of a 2% terminal growth factor amidst what is likely to be a higher growth structure through the medium term. We emphasize this is even discounted vs. many of the assumptions employed in our peer MLP valuations across the sector (typically in the 2-3% range).

Figure 6: General Partner Assumptions

GP Assumptions	
Shares Outstanding	320
Terminal Growth Rate	2.0%
Risk Free Rate	4.50%
Levered Beta	0.7
Cost of Equity	9.50%
Terminal Cost of Equity	10%
Capital Gains Tax	15%

Source: Company Filings and UBS Estimates

Figure 7: YieldCo Beta

2 year weekly beta	
PEGI	0.60
ABY	1.20
NYLD	0.90
NEP	0.62
RNW-CA	0.22
Average	0.710

Source: Company Filings

Below we summarize the total distributions to SunEdison from TERP which consist of dividends on the subordinated shares and IDRs. Our 2019E total proceeds to SunEdison is a few percent below guidance, likely implying that management intends to accelerate growth faster than we expect towards the end of the forecast horizon.

(2) Emerging Markets YieldCo: \$4/sh

Management has an S1 filing pending for its own emerging markets YieldCo; we see this as the next significant catalyst for value as the Street has yet to formally delineate what it sees the value at. With \$46 Mn of CAFD *already* in this segment it is easy to argue this business already has ~\$2/sh already, however with a conversion-weighted pipeline of ~2GW including leads, we expect the YieldCo offering to translate to upwards of ~\$4/sh of value.

We expect a public filing to be in the ~May timeframe, with a corresponding public listing executed in the Summer (June-July).

a. Common 'LP' Ownership: \$2/sh

While details are scant, we attempt to put down our initial estimate on the value of this business. Management has stated that they expect the EM YieldCo to trade approximately 150-200bp wider than TERP does but we are still not sold on investors' receptiveness to this non-OCED vehicle. Perhaps when further details are provided about risk mitigating elements we will have additional comfort and reduce our yield assumption further. We expect the initial portfolio to include initial CAFD of \$70-80 mn, larger than we had initially expected seeing the need to have meaningful market cap given a relatively smaller initial IPO listing likely.

Figure 8: EM YieldCo – LP Value to SUNE (SOTP – 2019E)

Emerging Markets YieldCo (EMYCo)	Downside	Base Case	Upside
Existing EM Assets CAFD (as of 4Q) \$ Mn		46	
Stand-Alone Asset Yield (Consistent with TERP/NYLD)		6.00%	
Add'l EM Yield Adder	4.00%	3.00%	2.00%
Pro-forma Yield on EM Assets Today		9.00%	
Implied Value on Only Assets Today		511	
Implied Value on Only Assets Today (\$/sh) - <u>Min Value/Illustrative</u>		\$1.58	
YieldCo Valuation	\$0.68	\$2.32	\$2.60
Incentive Distribution Rights from YieldCo	\$0.00	\$1.80	\$10.90
Value of to SUNE	\$0.68	\$4.12	\$13.50

Source: Company reports and UBS

While the details are still unclear, we include our initial understanding of the emerging market YieldCo's appeal.

- **How wide will the YieldCo trade?** There appears an expectation for the YieldCo to trade ~200bp wide of TERP, suggesting on a 2015E yield of ~6%. Our valuation conservatively projects a 2-3% discount off a future projected yield reflecting the added risk.
- **How big is the Emerging Markets footprint? There's a lot of CAFD here already.** Management disclosed it had \$46 Mn of CAFD as of end of 4Q, and a further \$164 Mn in ROFO Assets. Total pipeline is ~\$430 Mn in CAFD. Looking into the CAFD generated for each \$/Watt, we see guidance as consistently implying a robust unlevered CAFD of ~\$0.16-0.17/Watt.

We caution that the ROFO delineated in its slides is implicitly third-party acquisitions, rather than assets that are under development. It estimates these commitments as totaling \$164 Mn at present. We look for a full list of these assets to be released with the public filings.

How advanced are the development efforts? CAFD is Brewing.

As for the Development Assets, management has only disclosed a single development estimate of \$430 Mn, without breaking this more granularly between backlog-pipeline-leads-and qualified leads. We see this aspect as critical to the underlying credibility of the structure.

We flag that of the 3GW in the backlog, 12% is in emerging markets, translating to 360MW, translating to potential backlog CAFD of ~\$60 Mn. In the wider 'pipeline', this 12% translates to an estimated 684MW, translating to ~\$110 Mn in our view (using our \$0.16/Watt estimate). Combining these two, we see backlog and pipeline contributing ~\$170 Mn out of the total weighted opportunity (with leads) of \$430 Mn defined.

Figure 9: Breaking out the Opportunity set

International Assets - <u>Unlevered</u> CAFD	MWs	Conversion Factor	Operating MW	CAFD	CAFD/MW
Existing Assets	285	100%	285	\$46	\$0.16
ROFO (3rd Party Acquisitions)				\$164	
Development Assets	12,400	20%	2,539	\$430	\$0.17

Source: Company reports and UBS estimates

b. EM YieldCo GP (\$2/sh)

We include a table below illustrating our DCF of future contemplated project developments. We apply a relatively robust discount factor of 3% to reflect the disproportionate risk factor around development efforts.

Figure 10: EM YieldCo – GP Value to SUNE (DDM)

LP Valuation	Downside	Base	Upside
Total Drops (ROFO 3rd party & Development As:	\$164	\$594	\$594
Existing CAFD	\$46	\$46	\$46
Total CAFD (Projected Achieved by ~2018)	\$210	\$640	\$640
Corporate Interest Post Tax	(\$27)	(\$81)	(\$81)
Net CAFD	\$183	\$559	\$559
Distribution Reserve	20%	20%	20%
Net CAFD	\$147	\$447	\$447
IDR - 2018E	\$24	\$75	\$75
CAFD for LP unitholders	\$122	\$373	\$373
Initial Shares Outstanding	23	23	23
Additional Unit Issued	33	102	102
Total LP Unit Outstanding	56	124	124
LP Distribution per share	\$2.19	\$3.00	\$3.00
YieldCo Peer Yield	6.0%	6.0%	6.0%
(Premium)/Discount	<u>4.0%</u>	<u>3.0%</u>	<u>2.0%</u>
Assumed Yield	10.0%	9.0%	8.0%
LP Value per unit	\$21.9	\$33.3	\$37.5
LP Value per Hypothetical Share			
SUNE ownership	18%	18%	18%
LP Value (\$ Mn)	\$221.3	\$749.4	\$843.1
LP Value to SUNE	\$0.68	\$2.32	\$2.60

Source: Company reports and UBS estimates

YieldCo M&A Is Upside For SUNE

Due to the nature of the corporate structure with Incentive Distribution Rights (IDRs) and service contracts, when either TERP or the EM YieldCo executes on a third party M&A deal the sponsor also reaps the benefits. In relation to IDRs, as the YieldCos operating assets grow and revenues generated from the new assets matriculate, SUNE's IDRs increase as a result. The same goes for the O&M revenues, as the revenues are based on \$/Watt metrics, roughly \$0.02/Watt, and total revenues will increase as the denominator expands. Lastly, CAFD increases as projects are added to the portfolio, which would increase the LP valuation.

(3) Development Business (DevCo): \$5/sh

We include an assumption in our sum-of-the-parts valuation around the value created upon sale from the development entity into the YieldCo. We estimate a gross margin on transactions as being ~18% following 2014 results. We also reflect a broad-based \$2/watt solar installation assumption.

We see this segment as where competitive pressures could put the most pressure. Growing competition globally will put downward pressure on returns, effectively minimizing the value step-up as projects are developed and sold into the YieldCo. The company tends to guide to a ~20% margin, consistent with other industry peers. What is notable in our view is the consistency in the view that

How does SUNE benefit from TERP/EM YieldCo M&A?

1. IDRs
2. Servicing revenues
3. Appreciation on underlying LP shares

Our \$5 of value at the DevCo approximately offsets the corporate drag obligations.

margins will remain *intact*. We're biased to see margins move downwards from the 20% target threshold, down to 18% or lower over time as more industry participants enter the space.

Project costs also trending lower too over time.

We continue to apply a ~\$2/Watt build cost assumption in our profile below. While this is the cost structure through the near term, the continued declining cost of projects will also lower nominal margin \$ value through time. We're not as worried about this assumption given the bigger uncertainty over exactly how many MWs SUNE is able to achieve annually.

To reflect this risk we apply a discounted multiple to this biz. We apply a 5x multiplier to margins (~EBITDA) to reflect what we see as a short visibility business. We emphasize the lower multiple business is also appropriate as the company repositions from domestic projects towards opportunities abroad where competitive dynamics are less well defined (given numerous markets contemplated).

We're worried about declining profitability per project, not the projects per se. As such, we reiterate our disproportionate comfort in the attractive valuation of TERP rather than SUNE, seeing less risk from competitive pressures to this segment than elsewhere. Rather, given TERP's industry leading position, it has among the better costs of capital among peers, able to make a large number of potential acquisitions.

Figure 11: DevCo Value: How much value created at SUNE?

DevCo Value --> Step-up Value as Dropped from SUNE to TERP	Downside	Base Case	Upside
Capacity Built (GW) - 2016	2,000	3,000	4,000
Guidance for 2016		2800-3000	
\$/Watt Costs	2.00	2.00	2.00
Margin (%)	17%	18%	19%
Gross Margin (\$ Mn)	680	1,080	1,520
Opex	(765)	(765)	(765)
EBITDA	-85	315	755
EV/EBITDA-> 4-6x Range... Discounted given uncertainty	5.0x	5.0x	5.0x
Implied Value	(425)	1,575	3,775
Implied Value (\$/kW-yr)	(43)	0.53	189
Value of to SUNE	(\$1.31)	\$4.87	\$11.66

Source: Company reports and UBS estimates

Secondary Value Drivers and Parent Drag

(1) Servicing: \$1-2/sh

SunEdison performs the maintenance for the solar and wind assets it develops and as of the 2015 Analyst Day the company had over 5GW of assets under management (post-First Wind). This includes preventative maintenance on the solar and wind projects. The servicing revenue for 2014 was \$206Mn versus guidance of \$180-230Mn. Management targets growing this to a ~14-20GW platform in coming years.

Margins are in the mid-teens today, and projected to grow to the ~30% ballpark in coming years, off revenues at ~\$20/kW-yr. We see this translating to ~\$2/kW-yr today, edging upwards of ~\$5-6/kW-yr as the business scales. While this is not

Minor incremental value opportunity, but key to scale. Forming partnerships is key to M&A possibilities down the line.

necessarily a meaningful driver of value to the business, it could well serve to drive additional partnering opportunities as well. For example, Pattern currently has a services arrangement with Duke Energy for instance. *Bottom line this business does not add materially to cash flow generation, but is more meaningful to gaining scale in an increasingly competitive operating environment.*

Figure 12: Serving Business

Solar and Wind Servicing	Downside	Base Case	Upside
	2015 (Today)	2017	2017 Upside
Capacity (GW)	5,000	14,000	14,000
Revenue @ \$20/kW-yr	100	280	280
EBITDA Margin %	16%	20%	30%
EBITDA	16	56	84
EV/EBITDA	9.0x	9.0x	9.0x
Implied Value	144	504	756
Implied Value (\$/kW-yr)	3	4	6
Value of to SUNE	\$0.44	\$1.56	\$2.34

Source: Company reports and UBS estimates

(2) SEMI, SMP Poly, and Other: \$2/sh

a. Ownership of SEMI: \$1/sh

MEMC began as a semiconductor manufacturer with expertise in solar grade polysilicon and wafers, but shifted its focus to solar-grade manufacturing and PV project development following its acquisition of SunEdison in 2009. The majority of the manufacturing business was separated from SUNE in 2014 with the IPO of SunEdison Semiconductor (SEMI). SUNE has roughly 25.1% equity share in SEMI, through ownership of 10.6Mn shares as of January 20th disclosures. Mgmt. believes that the shares will most likely be sold down in 2015, subject to market conditions, and they expect \$200-300Mn in value when they sell.

SUNE has stated that it plans to fully exit this position over time with proceeds used to finance the balance of operations.

Figure 13: SEMI SOP

Remaining Ownership in Semiconductors	Shares (Mn)	Public Price	Value	Value/Sh.
Ownership in SunEdison Semiconductor (NYSE: SEMI)	10.6	\$26.34	279	\$0.86

Source: Company Filings and UBS Estimates

b. SMP Poly Plant: \$1/sh

Through the separation of SUNE and SEMI, SUNE retained the intellectual property rights associated with solar-grade products, and SEMI reserved rights for semiconductor manufacturing outside of the solar space.

Figure 14: SUNE Manufacturing SOP

SMP poly Plant	Downside	Base Case	Upside
Capacity (MT)			13,500
Revenues (\$/Kg)			\$25
Cash Costs (\$/Kg)			<u>\$15</u>
Cash Margin (\$/Kg)			\$10
D&A (\$/Kg)			<u>\$3</u>
Net Income (\$/Kg)			\$7
Ownership Interest			50.0%
Net Income (\$ Mn)			\$47
Cash Flow (\$ Mn)			\$68
EV/Cash Flow	7.5x	8.5x	9.5x
Debt as of 12/31/14 (SMP Credit Facilities, etc)	(\$353)	(\$353)	(\$353)
Market Value of Equity to SUNE	\$153	\$220	\$288
Value of to SUNE	\$0.47	\$0.68	\$0.89

Source: Company Filings and UBS Estimates

c. Third Party Sales: <\$1/sh

While management has little intention to continue selling projects to third parties, a last 'batch' exists that have yet to be sold given they were contemplated prior to the development of TERP. While exact details were not provided, management has repeatedly stated it does not see these projects as eligible for dropping down into the structure.

A last trickle coming from this 'defect' in the new business model.

Figure 15: Third Party Sales – Value to SUNE

Non-TERP Projects Sold to Third Parties	Downside	Base Case	Upside
Capacity (MW)		280	
EV (\$/kW)		\$2,000	
Developer Margin (%)	15%	20%	25%
Market Value of Equity to SUNE	\$84	\$112.00	\$140
Shares Outstanding	324	324	324
Value of to SUNE	\$0.26	\$0.35	\$0.43

Source: Company reports and UBS estimates

(3) Thinking through the SUNE Balance Sheet

Central to understanding the company is the underlying balance sheet of the company as it continues to transition from a manufacturing company towards more of a development platform.

- **Converts:** Are a main strategy of the SUNE story, with \$2.4 Bn at the parent. Of this \$914 Mn is already in the money (implied strike is ~\$18/sh). We include in our SOP the assumption the shares as converted.

The next meaningful conversion trigger is \$32.73/sh, with an additional ~\$1 Bn of conversion. We emphasize that this could provide the next meaningful resistance point for shares.

- **Other leverage?** Management recently issued \$747 Mn of loans at the parent in connection with the FirstWind acquisition. We flag these were structured with collateral from TERP shares (that SUNE presently owns). We see this as a

Figure 16: Convert Strike Prices

Convert	Strike Price
2018 Converts	\$14.62
2020 Converts	\$26.87
2021 Converts	\$14.62
2022 Converts	\$18.70
2022 Converts	\$18.70

Source: Company Filings

bit more aggressive seeing some risk around a degradation in the value of TERP shares. This is essentially a margin loan backed by the YieldCo shares which could create a liquidity issue if TERP declines materially lower.

- **Non-recourse entities:** Notably confusing is the consolidation of *both* the SEMI business and TERP within SUNE. We caution that this will continue to distort the 'true' leverage of the underlying business. Management will begin to deconsolidate SEMI now in 2015 – and likely to continue to sell down its owned shares. TERP will remain consolidated through the long-term.
- **Don't be fooled by the leverage – it's not actually that levered.** Despite the high nominal reported leverage, we see leverage as readily manageable with much of it taking the form of convertible bonds. Rather, true recourse debt appears to be only ~\$1 Bn; when netting this against ~\$1 Bn in existing cash, we see no real concerns.

Figure 17: Sun Edison Debt – Much of it is non-recourse and minority interest

SunEdison Inc - Debt	2014
Recourse Parent Debt	
Convertible senior notes due 2018, net of discount	\$485
Convertible senior notes due 2020, net of discount	\$432
Convertible senior notes due 2021, net of discount	\$429
Converts issued in 1Q15 - 2022	\$460
Converts issued in 1Q15 - 2022	\$600
Total Converts	\$2,406
Other non-solar energy system recourse debt	\$215
Solar Energy recourse financing	\$40
Other Previously Outstanding Debt	\$255
Margin Loan - w/ TERP Shares	\$410
Sellers Note due 2020 collateralized w/ TERP Shares	\$337
Total Defined UBS Recourse Debt (in SOP)	\$3,408
Other Debts (excluded in SOP) as largely non-recourse	
SMP Ltd. credit facilities	\$355
Emerging Markets Yieldco acquisition facility	\$150
Solar Energy non-recourse systems debt - current portion	\$668
TerraForm Power debt	\$1,604
Semiconductor Materials debt	\$207
Solar Energy non-recourse systems debt less current portion	\$2,615
Total Defined UBS Recourse Debt (in SOP)	\$5,598
Grand Total Debt	\$9,006

Source: Company reports and UBS estimates

Parent Recourse Obligations

The value per share associated with the debt obligations is displayed below in our full SOTP, and at (\$5.00)/share, it is meaningful. We see this discussion tied to the working capital/liquidity issues, as the amount debt they are able to raise will affect their ability to maintain the working capital necessary for their high-growth expectations. Additionally, the high levels of debt that SUNE management are predicting will impact their liquidity. We feel it is necessary to include the obligations in the SOP valuation, although we do not believe that the parent obligations are being considered in many valuations in the Street currently.

Figure 18: Parent Recourse Obligations

Obligations	Debt	Avg. Rate	Int. Exp
Converts	2,406	2.6%	63
Other	255	3.0%	8
Marin Loan	410	3.8%	15
Seller Note	337	3.8%	13
Total	3,408	2.9%	99
Guidance: \$25Mn Quarter for Parent Recourse Int.			

Source: Company Filings and UBS Estimates

Liquidity facilities

In addressing the leverage, management presently has just under \$1 Bn in cash and a L/C facility of \$540 Mn. We see this as adequate in the context of \$4Bn in capex contemplated for this year. That said, we expect management to continue to pursue investment and scaling up of corresponding liquidity facilities, including non-recourse warehouse facilities.

Full Sum-of-the-Parts Valuation

Figure 19: SunEdison Full SOP – Part 1

SunEdison Valuation UBSe	Downside	Base Case	Upside	
TERP LP Ownership Interest	Downside	Base Case	Upside	
Ownership in TerraForm Pow er (NYSE: TERP), using Price Target				
Shares Ow ned (Mn), 2015e	63.0	63.0	63.0	
UBSe Price Target	\$25.00	\$46.00	\$68.00	
Equity Value (\$ Mn)	\$1,575	\$2,898	\$4,284	
TERP LP Value to SUNE	\$4.87	\$8.95	\$13.24	
Current Share Price (for Comparison) - and Corresponding Value/sh	\$41.00	\$7.98		
TERP GP Ownership Interest	Downside	Base Case	Upside	
	Thru 2018	Thru 2019	Thru 2020	
NPV of IDRs & Terminal Value @ 20x CF	\$7.60	\$13.06	\$16.99	
TERP GP Value to SUNE	\$7.60	\$13.06	\$16.99	
Non-TERP Projects Sold to Third Parties	Downside	Base Case	Upside	
Capacity (MW)		280		
EV (\$/kW)		\$2,000		
Developer Margin (%)	15%	20%	25%	
Market Value of Equity to SUNE	\$84	\$112.00	\$140	
Shares Outstanding	324	324	324	
Value of to SUNE	\$0.26	\$0.35	\$0.43	
Emerging Markets YieldCo (EMYCo)	Downside	Base Case	Upside	
Existing EM Assets CAFD (as of 4Q) \$ Mn		46		
Stand-Alone Asset Yield (Consistent w ith TERP/NYLD)		6.00%		
Add'l EM Y yield Adder	4.00%	3.00%	2.00%	
Pro-forma Yield on EM Assets Today		9.00%		
Implied Value on Only Assets Today		511		
Implied Value on Only Assets Today (\$/sh) - Min Value/Illustrative		\$1.58		
YieldCo Valuation	\$0.68	\$2.32	\$2.60	
Incentive Distribution Rights from YieldCo	\$0.00	\$1.80	\$10.90	
Value of to SUNE	\$0.68	\$4.12	\$13.50	
Remaining Ownership in Semiconductors	Shares (Mn)	Public Price	Value	Value/Sh.
Ow nership in SunEdison Semiconductor (NYSE: SEMI)	10.6	\$26.34	279	\$0.86
Solar and Wind Servicing	Downside	Base Case	Upside	
	2015 (Today)	2017	2017 Upside	
Capacity (GW)	5,000	14,000	14,000	
Revenue @ \$20/kW-yr	100	280	280	
EBITDA Margin %	16%	20%	30%	
EBITDA	16	56	84	
EV/EBITDA	9.0x	9.0x	9.0x	
Implied Value	144	504	756	
Implied Value (\$/kW-yr)	3	4	6	
Value of to SUNE	\$0.44	\$1.56	\$2.34	

Source: Company reports, UBS estimates

Figure 20: SunEdison Full SOP – Part 2

SMP poly Plant	Downside	Base Case	Upside
Capacity (MT)			13,500
Revenues (\$/Kg)			\$25
Cash Costs (\$/Kg)			<u>\$15</u>
Cash Margin (\$/Kg)			\$10
D&A (\$/Kg)			<u>\$3</u>
Net Income (\$/Kg)			\$7
Ownership Interest			50.0%
Net Income (\$ Mn)			\$47
Cash Flow (\$ Mn)			\$68
EV/Cash Flow	7.5x	8.5x	9.5x
Debt as of 12/31/14 (SMP Credit Facilities, etc)	(\$353)	(\$353)	(\$353)
Market Value of Equity to SUNE	\$153	\$220	\$288
Value of to SUNE	\$0.47	\$0.68	\$0.89
DevCo Value --> Step-up Value as Dropped from SUNE to TERP	Downside	Base Case	Upside
Capacity Built (GW) - 2016	2,000	3,000	4,000
Guidance for 2016		2800-3000	
\$/Watt Costs	2.00	2.00	2.00
Margin (%)	17%	18%	19%
Gross Margin (\$ Mn)	680	1,080	1,520
Opex	(765)	(765)	(765)
EBITDA	-85	315	755
EV/EBITDA -> 4-6x Range... Discounted given uncertainty	5.0x	5.0x	5.0x
Implied Value	(425)	1,575	3,775
Implied Value (\$/kW-yr)	(43)	0.53	189
Value of to SUNE	(\$1.31)	\$4.87	\$11.66
Parent Obligations	Value/Sh.		
	Outstanding	Converted	
Convertible senior notes due 2018, net of discount	\$0	\$485	
Convertible senior notes due 2020, net of discount	\$432	\$0	
Convertible senior notes due 2021, net of discount	\$0	\$429	
Converts issued in 1Q15 - 2022	\$460	\$0	
Converts issued in 1Q15 - 2022	\$600	\$0	
Total Converts	\$1,492	\$914	
Other non-solar energy system recourse debt	\$215		
Solar Energy recourse financing	\$40		
Total Recourse Debt	\$1,747		
Margin Loan - w / TERP Shares	\$410		
Sellers Note due 2020 collateralized w / TERP Shares	\$337		
Grand Total Debt	\$2,494		
Cash Outstanding (Dec-14)	\$944		
Net Debt	\$1,550		
YieldCo Acquisition / Warehouse Facility	Outstanding	Size	
Emerging Markets Yieldco acquisition facility	\$0	\$150	
TERP Warehouse Facility	\$0	\$1,500	
Total Warehouse	\$0		
LC Facility	\$0	\$540	
Grand Total Obligations	\$1,550		
Grand Total Obligations per Share	\$4.79		
Value of to SUNE	(\$4.79)		
SUNE Equity Value per Share	\$9.09	\$29.66	\$55.12
Upside/(Downside)	-66%	11%	106%

Source: Company reports, UBS estimates

Upside Case: \$55/sh

Our upside case has a positive skew as we perceive an asymmetric opportunity here. The rationales for deviations from the base case are similar to the downside factors:

- **GP Valuations:** The upside case captures more of the peak IDR payments, driving ~\$13/sh, particularly with more appreciation from EM YieldCo. This embeds an optimistic view on the sustained development of China, as well as the takeoff of India and Brazil.
- **DevCo:** Increasing the number of installations corresponds with an additional \$5/sh with the same 5x EV / EBITDA multiple.
- **TerraForm Power:** Utilizing our \$68 upside scenario for TERP, this would drive SUNE's ownership up by ~\$5/sh.

The upside case has a larger delta between the base case than the downside case does.

Downside Case: \$9/sh

Our downside case of \$9/sh is premised on a scenario where installations slow and SunEdison is unable to achieve its targets. The largest deltas are detailed below:

- **GP Valuations:** This is a conservative take on YieldCo GP interest, where we only attribute SUNE with value for projected IDRs through 2018 (i.e. we do not capture the significant uplift in the high IDR splits). Collectively this is ~\$11/sh.
- **DevCo:** Increasing competitive pressure could reduce the number of installations, and a conservative stance on the growth of the EM YieldCo. Based upon the high cost structure we could see this business being a negative, contributing to a ~\$6/sh deviation if the margins erode.
- **TerraForm Power:** Utilizing our \$25 downside scenario for TERP, this would drive SUNE's ownership down by ~\$5/sh.

While the downside case seems dramatic, we remind investors that as recently as October 2013 shares were trading at this level. Less than two years ago (May 2013) shares were at \$6/sh.

Catalysts

We emphasize the following as key to seeing further share price outperformance in 2015.

What are the key execution datapoints for upside?

- **EM YieldCo is forthcoming:** We see upwards of \$4/sh in shares immediately available as Street analyst reflect expectations. Given the dearth of disclosures (just a handful comments at the Analyst Day), we see this as largely incremental to the current valuation. At a minimum its existing international asset base does not appear to be reflected among Street expectations, contributing \$46 Mn in CAFD today, and worth ~\$1-2/sh alone. *There is the potential for substantial accretion here if EM YieldCo trades 'more' like a domestic US YieldCo. The further question becomes what will the targeted growth rate be?*
- **Further sector consolidation:** Many semi-oriented investors may fail to fully appreciate the spectrum of potential consolidation in the sector, particularly on the wind side. Future acquisitions could prove particularly accretive- both in the context of additional operating assets, but also in executing on a diversification strategy in its development efforts.
- **TERP Partnerships.** This accrues not just to SUNE, but also potentially via TERP and its independent management team – in garnering potential drop-down partnerships with other utilities. While intangible/we don't attribute any explicit

benefits in our SOP, having another parent 'source' of projects with a backlog would improve the visibility on the dropdown story.

- **2015 Contract awards.** As we emphasized before, the real focus for shares will remain expanding the backlog, domestically and abroad. Domestic prospects remain quite attractive (as good as they have been/will get at present) – with every sub-sector seeing substantial interest. With a 12-18 month development cycle we would not doubt a surge of announcements/conversions from pipeline to backlog around mid-2015.
- **More warehouse arrangements – enabling the build out**

Perhaps among the least emphasized angles for Sun Edison is its need for capital to fund growing working capital to hit growth targets. In an effort to avoid equity issuances, we have tentatively assumed expansion of the initial warehouse facility to \$2.5 Bn by 2017. We suspect SUNE could yet further expand this structure – as well as seek a cheaper cost of financing within the vehicle given its initial cost at 8%. *Look for developments with subsequent quarterly calls.*

Figure 21: Liquidity Needs – Warehouse improves the outlook

Working Capital Needs	FY 2015E	FY 2016E	FY 2017E	FY 2018E	FY 2019E
Total Capital Needed Annually (\$ Mn)	4,400	5,580	6,919	6,435	5,984
Warehouse Facility	<u>\$1,500</u>	<u>\$2,000</u>	<u>\$2,500</u>	<u>\$2,500</u>	<u>\$2,500</u>
Net Capital to SUNE to Finance	\$2,900	\$3,580	\$4,419	\$3,935	\$3,484
Leverage on SUNE-Financed Development	✓ \$2,175	✓ \$2,685	✓ \$3,314	✓ \$2,951	\$2,613
Equity Working Capital (@ 75% Leverage)	<u>\$725</u>	<u>\$895</u>	<u>\$1,105</u>	<u>\$984</u>	<u>\$871</u>
Incremental Net Working Capital Needs	\$225	\$170	\$210	(\$121)	(\$113)
Interest Expense on Warehouse @ 8%	(\$120)	(\$160)	(\$200)	(\$200)	(\$200)

Source: Company reports and UBS estimates

- **Finalization of EPA's carbon 111(d) in June.** While not yet readily understood by the solar investors, we emphasize this is the most significant long-term driver of renewable demand in the US (and globally). Formal introduction of state-by-state targets should ultimately lead to upward revisions on RPS targets.

Longer-term datapoints

- **Talking about cash flow, dividend, and EPS turnaround.** A shift towards a focus on FCF will translate to improved valuation as management articulates its use of the balance sheet and FCF prospectively. While focusing on investment today, our projects indicate the company will be meaningfully FCF positive – and also generate more than breakeven EPS. Altogether, the turnaround of this company from a loss-making panel producer is on the verge of occurring. The secondary question by ~2016 timeframe remains *how management will deploy its FCF assuming it is successful on its targets. We give no credit in our SOP for any of this cash deployment.*
- **A dividend too?** We would not doubt if paying a common dividend becomes a much more mainstream conversation by ~2016 timeframe as the company contemplates its new business mix and investor base. We emphasize the expanding investor base away from historically technology-oriented folks to a broader income-and-growth orientation could prove particularly attractive. SUNE is the closest parallel investment already to the power & utility sector –

Altogether, the turnaround of this company from a loss-making panel producer is on the verge of occurring.

Dividend would unlock a new investor base.

particularly given its successful TERP YieldCo. As such we would expect investors seeking diminishing growth prospects among utilities to come here.

We provide more details around these catalysts subsequently in the note in our Key Investment Consideration section.

Looking at the GP Publically Traded Peer Group

We emphasize that SUNE's best comps increasingly appear to be General Partners in the MLP space rather than any other solar or IPP company. We see the substantial drops contemplated as driving significant prospective value to the GP aspect of the valuation.

- While publically traded midstream GP comps admittedly do not share the same business risk characteristics as TERP (higher), they are nevertheless available unlike more nascent renewable YieldCo GP comps.
- In the table below we present a list of midstream GP comps, showing that their price/DCF is in the range of 18x-25x 2014-15E, respectively. This is in-line with management guidance of 20x-22x using an implied GP value from parent companies. As a reminder, our valuation embeds a 21x CF multiple to derive our terminal value in 2019.

Figure 22: Midstream General Partners Comparables

General Partners	Ticker	UBS Rating	Unit Price		Total EV (\$ billion)	UBS Distribution Estimates								Current Yield on Est Ann Rates		Implied Target Yield	Forecasted Total Return	Price / DCF		Debt / NTM EBITDA	Credit Rating	
			Current	Target		Paid Distribution			CAGR			3Q14	3Q15	2014e	2015e			Moody's	S&P			
						IDR Splits	2014	2015	2016	14/13	15/14										3-Yr Hist	3-Yr Fwd
Crestwood Equity	CEQP	Buy	\$5.87	\$8.00	\$8.3	50.0%	\$0.55	\$0.55	\$0.55	NA	0.0%	NA	1.8%	9.4%	9.4%	6.9%	42.5%	16.0x	12.2x	4.5x	Ba3	NA
Energy Transfer Equity	ETE	Buy	\$63.76	\$70.00	\$86.0	50.0%	\$1.60	\$2.03	\$2.39	20.4%	26.3%	9.9%	18.9%	2.6%	3.2%	2.3%	13.3%	39.0x	31.5x	4.8x	Ba2	BB
NuStar GP Holdings	NSH	Buy	\$34.98	\$44.00	\$1.5	25.0%	\$2.18	\$2.23	\$2.44	0.0%	2.3%	3.3%	9.2%	6.2%	6.4%	5.0%	30.0%	16.3x	16.1x	0.4x	NA	NA
ONEOK	OKE	Neutral	\$48.07	\$43.00	\$21.7	50.0%	\$2.32	\$2.41	\$2.62	56.4%	4.1%	28.2%	7.5%	4.9%	5.0%	5.4%	-6.0%	16.3x	16.3x	6.0x	Baa3	BB+
Plains GP Holdings	PAGP	Buy	\$27.93	\$32.00	\$36.1	50.0%	\$0.74	\$0.90	\$1.05	NA	21.2%	NA	17.2%	2.7%	3.3%	2.3%	17.4%	40.1x	19.7x	7.8x	NA	NA
SemGroup	SEMG	Buy	\$82.62	\$97.00	\$4.4		\$1.15	\$1.81	\$2.48	40.2%	57.4%	NA	35.1%	1.5%	2.3%	1.2%	20.7%	13.4x	11.3x	2.2x	B1	B+
Spectra Energy Corp	SE	Neutral	\$36.06	\$37.00	\$41.0	50.0%	\$1.41	\$1.55	\$1.69	13.7%	9.9%	9.7%	8.7%	4.1%	4.5%	3.8%	8.0%	16.5x	19.5x	5.0x	NA	BBB
Targa Resources	TRGP	Buy	\$94.85	\$118.00	\$9.2	48.0%	\$2.85	\$3.60	\$4.65	29.0%	26.5%	33.6%	27.0%	3.1%	3.9%	2.4%	28.3%	32.1x	18.0x	3.5x	NA	NA
Williams Cos	WMB	Buy	\$50.30	\$55.00	\$70.5	50.0%	\$1.96	\$2.38	\$2.68	36.2%	21.6%	40.9%	11.0%	4.5%	4.8%	3.6%	14.8%	20.9x	19.5x	6.1x	Baa3	BB+
Average										25.6%	18.4%	19.9%	14.8%	4.3%	4.8%	3.7%	17.9%	24.5x	18.2x	4.6x		

C-Corp General Partners	Ticker	Price	UBSe Dividend			UBSe Growth Rate		Current Yield	After Tax Yield ⁽¹⁾	2015 Yield	2015 After Tax Yield ⁽¹⁾
			2013	2014	2015	2014	2015				
Oneok Inc	OKE	\$48.34	\$1.48	\$2.32	\$2.41	56.4%	4.1%	5.0%	4.1%	5.0%	4.0%
Plains GP Holdings	PAGP	\$28.05	\$0.14	\$0.74	\$0.90	NA	21.2%	2.9%	2.9%	3.2%	3.2%
SemGroup Corp.	SEMG	\$82.01	\$0.82	\$1.15	\$1.81	40.2%	57.4%	1.3%	1.7%	2.2%	1.8%
Spectra Energy Corp	SE	\$35.73	\$1.24	\$1.41	\$1.55	13.7%	9.9%	4.1%	3.4%	4.3%	3.5%
Targa Resources	TRGP	\$94.99	\$2.21	\$2.85	\$3.60	29.0%	26.5%	3.3%	2.6%	3.8%	3.1%
Williams Companies	WMB	\$50.05	\$1.44	\$1.96	\$2.38	36.2%	21.6%	4.6%	3.8%	4.8%	3.9%
Average						35.1%	23.5%	3.6%	3.0%	3.9%	3.2%
Median						36.2%	21.4%	3.7%	3.1%	4.1%	3.4%
Associated LP	Ticker	Price	UBSe Dividend			UBSe Growth Rate		Current Yield	After Tax Yield ⁽¹⁾	2015 Yield	2015 After Tax Yield ⁽¹⁾
			2013	2014	2015	2014	2015				
Oneok Partners	OKS	\$40.94	\$2.89	\$3.07	\$3.18	6.2%	3.6%	7.7%	6.3%	7.8%	6.3%
Plains All American Pipeline	PAA	\$48.72	\$2.38	\$2.61	\$2.80	9.8%	7.3%	5.5%	4.5%	5.7%	4.7%
Rose Rock Midstream	RRMS	\$47.50	\$1.79	\$2.23	\$2.70	24.6%	21.6%	5.2%	4.2%	5.7%	4.6%
Spectra Energy Partners	SEP	\$51.75	\$2.07	\$2.29	\$2.48	10.7%	8.4%	4.6%	3.7%	4.8%	3.9%
Targa Resource Partners	NGLS	\$41.00	\$2.89	\$3.15	\$3.51	8.9%	11.3%	7.9%	6.4%	8.5%	6.9%
Williams Partners	WPZ	\$48.87	\$2.04	\$2.42	\$3.40	18.5%	40.5%	7.0%	5.6%	7.0%	5.6%
Average						13.1%	15.4%	6.3%	5.1%	6.6%	5.3%
Median						10.2%	9.8%	6.2%	5.1%	6.4%	5.2%
MLP General Partners	Ticker	Price	UBSe Dividend			UBSe Growth Rate		Current Yield	After Tax Yield ⁽¹⁾	2015 Yield	2015 After Tax Yield ⁽¹⁾
			2013	2014	2015	2014	2015				
Energy Transfer Equity	ETE	\$63.63	\$1.33	\$1.60	\$2.03	20.4%	26.3%	2.8%		3.2%	
NuStar Holdings	NSH	\$35.58	\$2.18	\$2.18	\$2.23	0.0%	2.3%	6.1%		6.3%	
Average						10.2%	14.3%	4.5%		4.7%	
Median						10.2%	14.3%	4.5%		4.7%	
Associated LP	Ticker	Price	UBSe Dividend			UBSe Growth Rate		Current Yield	After Tax Yield ⁽¹⁾	2015 Yield	2015 After Tax Yield ⁽¹⁾
			2013	2014	2015	2014	2015				
Energy Transfer Partners	ETP	\$56.34	\$3.61	\$3.86	\$4.13	6.9%	7.0%	7.1%		7.3%	
NuStar Energy Partners	NS	\$62.02	\$4.38	\$4.38	\$4.39	0.0%	0.2%	7.1%		7.1%	
Average						3.4%	3.6%	7.1%		7.2%	
Median						3.4%	3.6%	7.1%		7.2%	

C-Corp GP/LP	GP/LP Yield Spread		GP Yield Multiplier	
	Current	2015	Current	2015
OKE vs. OKS	2.8%	2.3%	1.5x	1.6x
PAGP vs. PAA	2.5%	1.5%	1.6x	1.5x
SEMG vs. RRMS	3.5%	2.8%	3.1x	2.6x
SE vs. SEP	0.5%	0.4%	1.1x	1.1x
TRGP v NGLS	4.8%	3.9%	2.4x	2.3x
WMB vs. WPZ	2.2%	1.8%	1.5x	1.5x
C-Corp Average	2.7%	2.1%	1.9x	1.7x
C-Corp Median	2.7%	2.0%	1.5x	1.5x
MLP GP/LP	GP/LP Yield Spread		GP Yield Multiplier	
	Current	2015	Current	2015
ETE vs. ETP	4.2%	4.1%	2.5x	2.3x
NSH vs. NS	0.9%	0.8%	1.2x	1.1x
MLP GP Average	2.6%	2.5%	1.8x	1.7x
C-Corp Median	2.6%	2.5%	1.8x	1.7x

Source: UBS estimates, Factset

Projections: Turning the Ship Around

We include a high level of our segment EPS and Cash Flow projections leveraging management's latest shifts in disclosures around its segments. We emphasize the sell-down value from recycling capital to third-party acquirers (predominantly TERP) remains the single largest source of cash flow for the medium-term. By late in the decade, IDRs begin to contribute meaningfully to the outlook.

We expect FCF to become positive in 2016E, even net of working capital needs

Figure 23: SUNE – Consolidated CFO and Net Income Guidance

Total cash flow from ops.	FY 2015E	FY 2016E	FY 2017E	FY 2018E	FY 2019E
Devco Cash Flow (Sales to TERP)	\$290	\$351	\$504	\$504	\$504
Materials Cash Flow (Samsung JV/Legacy)	(\$30)	\$68	\$68	\$68	\$68
TERP Dividends	\$84	\$99	\$123	\$147	\$168
TERP IDRs	\$0	\$5	\$37	\$139	\$258
Servicing Cash Flow	\$22	\$32	\$52	\$75	\$101
EM YieldCo - Dividends & IDRs	\$12	\$19	\$31	\$57	\$133
Parent Interest Expense	(\$219)	(\$259)	(\$299)	(\$299)	(\$299)
Total cash flow (pre-w/c)	\$160	\$315	\$515	\$691	\$933
<i>Per share</i>	\$0.59	\$0.98	\$1.60	\$2.14	\$2.87
Working Capital	(\$225)	(\$170)	(\$210)		
Proceeds from Sale of SEMI	279				
Total cash flow (post-w/c)	\$214	\$145	\$305	\$691	\$933
Less: Depreciation	515	678	760	784	949
Add Back: Working Capital Changes	225	170	210	-	-
Less: Proceeds from Sale of SEMI	(279)				
Net Income:	(\$355)	(\$363)	(\$245)	(\$93)	(\$16)
EPS	(1.31)	(1.13)	(0.76)	(0.29)	(0.05)

Source: Company reports and UBS estimates

Managing the working capital requirements is key to profitability

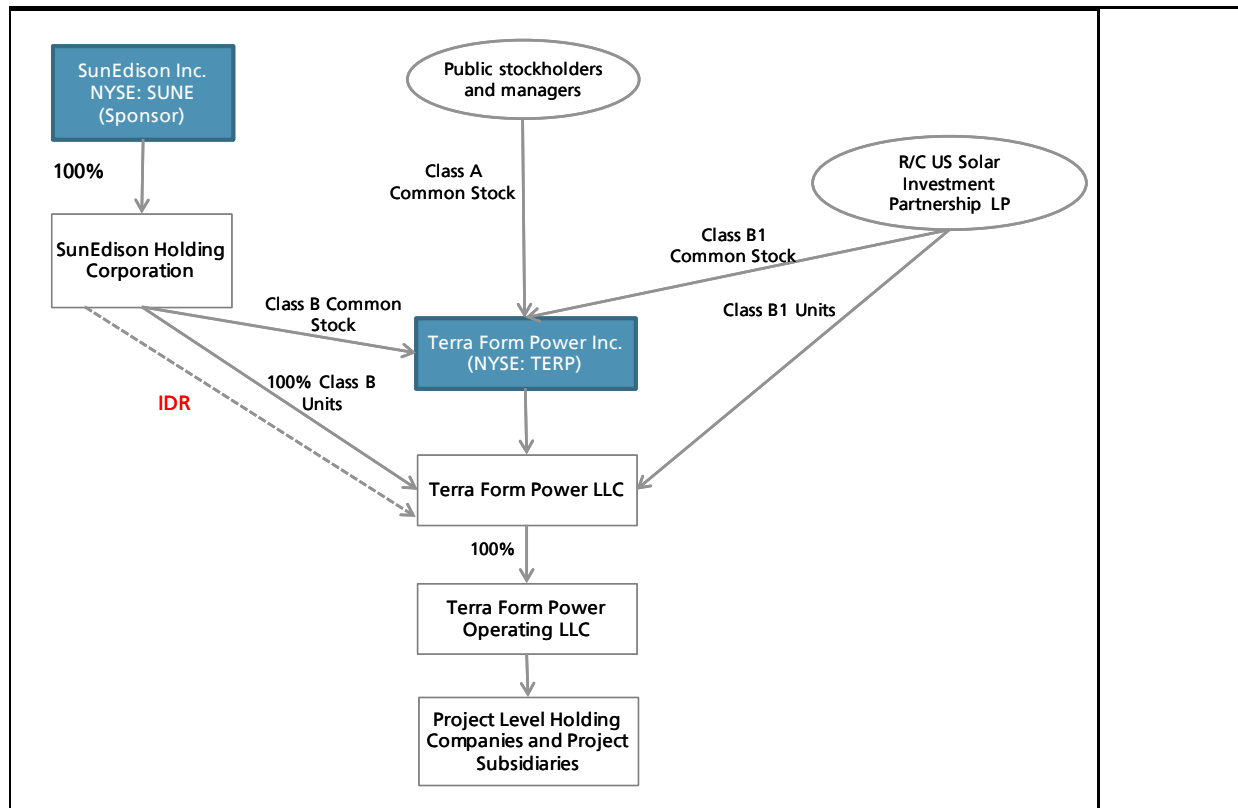
As management progresses along its path from 1GW of system installations in 2014 to 4GW in the future it will increasingly need to rely upon its warehouse facility to minimize working capital commitments. For example in 2014 without the warehouse the \$2Bn of installation costs was attributable directly to SunEdison, driving net working capital of \$500Mn (75% debt financing). In 2015 with 2.2GW of targeted installations a cost of \$2.2Bn would require 'only' \$625Mn of net working capital, an increase of \$125Mn despite the install costs doubling. The driver is the \$1.5Bn warehouse facility to reduce cash needs. In the future SunEdison sees working capital improving as it adds more warehouse facilities and its install cost profile improves.

Overview of SunEdison

SunEdison Ownership Structure and Affiliates

Below we present the key components of the SunEdison structure and its interrelations with its semi spin and YieldCos (TerraForm Power and the pending EM YieldCo). At the TERP IPO SunEdison sold 36.1% of its economic interest and has exposure to TERP via common ownership and its Incentive Distribution Rights (IDRs), the key component of value equation for SUNE.

Figure 24: TerraForm Power Corporate Structure



Source: Company Filings

Who is SunEdison? Evolution of how we got to where we are today

SunEdison started a silicon-wafer manufacturing company as Monsanto Electronic Materials Company (MEMC Electronic Materials) and focused primarily on the development of the semiconductors wafers. In 2009 MEMC acquired then private SunEdison to focus on the development of photovoltaic (PV) assets and 2013 the name was changed from MEMC (ticker: WFR) to SunEdison (ticker: SUNE).

Development Pipeline

The development arm has four primary classifications based upon how advanced the opportunity is and the likelihood of successful completion. The goal is ~20% operating gross margins from this business.

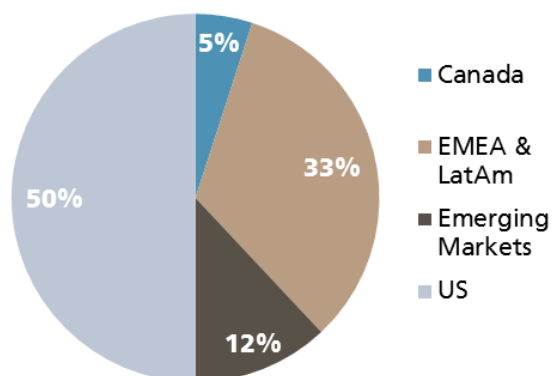
2H14 guidance was for 13% more efficient SunEdison modules versus peers.

- **Leads:** This is the first step to executing on a completed asset. There is no commitment from the counterparty and a low probability of success as a mere solicitation of interest has been received or a target opportunity identified.
- **Qualified Leads:** As confidence in an opportunity grows, the potential project moves to the qualified lead bucket from just a lead previously. Qualified leads have development budgets approved but historically still have below a 50% probability of success.
- **Pipeline:** Opportunities in the pipeline either have a signed/awarded PPA or (1) site control, (2) an interconnection point identified, and (3) a high probability of signing an offtake agreement.
- **Backlog:** These assets are under contract with a PPA or some other form of offtaker agreement and generally have a high probability of successful completion. Smaller distributed generation projects typically are not in the backlog due to the fast conversion cycle.
- We include the figures below, looking specifically at SUNE's opportunities by region. We emphasize the preponderance remain domestically or First World oriented.

Pipeline still has a US bias

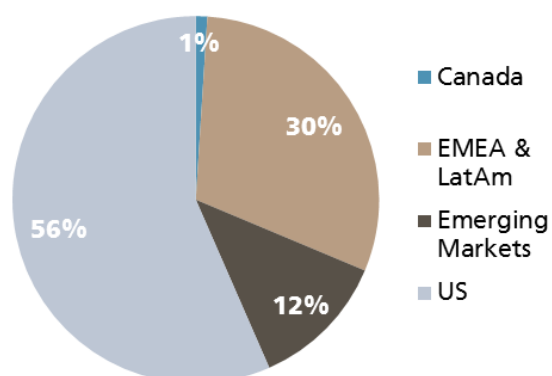
SUNE's solar pipeline is heavily US weighted, with EMEA and LatAm taking up substantial share and the Emerging Markets and Canada making up ~17%. The 5.7 GW pipeline is anticipated to be built between 2015 and 2020. In terms of LatAm, SUNE sees Chile being the major player in the region, and believes it is a mature enough market to not consider it 'emerging' and not place projects in the EM YieldCo as a result. Late last year SUNE won 15-year power supply contracts for ~350MW of solar PV projects from Chile's National Energy Commission (CNE). The projects will cost approx. \$700mn to build. SunEdison said that the projects will supply ~190 GWh annually to the nation's Central Grid (SIC) starting in 2016, and a further 350 GWh in 2017. According to media reports, SunEdison bid at \$0.089 per kWh for its 2016 projects, and \$0.085 per kWh for 2017 - the low prices may reflect how competitive these auctions were.

Figure 25: SUNE + First Wind Solar Pipeline by Region (5.7 GW)



Source: SUNE Capital Markets Day 2015 Presentation

Figure 26: SUNE + First Wind Solar Backlog by Region (3 GW)



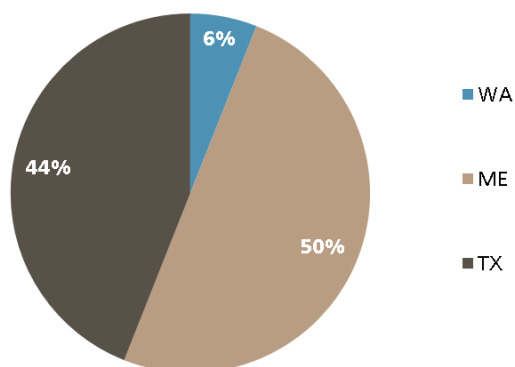
Source: SUNE Capital Markets Day 2015 Presentation

First Wind's entire wind pipeline is located in the US, with 50% of projects in ME, 44% in TX, and 6% in WA. First Wind's total pipeline is 1 GW of wind projects and over 500 MW of solar, compared to 419 MW of operating wind assets, and 102 MW of operating solar.

Atlantic Power Acquisition adds to the large US-based wind portfolio

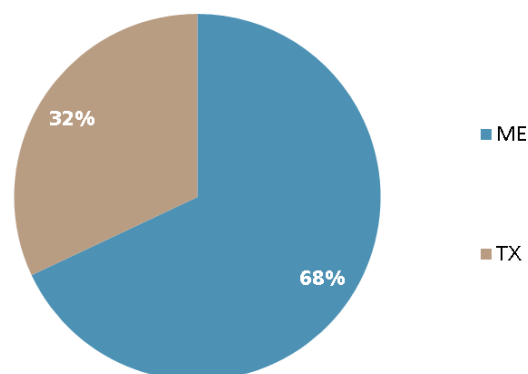
SUNE/TERP's recent Atlantic Power acquisition added to the First Wind–wind portfolio through the addition of 521 MW of operating projects. The deal is expected to go through in 2Q15. SUNE did not acquire a pipeline in the deal, but rather stakes in 5 wind projects throughout the US, signifying an approach by mgmt. to develop as well as purchase assets to be dropped into the YieldCos. We expect SUNE to make further opportunistic acquisitions in the wind and solar sectors in order to build their portfolio, and as indicated with this deal—many sellers are eager to monetize their assets, and become more desperate to cover their capital expenditures as more time elapses between build and sale. Additionally, via the last 2 high profile acquisitions in First Wind and Atlantic Power, SUNE has shown that they are looking to carry a diversified asset portfolio of solar and wind in order to attract a broader investor base as well as hedge any sector-specific legislative risk.

Figure 27: SUNE + First Wind- Wind Pipeline by Region (1.0 GW)



Source: SUNE Capital Markets Day 2015 Presentation

Figure 28: SUNE + First Wind- Wind Backlog by Region (0.6 GW)



Source: SUNE Capital Markets Day 2015 Presentation

Why First Wind is a Win-Win

The recently closed First Wind acquisition significantly bolsters TERP by not only enhancing the accretion profile and providing more visibility into the pipeline but also by diversifying the asset base. First Wind's competitive advantage is the ability to get permits, interconnections, etc. secured, thus it focuses on non-traditional markets which are not entirely dependent on who has the lowest cost of capital. This core competency will only be enhanced now that it has access to TERP currency.

- **First Wind deal underscores our confidence in management:** Perhaps more than any other deal thus far, we see this deal as addressing the underlying need for SUNE and TERP to diversify into alternate sources of renewable growth to feed TERP growth. We continue to see wind, at least in the US, as the larger market for now – and likely into the future as the fundamental economics (LCOE) is more competitive than solar. To the extent that solar and wind markets are complementary (wind is more of a New

Wind assets filled a glaring gap for SUNE. Expanding into More than Just Solar

Fall/Winter cash flow profile of wind (1Q/4Q) complements that of Spring/Summer solar (2Q/3Q).

England and Midwest resource), this will enable SUNE/TERP to expand to other areas of the US.

- **The current backlog and pipeline does not include incremental development from the 1.6GW of PTC-qualified projects through 2016:** In January SUNE announced that it secured 1.6GW of incremental PTC eligible wind turbines, increasing the total PTC/ITC eligible backlog/pipeline to ~3.0GW. Peers such as NextEra Energy also likely participated in the annual rush to secure equipment but this is new for SUNE with its First Wind exposure. At the end of December Congress passed a tax extenders bill granting an extension of the PTC safe harbor for wind assets, providing a two-year development window with assets grandfathered. A supply of PTC eligible assets with the \$0.023/KWh tax credit is a vital component for the compelling economics in wind, particularly true in the high cost regions which First Wind specializes (Northeast and Hawaii).

Economics of wind are better than solar: Given the robust economics (and declining costs to as low as ~\$1,300/kW under the cheapest deals we've seen) we remain constructive on near-term development of renewables in the US, with capacity factors of >50% achievable in certain geographies across the US. We would expect management to announce incremental wind awards through 2015 off these qualified assets.

Further details are available in our note, [SUNE: PTC Wind Turbine Purchase Highlights Aggressive Plans](#).

- **In the near-term, we continue to see the Northeast as an ideal wind starting point to build out:** The New York and New England states have meaningful capacity left prior to hitting RPS targets. We suspect First Wind will remain the premier developer in the Northeast for states like CT and MA, delivering large-scale projects. We also flag the relatively higher cost of development to build in the region and meaningful NIMBY pushback creates both meaningful barriers to entry for many (NEE has historically not developed in this market for instance) alongside creating robust cash flow PPAs for those successful in their efforts (new PPAs are still in the \$90's+/MWh). First Wind is also working on solar/wind projects in Hawaii and Utah among other states – highlighting that First Wind is not just a 'one-trick' pony..
- **The question after First Wind deal is whether more platforms needed?** Our key question remains whether management will need to pursue additional development teams and assets. While initial indications from management downplay this need, we would not be surprised to see further meaningful bulking out of the First Wind team to feed future growth projects, if not via acquisitions, at least organically. We look for the deal teams to focus on incremental opportunities for development both pre & post ITC in the US across the Plains/Midwest states.
- **Leveraging this deal into a global wind platform:** Notable from the recent earnings call is managements' willingness to leverage the First Wind deal into a global development platform. We see wind development as fundamentally 'local' with greater barriers to entry than solar development. The know-how of the First Wind team is among the best and we expect expansion both elsewhere in the US and within the Organization for Economic Co-operation and Development (OECD) world [[member countries are available here](#)]. We

First Wind may be one of many with large supply agreements coming through on the back of PTC eligible assets.

Wind exposure separates TERP from comparisons with planned FSLR/SPWR YieldCo.

While a bit of a stretch, this is the long-term promise

suspect *global* wind development efforts could take a bit to materialize, but offering a multi-pronged solution to customers is an obvious synergy.

- **So what is needed?** Focus on wind execution. We look for management to leverage the platform to deliver deals on its new platform. We attribute recent outperformance as largely due to growing investor comfort with a focus from TERP/SUNE *outside* of the core solar focus previously harped on. Given the magnitude of wind opportunity in the US, we reiterate the economics remain quite appealing.

Execution is Key

There's nothing more important to realize about this name

The risks even to management's targets are not trivial, seeing both international development risk off a nascent platform as well as growing competition domestically. With other companies such as Vivint (VSLR) and SolarCity (SCTY) tripping in recent quarters on hitting their own targets, there is precedent for solar stocks to falter on commitments as well; we flag SUNE is much more diversified than the limited residential offerings from these two specialty peers.

If management hits its target, we believe the stock will work – handsomely rather.

This is not your regular development or IPP

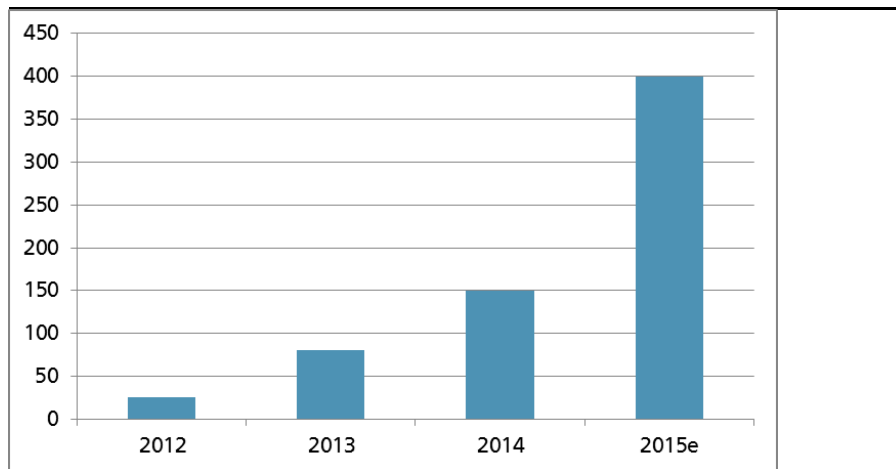
While similar to many domestic developers, we emphasize the magnitude of the ambitions – and the numerous avenues pursued thus far differentiate the story from peers. Management has been successful on both utility-scale and C&I efforts, and is increasingly repositioning itself towards the residential DG opportunity.

Taking the Plunge into DG

As part of management's strategic shift away from utility-scale towards more of a distributed generation (DG) angle, management laid out what we deem to be fairly aggressive targets for itself. We see this tactical shift in the source of its backlog as among the riskiest and critical elements to the ultimate execution of the story; it's not just the size of the development underway, but also the shifting source of these developments towards fundamentally smaller scale projects. While clearly more lucrative – and the right strategic move – we're particularly sensitive to the execution focus through 2015 and 2016 in particular.

How serious is the DG push? Quite...

Figure 29: SUNE Historic & Expected Annual DG Project Development (MW)



Source: SUNE Capital Markets Day 2015 Presentation

Not opting for organic effort, with channel partners instead: Most notable in its effort to build out a DG presence, management has indicated it intends to use channel partners rather than build out its business organically. In some senses, we see this effort as largely a 'buy' the market approach; the chief concern of ours here relates to the wider execution issues involved in assuring the economics will remain compelling as partner arrangements are not necessarily long-term.

Will management shift towards an organic opportunity? We suspect the decision to pursue a multitude of channel partners through the initial phase of its DG implementation as a reflection of a need to source a wide number of development MWs quickly. *We wouldn't doubt if management were ultimately to push towards greater control of its partner network through acquisitions to ensure continued palatable acquisition costs;* consistent with SUNE's decision to acquire a development business for wind, we suspect a comparable focus to push out its DG strategy could yet be in the works.

That said, management has remained committed to being 'people-light'. SUNE's CEO emphasized at its latest analyst day the need to remain nimble in its cost structure – without acquiring too substantial of a development platform.

Key Considerations

(1) Carbon Policies Keep Renewables Shining Bright

What's the biggest opportunity before the solar industry? Carbon regulation and implementation of 111(d) regs. We are surprised that rhetoric in the industry continues to avoid this focus as this appears to be the single most important driver in long-term renewable procurement, providing an outlook, particularly for utility-scale deals beyond the current 2017 ITC 'cliff' over which many investors continue to panic. We flag many utilities and regulators of late have continued to indicate a willingness to contemplate ratable procurement *beyond* the ITC expiration. Dominion, Southern Company, and Xcel Energy have all indicated explicitly and implicitly such plans. While historically addressing climate change meant embracing nuclear all the more, with the decline in the cost curve of renewables, we see a step-change improvement in the outlook for renewables to address the forthcoming carbon targets both in the US and globally.

Long-term demand is quite intact beyond tax credits expiration

Investors too focused on renewables cliff

The question is timing and pace – mostly early 2020's, but big opportunity

While there is considerable discussion around 111(d) in the context of the next presidential election –as well as the narrow legal path employed by EPA to achieve program implementation, we ultimately emphasize it was the supreme court's own endangerment finding that drove the need to address carbon – rather than an executive branch decision to tackle the subject. As such, we see timing implementation and ultimate goals as perhaps the greatest uncertainties out of this program (goals likely to be largely engrained through finalization of the regime), but timeline involved is likely to be pushed out some as realistic implementation looks more towards the early ~2020's. Nonetheless, given forthcoming targets and desire for utilities to push ratable progress, we expect utilities and state regulators alike to expand or accelerate their contemplated renewable procurements into the later part of this decade.

Utilities are already starting to materially increase the renewable targets around 2020 for their state IRPs.

Tax credit cliff not as much of a concern – it's just *who* is paying?

Ultimately, we emphasize that the expiration of the tax credits is *not* as meaningful an impediment to the overall development of renewables in the long-term as is currently depicted. Rather, investors should appreciate that much of the renewable sector continues to build, particularly solar, dependent on state subsidies. Rather, the source of where the subsidies are coming from (state or federal) will simply shift under a reduced ITC framework.

States will continue to subsidize renewables

(2) The Big Consolidation Opportunity

We see both SUNE and TERP as well positioned to capitalize on M&A within the space. We see this directly in the context of outright asset acquisitions, as well as potential to acquire and/or partner with other strategic developers. With much of the sector still private, or otherwise in slower-growing vehicles we wouldn't doubt significant consolidation continues through 2015. We emphasize that with many further contemplating public YieldCos, we would expect many to ultimately settle on *selling* rather than pursuing a stand-alone IPO process – providing further fodder for growth in the sector. We see SUNE & TERP as well positioned to enable this growth in multiple avenues:

- Independent management allows for strategic partners to 'trust' TERP, and for TERP to act on its own (full-time) in pursuing deals
- Among the better costs of capital within the YieldCo sector.
- Expanding into all renewable asset classes – truly diversified enables the company to be open to all project types.

Focus will be on strategic partnerships to improve visibility

We suspect the next shift in the YieldCo space could yet see TERP move to enter into a strategic partnership with utilities keen to sell down their assets into a structure that would provide maximum value.

Who are the likely partners?

Likely potential partners include Dominion, Duke, and Southern Company. While Dominion has been most explicit thus far in seeing to partner with a "Top 3" YieldCo in an effort to divest its renewable assets post-tax extraction, we suspect the others will follow suite soon too. With relatively negligible earnings from these

TERP could pay a utility upfront to 'lock-up' a utilities renewables assets in a ROFO agreement.

assets we would look for utilities to pursue divestment with their shares trading primarily on a P/E basis.

Are there competitors?

We see other YieldCo's as keen to hook up with these strategic utilities in an effort to garner the benefit of their long-term visible pipeline of drop-downs. Using Dominion as the example, management sees its utility-scale business continuing through 2016, with a total of 1GW developed through this period. In turn, we see the potential to sell down a ~25% interest ahead of the tax-recapture period being completed, and a 100% of the asset at the conclusion of the 5-year recapture period. Altogether, this would presumably provide continued drop-downs through 2021.

So who else could it be? Other credible YieldCos include NRG Yield (NYLD) as well as even SunPower-FirstSolar's proposed YieldCo, particularly given its bias to be strategically aligned with utilities in their efforts.

But what does a strategic partnership mean?

We see any deal with Dominion or another party as likely structured with an upfront cash payment from TERP in exchange for a deal in which TERP would receive a ROFO to buy in the future assets from Dominion in a ratable fashion. We emphasize a deal could be structured with an initial upfront sale of assets (those that are already eligible to be sold), obfuscating the upfront payment made by management. We emphasize this will likely be done at the TERP level rather than with SunEdison; we don't think Dominion would be open to selling to another entity which would presumably extract a further premium prior to dropping it down into its own YieldCo structure.

SUNE looks set to lock up developers into future drop-downs to improve TERP cost of capital and/or acquire platforms outright

Warehousing growth into TERP? Providing the visibility

Among the key developments investors are keen to hear about later this year is the use of the warehousing facilities at both the EM YieldCo and for TERP. Ideally, there will be two separate vehicles per YieldCo – one designed to hold acquisitions, while another designed to manage the working capital needs of development. This enables SUNE to continue to pursue acquisitions without immediately dropping them into TERP to 'smooth' the growth out, while also limiting the strains on the SUNE balance sheet – whose balance sheet wouldn't otherwise support such acquisitions or development activities currently. The further question is the cost of capital with the vehicle, seeing a mid-teens cost of equity on the inaugural facility as translating to a ~7-8% cash flow vehicle (effectively extracting all of the cash flow from these vehicles while held in the entity).

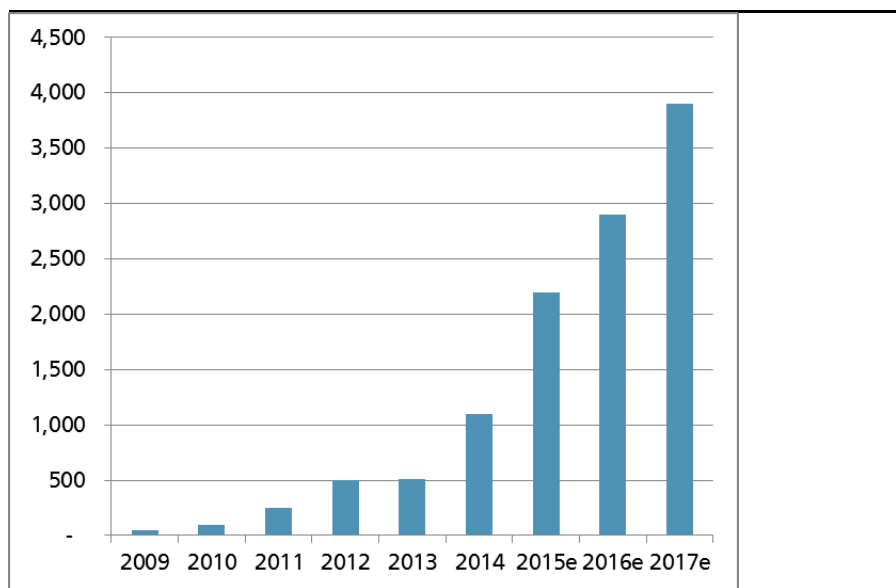
TERP will likely announce details of it's warehouse facility with 1Q results ...

... alongside first use of this facility to execute Atlantic Power deal

(3) Growth Meaningfully Outsized vs. Peers

The company projects substantial growth per year, scaling from 1.1GW in 2014, up to 3.9GW/yr in 2017. We see management's targets as quite aggressive – we believe the stock will work if management is able to simply hit the delineated targets. They are meaningfully higher than any peer aside SCTY – and even then – SCTY's large targets are only specifically targeted at Residential solar.

Figure 30: SUNE Historic & Expected Annual Project Development (MW)



Source: SUNE Capital Markets Day 2015 Presentation

Thinking through the development cycle: *upside?*

While we don't see upside per se to management's long-term guidance, we do see upside to its near-term guidance as the maturation cycle around distributed generation lends itself to positive revisions to near-term developments. We emphasize that with much of the DG business involves at the shortest length 30-100 days of turnaround timeline for residential, with most DG projects likely in the ~1-year range. As such, we wouldn't be surprised if results actually materialized at the upper end of the range. That said, this conservatism enables SUNE to disclose a 4GW/yr target by 2017, but suspect much of these shorter maturation cycle projects are already embedded in this pace of development.

Other Key Investment Considerations

A shifting investor base: opportunity?

Alongside the company's ongoing repositioning, we see a potential upside opportunity alongside a shifting investor base. We believe the shift towards a focus on cash, and benefits from the GP splits should continue to garner a different investor base. We suspect many utility and MLP investors will be attracted to the growth prospects of solar, seeing SUNE as a mature alternative investment vehicle to conventional IPPs and Utilities through which they have typically invested.

We see more of an income and utility investor base as converging on SUNE

▪ Late to the party but still see upside on Buy in a unique way

SUNE is a consensus sell-side Buy (12 Buys, 1 Neutral, and 0 Sells) but we take a different road to arrive at our rating, leaning on a macro focus.

How about a dividend too? It's coming.

Management was clear that a dividend was a question of when rather than if, as they transition towards an EPS positive profile at its latest Analyst Day. With management projecting it will be profitable in the next couple years, it sees the potential to payout a dividend there after in more of the ~2017 timeframe.

- Seeing 2017-18e guidance as projecting roughly **~\$500-700 Mn** of FCF, we estimate a dividend would likely be around **~25% of its distributable cash** to ensure it has adequate ability to finance and address future working capital needs. We see as consistent with the policy AES pursued when it had initially launched a 'nominal' dividend and *still* framed itself as a growth story.
- Taking $25\% * \$600 \text{ Mn} = \sim \150 Mn /yr in FCF for a dividend would equate to a **~2.2% dividend yield on current shares** (or 1.8% on converted share count for 2018). We see this as roughly comparable to those equities desiring to have a sufficient income component to screen for minimum income fund criteria, and continue the re-rating in shares.

Taxes: another interesting consideration.

Having generated sizable losses in recent years – and projected to continue to do so from an income statement perspective, it appears that the company will not be in a cash tax position for some time (~2020). Beyond the existing and projected NOLs, we see the ability to organically absorb tax credits generated by solar and wind projects. As a reminder, renewables will continue to benefit from accelerated depreciation tax shields in periods beyond the expiration of 2016/17 – and also will continue to qualify for a 10% ITC (rather than 30%).

Extension of the PTC and ITC is still a real possibility

Given the negativity embedded in the sector around doubt for a future extension of the ITC, we emphasize that there could still be an extension (and wouldn't fully discount this eventuality). Of note, NEE was particularly bullish on the prospects for a further PTC extension (even if it is gradually reduced) beyond the current 2016 expiration of its roll-off. As a reminder, the wind PTC has been extended numerous occasions in the past leading to the current situation with developers having hundreds of MWs of 'grandfathered' assets that extend the tax credit horizon.

Key Risk Considerations

1. Solar remains a risky sector

Why solar this time is not Calpine or legacy '08 solar play.

In contrast to prior iterations of solar development in the '08/'09 period and development of conventional generation with Calpine and others in the early 2000's, the economics are substantially more attractive – and typically complemented with contracts that embed 20-year PPA structures.

- *What's different from the big IPP wave in the 2000's?* Calpine and others largely developed these projects at the time on a merchant basis on the promise of deregulation. In the current instance the renewables are being developed under long-term firm contract, typically accompanied with 20-year visibility on both utility-scale and distributed deals. *The cautionary tale here largely relates to failed promises around wider industry deregulation. The analog here is commitment to net metering policies, which we do not see as going away unless growth proves unsustainable.*

Development businesses sound scary to those familiar with the early 2000 IPPs but today's renewable development has an entirely different profile that reduces the risk.

- *But what about previous international development by the IPPs?* In the early 2000's, Enron and others attempted to build out power generation abroad. Their efforts largely failed. What's different this time? Here too, we emphasize the nature of solar contracts are more diverse, likely across a wider base of distributed counterparties. The scale of conventional IPP development typically involved large-scale generation, with contracts in many instances underwritten by government off-takes but fundamentally above-market. *The analog would here would be to be wary of substantially above-market schemes instituted in certain markets as Feed-In Tariffs (FITs) or the like. Given the high (or even moderated price of oil), economics of solar appear to be largely competitive, particularly on mid-to-large scale deals.*

'Bite-sized' projects provide significant diversification benefits in foreign markets, removing concerns around 500MW+ fossil plants in one market. Essentially SUNE takes lots of small bets versus peers like AES.

And what of the risks around the solar industry itself?

- **Tackling the ITC expiration risk head on; Carbon is the offset**

We maintain our view that while the step-down of the ITC could slow development of utility-scale deals and encourage greater competition from utilities themselves, the nascent prospect of carbon regulations in the US is a major positive offset, structurally under-appreciated by the bulk of investors in the story who have been focused on declining costs rather than shifting policy environment. Carbon regulations could well translate to meaningful (albeit informal) increases to existing state-level Renewable Portfolio Standards.

Delineation of state level plans for RPS increases could begin as early as 2015. Look to Michigan as an example.

- **Distributed generation: net metering reform will only moderate growth**

Turning to the distributed proposition, we suspect regulators in the US *will not* follow Europe's lead in pulling back subsidies to quite the same magnitude, with net metering tariffs seemingly here to stay (rather, increases in fixed tariffs should moderate the pace of deployment to stable levels rather than allowing an asymptotic adoption of the technology across all geographies). For those insular to the solar world, we see DG reform (which is inevitable) as perhaps the most immediate 'risk' to the prospects of solar with its current investor base. That said, without any residential leases in the TERP structure today, this remains simply a question of future growth (outside of anything contemplated in SUNE's drop-down schedule).

- **Why Oil is *not* a big issue either: addressable market is huge despite pullback.**

Why is the decline in oil not a primary concern? While many investors appear to be caught up in the argument around the 'marginal' opportunity for solar, we believe the real focus should be on rate of penetration among those eligible for solar today. The US market share for instance is entirely de-linked from oil, despite continued viable economics for solar. We see comparable arguments as available in other OECD countries, particularly for smaller scale projects at the Commercial and Residential scale, where net metering subsidies matter *more* than the alternate fuel cost. Further correlation data is available later in the report [[click here](#)].

With the US opportunity unaffected by oil, how can the pullback be that meaningful?

2. Competition is gearing up

While we readily acknowledge the addressable market is improving – both in the US – as well as abroad, we caution competition is too. We suspect more developers from all walks of life will emerge to tap into the 20% margins on development, as well as to capture incremental growth opportunities as renewables continue to take sizable market share from conventional fossil fired

We worry about the barrier to entry in the sector

investments utilities had historically seen as their bread-and-butter source of growth. We flag returns on operating assets have already compressed, and see further risk around development margins.

That said, we see scale as a meaningful impediment for those to compete in an environment that is more competitive. As SUNE and TERP have attempted to build out their efforts rapidly, we suspect the company's platform will rapidly benefit from both advantaged \$/Watt development costs, but also lower financing costs for both the warehouse and ultimately lower cost of capital for TERP, the long-term structure as well. Lastly, as a large globally diversified renewable developer, SUNE is well positioned to weather this trend.

Barriers to entry are structurally low for solar

What is particularly concerning are the relatively low barriers to entry involved in the sector, with relatively little to actually citing the panels in an effective location. Rather, the solar incidence would appear relatively consistent across related regions. Hurdles to development will remain transmission interconnect and land site acquisition/leasing costs.

Tax barrier to entry goes away – enables more competition in 2017

We emphasize that with the expiration of the 2016 ITC and PTC, we see the barriers to entry relating to tax appetite and abilities for utilities to compete as meaningfully shifting, with many more utilities keen to participate in this market beyond the ITC expiration, as they have historically been limited from immediately recognizing the benefits upfront in their rate structure (having to amortize the benefits instead if under a 'rate base' paradigm). Moreover, other developers, unable to gain the scale necessary to leverage tax equity historically could yet enter the space as well. All this said, the 10% ITC will remain in place alongside accelerated depreciation tax benefits – both of which should continue to provide some advantages to larger, independent entities like SUNE.

Contrary to popular opinions, we see competition increasing in 2017, with more utilities involved

3. Cost Structure – and Keeping G&A in Check

Among the chief risks we see to the story is cost structure inflation associated with management's development efforts. While SUNE was clear in its communication to limit G&A through pursuing partnership strategies, we flag disclosed Opex growth was already meaningful to enable the contemplated growth in development MWs annually.

4. Working capital risks, will they be able to meet guidance?

We see serious risk surrounding SUNE's ability to maintain the levels of working capital needed to support its forecasted development growth targets. We believe that 2015 working capital requirements will be met, but don't have full confidence in 2016 and 2017. Working capital shortage could curtail future development if SUNE runs into any liquidity issues, which could result in the company having difficulty paying suppliers on-time. SUNE's working capital requirements will largely be sourced through the warehouse facilities in the near and medium terms. SUNE claims to have \$1.5bn in warehouse capacity currently, and intend to expand on that. Current installation costs total \$4bn, and will increase substantially. In the long-term SUNE expects to utilize 4 warehouse facilities. We see SUNE's potential to not be able to meet future working capital requirements as a main obstacle to them meeting their development guidelines.

This is the primary risk around execution

Guidance on working capital? Among the key elements missing from the company's forward looking disclosures is a sense on how much development capital is needed to be plowed back into the business in order to achieve its stated development goals. Given this is likely to account for the majority use of the 'use' of FCF, we see a potential need to delineate a more complete FCF profile in an effort to reposition the company as a cash flow positive story. While we would expect meaningfully negative working capital and even development platform capex, we suspect this would have issues in the ~2017 timeframe.

Ideally mgmt would provide (total) guidance on costs to achieve platform

Working capital in this instance is not a short turnover investment. We assume this remains elevated in the near-term to emphasize the continued re-investment in the business, particularly abroad to enable the contemplated scale.

5. Liquidity remains a focus

We see liquidity in executing on the growth ambitions discussed as further relevant, seeing even the 2015 target of >2GW as requiring north of \$4 Bn in capex. This alongside a scaling of the business for development purposes (high working capital) implies a need to rapidly recycle capital within the company back to TERP in order to avoid equity issuances. We flag its revolver is at \$560 Mn today, likely scaling up to \$800Mn in future periods. We suspect upsizing in corporate borrowing capacity will actually be a needed improvement for the story given the magnitude of its ambitions.

Growth at this pace requires a rapid recycling of capital

6. Meeting bold targets depends on uncertain markets

Outside of the working capital uncertainty, we see SUNE's reliance on the development of highly inconsistent markets like India and China as potentially obstructive to their meeting development goals in 2016 and onward. The large upside provided by the EM YieldCo highly correlates to massive expected growth in China and in India by 2020, but we are particularly bullish on India being able to meet forecasts given historic evidence of the country's ability to meet bold infrastructure development goals in short time-periods.

7. Going international is not a panacea

The second primary risk to the story will increasingly be management's focus on pursuing international growth. With such substantial domestic targets already, the question remains whether the team can handle international growth while maintaining its domestic trajectory.

What's the cautionary tale here? AES. We view AES – and its discounted valuation as the chief cautionary tale for SUNE. While it had initially promised to grow substantially (and above per averages) through an international diversification strategy, it has ultimately traded at a multiple in-line with what each of its international subsidiaries would have. In the interim, the company substantially levered up as part of its development strategy, incurring substantial G&A as part of its efforts to expand across a vast array of geographies without a specific strategy or local partner. The most important consideration for SUNE and its EM YieldCo subsidiary is whether it will be awarded a premium valuation predicated off US domestic peers – or if its valuation will be tied to EM market valuations, embedding a sizable discount. In the case of AES, the stock has effectively re-rated to reflect local market multiples.

How was management mitigated risks around its international strategy?

We see several aspects to the story that are clearly differentiated from past attempts abroad but it is always a challenging thesis to convince domestic investors to enter emerging markets, particularly with ambitious development plans with plans for relatively high margins.

- **Regulatory risk:** This is the key aspect that comes to mind. With many Emerging Market countries struggling with affordability, the question remains whether subsidy policies, Feed-in tariffs, and other regimes will be honored through the life of the contract.
- **Payment?** Given historic issues in collecting payments for conventional electricity service, the question remains whether collection and non-payment will prove as tricky with rooftop systems, where SUNE will be able to *choose* its customers ahead of sale.
- **F/X fluctuations:** How to deal with it? With much of the energy industry dollarized, we see this as a bit less of a concern vs. other sectors, but emphasize this will be an issue for the EM YieldCo, and even TERP to the extent to which it pursues meaningful investments in OECD countries.
- **Hedging for F/X remains a focus:** While we expect an S1 to delineate much more of this strategy, we envision more of a 'basket' hedging approach. This will be among the key considerations in the yield for the company, particularly following sharp moves in relative rates and F/X.
- **Overall FCF risk:** Management intends to have a lower payout ratio for its EM YieldCo than TERP (which is 85% CAFD payout). We tentatively model out **80%** to account for volatility but this could be lower.

8. A look at considerations for the EM YieldCo:

Financing international projects

Most projects outside of the US are via term debt financing with a maturity date tied to the date the applicable feed-in tariff or similar incentive expire; or in the case of projects structured on the basis of power purchase agreements, tied to the duration of such agreements. The tenor for SUNE's merchant projects (San Andres and Crucero in Chile), in absence of incentives and power purchase agreements, is typically agreed to on the basis of the projected market prices. Upon the sale of these systems, the new project owner acquires the term debt financing. Alternatively, in lieu of, or in addition to financing solar energy systems, mgmt. may oft times choose to sell a portion of their portfolio to third parties - outside the U.S., projects are generally sold outright to third parties, except in India, South Africa and Jordan where there is a partial equity holding requirement.

Risks from international exposure

The most significant risk in our opinion is the risk from regulatory uncertainty in some of these markets. There have been cases in the past (across industries rather than solar specifically) where changes have been made on rules around limits on foreign ownership of local companies, changes in laws (including tax laws and regulations), and rules restricting transfer of funds from foreign operations or converting local currencies into USD.

We also think emerging market operations may require considerable management time, and significant on the ground boots and resource allocation.

So what is the EM YieldCo opportunity?

Management appears primarily focused on Asia for this effort, emphasizing potential opportunities in China, India, and elsewhere. In addition, Latin America remains a focus, particularly with Brazil. We also emphasize a focus on South Africa as well.

Where will TERP trade versus EM YieldCo?

We understand that lower risk projects will largely be treated as TERP opportunities in countries like Chile, but projects with greater degrees of risk even within say Chile could well be EM YieldCo opportunities.

▪ What are the MWs under development?

- MW is committing to develop 365-435MW

▪ Existing Announcements:

- **China:** 1GW JV with JIC, a subsidiary of GIC
- **Brazil:** 1GW JV with Renova
- **Philippines:** 300MW JV with Aboitiz
- **India:** Announcement for \$4 Bn investment.
 - 250MW Omnigrid Micropower Co, India
 - 5GW in Karnataka
 - 5GW in Rajasthan

Further Dive into EM's Main Markets

China: SunEdison has a joint venture with a Chinese private equity firm, JIC Capital, with plans to build 1GW (~\$1.3bn) of projects across China over three years. Its plan to become a major solar power project developer are different from its historical relationship with China, where it had been manufacturing silicon and wafers for making solar cells and chips via a joint venture with the Huantai Group.

The cost of developing and building the 1GW of projects will come via non-recourse financing. JIC Capital is part of China Jinayin Investment, a subsidiary of Central Huijin Investment (a government owned biz) - this relationship may be a positive from a financing perspective. The JV with JIC Capital also involves creation of a \$300mn fund for project development, in which SUNE has the majority stake in the fund.

SUNE is also working with its manufacturing partner Huantai to develop projects (Huntai is expected to bring site development and construction expertise to the table) - this partnership plans to develop 1.7 GW of projects over 5 years. Overall, SunEdison plans to build projects between 50-100 MW sized projects in several parts of country except the south (where irradiation is lower) - a mix of both rooftop (commercial rather than residential) and ground-mounted installations.

We think any foreign developer in China will face intense competition from the local players (such as Jinko Solar, Trina Solar etc) who have a significant advantage in terms of an understanding of local politics and cultural dynamics.

India: SunEdison recently announced plans to build a \$4bn solar equipment factory in Mundra, in the state of Gujarat, in India, in partnership with Adani Enterprises, a local Indian firm. The new factory, being aimed to be operational in H2 2016, is expected to have an annual production capacity of ~7.5GW. According to SUNE, mgmt. plans to secure loans for 60% of the \$4 bn required to build and equip the factory

Separately, SUNE has also announced plans to develop 5 GW's of solar in the Indian state of Karnataka, and 250 MW's of off-grid solar in parts of rural India. Power from the project is expected to be sold via PPAs to the state distribution company (at non subsidized rates).

In terms of market potential, India's Modi raised the solar capacity target to 100 GW by 2022, and projects it will require \$100bn in renewable investments to hit the goal. Further details behind the specific incentives are yet to be fully released, but regardless we see this as an ambitious target, and one that SUNE's growth in India is highly dependent on.

Background on solar manufacturing business

Despite planning to exit the semi business, SunEdison still manufactures solar panels and views its technological advantages as a core competency. Technologies such as High Pressure-Fluidized Bed Reactor (HP-FBR) and Continuous Czochralski (CCz) allow SunEdison to develop purer ingots that lead to more efficient solar panels capable of generating more watts per square inch.

While an important ingredient of SUNE's success, management wants to focus more on the development side of the business and works with partners to reduce the capital intensive nature of the solar manufacturing business. We suspect management will continue to de-emphasize this business aside the opportunity to develop the SMP plant in Korea.

There is a joint venture with Samsung Fine Chemicals for the HP-FBR Poly technology which is part of the strategy to reduce panel raw materials costs below 5¢ per watt by 2016.

For valuation purposes, we ascribe no value to its plant in Pasadena, TX, nor its Malaysia Wafer and Oregon Ingot facilities. We include the -\$30 Mn in margin from its Pasadena plant in our cash flow projections, and reflect no contributions from the further two businesses in estimates either.

SUNE's strategy is to remain relatively asset light vis a vis manufacturing, following a period of continued declining panel cost trends in recent years. While this appears to be the wider trend in the space, SolarCity has recently bucked this trend by deciding to build out its own high efficiency

Another joint venture is with Adani Enterprises for a \$4Bn manufacturing facility in India where SUNE licenses its intellectual property (IP) and sells its specialized equipment to the JV. Leveraging its IP allows SunEdison to build superior technology without a high capital burden.

SMP Plant History

Production began at South Korea based SMP in mid-2014 (mgmt. claims there is no revenue out of SMP currently), and is expected to reach full production capacity of 13,500MT in polysilicon by 4Q15. The polysilicon capacity roughly equates to ~400 MW of solar wafer capacity. The Samsung-SUNE JV currently owns 50% of

Leveraging its intellectual property allows SunEdison to build superior technology without a high capital burden.

Key to JV deals is preserving SunEdison cash for development of renewable projects.

SMP, with SUNE owning 35% (~\$200MN in equity) and Samsung owning 15%, and SUNE expects the JV ownership to be consolidated; SUNE could yet buyout Samsung. The plant utilizes high-pressure fluidized bed reactor technology (FBR), which is more energy efficient than many competing poly manufacturing processes. SUNE claims they can sell poly in the spot market at low to mid \$20's/kg, and will produce at ~\$10/kg at SMP. SUNE claims that the poly produced out of SMP is the highest purity poly in the world.

Pasadena Plant History

SUNE's legacy MEMC poly plant in Pasadena is being ramped down, and SUNE claims that it will shut-down at some point in 2016. Mgmt believes that Pasadena will be a continued drag on earnings as they are selling poly at a loss and wafers at break-even. The Pasadena plant has an out of the money take-or-pay contract with PCS, which has hurt the plant's margins. Wafer manufacturing will get shut down first, then poly, as the entire facility ramps down. As previously discussed, we attribute no Pasadena value to SUNE's stock price.

Overview of TerraForm Power and EM YieldCo

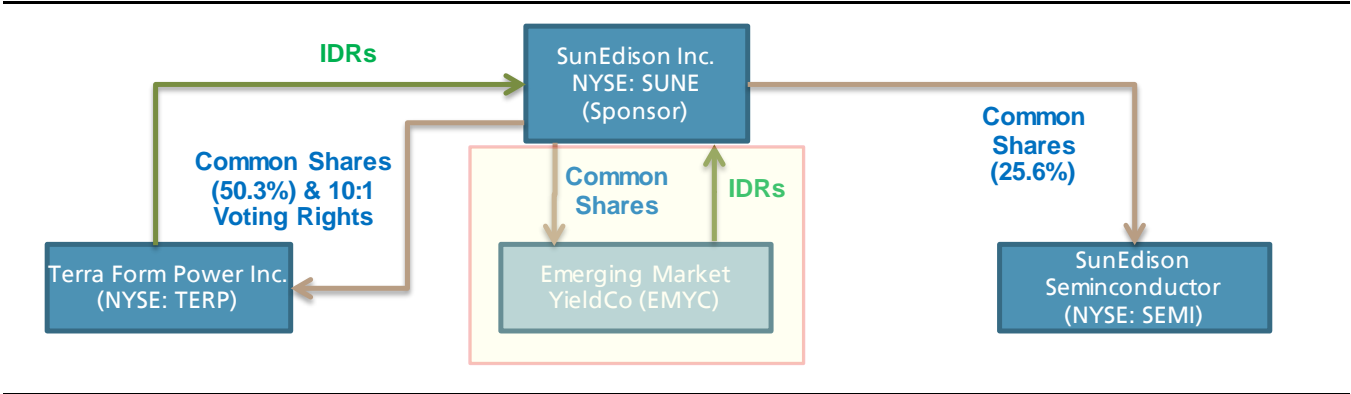
For additional background, please refer to our recent reports:

- [4/2/15 Flexing YieldCo Muscles: Interactive TERP Model](#)
- [3/2/15 House of Rising Sun: Initiate With Buy Rating](#)
- [3/6/15 Beantown Buzz: TERP and SUNE Management Takeaways](#)

TerraForm was formed to own the North American and Chilean assets and SUNE has confidentially filed an S-1 for an emerging markets YieldCo (Africa and Asia are an expected focus). SunEdison's focus is transitioning from what it calls 'subsidy-driven' markets to 'economics-driven' markets, highlighting its ambitions to grow in countries at grid parity with growing electricity needs. As of 2014 approximately half of the pipeline was in North America with 36% in EMEA/Latin America and the balance in Emerging Markets.

As of 4Q14 there was 295MW of projects retained at SUNE, up from 127MW in 4Q13.

Figure 31: SunEdison Simplified Organization Chart (EM YieldCo Pending)



Source: Company Filings

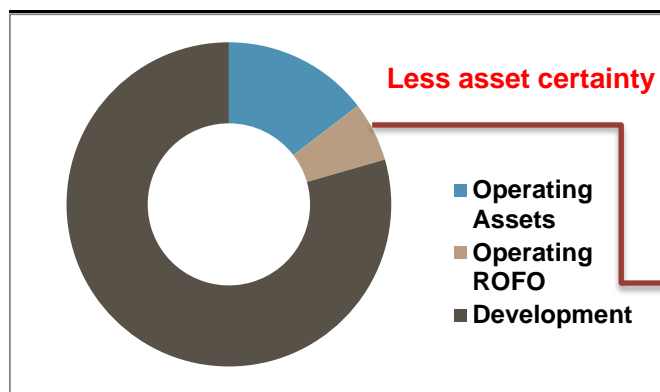
Execution on wind/solar is more vital for TERP than peers

Unlike NEP, NYLD, and other YieldCos which we believe have more static fundamental valuations (trading volatility aside), SUNE does not have a deep bench of drop-ready assets. What SUNE lacks today it makes up for with potential that we do not believe is being adequately priced by the market today. For example the conversion-weighted pipeline and backlog for SUNE jumped to 3.8GW from 3.2GW at 3Q14, value that largely accrues to TERP. SunEdison needs to continue converting its leads into operational projects to drop into TerraForm as there is a much smaller asset base that is operational and 'ready to go' for SUNE to sell to TERP. As we detail below, **only ~15% of the visible CAFD for TERP is in the entity today, in contrast with ~45% for NRG Yield**. Furthermore only ~5% of the potential drop-down CAFD is from currently operational assets (CAFD from assets on SunEdison balance sheet), whereas NRG Energy has an inventory of operating assets it can drop-down that is 4x greater. This gives TERP a thinner buffer against development hiccups.

Shares continue to perform well in the short-term as the sponsors execute on developing the pipeline.

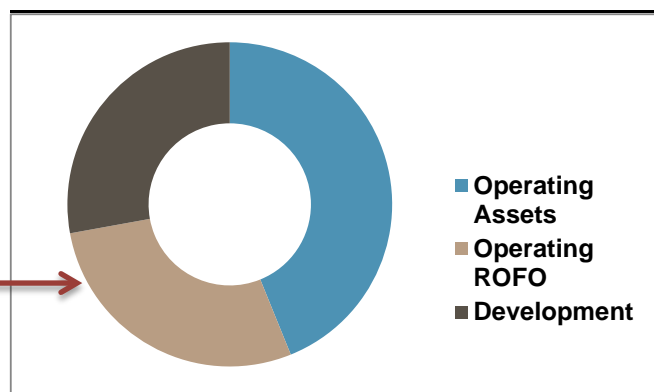
The flipside of this equation is that TerraForm has more incremental opportunity

Figure 32: TERP % CAFD Visibility



Source: Company Filings and UBS Estimates

Figure 33: NRG Yield % CAFD Visibility



Source: Company Filings and UBS Estimates

Defining the near-term drop downs

As shown below, SunEdison and First Wind each have a large inventory of identified assets that are strong drop-down candidates for 2015/2016 which significantly reduces the near-term development risk for TERP. As we have emphasized there is naturally developmental risk but with the nature of solar development in particular there tends to be a lower level of risk. For example, with hundreds or thousands of individual solar panels the risk of any one defective part impacting the asset is diminished. In contrast conventional power facilities have much larger dollar-value components that are critical to development. For example, the delays on certain milestone nuclear components have significantly delayed the timeline for SCANA's (SCG) ongoing nuclear development. Quite simply, the risk is much more distributed and easier to manage on these projects.

Despite not having a pre-build inventory of assets, solar tends to have lower construction risk due to the modular design.

Figure 34: Visible SunEdison Projects

Visible Drop Down Pipeline	As of January 2015		
Sun Edison Project	COD	Type	MW
Ontario 2015 Projects	2015/2016	Solar	16
UK Projects #1-13	2015	Solar	179
Chile Project #1	2015	Solar	42
US DG 2015 Projects	2015	Solar	119
Chile Project #2	2016	Solar	94
US AP North Lake I	2015	Solar	24
US Bluebird	2015	Solar	8
US River Mountains Solar	2015	Solar	18
US Kingfisher	2015	Solar	7
US Western Project #1	2016	Solar	156
US Island Project #1	2016	Solar	65
US Southwest Project #1	2016	Solar	100
US Utah Project #1	2016	Solar	163
US California Project #1	2016	Solar	55
Tenaska Imperial Solar	2016	Solar	73
US California Project #2	2016	Solar	46
US DG 2016 Projects	2016	Solar	55
US California Project #3-4	2016-2019	Solar	516
	Total		1,736

Source: Company Filings and UBS Estimates

Figure 35: Visible First Wind Projects

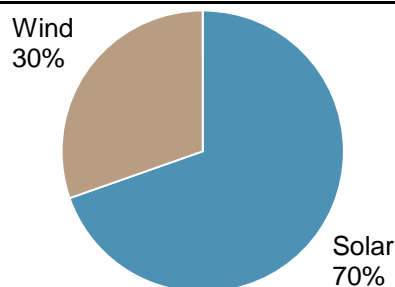
Visible Drop Down Pipeline	As of January 2015		
FirstWind Project	COD	Type	MW
Mililani Solar I	2015	Solar	26
Seven Sisters	2015	Solar	23
Kawailoa Solar	2016	Solar	65
Waiawa	2016	Solar	61
Mililani Solar II	2016	Solar	20
Four Brothers	2016	Solar	400
South Plains	2015	Wind	200
Oakfield	2015	Wind	148
South Plains II	2015	Wind	150
Bingham	2016	Wind	185
Hancock	2016	Wind	51
Weaver	2017	Wind	74
Rattlesnake	2017	Wind	62
Route 66 II	2017	Wind	100
Bowers	2017	Wind	48
	Total		1,611

Source: Company Filings and UBS Estimates

As of January 31, 2015, TERP had 1.5GW of operating assets and has guided to 2.1-2.3GW for 2015, a 700MW increase. The majority of the 3.3GW asset visibility is expected to reach commercial operations by the end of 2016 with ~950MW in 2015 and 1,600MW in 2016. In sum, the identified projects in the next two years provide confidence in management's ability to achieve the distribution guidance.

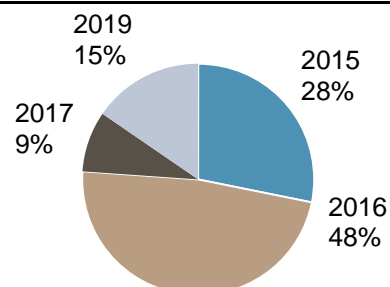
2017+ is the question.

Figure 36: Visible Drop Down Pipeline by Tech. Type (%)



Source: Company Filings

Figure 37: Visible Drop Down Pipeline by COD (%)

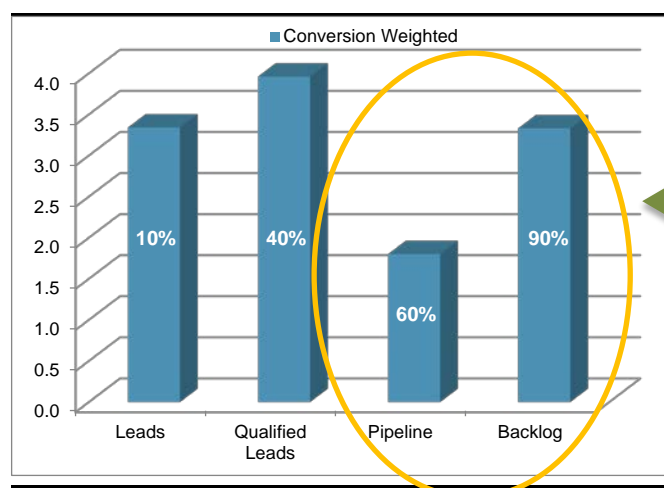


Source: Company Filings and UBS Estimates

Basic backlog Projections arrive at dividend growth already

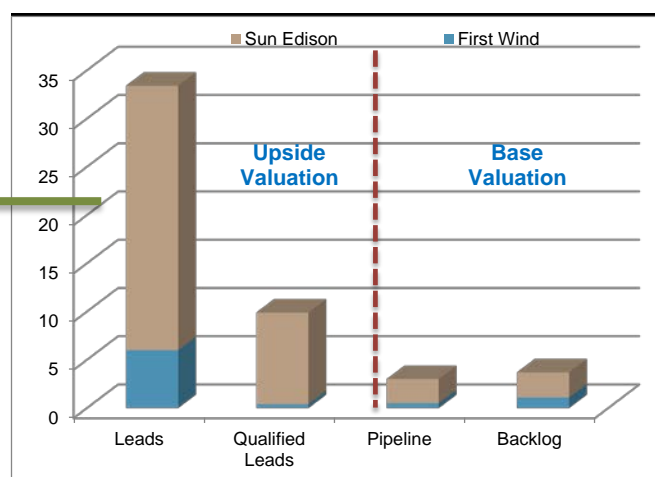
We discuss the outlook for the industry in the subsequent section but as we focus on TerraForm Power, the long-term outlook will be influenced by the sponsor's abilities to execute on its developmental aspirations. We elaborate on the macro factors driving continued renewables development in the YieldCo industry. The pipeline and backlog have the highest probability of success but SunEdison will have to execute beyond just 2016 to prove its sustainability; macro tailwinds will help. **We only include the first two, most certain, buckets of growth in our projections.**

Figure 38: Conversion Weighted MW: SUNE and First Wind as of First Wind deal



Source: Company Filings

Figure 39: Gross MW: SUNE and First Wind Conversion as of First Wind deal



Source: Company Filings

And how does this jive with our drop-down assumptions?

We include a year-by-year drop-down assumption to derive our dividend growth assumptions. We include the breakdown below by MW type and projected CAFD.

Figure 40: ROFO and CAFD Asset Breakdown vs guidance

ROFO Assets	FY14	FY15	FY16	FY17
Capacity (MW)				
Total US DG	263.0	613	957	1,057
Total Solar - US Utility	613.1	759	1,070	1,482
Total Solar - UK Utility	161.8	323	323	323
Total Wind - US Utility	468.9	675	858	1,443
Total Capacity	1,507	2,371	3,209	4,306
Distributable Cash Flow and Coverage Analysis				
Total (amounts in \$M, except per unit amounts)	FY14	FY15	FY16	FY17
Adjusted EBITDA	\$71	\$374	\$547	\$698
Estimated cash available for distribution		\$214	\$299	\$402

Source: Company, UBS estimates

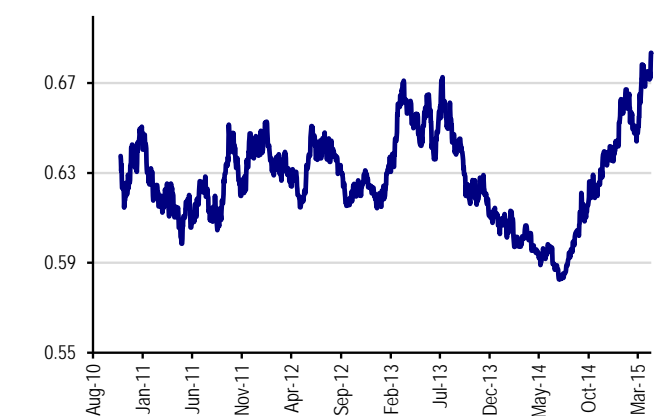
Framing the Risks – Getting Paid in Yield

What are the risks?

- Foreign country risk:** Some of the countries have high levels of inflation but the PPAs are not indexed and UK PPAs are only fixed for ~four years. Other foreign currency exposure includes the Chilean Peso but the related PPA is denominated in USD with semiannual inflation indexing. The weakening Peso is an issue as it makes the mines operations less competitive.

Weakening GBP is a concern

Figure 41: USD-GBP F/X



Source: FactSet

Figure 42: USD-Chilean Peso F/X



Source: FactSet

- **Developmental risk:** The risk is indirect for TERP but this YieldCo faces significantly more developmental risk than the likes of NextEra Energy Partners as TERP's sponsor lacks the same breadth of developed projects. Even the visible drop-downs at SunEdison have largely not met their COD. In the near-term TERP is somewhat insulated with the Project Support Agreement (PSA) (i.e. making CAFD fungible in the near-term). We detail out the PSA later in the note but it essentially offers a specific dollar target for drop-down cash rather than just a list of target assets. On a longer-term basis SunEdison will have to enhance the transparency of the pipeline, particularly in 2017 and beyond as there is only 800MW of identified projects in the visible drop down pipeline in the out years.
- **Operational risk:** As we detail in the First Wind portfolio later in the note, despite having PPAs we have some concerns about assets in the portfolio. For example, approximately half of the First Wind assets by nameplate capacity (230MW) utilize turbines made by Clipper which are no longer under warranty. At TERP the CMP (Compania Minera del Pacifico) asset is a 101MW solar facility which supports an iron ore mine. Although the contract is for below-market power, this is another higher risk investment relative to traditional US renewables.
- **Volatility in REC market:** Unlike Production Tax Credits, Renewable Energy Credits (REC) are traded in the secondary market and are subject to volatility. Due to First Wind's concentration in New England and the northeast US in general there is a concentration of REC exposure at the largest assets including Cohocton, Rollins, Stetson I, and Mars Hill.

SunEdison's ability to build new renewables in line with its historical success is the primary issue that TERP investors need to gain comfort with.

Operational risk appears higher for some of the TERP/First Wind assets than other peers.

Appendix

Business Segment Breakdown

We include the assumptions for our Development business, reflecting guidance on both margin creation from sell-downs to TERP as well as underlying services business. We reflect SUNE's latest run-rate guidance on Opex as well. We have inserted our initial estimate on the breakdown between utility-scale, residential, and C&I project composition as well to back into the projected cost structure.

Figure 43: Projections on Development Business and Services Business

Development Business Model	FY 2015E	FY 2016E	FY 2017E	FY 2018E	FY 2019E
MWs Completed	2,200	3,000	4,000	4,000	4,000
\$/kW	\$2,000	\$1,860	\$1,730	\$1,609	\$1,496
Gross Development Cost (\$ Mn)	4,400	5,580	6,919	6,435	5,984
Gross Margin (%)	20%	20.00%	20.00%	20.00%	20.00%
Development Gross Margin	\$880	\$1,116	\$1,384	\$1,287	\$1,197
	\$112				
% of Growth					
Resi	10%	10%	10%	10%	10%
C&I	3%	5%	5%	5%	5%
Utility Scale (Remainder)	88%	85%	85%	85%	85%
DG Cost Structure					
Costs/Watt (Resi - Marketing, G&A, etc)	\$0.52	\$0.46	\$0.40	\$0.34	\$0.34
Cost Trajectory		(\$0.06)	(\$0.06)	(\$0.06)	\$0.00
DG (Both) MW Target	425	875	1,475	2,075	2,675
Resi MW Additions	210	300	400	400	400
Resi MW Total	250	550	950	1,350	1,750
C&I MW Additions	65	150	200	200	200
C&I MW Total	175	325	525	725	925
Total Costs DG	\$221	\$403	\$590	\$706	\$910
Guidance	\$220				
Utility-Scale Cost Structure					
Costs/Watt (Utility-Scale)	\$0.22	\$0.16	\$0.13		
Utility-Scale Additions	1,925	2,550	3,400	3,400	3,400
Utility-Scale Total	783	3,333	6,733	10,133	13,533
Cost Structure					
DG	\$221	\$403	\$590	\$706	\$910
Remainder (Utility-Scale)	\$369	\$369	\$369	\$369	\$369
Opex	(\$590)	(\$765)	(\$880)	(\$880)	(\$880)
Opex Inflation	(\$75)	30%	15%	0%	0%
Devco EBITDA	\$290	\$351	\$504	\$407	\$317
Service Business	FY 2015E	FY 2016E	FY 2017E	FY 2018E	FY 2019E
MWs	6,200	9,000	13,000	17,000	21,000
MW additions	2,200	2,800	4,000	4,000	4,000
Revenue (\$/kW-yr)	20	20	20	20	20
Revenue (\$ Mn)	124	180	260	340	420
Margins (%)	18%	18.0%	20.0%	22.0%	24.0%
Margin (\$ Mn)	\$22	\$32	\$52	\$75	\$101

Source: Company reports and UBS estimates

Interest Expense Projections for SUNE

We include parent interest expense projections, which show a significant step-up in forthcoming periods to address funding of warehouses involved in development. While note yet in place, a meaningful source of FCF improvement remains the ability to refinance outstanding debt at meaningfully lower rates (off the 7-8% weighted-average cost of the first facility).

- **Warehouse assumed to grow from \$1.5 Bn to \$2.5 Bn:** The question remains how much working capital does the company need to raise vs. opting to leverage the non-recourse warehouse structure to finance development of projects. We see this as critical to the company's ability to rapidly raise liquidity of the overall company without using its corporate credit rating.
- **Leveraging corporate revolvers:** With the cost of equity in these warehouses into the mid-teens, it may well make sense to employ corporate debt/revolvers rather than warehouses over time. We emphasize the current revolver is contemplated only for L/Cs, and is expandable from its current \$540 mn to \$800 Mn eventually.

Figure 44: Interest Expense for SUNE

Interest	FY 2015E	FY 2016E	FY 2017E	FY 2018E	FY 2019E
Warehous facility expense (DevCo)	\$120	\$160	\$200	\$200	\$200
Converts	\$63	\$63	\$63	\$63	\$63
Other	\$8	\$8	\$8	\$8	\$8
Margin Loan	\$15	\$15	\$15	\$15	\$15
Seller Note	\$13	\$13	\$13	\$13	\$13
Incremental Recourse Debt					
Total Interest Payment	(\$219)	(\$259)	(\$299)	(\$299)	(\$299)
Projections (ex-warehouse)	(\$100)				

Source: Company reports and UBS estimates

Emerging Markets GP and Distribution Projections

We include the modeling projections from our LP units and GP units, respectively.

Figure 45: EM YieldCo breakdown on hypothetical value composition

Summary of EM YieldCo Distributions/Grow	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Excess CAFD required (Beyond Pipeline and ROFO)			3	19	60	78	151	270	469	806
Total CAFD from Backlog/Pipeline	83	127	171	215	244	244	244	244	244	244
Total CAFD for Distribution		130	190	275	401	545	784	1182	1856	3013
Distribution Reserve	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
CAFD available for distribution	66	104	152	220	321	436	627	946	1,485	2,411
Distribution to LP unitholders	66	104	152	220	321	436	627	946	1485	2411
Distribution/LP unit	2.578	3.093	3.712	4.454	5.345	6.414	7.697	9.236	11.083	13.300
Growth% on LP Units		20%	20%	20%	20%	20%	20%	20%	20%	20%
EM YieldCo IDR	\$0	\$0	\$3	\$17	\$75	\$157	\$293	\$526	\$935	\$1,667
Implied Yield on Shares	12.9%	13.4%	14.0%	14.6%	15.3%	15.9%	16.6%	17.4%	18.1%	18.9%

Source: Company reports and UBS estimates

Initial view of GP Value

In turn we also provide a summary of our valuation for the GP, reflecting a DCF of projected IDRs.

Figure 46: SUNE GP Valuation

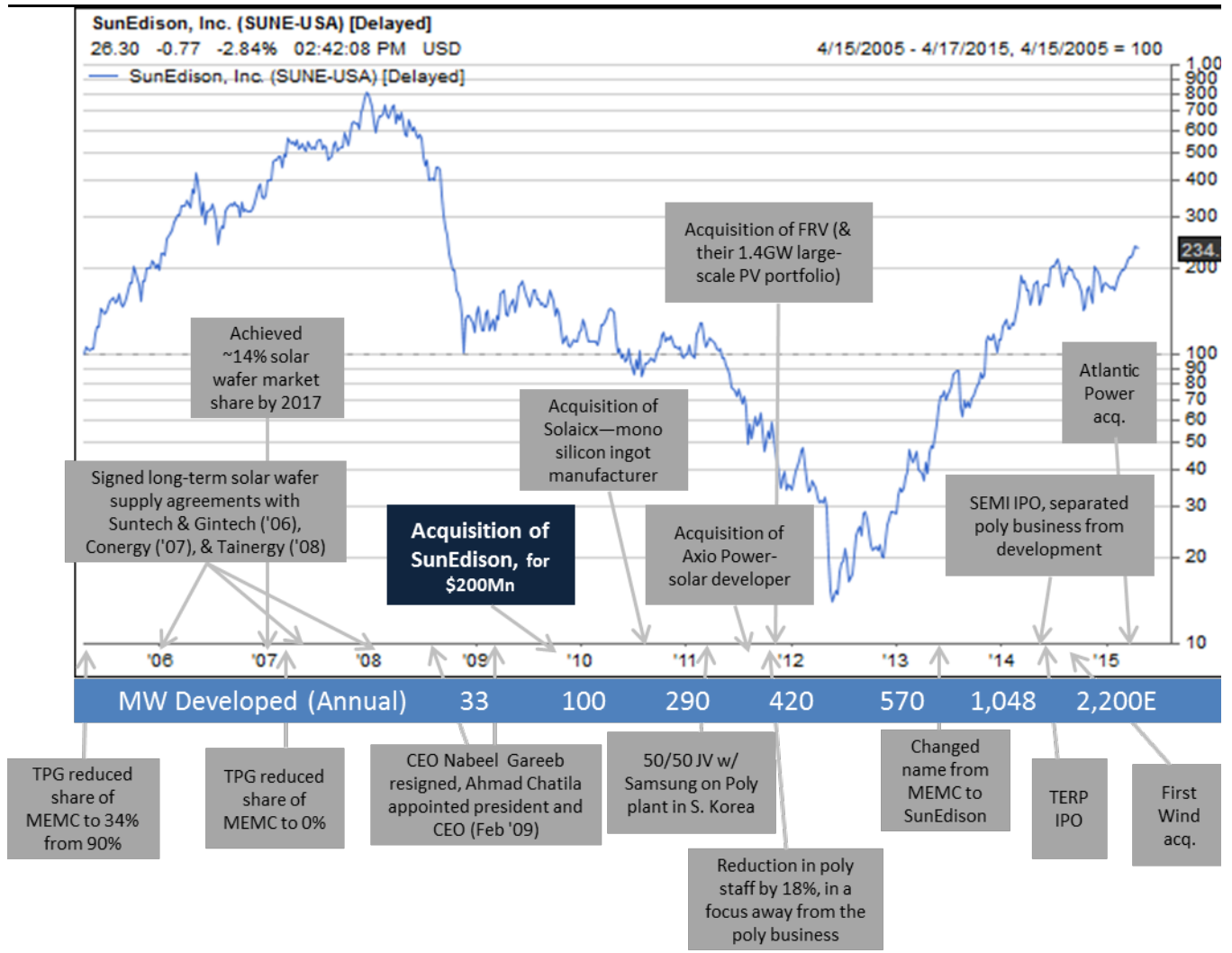
SUNE GP Value	2015	2016	2017	2018	2019	2020
IDR	\$0	\$0	\$3	\$17	\$75	\$157
Units	26	34	41	49	60	68
IDR (\$ Mn)	\$0	\$0	\$3	\$17	\$75	\$157
PV of IDR	\$0	\$0	\$2	\$12	\$46	\$89
PV of IDR per Unit of SUNE	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1	\$0.3
PV of IDR per Unit less Capital Gains Tax	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1	\$0.2
Terminal Value						\$2.6
PV of Terminal Value						\$1.4
Sum of PV of IDR per unit less capital gains tax	\$0.39					
PV of Terminal Value	\$1.41					
Estimated value of IDRs through 2020	\$1.80					
GP Assumptions						
Shares Outstanding	324					
Cost of Equity	10.00%					
Terminal Cost of Equity	11.00%					
Capital Gains Tax	15%					

Source: Company reports and UBS estimates

Historic Stock Performance

The company consciously has opted to rename itself to SunEdison from MEMC in 2013 as re-oriented its business model. We wouldn't be surprised to see others follow suite here.

Figure 47: SUNE Historic Stock Performance & Timeline, 2005-2015



Source: Factset

Projected Financials

Figure 48: SunEdison Income Statement

Income Statement \$M	FY 2015E	FY 2016E	FY 2017E	FY 2018E	FY 2019E
Operating Revenues					
Solar	\$716	\$734	\$752	\$770	\$790
TERP	\$486	\$687	\$882	\$1,476	\$1,935
Semiconductor					
Other	\$201	\$243	\$272	\$284	\$270
Total Revenues	\$1,403	\$1,663	\$1,906	\$2,530	\$2,996
% Change	-43.5%	18.6%	14.6%	32.7%	18.4%
Total COGS	(\$741)	(\$680)	(\$713)	(\$988)	(\$1,170)
Gross Profit	\$662	\$983	\$1,193	\$1,542	\$1,826
Gross Profit ex non recurring COGS	\$668	\$989	\$1,199	\$1,548	\$1,832
Gross Margin	47.2%	59.1%	62.6%	61.0%	61.0%
Gross Margin - adjusted	47.6%	59.4%	62.9%	61.2%	61.2%
Gross Profit before one-times and options expense	\$668	\$989	\$1,199	\$1,548	\$1,832
Devco Gross Margin Guidance	\$500	\$500	\$500	\$500	\$500
Gross Margin ex Non recurring & Options COGS	47.6%	59.4%	62.9%	61.2%	61.2%
Total SG&A	(\$552)	(\$668)	(\$514)	(\$390)	(\$327)
R&D	(\$14)	(\$14)	(\$14)	(\$15)	(\$15)
Other recurring					
Restructuring / Other Non Recurring Op. Costs					
Operating Profit	\$103	\$308	\$672	\$1,145	\$1,492
Operating Profit before non recurring items	\$126	\$331	\$695	\$1,168	\$1,515
Operating Margin	7%	19%	35%	45%	50%
Operating Margin - adjusted	8.9%	19.9%	36.5%	46.2%	50.6%
Total Options Expense					
Operating Profit ex non recurring items & Options expense	\$125	\$330	\$694	\$1,166	\$1,513
Operating Margin ex non recurring & option expense	8.9%	19.8%	36.4%	46.1%	50.5%
Non Operating Income	(\$475)	(\$664)	(\$888)	(\$1,154)	(\$1,382)
Interest Expense	(488)	(678)	(901)	(1,168)	(1,396)
Senior notes accretion Other regular debt					
Interest Income	\$14	\$14	\$14	\$14	\$14
Royalty Income					
Other					
Income b/f taxes, equity inc and minority int	(\$350)	(\$334)	(\$194)	\$12	\$130
Provision for Taxes	(\$9.56)	(\$9.14)	(\$5.31)	\$0.32	\$3.57
Effective Tax Rate	3%	3%	3%	3%	3%
Income before equity inc and minority int	(\$340)	(\$325)	(\$189)	\$12	\$127
Equity Income (SEMI)					
Minority Interest (TERP)	\$15	\$38	\$56	\$104	\$142
Net Income to Majority Shareholders	(\$355)	(\$363)	(\$245)	(\$93)	(\$16)
Preferred Stock Dividends					
Net Income to Common Shareholders	(\$355)	(\$363)	(\$245)	(\$93)	(\$16)
Net Margin	-25%	-22%	-13%	-4%	-1%
Add-Backs	-	-	-	-	-
Net Income, Adjusted	(\$355)	(\$363)	(\$245)	(\$93)	(\$16)
Net Margin - Adjusted	-25%	-22%	-13%	-4%	-1%
Core EBITDA	617	986	1,432	1,929	2,440
Core EBITDA margin	44%	59%	75%	76%	81%
Core EBIT	103	308	672	1,145	1,492
Core EBIT margin	7%	19%	35%	45%	50%
PER SHARE DATA:	(4.37)	0.60	0.45	0.35	0.27
Basic Shares Outstanding	270	320	320	321	321
Fully Diluted Shares Outstanding	271	322	323	324	325
EPS (Basic, reported)	(1.32)	(1.14)	(0.76)	(0.29)	(0.05)
EPS (Diluted, reported)	(1.31)	(1.13)	(0.76)	(0.29)	(0.05)
EPS (Diluted, adjusted)	(1.31)	(1.13)	(0.76)	(0.29)	(0.05)

Source: Company Filings and UBS Estimates

Figure 49: SunEdison Cash Flow

Cashflow - \$M	FY 2015E	FY 2016E	FY 2017E	FY 2018E	FY 2019E
Net Income	(\$340)	(\$325)	(\$189)	\$12	\$127
Depreciation and Amortization	515	678	760	784	949
Interest Accretion					
Minority Interest					
Equity Income					
Deferred Compensation					
Restructuring Costs / Other					
Gain on sale of PP&E					
Stock Compensation					
Deferred Taxes					
Working Capital and Other	40	(208)	(266)	(104)	(142)
Net Cash from Operations	\$214	\$145	\$305	\$691	\$933
guidance		\$652			
Capex (Net Equity Investment in Projects)	(100)	(100)	(100)	(100)	(100)
Proceeds from sale of PP&E	\$371				
Short term investments					
Refund of Option Payment					
Purchase of business, net of cash acquired					
Construction of solar energy systems	(4,400)	(5,580)	(6,919)	(6,435)	(5,984)
Equity Infusions in joint ventures					
Notes Receivable from affiliates					
Dividend received from unconsolidated JV					
Other					
Net Cash from Investing	(\$4,129)	(\$5,680)	(\$7,019)	(\$6,535)	(\$6,084)
Net short-term borrowings	-	-	-	-	-
Long term debt issuance	2,652	3,328	3,922	4,677	4,001
Long term debt payments					
Dividend to minority interest					
Proceeds from issuance of common stock					
Dividends Paid to majority shareholders					
Capital contributions from E.ON AG					
Expenses related to capitalization					
Common Stock Issued	500	500	500	500	500
Proceeds from Non Controlling Interest -					
Proceeds from IPO placement	977	1,852	2,598	1,358	1,583
Proceeds from Note hedge and Warrant Transaction					
Dividend Paid by TERP	\$84	\$99	\$123	\$147	\$168
IDR From Terp	\$0	\$5	\$37	\$139	\$258
Common Dividend			(\$150)	(\$165)	(\$182)
Other, Net					
Net Cash from Financing	4,213	\$5,784	\$7,029	\$6,656	\$6,330
Effect of FX rate changes on cash					
Net Change in cash	\$298	\$248	\$315	\$813	\$1,178
Cash at the Beginning	\$944	\$1,242	\$1,490	\$1,805	\$2,617
Cash at the End	1,242	1,490	1,805	2,617	3,796

Source: Company Filings and UBS Estimates

Figure 50: SunEdison Balance Sheet

Balance Sheet \$M	FY 2015E	FY 2016E	FY 2017E	FY 2018E	FY 2019E
Cash and equivalents	1,242	\$1,490	\$1,805	\$2,617	\$3,796
Restricted Cash	\$162	\$162	\$162	\$162	\$162
Short term investments	\$0	\$0	\$0	\$0	\$0
Total Cash Position	\$1,403	\$1,651	\$1,966	\$2,779	\$3,957
Accounts Receivable	\$266	\$316	\$362	\$481	\$569
Inventories	\$128	\$152	\$174	\$231	\$273
Other Current Assets	\$446	\$446	\$446	\$446	\$446
Working Capital and Other Adjustments		\$264	\$582	\$820	\$1,062
Total Current Assets	\$2,244	\$2,829	\$3,530	\$4,756	\$6,307
PP&E	10,090	15,092	21,351	27,102	32,237
Investments	\$0	\$0	\$0	\$0	\$0
Restricted Cash	\$0	\$0	\$0	\$0	\$0
Goodwill	\$660	\$660	\$660	\$660	\$660
Deferred tax assets	\$0	\$0	\$0	\$0	\$0
Other Assets	\$403	\$403	\$403	\$403	\$403
Intangible Assets, Net	\$0	\$0	\$0	\$0	\$0
Total Assets	\$13,397	\$18,984	\$25,944	\$32,920	\$39,608
Short term debt and current portion of LT debt	1,080	1,080	1,080	1,080	1,080
Solar energy system financing and capital lease obligations					
Accounts Payable	\$694	\$823	\$943	\$1,252	\$1,483
Provision for restructuring costs	\$0	\$0	\$0	\$0	\$0
Other Current Liabilities	\$472	\$472	\$472	\$472	\$472
Total Current Liabilities	2,246	2,375	2,495	2,804	3,035
Non-Recourse Debt	8,567	11,895	15,816	20,493	24,494
Long term debt, less current portion	-	-	-	-	-
Solar energy system financing and capital lease obligations					
Senior Notes being accreted	\$0	\$0	\$0	\$0	\$0
Other regular debt	-	-	-	-	-
Pension and similar liabilities	\$53	\$53	\$53	\$53	\$53
Other long term liabilities	\$393	\$393	\$393	\$393	\$393
Total Liabilities	11,259	14,715	18,757	23,743	27,975
Minority Interest	684	684	684	684	684
Redeemable Preferred Stock					
Commitments and Contingencies					
Shareholders' Equity	1,454	3,585	6,503	8,494	10,949
Preferred Stock					
Common Stock					
Additional Paid in Capital					
Retained earnings (deficit)					
Accumulated other comprehensive loss					
Deferred Compensation					
Treasury stock					
Total Liabilities and Shareholders' Equity	13,397	18,984	25,944	32,920	39,608

Source: Company Filings and UBS Estimates

Industry Overview: Renewables on the Road to Grid Parity

Renewable energy is reshaping the electric generating industry as new technologies with declining cost curves are entering the market at the same time that energy efficiency and demand response are breaking the historical correlation between GDP and electrical demand growth. We have seen this trend in its most extreme forms in Germany and domestically in California and Hawaii but industry sources expect renewables to be cost competitive in more and more locations. Renewables are most economical in regions with high electric costs – i.e. oil based generation (such as Hawaii and emerging markets).

Renewable power has ~\$0 variable cost of energy but is an intermittent power source (i.e. needs sunshine/wind) compared with conventional power sources that are capable of running 'baseload' such as coal, nuclear, and natural gas. The economics of renewables are still driven largely 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 exist as well (Ex. Renewable Energy Credits in NJ and MA)

The expiration/step-down in credits is expected to slow growth in the intermediate-term but will be offset partially by continued technological improvements (lower costs, more generation efficiency, etc.). Aside from pure economics the growth in renewables is due to environmental policy that seeks to curb carbon and other emissions. Most states have Renewable Portfolio Standards (RPS) requiring X% of generation come from renewable sources (typically solar and wind) by 20XX. For example, California has a 33% RPS by 2020 and Michigan has a 10% RPS by 2015.

We include proposed renewable targets by state. Broadly, the targets are calculated as a function of existing RPS requirements, through 2020. Modest incremental deployment is assumed for the purpose of 2030 targets, but the renewable energy aspect effectively adds an element of teeth to the existing RPS policies in place across a range of states. Notably, California is assumed only at 20%, despite having a 33% standard for 2020. The only states to see measurable growth from 2020 through 2030 appear to be the Northeast (MA, CT, NY, PA, and NJ) where penetration is modelled to significantly increase. We expect many states to reassess their RPS in the near future with initial goals having been met such as the aforementioned Michigan and Hawaii. In February West Virginia actually repealed the state's RPS which had required 10%/15%/25% renewables by 2015/2020/2025; however, we note the overwhelming trend is towards increases rather than to rollback progress made to date.

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

Improving technology and lower costs will help offset a loss of tax incentives.

Renewable Portfolio Standards: Remain in place and set to increase in many states.

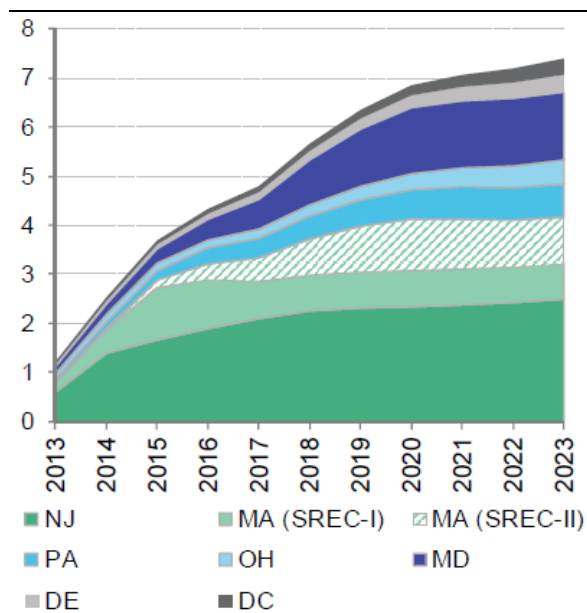
**Figure 51: State Renewable Energy Generation Levels for State Goal Development
(% of Annual Generation) as of 2014**

% of Annual Generation State	Proposed Goals			Alternate Goals	
	2012	Interim Level	Final Level	Interim Level *	Final Level
Alabama	2	6	9	4	5
Alaska	1	2	2	1	1
Arizona	2	3	4	3	3
Arkansas	3	5	7	4	5
California	15	20	21	20	21
Colorado	12	19	21	17	19
Connecticut	2	5	9	4	5
Delaware	2	7	12	4	5
Florida	2	6	10	4	6
Georgia	3	8	10	6	7
Hawaii	9	10	10	10	10
Idaho	16	21	21	21	21
Illinois	4	7	9	6	7
Indiana	3	5	7	4	5
Iowa	25	15	15	15	15
Kansas	12	19	20	19	20
Kentucky	0	1	2	1	1
Louisiana	2	5	7	4	4
Maine	28	25	25	25	25
Maryland	2	10	16	6	8
Massachusetts	5	15	24	11	13
Michigan	3	6	7	5	6
Minnesota	18	15	15	15	15
Mississippi	3	8	10	6	8
Missouri	1	2	3	2	2
Montana	5	8	10	6	7
Nebraska	4	8	11	6	7
Nevada	8	14	18	12	14
New Hampshire	7	19	25	15	19
New Jersey	2	8	16	5	7
New Mexico	11	18	21	16	18
New York	4	11	18	8	10
North Carolina	2	7	10	5	6
North Dakota	15	15	15	15	15
Ohio	1	6	11	4	5
Oklahoma	11	19	20	18	20
Oregon	12	19	21	17	19
Pennsylvania	2	9	16	5	7
Rhode Island	1	4	6	3	3
South Carolina	2	7	10	5	6
South Dakota	24	15	15	15	15
Tennessee	1	3	6	2	3
Texas	8	16	20	13	15
Utah	3	5	7	4	5
Virginia	3	12	16	9	12
Washington	7	12	15	10	11
West Virginia	2	8	14	5	6
Wisconsin	5	8	11	7	8
Wyoming	9	15	19	13	14

Source: EPA

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

Figure 52: Solar Carve-Out RPS Demand (TWh)

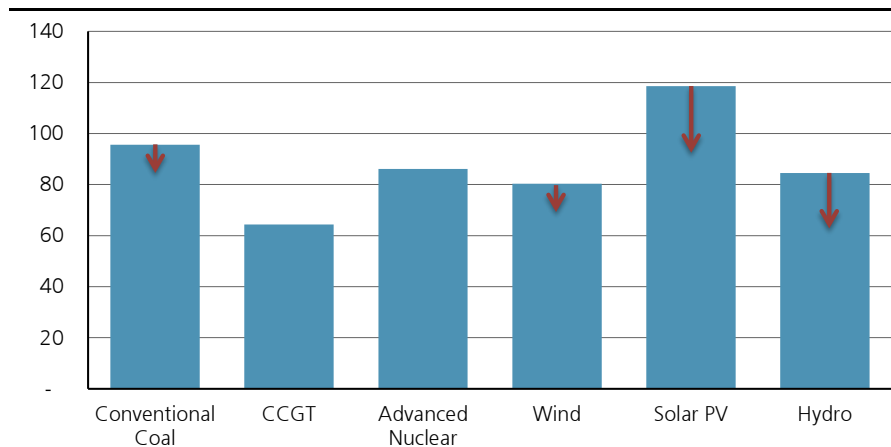


Source: Bloomberg New Energy Finance & EIA – Reflects RPS under legislation as of January 2015

RPS focused demand will continue to drive investment at least into the beginning of the next decade.

Across the board renewables are becoming more economic

Figure 53: U.S. average subsidized levelized costs (2012 \$/MWh) for utility scale plants entering service in 2019



Source: EIA (2014) and UBS Estimates

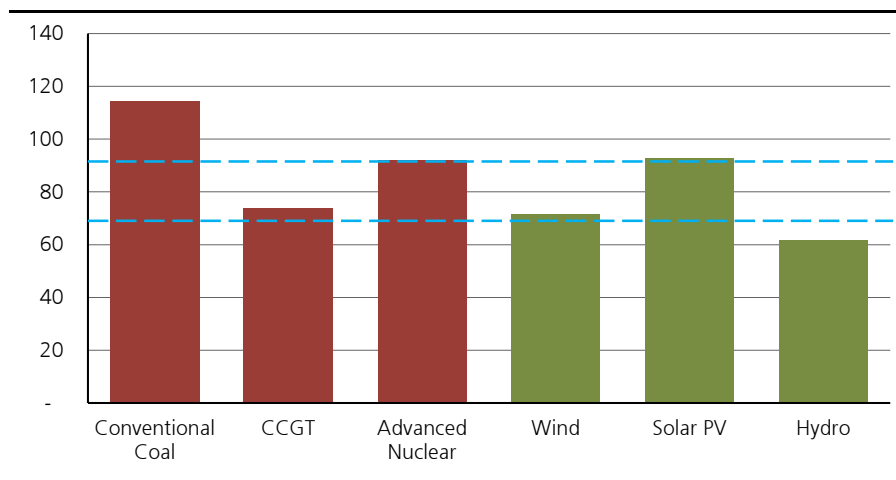
The Levelized Cost of Energy (LCOE) is the most frequently cited metric (although not without flaws) to compare cost-competitiveness across technology types and shows that renewables are rapidly approaching grid parity against conventional generation. The EIA estimates that the average 2019 subsidized LCOE (10% ITC and nuclear PTC) have the cost of wind below coal and nuclear but still well higher than an efficient natural gas plant. Without the 30% ITC, the cost of solar PV is notably above average. Most importantly, the trend versus the 2018 data shows 6%-10% reductions YoY for all renewables (solar PV showing the greatest gains).

Wind is estimated to be cost competitive against many forms of generation in 2019.

On the previous figure we present EIA's estimation of the subsidized regional minimums to illustrate a 'best case' scenario adjusting for access to transmission, access to fuel, etc. using the **red arrows** (the regional best case for CCGT and nuclear was largely de minimus). This shows that utility scale PV solar in premium locations at a 93 LCOE is more affordable than expensive conventional coal (114) and nearly at parity with nuclear (92). CCGTs remain significantly cheaper than solar even in a worst-case scenario but interesting premium wind essentially can be cost competitive against. All of this data assumes that neither the PTC nor the ITC is extended in any form, factors that would only enhance the cost competitiveness of solar and wind. Renewable industry groups such as AWEA have proposed multi-year roll-offs for the PTC and a grandfathering for the ITC, attempts to offset a 'cliff'.

Even-though conventional generation is lower cost, the declining cost of renewables are expected to decline more rapidly.

Figure 54: U.S. regional maximum conventional subsidized LCOE (2012 \$/MWh) vs regional minimum for utility scale renewables plants entering service in '19



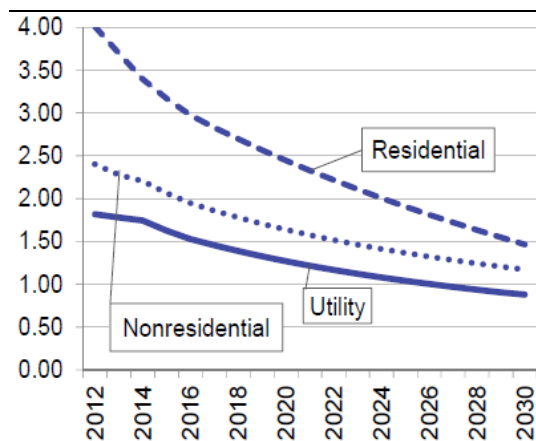
Source: EIA (2014) and UBS Estimates

Growth should accelerate in 2016/2017 before picking-up again as the costs decline offset the loss of tax credits. With technology costs continuing to drop we anticipate that Power Purchase Agreement (PPA) prices will continue to decline through 2017, driving an accelerating deployment of wind projects. A key question will be whether windy states (like KS, OK, etc.) will continue to contract incrementally for projects beyond RPS requirements just to lock in PTC benefits. Meaningful uptick remains predicated on filling incremental demand growth (if any).

Bloomberg New Energy Finance estimates that the levelized cost of electricity for solar PV in North Carolina (generic portfolio in attractive state) will continue to decline steadily after overcoming the ITC reduction. BNEF projects declines in panel costs to equate to ~15-20¢ through 2020, off their current levels of ~50¢/Watt to arrive at the 30-35¢/Watt range.

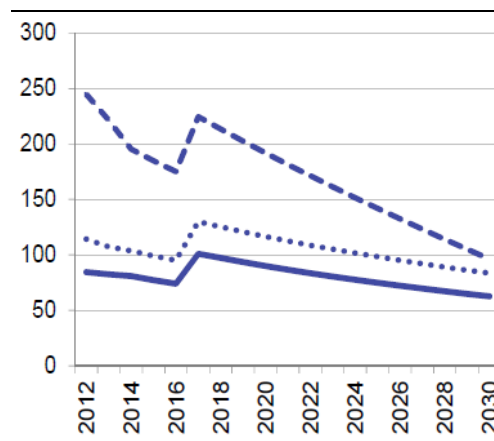
All-in, we asked investors of late how much cost reductions could be? There appears confidence for a \$0.30-0.40/Watt reduction in utility-scale economics through the ~3-year view (off a baseline of a ~\$1.75/Watt today). We see this translating to a continued high single-digit CAGR reduction in costs through the medium term (with higher rates likely for residential and DG solutions).

Figure 55: BNEF Projections on Cost (\$/Watt)



Source: BNEF Presentation

Figure 56: 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'](#).

What about distributed solar?

Distributed solar installations are frequently lower cost to end consumers due to the lack of additional transmission and distribution (T&D) spending as well as net metering policies that allow consumers to sell back into the grid at the full residential price (not just the avoided cost of energy). Incremental transmission costs are only 1-2% of the LCOE for conventional generation whereas they are 3-4% of the LCOE for utility scale solar PV and onshore wind.

Falling costs have been a big driver underpinning solar growth, with solar PV prices down 75% since 2001 from about \$10/watt installed down to \$2.50/watt lead to this point largely by scale – SEIA believes the DOE's SunShot goal of prices at between \$1 and \$1.60/watt may soon be possible. This ~20- 25% YoY decline in costs is across the board, but utility scale is the cheapest, already around \$1.70 per watt on average for installed cost. Although historically the cost driver has been module prices, expect cost savings into the next few years to be driven by savings on more standardized/cheaper financing as well as lower inverter prices, along with efficiencies in installation processes (cheaper and also less time consuming).

Further details are available in our note ['The Solar World According to SEIA'](#).

Winning the cost of capital battle

As we indicated in a previous note, ['Can REITs and UTEs Play Together?'](#), the White House stated last May that the Treasury Department and the IRS intend to provide updated guidance on the status of renewables eligibility as 'real property' within a REIT. With sun setting on federal tax credits, there has been open question of late of how exactly the administration would subsidize the sector. While we understand many in the sector readily see solar as potentially qualifying as 'real property', particularly which is mounted onto existing real estate, there remains some questions on whether ground-mounted panels could be eligible as well (further ambiguity exists between the modules and the racking itself). It is less clear whether the IRS will apply a comparable treatment to the wind industry, deeming it as 'real property' too; we believe there is a strong need to distinguish along technology types for REIT classification (further eligibility criteria will need to be extended to geothermal, etc. and the degree of 'permanency'). While we had

Transmission investment for utility-scale solar can be four-times greater than for a conventional gas plant.

Declining costs complement favorable policy support for DG.

REITs: Still A Possibility for Some Structures?

been previously skeptical of a wholesale addition of the renewable sector into a new tax structure given the continued talk of all-encompassing 'tax reform' and seeming concern over regulatory 'creep' across broad swaths of the economy, it appears quite likely to become a reality for the niche; there is no need enabling legislation. As a reminder the pending tax-extendors bill would provide an extension of the current PTC structure for a further two-year period. Overall, we are more constructive on the implications for the solar sector, given the much clearer path to qualifying for REIT status. But potential for wind assets still exists.

YieldCos would benefit from this development. Why? 1) Because the value of wind assets coming off their ten-year PTC will continue to benefit from a tax-advantaged status, lifting valuations; and 2) this will only accelerate the consolidation/maturation of the renewable sector into larger entities, with traditional C-Corps likely to sell to REIT 'consolidators', effectively arbitraging out the tax benefits. The argument is that real tax savings provided by a REIT structure (rather than just simple multiple/cost-of-capital arbitrage with YieldCos today) will enable the consolidation cycle, much as has been seen in the last decade with MLPs. The question remains how many existing renewable companies will convert to REITs, and how many YieldCos will be 'refiled' as REITs out-of-the-gate.

Why wait for a REIT when an MLP is an option?

The verdict is still out regarding REITs but following our latest meeting with the FERC Commissioners in January we do not think the country is ready for yet another tax-advantaged vehicle. We understand there remains wide debate across the administration on the subject, suggesting to us limited latitude for REITs or MLPs to find legislative support to get off the ground. We acknowledge that many will continue to push the concept through applying for Private Letter Rulings (PLRs) for such status – such as Renewable Energy Trust (RET), a potential YieldCo/REIT structure for renewables, but do not believe this will be pervasive.

What about tax vehicles: Can renewables get the same treatment as Oil & Gas?

Solar REIT clarification coming too from IRS? Having said that, our latest discussions in the industry around REIT structures suggest that IRS could be preparing further clarification as to *what* qualifies in a solar REIT structure later this Fall. Specifically, it is expected that both utility scale and distributed sources would qualify. Additionally, the REIT clarification would also remove the requirement that solar REIT owners *also* own the underlying land. Such a clarification could open up the sector to solar leasing companies being eligible. The question remains what the administration will do to support renewables beyond the existing expiration of the tax credit schemes in place today.

More details on our takeaway from the FERC meetings are available in our note ['Taking The Polar Express From Washington'](#).

Obama's latest budget strongly supportive of renewables but is expected to face significant challenge

President Obama's proposed \$4Tn 2016 budget involves significant changes for the energy sector including reductions for fossil fuels and increases for renewables. The most relevant change for renewables would be the permanent extensions of the PTC and ITC. While Obama and the Democrats likely proposed a steep request given Republican control of both the House and Senate, this budget does present an opportunity for a more permanent solution to the PTC/ITC with certainty provided on a multi-year basis.

Obama proposed a permanent extension of PTC/ITC – a steep ask from a Republican congress.

YieldCo: Debunking the Myth

2014 was full of buzz surrounding YieldCos with numerous vehicles coming to the market and 2015 looks to be a period where the new shine could start to wear off. There seems to be some confusion still, so we will start off by explaining what a YieldCo is and then will share our views on some of the benefits and potential risks associated with investing in YieldCos.

YieldCos remain a top discussion topic in conversations with our clients.

What Is a YieldCo?

The core idea behind a YieldCo is simple: provide investors with access to steady contracted cash flows in exchange for a lower cost of capital for power developers of wind, solar, and some conventional generation portfolios. YieldCo's work as follows: a power producer places assets that have long-term Purchase Power Agreements (PPAs) with creditworthy counterparties into a holding company (that would be the YieldCo). The power producer then sells a minority interest in the YieldCo to the public in order to gain access to capital markets. Access to public debt and equity grants the YieldCos with the ability to finance accretive sponsor drop-downs and third party acquisitions. Add some sweeteners such as avoiding paying income tax (thanks to NOLs) or a clearer path to growth (through ROFO agreements), and you get a recipe for a successful new asset class in a yield-starved market. The desire for yield has only increased in the past half-year with risk-free yields declining even further.

We note that the tax advantages of YieldCo's are not unique to the structure, as they are with MLPs. YieldCo's do not enjoy any cost of capital advantage from tax breaks over and above the portfolio's pre-YieldCo status aside from those inherent in partnership federal tax accounting.

All YieldCos Are Not Created Equal

We discuss the primary factors which distinguish YieldCos.

- **Geography:** US focused renewable investments tend to have the highest credit quality counterparties, greatest degree of certainty, and low correlation with oil. Opportunities in other OECD countries also offer a relatively low degree of risk as well as greater return profile. Looking at emerging market opportunities, the risk profile is greater (as expected) but growth in renewables is more abundant given higher electric pricing in many countries.
- **Growth Rate:** The 'top' YieldCos offer double-digit growth rates with some deviations between peers (i.e. 10% vs 19%). The lower quality YieldCos have growth rates below 10% and tend to trade at notably higher yields due to the reduce growth rate prospects.
- **Sponsor Quality:** On one end of the spectrum are sponsors with a deep inventory of assets that are already operational that can be dropped-down into the YieldCo whereas other sponsors (such as SunEdison) need to continue to develop projects to feed the growth of the YieldCo. The market tends to reward YieldCos with more predictable and visible cash flows which are based on the available assets at the sponsor.
- **Asset Types:** YieldCos tend to focus on wind and solar renewables but some include conventional fossil assets. NEP in particular has said that despite its inventory of contracted fossil asset it plans to keep the YieldCo as 'pure' with just renewable assets as it appeals to a certain investors. Abengoa Yield has

been the most vocal about expanding into non-traditional assets such as water desalination and transmission.

- **Ownership Structure and IDRs:** For example NEP and TERP have IDRs while the earlier YieldCos do not. Another important distinguishing factor is the voting control of YieldCos. SUNE is advantaged again here as it has 10x preferred voting rights for TerraForm which grants consolidating control.

Why Are YieldCos So Popular?

(1) Yield AND Growth

YieldCos seem to offer the best of both worlds: providing appreciable, predictable income while promising growth rarely seen in the contracted power generation business, with target DPU growth in the range of 10% to 18%, and sometimes higher. Today's low interest rate environment makes investors even fonder of this type of vehicle.

Is it a Yield Vehicle or a Growth Vehicle? More appropriately should be called 'GrowthCo'

We note however that most YieldCos rely on their parent dropping ROFO assets to fuel their growth. In essence, distribution growth is an engineered phenomenon with a finite lifespan as set by management, and not perpetual growth. By the nature of the PPAs, individual projects have little organic growth with (at best) escalators for inflation, although rare. Inflation escalation is more common outside of the US with more volatile currencies.

(2) Low Cost of Capital

Because their assets are contracted over a long period of time (twenty year is not uncommon) with creditworthy counterparties, YieldCos have a lower risk profile than the typical IPP, which translates into a lower cost of capital. In addition, by catering to a specific group of investors (i.e. those looking for stable, utility-like returns), YieldCos are able to attract capital more efficiently, which further exacerbates their cost of capital advantage. Finally, as YieldCos typically focus on renewables (NEP and TERP are pure-plays on renewable for instance), those vehicles are of unique interest to 'green' investors and sustainable funds. This improves YieldCos access to capital even further.

Focus is on stability in cash flow to payout bulk of cash flow

TERP target is ~85% of distributable cash flow

(3) Flexible Business Model

As mentioned before, unlike MLPs, YieldCos are not restricted on the type of asset that they can own. In fact, any contracted energy asset with ten or more years left under its contract will do the trick. Contracted Solar plants or Wind plants without PTCs are a particularly good fit, but conventional plants or even transmission assets could work as well. Abengoa has pushed the envelope the furthest here but we anticipate others following as renewables growth slows.

(4) Some Tax Advantages

To the extent that a YieldCo has NOLs (most do), it can avoid paying Federal taxes. For instance, NEP and NRG Yield do not expect to pay US Federal taxes for approximately 15 years. Of course, whether that advantage continues in the future depends on whether the assets dropped-down present the same tax attributes. In addition, thanks to the C-Corp structure, distributions are treated as dividends or capital gains for tax purposes, which are often taxed at a more favorable rate than income.

Is It Too Good to Be True?

As seen above, there is a lot to like about YieldCos so it would be easy “yield” to the frenzy. Nonetheless, in general we prefer to remain cautious and have compiled some of the major concerns that we have regarding YieldCos. Despite our cautious stance, we see the upside profile from TerraForm Power as more than large enough to compensate for our concerns.

(1) Growth?

Like any “growth” type of company, if the expected growth does not materialize, the stock price will most likely suffer. YieldCos have set expectations very high with that regard so even a minor mishap could have disastrous consequences.

In addition, inherent to the growth model is the dependence on capital markets. YieldCos need to be confident in their stock trading at adequate levels and/or in their ability to successfully raise debt on attractive terms. This is even more critical given the high ratio of financing-to-EV in capital raises.

Furthermore, as YieldCo structures become more widely spread and competition for high quality contracted assets becomes fiercer, M&A premia inflation becomes a sure concern.

Significant growth in distributable cash flow is predicated on acquiring assets from the sponsors, thus requiring the YieldCos to tap the capital markets.

(2) Yield?

The value of most YieldCos has increased so much lately that the “yield” in their sobriquet has become somewhat undeserved. Indeed, as seen previously, most YieldCos currently trade at a 2-4% yield. To put this figure into perspective, the average regulated utility yields approximately 3.5%.

(3) Interest Rates?

YieldCos are particularly exposed to a rising rate environment, similar to corporate debt in the same maturity profile. Furthermore, with YieldCos paying 80%-90% of their cash available for distribution out to investors, they depend almost entirely on capital markets for non-organic growth via drop-downs and third-party acquisitions. As we saw in 2008, the MLP sector (similarly exposed) was hit especially hard by inaccessibility to capital.

Increasing interest rates can remove the attractiveness of YieldCos as the relatively spread declines.

(4) Corporate Governance?

Given the prevalent concerns around corporate governance across the MLP space, we believe corporate conduct is among the most significant risks to investors in YieldCos. Specifically, given the structures’ relative novelty, we believe maintaining credibility in fairly negotiating ROFO assets drop-downs will be crucial to sustain investor confidence. For example, NEP has two independent directors.

(5) Heavy Reliance on Wind Generation

Many YieldCos are greatly dependent on wind power to generate electricity and, as mentioned earlier, this type of generation suffers from resource variability. Ultimately, this can notably damage the stability of the cash flow generation. We include historical capacity factor data in the following tables, including average, year-over-year changes, and relationship with temperatures for various fuel types:

(6) Trading volatility

The underlying cash flows from the assets might offer certainty but shares can oscillate significantly given a lack of liquidity. For example, TERP appreciated ~35% from Jan 1 – Apr 15 in 2015. This volatility risk should decline as YieldCos grow in size and have more float but these vehicles will still remain smaller than most utilities.

Cash flows are stable but the stocks are not.

(7) Incentive Distribution Rights (IDRs)

NEP and TERP offer explicit IDR fees to their sponsors which are designed to provide a clear financial reward for sponsors dropping assets into their YieldCos. The permits of IDRs have been debated before with MLPs but are still relatively new to the utilities universe. The most obvious downside of IDRs is that it requires the underlying YieldCo to grow significantly faster to maintain its common distribution per unit (DPU) growth as a portion of the cash flows is returned to the sponsor. As we saw with Kinder Morgan's reconsolidation, at some point the IDRs can become so prohibitive that the increased cost of capital limits the ability to win accretive deals.

Charting New Waters: What are the Emerging Themes?

We think the near term bodes quite well for the sector amidst our expectations for continued consolidation of both existing portfolios – as well as even development platforms. We continue to prefer those with the currency to enable growth – and management teams that understand the need to have a visible long-term pipeline of growth; notably NYLD plays into this along with TERP after First Wind, but following NEP's structural update in October, we're constructive here too. As for the next wave of YieldCo listings, less visible growth will drive wider spreads vs. the mainstays, but we emphasize again – this contracted IPP sector is here to stay—it's really just the valuations that are up for debate. Below we present themes that we believe will be highlights for not just 2015 but years to come as the vehicles continue to evolve.

(1) Theme #1: Having a hand in everything? Developing via all avenues possible

Among the most notable themes for the existing YieldCos is the recognition that they will increasingly migrate towards relying on all sources of potential organic project development, including utility-scale wind & solar as well as distributed/rooftop solar from which to source future drops in an increasingly competitive environment. Notably, we see SUNE's foray into wind through its recent First Wind acquisition as indicative of this trend – and wouldn't doubt if we saw other Solar YieldCo's follow their lead. With utility-scale solar projects set to become increasingly competitive, particularly beyond the 2016 ITC expiration, we see it as necessary for such YieldCo's to build out wind development platforms to remain relevant in large-scale category—or expand into DG to the extent they have scale to develop this business. Meanwhile, we continue to see an argument for the NRG's of the world to eventually enhance their existing wind prowess. Bottom line, we see a desire for not just acquiring operating assets, but a real value to having credible development businesses; that is why SUNE paid up for First Wind.

Expansion into non-pure power asset is inevitable, and some are already starting.

(2) Theme #2: Going Independent? Next wave poised to strike it on their own

We believe the next wave of YieldCos will be unlikely to have any meaningful parent sponsors, opting instead to rely on independent agreements with developers to 'feed' their growth. This trend towards relying on independent developers for drop-downs brings into question the structural alignment of the parent entity – and the implicit and explicit benefits of parent ROFO agreements. We also think the focus on the quality of development pipelines will gain greater scrutiny as ROFOs agreements will increasingly be signed around assets that have yet to be constructed. To solve the alignment issue, we understand some are contemplating paying with equity in their YieldCo structures (rather than simply engaging in all-cash deals for ROFO acquisitions) in order to 'align' the parent interests. Among further interesting trends, the question of using multiple developers – to enable both regional and asset diversity – could also prove useful to mitigate concerns around lack of credible growth. Once more, we reiterate the next wave of YieldCo's are the second tiers – with the key question remaining in our minds whether to simply sell directly to the top-tier folks rather than bothering to list.

More 'developer agnostic' YieldCos are expected.

(3) Theme #3: Emerging Markets will become a reality. Breaking out capital market risk vs development risk

Following SUNE's lead yet again, we see their second forthcoming spin of an emerging-markets focused YieldCo asset listed in the US could yet prove to be another significant trend for this sub-sector in 2015. We highlight the lower multiples with which all infrastructure assets in emerging markets – including renewables – lends itself towards a cost of capital arbitrage in the US to drive accretive growth. We highlight to investors that growth in geographies abroad will involve not just capital markets risk, but meaningful development and execution risk, with sanctity of development contracts and Memorandum of Understanding (MoU) commitments as worth close scrutinizing. Once more the question remains just *how* wide any EM YieldCo would trade – seeing F/X and broader regulatory risk around contracts, beyond conventional development risk. We flag even SUNE's YieldCo will largely be predicated around assets yet to be built.

The same question for US utilities will exist for YieldCo's – can the US listed companies trade at a full (or near full) multiple vs. domestic peers despite holding foreign assets?

YieldCo vs GrowthCo: EM can be the engine of growth to feed the beast

The EM risks nonetheless do come along with a counterbalancing growth opportunity, once development risks can be negotiated. Positive power demand growth, higher conventional energy/fuel costs, as well as addressing energy security issues should lead to continued growth in coming years (and *without* the corresponding tax credit risk beyond 2016 that looms over the US focused developers/YieldCo structures). We still expect capital markets to trend into EM, we also expect companies to meet credibility thresholds through a proven track record of timely execution of development.

(4) Theme #4: How secure are ROFOs? It's *just* the right of a first offer.

Among our chief concerns for the independent YieldCo's, particularly those without strong ties to support the subsidiaries (i.e. – no equity stakes or IDRs), is whether companies would opt to *walk* from ROFO, MOUs, or any other range of commitments made. As is implied in the ROFO acronym, it is just the right of a first offer – it doesn't necessarily mean that the offers are the most competitive. Over time, our bias remains that quality YieldCo's will eventually buy up the lower quality subsidiaries in search of growth – but this could yet manifest itself through

Will independent YieldCos have sufficiently committed parents to see the ROFOs to fruition?

the taking of assets away from ROFOs where the parents and sponsors have little holding them together aside gentleman's agreements. This implicit risk should emphasize the underlying (primary) capital market risk in following through on Yieldco drop-down related stories.

(5) Theme #5: Could tax advantaged structures come to the fore?

While up until now YieldCo's have enjoyed an advantaged tax status primarily from the tax basis step-up involved in their acquisitions alongside the intrinsic tax credits/shield generated from the assets themselves (ITC/PTC and accelerated MACRS depreciation), the question remains whether the IRS clarification on REIT eligibility from last spring will have come to pass. Many investors have expressed some degree of skepticism on the viability for the traditional C-Corps to remain competitive with the IDR payments back to their sponsors eventually, the introduction of a REIT advantage could drive a more structural argument around 'why' assets should continue to migrate into the YieldCo structure, through the interest rate cycle, seeing the tax attribute upside.

Can a YieldCo be a REIT?

(6) Theme #6: Is there an MLP diversification theme at play here too?

Following on recent months of MLP volatility, we note greater willingness among some constituents to evaluate investments in contracted renewable assets held within the YieldCo sector. Seeing the entire sub-sector's market cap as miniscule relative to MLPs, outflows from commodity-sensitive names could well provide a bid for the small, relatively illiquid YieldCo 'niche'.

(7) Theme #7: Leverage – what is the right financing approach?

Having focused on valuing assets off yield, the bias appears to increasingly push to finance with non-amortizing debt both at the project and corporate level to enable higher near-term cash yields. The question remains whether conventional bullet maturity notes will align with less overall leverage – or simply stretch companies all the more at the end of their contract lives.

Expanding the definition of a YieldCo asset: what can qualify?

Beyond geographical expansion, eventually we think the pipeline of eligible assets will grow by including non-renewable assets as well. This could start with long term contractible businesses but which could include lower quality hedges (more volatility than conventional PPAs where volumetric risk is assumed by the buyer) these include sectors such as power transmission and water assets to begin with. Eventually, the YieldCo definition will likely expand broadly to feature 'infrastructure' assets more widely.

Expanding to include transmission and water does not look like much of a stretch.

Defined asset lives within a YieldCo? Losing the residual value tail

We think the other angle here will be players trying to push the limits, and questioning the palatability of including high yield bonds in a portfolio to strengthen yield characteristics of their vehicles. *Broader question is whether drops of assets/structures with specific lives (either via bonds or NRG's 18-year flip on its DG drops) will be palatable to YieldCo investors – or will they demand security of retaining the residual value of assets?*

A further trend in pushing the limits of a YieldCo points to fixed-live asset drop-downs – without the residual value of any contract reset

Even staying with renewables, questions about fundamental asset quality have largely been ignored with solar and wind investments viewed as somewhat fungible as long as the PPA was signed at a similar time in a similar market. A focus on turbine/panel quality, PPA details, and other nuances could emerge as more developers bring assets to the table.

Not all MWs are created equal.

Many bulls argue residual value is key to long-term YieldCo upside – We think a greater focus on what an eventual drop to 'market' for many assets bears close scrutiny. We see DG assets, which exist behind the meter, and newer wind assets as presenting the least risk, while legacy (particularly 2009/2010 solar assets and California gas assets) appear to have the most downside risk on contract expiration. We see repowering opportunities of both utility-scale solar and wind as opening an entire avenue of long-term growth that has received relatively little attention in the YieldCo debate.

At the end of the day... the sector remains one of consolidation.

While new YieldCo's may continue to grab attention in coming months, we see the most relevant news as still coming back to the outlook for consolidation and improving 'growth' metrics for the *existing* entities. While the question of the 'ideal' dividend growth target is hotly debated, there's no doubt that exceeding these targets in the near term (via one-time deals) is an attractive proposition to both the YieldCo entity and their sponsors, who are able to accelerate the realization of the underlying IDRs.

What's the next deal we're tracking? We think the sale of Atlantic Power's crown jewel wind portfolio could be the clearest 'big datapoint' in the sector, providing a potential transaction worth ~\$500 Mn in EV, as the former 'YieldCo' trades over the assets to a company that is still in good standing.

We think the bias towards consolidation rather than incremental public listings plays into TERP's hands. Given the widening yield between the 'haves' and the 'have-nots' (particularly those seeking to go public), we see a clear argument to sell-out rather than *bother* with an IPO process.

Who Are the Players in the Renewable Space?

As mentioned, renewables are particularly adapted to YieldCos. We include below the top-25 owners of wind and solar capacity in the US/Canada:

Figure 57: Top-25 Owners of Operating Wind Capacity in US/Canada as of 2014

	Ultimate Parent	Number of Assets	Total Owned Operating Capacity (MW)	Total Owned Planned Capacity (MW)	YieldCo Yet?
1	NextEra Energy, Inc.	121	10,611	2,532	YES
2	Iberdrola, S.A.	73	5,779	4,996	Considering
3	EDP - Energias de Portugal SA	56	4,029	4,666	Considering
4	China Three Gorges Corporation	49	3,924	3,984	
5	EDP Renováveis	48	3,919	3,984	Considering
6	HidroCantábrico Energia S.A.	48	3,919	3,984	
7	PARPÚBLICA - Participações Públicas	48	3,919	3,984	
8	Berkshire Hathaway Inc.	31	3,747	1,148	
9	Invenergy LLC	44	2,996	3,295	
10	EDF Group	50	2,767	3,262	Considering
11	BP plc	21	2,743	1,861	
12	E.ON SE	27	2,725	2,700	
13	NRG Energy, Inc.	46	2,314	285	YES
14	Pattern Energy Group LP	16	2,310	1,262	YES
15	Riverstone Holdings LLC	19	2,310	1,611	IPP Spin
16	General Electric Company	13	2,094	456	
17	Duke Energy Corporation	22	2,078	497	
18	Enbridge Inc.	20	1,989	110	
19	Enel S.p.A.	45	1,764	3,710	
20	Infigen Energy Limited	18	1,554	-	
21	Sempra Energy	7	1,488	475	
22	TransAlta Corporation	19	1,468	-	YES
23	Pattern Energy Group Inc.	9	1,426	249	YES
24	Exelon Corporation	82	1,329	120	
25	Global Infrastructure Management	23	1,297	683	

Source: SNL data

The larger question remains to what extent the YieldCo phenomenon will enable consolidation, particularly of smaller developers. In particular, 'mature' portfolios without meaningful development opportunities would be disproportionately biased to 'monetize' to a YieldCo.

Figure 58: Top-25 Owners of Operating Solar Capacity in US/Canada as of 2014

	Ultimate Parent	Number of Assets	Total Owned Operating Capacity (MW)	Total Owned Planned Capacity (MW)	YieldCo Yet?
1	NRG Energy, Inc.	26	1,677	22	YES
2	NextEra Energy, Inc.	27	1,094	2,402	YES
3	Berkshire Hathaway Inc.	12	844	847	
4	SunEdison, Inc.	235	576	1,424	YES
5	Consolidated Edison, Inc.	29	460	879	
6	Sempra Energy	11	439	1,178	
7	Google Inc.	4	394	-	
8	BrightSource Energy	8	392	2,990	
9	General Electric Company	10	390	167	
10	Sumitomo Corporation	2	383	167	
11	Exelon Corporation	35	324	130	
12	Southern Company	11	293	90	
13	Turner Enterprises, Inc.	7	292	-	
14	LS Power Group	4	280	151	
15	EDF Group	21	265	363	
16	Abengoa, S. A.	2	250	280	YES
17	Enbridge Inc.	7	250	-	
18	Strata Solar LLC	138	240	808	
19	8minutenergy Renewables, LLC	17	206	1,595	
20	Riverstone Holdings LLC	2	206	550	IPP Spin
21	Fortress Investment Group LLC	5	180	-	
22	ArcLight Capital Holdings, LLC	2	176	-	
23	Global Infrastructure Management, LLC	2	176	-	
24	Duke Energy Corporation	38	159	507	
25	PG&E Corporation	11	153	-	

Source: SNL data

Lastly in addition to renewables, we could see transmission assets being dropped-down into YieldCo structures. Given the smaller base of existing assets, we suspect the preponderance of YieldCo growth will remain driven by wind assets rather than solar. Abengoa Yield has been a leader here whereas TerraForm Power has stated it intends to remain a 'pure' renewable business with only Solar and Wind assets.

YieldCos are a global phenomenon

We tend to focus on the YieldCos in the US in our analysis but there are vehicles with contracted renewables abroad as well. As shown by dividend yield, many of the foreign YieldCos offer lower growth and trade at current yields in excess of five percent, a contrast to US YieldCos at ~3% or lower.

Figure 59: Full YieldCo Universe

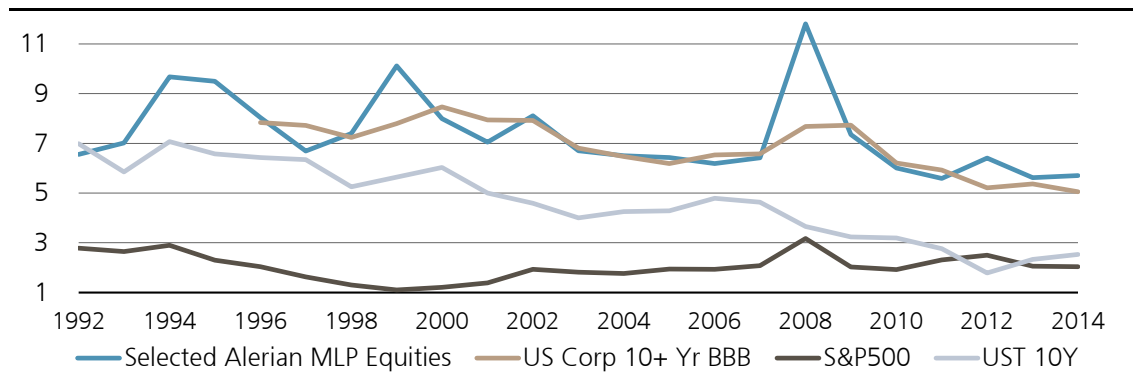
Ticker	Company name	Market Cap \$M	Price \$	Dividend Yield (%)				EV/EBITDA			
				2014	2015	2016	2017	2014	2015	2016	2017
NEP	NextEra Energy Partners LP	766	41.0	1.1%	2.5%	3.0%	3.3%	22.6x	17.3x	13.3x	11.1x
NYLD	NRG Yield, Inc. Class A	4,186	54.1	2.6%	3.2%	3.8%	4.6%	18.6x	13.1x	11.6x	10.8x
ABY	Abengoa Yield PLC	2,798	33.4	1.8%	4.9%	6.4%	9.2%	12.8x	12.8x	11.2x	NA
AQN-CA	Algonquin Power & Utilities Corp.	1,921	8.1	3.9%	4.0%	4.2%	NA	13.3x	12.6x	11.0x	NA
PEGI	Pattern Energy Group, Inc. Class A	1,957	28.3	4.6%	5.2%	5.9%	6.5%	17.0x	12.1x	10.2x	NA
INE-CA	Innervex Renewable Energy Inc.	976	9.7	5.3%	5.0%	5.1%	4.9%	16.3x	17.0x	16.9x	11.9x
BEP.UT-CA	Brookfield Renewable Energy Partners LP	8,649	31.4	5.3%	5.6%	6.0%	6.2%	13.1x	11.4x	10.9x	11.2x
CPX-CA	Capital Power Corporation	1,588	19.1	5.9%	5.8%	6.1%	NA	7.4x	7.4x	7.0x	NA
UKW-GB	Greencoat UK Wind Plc	740	1.6	6.0%	6.0%	6.2%	6.3%	NA	NA	NA	NA
TRIG-GB	Renewables Infrastructure Group Limited GBP Red.Shs	652	1.6	6.0%	NA	NA	NA	NA	NA	NA	NA
RNW-CA	TransAlta Renewables, Inc.	1,176	10.3	6.5%	6.0%	6.0%	6.4%	11.4x	10.7x	9.8x	10.7x
CSE-CA	Capstone Infrastructure Corporation	242	2.5	10.3%	9.5%	9.5%	9.5%	8.7x	12.3x	12.0x	9.7x
SAY-ES	Saeta Yield SA	926	11.4	0.0%	NA	NA	NA	NA	NA	NA	NA
Average		2,045	19.4	4.6%	5.2%	5.7%	6.3%	14.1x	12.7x	11.4x	10.9x
Median		1,176	11.4	5.3%	5.2%	6.0%	6.3%	13.2x	12.5x	11.1x	10.9x
TERP	TerraForm Power, Inc. Class A	4,231	34.0	3.2%	3.8%	4.6%	5.5%	NA	16.9x	12.6x	10.7x

Source: FactSet

Where Have MLPs and YieldCos Traded?

Rightfully so or not, investors and management often compare YieldCos and MLPs, so we thought we would give an overview of how asset class performed. We focused on the ten equities with the largest weighting in the Alerian MLP Index (representing the majority of the market cap), an index focused on MLPs with an emphasis on growing distributions. The other instrument examined was an index of US Corporate 10+ year BBB-rated corporate debt. Additionally, to provide context we included the yields of the S&P 500 and the ten-year US Treasury note, although both were notably lower. We note that, due to investment mandate restrictions, not all investors can hold MLPs, which is not the case with YieldCo's.

Figure 60: Monthly Historical Yields: MLP/Bond spread largely still holds



Source: FactSet

Figure 61: Historical Yields

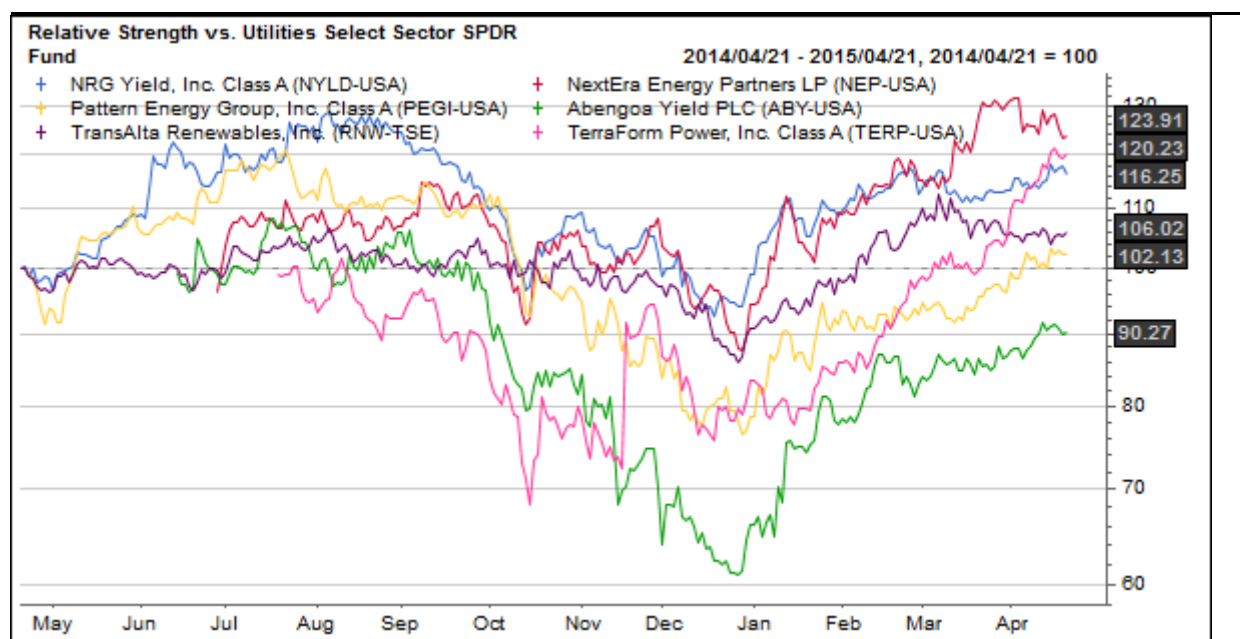
Yield %	'99-'14	'99-'05	'05-'10	'10-14	'14
Alerian	7.1	7.6	7.4	5.9	5.7
BBB	6.7	7.4	6.8	5.6	5.1
Spread	0.4	0.2	0.5	0.3	0.7

Source: FactSet

Since the early 2000s, the yields on MLPs have generally been in-line with the yields on US Corp BBB rated debt. Although the yields on Alerian and BBB have been close, the spread had been narrowing notably over the years prior to 2014. For example, from 1999-2014 the Alerian yield was 40bps higher. Upon closer examination, the bulk of that excess was caused by the artificially inflated yields during the financial crisis in 2008. In 2017 the yield on MLPs declined but corporate interest rates fell more sharply.

We also include a chart of recent YieldCo stock performance which shows the strong rally in 2015 which has driven outperformance versus the broader utilities index.

Figure 62: How have YieldCos traded in 2015? Very well.



Source: FactSet

Yield vs. Retained Valued

As discussed in our recent solar valuations note, we believe there will be a shift in the solar sector away from a focus on earnings and to a concentration on yield, and CAFD-like metrics in particular.

Retained value hasn't told the whole story

The main metric used by most analysts when valuing solar companies SCTY, SUNE, SPWR, FSLR, VSLR et al. has been retained value, where a projection of the future income that a company will receive from its customers over the ~30 year life-span of a lease/ solar system (including post-PPA life) is net of costs and discounted back. This has been used as a result of the solar lease process, with companies keeping solar projects on their books rather than selling them. Lease contracts currently make up the majority of many developers' sales, and require most companies to finance the bulk of the installation costs. Developers pay back financiers in the short-term, and normally break even around the ~6-10 yr mark. Essentially, retained earnings allow solar companies to have the revenues from their 20-30 year contracts reflected in their valuations.

Investors are willing to pay a premium for investments that generate consistent cash flow, today – rather than a metric that focuses on long-term NPV

Asset development sales also had limited ongoing value

Solar project development initially began with build and sell business models, which failed to give long-term value to development efforts, amidst uncertainty over achievable margins on future sales. We see a discounted 4-6x multiple on development businesses historically given the limited visibility associated with the business model. The transition towards YieldCo model, with its emphasis on backlog, is ultimately a substantially greater value proposition as evidenced by the quick shift towards this structure for developers SUNE, SPWR, and FSLR. We acknowledge the similar risk profiles – seeing that successful execution on development prospects and the ability to drop-down assets into the YieldCo are circular in nature. Rather, the arbitrage in the equity markets appears to offer a premium to companies that not just grow, but can grow with a firm dividend growth commitment behind it.

Moving away from low-multiple development business model is key

Admittedly—the same risks remain on development viability

Furthermore, for the purposes of valuation, there is also merit to arguing for separate and distinct value between the *existing and future asset base*, as well as the *development margin* garnered by a parent company by selling assets into a YieldCo structure; said differently, solar developers still realize the 20% margin step-up in selling their assets to the YieldCo, and separately realize benefits at the YieldCo relating to an attractive cost of capital for future growth prospects.

Yield provides improved valuation framework over development paradigm

We see an ongoing transformation in the solar industry towards ongoing ownership of assets – and away from monetizing developed projects outright-converting into a sector of renewable infrastructure companies in their own rights. Many solar companies offering lease products or developing and retaining projects are having the projects financed upfront, leasing the equipment to the host, and owning the projects and future cash flows yielded as a by-product of the energy produced. Valuing these companies has become increasingly difficult using 'retained value' and other conventional project development sales margins. Rather, we see the success of the YieldCo model as illustrative of a wider trend towards FCF of project development, emphasizing our expectation for all solar developers to leverage new metrics like Cash Available for Distribution (CAFD) and IRR return profiles to cater to a new investor class. Beyond simply providing a premium valuation, we see a focus on more conventional cash metrics as broadening out

the appeal of the sector beyond dedicated investors willing to decipher the NPV lingo of retained value employed today.

Management

We present the biographies of SUNE executives and TERP's Independent Directors, as presented on their websites. ***Denotes TERP Board member**

***Ahmad R. Chatila - President and CEO**

Ahmad Chatila serves as the President, Chief Executive Officer and as a member of the board of directors for SunEdison, positions he has held since March 2009. Mr. Chatila is the Chairman of the TERP board as well. Prior to SunEdison, Mr. Chatila served as Executive Vice President of the Memory and Imaging Division, and head of global manufacturing for Cypress Semiconductor. Previously, Mr. Chatila served as managing director of Cypress' Low Power Memory Business Unit. Prior to these roles at Cypress, Mr. Chatila served in sales at Taiwan Semiconductor Manufacturing Co.

***Brian Wuebbels - Executive Vice President and Chief Financial Officer**

Brian Wuebbels serves as the Executive Vice President and Chief Financial Officer of SunEdison, positions he has held since May 2012. Mr. Wuebbels also serves on TERP's board of Directors. Mr. Wuebbels has been with SunEdison/MEMC Electronic Materials, Inc. since 2007 and previously held various positions, including Vice President and General Manager—Balance of System Products, Vice President, Solar Wafer Manufacturing, Vice President of Financial Planning and Analysis and Vice President Operations Finance. Before joining MEMC, Mr. Wuebbels served as Vice President and Chief Financial Officer of Honeywell's Sensing and Controls Business. Prior to that, Mr. Wuebbels spent 10 years at General Electric in various senior finance and operations roles in multiple businesses around the world.

Brandon Middaugh - Chief of Staff

Brandon Middaugh serves as Chief of Staff for SunEdison, and has been with the firm since 2013. Ms. Middaugh leads corporate planning and social innovations activities at SUNE. Previously, Ms. Middaugh held the position of Vice President and Director at Albright Stonebridge Group where she advised institutional investors and corporate clients on EM investment decisions in clean energy, electric vehicles, health, and consumer goods.

Paul Gaynor - Executive Vice President; North America Utility and Global Wind

Paul Gaynor serves as SunEdison's Executive Vice President of North America Utility and Global Wind. Mr. Gaynor was previously the CEO of First Wind, and joined SunEdison's management team as a result of the acquisition. Mr. Gaynor has over 25 years of experience in the energy field through his leadership roles at Noble Power Assets, Singapore Power Group, PSG International, GE Capital and GE Power Systems

Julie Blunden - Senior Vice President and Chief Strategy Officer

Julie Blunden serves as SunEdison's Senior Vice President and CSO, and joined the group in April 2015. Ms. Blunden is responsible for overseeing marketing, communications, investor relations and government affairs. Previously, Ms. Blunden served as CEO of ClimateWorks, Executive Vice President at SunPower,

and has held positions at KEMA, AES, and Green Mountain Energy Company over her 25 year career in the energy industry.

Pashupathy Gopalan - President; SunEdison Asia Pacific

Pashupathy Gopalan serves as SunEdison's President of the Asia Pacific market, and has been with the company since 2009. Prior to SunEdison, Mr. Gopalan was the Global Vice President- Strategic Marketing and Business Development at Cypress Semiconductor. Previously, he worked at Bloom Energy/ Ion America as the Vice President of Sales, Marketing, Business Development and Government Relations.

Matthew E. Herzberg – Senior Vice President and Chief HR Officer

Matthew E. Herzberg serves as the Senior Vice President and Chief Human Resources Officer at SunEdison. Mr. Herzberg joined SunEdison in 2011 from Express Scripts, where he served as the Vice President of Talent Management & Total Rewards.

David A. Ranhoff - Senior Vice President, Solar Materials

David Ranhoff is the Senior Vice President of Solar Materials at SunEdison. Mr. Ranhoff joined SunEdison through the acquisition of Solaicx in 2010. Previously, Mr. Ranhoff served as the President and CEO at Solaicx, and the President and CEO at Credence Systems, where he worked for 18 years.

***Martin H. Truong - Senior Vice President, General Counsel and Secretary**

Martin Truong has served as SunEdison's Vice President, General Counsel and Secretary since April of 2013 and was promoted to Senior Vice President in May of 2014. Mr. Truong was appointed to TerraForm Power's board of directors in connection with the completion of the IPO. Mr. Truong joined SunEdison in February 2008 and has held various roles of increasing responsibility, most recently serving as SunEdison's Assistant General Counsel with legal responsibilities for Emerging Markets, Solar Materials and intellectual property licensing and monetization.

Independent Directors on TERP Board

Hanif Dahya

Hanif Dahya is currently CEO at The Y Company. He has been the President and CEO of Farah Ashley Capital, a Principal and Partner of Sandler O'Neil, Partner and Managing Director of mortgage-backed securities for Union Bank of Switzerland; Head of Mortgage Finance and Managing Director of LF Rothschild and Company. As an investment banker he has over 14 years of experience on Wall Street and started his career with E.F. Hutton and Company.

Mark Florian

Mark Florian is a Managing Director and Head of Infrastructure Funds for First Reserve, the largest global private equity firm exclusively focused on energy.

He directs the Firm's infrastructure funds, which invest in contracted power, contracted midstream and regulated utility assets globally, leading the First Reserve infrastructure investment team located in Greenwich, Houston and London. He currently serves on the Board of Caliber Midstream Partners, First Caribbean Power & Midstream, and First ECA Midstream.

Mark Lerdal

Mark Lerdal is currently Executive Chairman of Leaf Clean Energy, a closed end fund focused on renewable energy investments. Since 2009 he has also been a Managing Director of MP2 Capital, a developer, owner and operator of solar generation assets.

Forecast returns

Forecast price appreciation	+12.3%
Forecast dividend yield	0.0%
Forecast stock return	+12.3%
Market return assumption	5.5%
Forecast excess return	+6.8%

Statement of Risk

SunEdison is exposed to supply/demand imbalances which are heavily impacted by local and national government incentives. Demand for solar is still dependent on government subsidies such as tax rebates or feed-in tariffs. Any material change in an individual country's position on support for solar energy could have a negative impact on the growth of the solar market. SunEdison's expansion plans are also driven by expected cost reductions in renewable energy system equipment. Additionally, adoption of renewable energy generation is associated with the costs of incumbent generation sources and will be heavily impacted by any large swing in the costs of these energy sources.

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%	37%
Neutral	FSR is between -6% and 6% of the MRA.	43%	33%
Sell	FSR is > 6% below the MRA.	12%	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 31 March 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
First Solar Inc. ^{13, 16}	FSLR.O	Neutral	N/A	US\$63.11	21 Apr 2015
NextEra Energy Partners LP ^{2, 4, 6, 16}	NEP.N	Neutral	N/A	US\$41.72	21 Apr 2015
NRG Yield ¹⁶	NYLD.N	Neutral	N/A	US\$51.59	21 Apr 2015
SunEdison Inc. ^{13, 16}	SUNE.N	Buy	N/A	US\$26.71	21 Apr 2015
SunPower Corp ¹⁶	SPWR.O	Neutral	N/A	US\$34.46	21 Apr 2015
TerraForm Power, Inc. ¹⁶	TERP.O	Suspended	N/A	US\$41.68	21 Apr 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

2. UBS AG, its affiliates or subsidiaries has acted as manager/co-manager in the underwriting or placement of securities of this company/entity or one of its affiliates within the past 12 months.
4. Within the past 12 months, UBS AG, its affiliates or subsidiaries has received compensation for investment banking services from this company/entity.
6. This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and investment banking services are being, or have been, provided.
13. UBS AG, its affiliates or subsidiaries beneficially owned 1% or more of a class of this company's common equity securities as of last month's end (or the prior month's end if this report is dated less than 10 days after the most recent month's end).
16. UBS Securities LLC makes a market in the securities and/or ADRs of this company.

For a complete set of disclosure statements associated with the companies discussed in this report, including information on valuation and risk, please contact UBS Securities LLC, 1285 Avenue of Americas, New York, NY 10019, USA, Attention: Publishing Administration.

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

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 Licence 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 SEBI Registration Numbers: NSE (Capital Market Segment): INB230951431, NSE (F&O Segment) INF230951431, BSE (Capital Market Segment) INB010951437.

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.

