
CAPITALIZING **S**OLAR: A U.S. WORK IN PROGRESS

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The Global Imperative

- Commitments under COP 21 to ambitious carbon reduction goal by governments representing both developed and emerging economies around world
- Also buy-in from numerous large corporations around world, from new manufacturing, industrial, finance and energy sectors
- Large financial institutions like Goldman Sachs and Citigroup making major commitments to sustainability
 - Goldman Sachs announced it is tripling goal set in 2012 for clean-energy finance and investment to US \$150 billion by 2025
 - Citigroup published “Energy Darwinism II: Why a Low Carbon Future Doesn’t Have to Cost the Earth” in August 2015, examining costs of action and inaction on limiting global warming to <math><2\text{ C}^\circ</math> compared to pre-industrial levels and concluding that inaction is the more costly option

Political Headwinds

- Brexit and EU Disunity
- Trump election and announced intent to withdraw from Paris Climate accord
 - Note: Technically, withdrawal cannot occur legally until Nov. 4, 2020
- Rise of post-factual populism and politicization of science
 - “Red Team” vs “Blue Team” debate on climate change inside EPA
 - “Evidence-based” and “Science-based” among 7 words prohibited by U.S. Centers for Disease Control and Prevention budget documents
- Trump administration attempt to impose tariff on imported solar panels
- Trump administration support for pro-coal global alliance to push back against renewable energy

Positive Indicators

- Renewable energy market in U.S. and around globe is on strong growth trajectory in spite of political headwinds
- GOP - enacted tax reduction legislation in U.S. preserved tax credits for renewable energy projects
 - Exception: New tax reduction legislation imposes new limits on the use of ITC by foreign corporations investing in U.S. Solar projects or on U.S. companies making cross-boarder payments to affiliates
 - Exception: Corp tax rate reduction could de-value tax credits for renewable projects
- Price of solar power in U.S. has been reduced to \$0.05 per kwh, making solar power competitive with other energy sources even without tax subsidy
- One Planet Summit in Paris in December attended by over 60 heads of state vowing commitment to act on principles of 2015 Climate Accord
- Pledges at One Planet included a pledge to stop funding oil and gas drilling after 2019 (except for exceptional circumstances)

Positive Indicators (Cont'd)

- UN Secretary-General Guterres announced that “finance [of climate-friendly infrastructure] is difference between winning and losing the war [to prevent more than 3°C of warming]”
- 225 investors launched Climate Action 100+ to bring world’s biggest corporate climate polluters into compliance with Paris goals
- Despite Trump administration announced intent to withdraw from Climate Accord, 30 mayors of U.S. cities, 3 Governors, over 80 university presidents and over 100 businesses have pledged to meet the U.S. greenhouse gas emissions targets under the Paris Accord

Mixed Indicators

- Through Q3 2017, solar installations are tracking 22% behind the same period in 2016
- Also, residential PV is expected to fall in 2017 vs. prior year for first time ever, and non-residential solar is, according to recent report, the only segment expected to grow on annual basis (pushed by rush to install before changes in rate and incentive structures in certain markets and by emergence of community solar, projected to grow by over 50% year-over-year.)¹
- Residential declines attributed primarily to increased competition in resi sector, resulting in solar companies pursuing more profitable sales channels and pulling back in less scalable channels¹

¹*Solar Market Insight Report 2017*

Capital Requirements

- Estimated that \$22+ Trillion of incremental investment required to meet global carbon reduction goals over next 20 years²
 - Energy efficiency cost: \$13.5 Trillion
 - Renewable cost: \$8.8 Trillion
- International Energy Agency estimates that to meet 2°C goal, renewable energy capacity must grow from 1.94 terawatts (2015 level) to 3.49 TW in 2025 and 4.53 TW in 2030.³
- Different growth requirements for emerging and developed markets
 - Majority of increased renewable energy investment (over currently projected investment) required in emerging markets
 - In developed markets, majority of increased investment (over currently projected investment) may be in energy efficiency

²Citigroup, *Energy Darwinism II*, Aug. 2015

³IEA, 2015, “*Medium-term RE Market Report*” (Note: TW = 1 Million megawatts and 1 Billion kilowatts.)

Capacity Not The Issue

- Institutional investors willing to invest in renewable energy and energy efficiency currently have assets under management far in excess of \$22 Trillion⁴
 - Institutional Investors Group for Climate Change -- \$12 Trillion of AUM
 - Carbon Disclosure Project -- \$95 Trillion of AUM
 - Norwegian Government Pension Fund and other large pension funds, sovereign wealth funds and insurance companies have announced initiatives to make their portfolios environmentally friendly
 - Impact investors/double and triple bottom line investors
 - US \$39 Trillion of investible assets in institutional debt markets in 2014
- Substantial portion of institutional capital is restricted to fixed income (debt) securities that are rated “investment grade” by internationally recognized rating agencies

⁴Citigroup, *Energy Darwinism II*, Aug. 2015

What Does Investment Grade Mean?

- Any rating from highest (AAA/Aaa) to lowest on scale that receives “investment grade” classification
- Lowest investment grade rating denotes that timely repayment of principal and interest is “likely”
- Below investment grade is “junk bond” or “high-yield” bond territory
- Comparative lowest Investment Grade Rating Scales:

S&P :	BBB-
Moody's:	Baa3
Fitch:	BBB-
DBRS:	BBB
Kroll:	BBB

Keys to Attaining Investment Grade Rating for Renewable Energy/Energy Efficiency Bonds

- Corporate debt issued by company which is itself rated investment grade (rare)

OR

- Use of Securitization technology to obtain rating uplift over rating of sponsor
- Irony #1: Same technology whose abuse was a major contributor to Great Recession of 2008 (whose reverberations are still being felt in rise of populism and anti-elitist anger in U.S. and Europe and the election of Trump) is the key to the financing of a carbon-free economy
- Irony #2: Same rating agencies who were blamed for yielding to market pressures in creation of housing bubble by assigning irresponsibly high ratings to sub-prime CDOs are now once again the gatekeepers to the institutional capital stash

Securitization Market a Deep Cash Pool

- US \$3 Trillion of new ABS/MBS issuance in U.S. at height of housing bubble in 2007
- US \$2.2 Trillion of new ABS/MBS issuance in U.S. in 2016 ⁵
- US \$322.5 Billion of new ABS issuance alone in U.S. in 2016 ⁵
- US \$414.8 Billion of new ABS issuance in U.S. through November 2017 ⁵
- Average daily trading volumes of ABS in U.S. were US \$209.9 Billion in 2016 ⁵
- Of US \$1.4 Trillion of total U.S. ABS outstanding, US \$982.9 Billion, or 69.7%, is rated Baa/BBB or higher (investment grade) ⁵

⁵Source: SIFMA

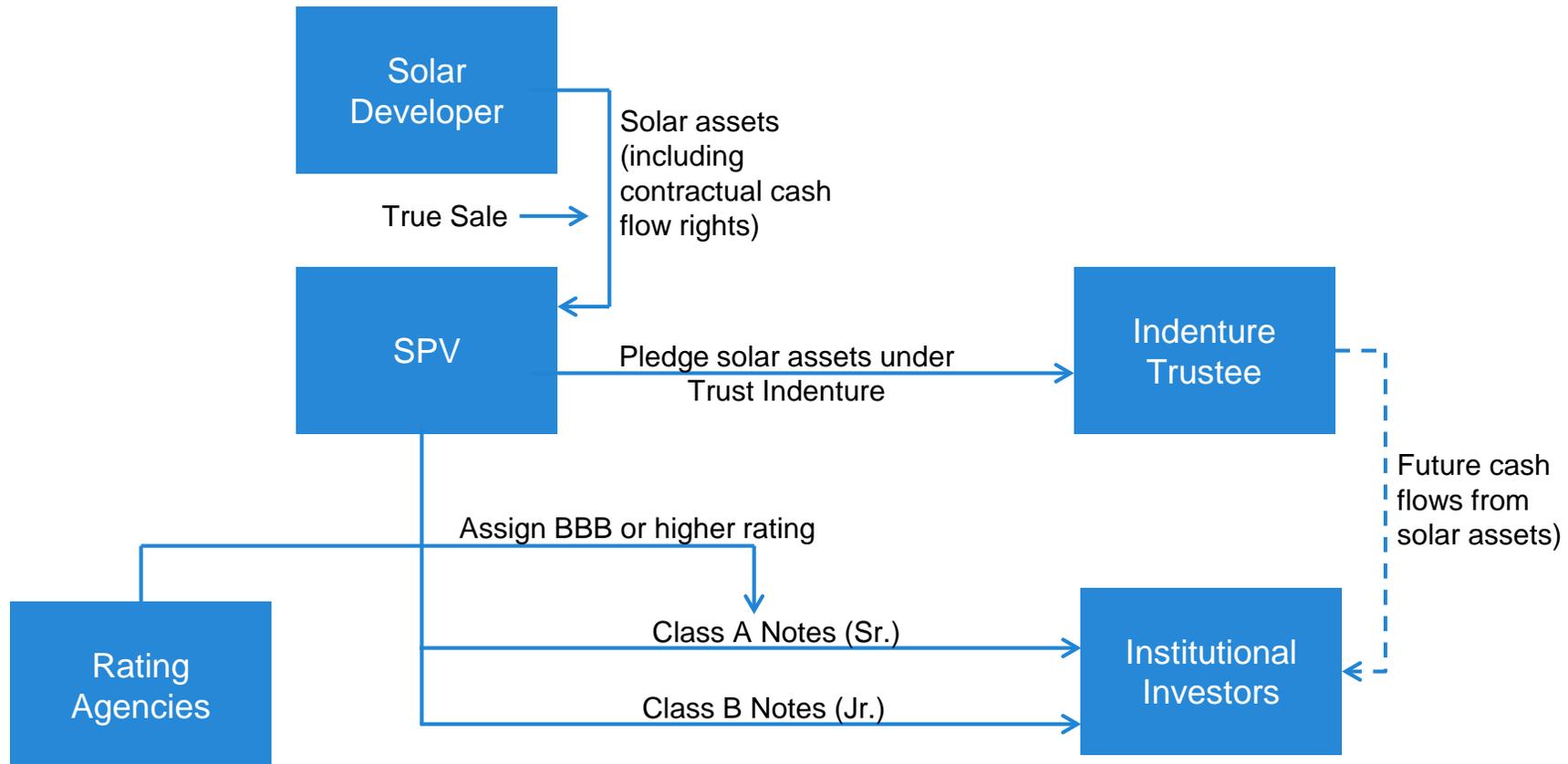
Securitization Paradigm for Reaching Investment Grade Ratings

- Ring-fence cash-flow generating assets in bankruptcy-remote special purpose vehicles – e.g., Trusts, Limited Liability Companies
- Reliable and predictable cash flows of sufficient duration to support bond repayment
- Credit support in form of one or more of the following:
 - Investment-grade rated obligors on assets being securitized
 - Sufficiently large pool of obligors to support a statistical analysis concluding that statistical probability of timely repayment of P&I is sufficiently high
 - Senior/subordinated structure
 - Third-party (external) credit support
 - Financial guarantee of bonds
 - Surely covering performance of underlying obligors

Securitization Paradigm for Reaching Investment Grade Ratings (Cont'd)

- Stress tests/Monte Carlo simulations run by rating agencies with result that cash flows still sufficient to make timely payment of P&I
- Third-party servicing provided by servicer with strong and durable servicing platform

Securitization Paradigm for Solar Energy Projects



Solar Business Models

- Distributed Solar (Residential)
 - Lease/PPA between Solar Installer and Homeowner
 - Solar panels installed on rooftops of homeowners
 - Solar Installer retains tax benefits and “sells” them to Tax Equity Investors
 - Solar Installer receives future lease/PPA cash flows
 - “Behind-the Meter” power sale to customers
 - Net metering
 - Loan by Solar Installer
 - Homeowner receives tax benefits
 - Solar Installer receives future note payments from homeowners
 - Large portfolios of small unit sizes
 - Statistical probability analysis possible, using stochastic cash flow models

Solar Business Models (Cont'd)

- Distributed Solar (Commercial and Industrial)
 - Lease/PPA
 - Solar panels installed on rooftops of commercial properties and lease/PPA entered into with either property owner or third party
 - Solar Installer retains tax benefits and “sells” to Tax Equity Investors
 - Solar Installer receives future cash flows from Lease/PPAs
 - Off-takers under PPAs/leases generally a mix of private companies, non-profit religious, educational or charitable organizations or governmental entities
 - Projects generally larger, ranging in system size from 20 kW to 2500 kW
 - Most U.S. C&I solar developers have relatively small portfolios of relatively large unit sizes
 - This makes statistical probability analysis difficult and instead requires granular credit analyses of off-takers
 - Net metering, virtual net metering or SRECs are source of extra cash flow, but they are difficult to predict and thus are of limited value in securitizations

Solar Business Models (Cont'd)

- Utility Scale Solar
 - Solar assets installed in array owned by Solar Developer
 - Assets placed under PPA with utility or utilities and power sold at wholesale rates
 - Developer retains tax benefits and “sells” to Tax Equity Investors

Solar Business Models (Cont'd)

- Community Solar (Distribution-Scale Solar)
 - Solar arrays developed to feed electricity directly into local distribution grids
 - Offers communities and utility co-ops benefits of reliable power generation sited near load
 - Offers economies of scale (compared to residential solar)
 - Avoids transmission charges imbedded in utility-scale solar
 - Optimally allows customers that might lack perceived creditworthiness to enter into conventional financing arrangements to participate in solar energy generation
 - Ability to promptly transfer defaulted customer obligation to another customer mitigates (but does not solve) credit risk issue

Growth of U.S. Residential Solar ABS Market (2013-2017)

- Over \$2.332 Billion of rated solar ABS issued between 2013 (first rated solar ABS in U.S.) and end of 2017
- Senior tranches rated BBB to A by S&P or Kroll
- Solar firm sponsors (ranked by issuance size):
 - Solar City (now Tesla) - \$1.308 Billion (56.1%)
 - Solar Mosaic - \$446 Million (19.1%)
 - Helios - \$254.75 Million (10.92%)
 - Dividend Solar - \$128.95 Million (5.53%)
 - Sunrun - \$111.0 Million (4.76%)
 - Spruce - \$83.78 Million (3.59%)

\$2.332.48 Billion

Growth of U.S. Residential Solar ABS Market (2013-2017) (Cont'd)

- All securitized solar pools predominantly residential
- Mixture of PPAs and leases, but some only loans to residential home owners
- Most involved tax equity, using either partnership flip or inverted lease tax structures
- Bond coupons ranging from <4% to >9% (depending on whether investment grade or non-investment grade)
- Advanced rate (bond amount ÷ net present value of projected cash flow collateral) ranged from 62% to 95%
- Counterparties under PPAs, leases, or loans had average FICO scores ranging from 728 to 767

U.S. Solar ABS Issuance Score Card

	SCTY I – SolarCity – LMC Series I LLC (Series 2013-1) November 2013	SCTY II – SolarCity – LMC (Series II) LLC (Series 2014-1) April 2014	SCTY III – SolarCity – LMS (Series III) LLC (Series 2014-2) July 2014	Sunrun Callisto – Issuer 2015-1, LLC (Series 2015-1) July 2015	SCTY IV – SolarCity LMC Series IV, LLC (Series 2015-1) August 2015	Aurora Master Funding, LLC Series 2015-1 ⁵	SCTY V- SolarCity FTE Series 1, LLC (Series 2016-A)	SCTY-VI SolarCity LMC Series V, LLC (Series 2016-1)	SCTY-Cash Equity Monetization ⁷	Spruce ABS Trust 2016-E1 ⁸	SCTY FTE Series 2, LLC, Series 2017 - A ⁹	Mosaic Solar Loans 2017 - 1 ¹¹
ABS Coupon/Yield	4.80%	4.59%	4.32% ¹	4.50% ¹	4.41% ¹		5.81% ¹	5.45% ¹	~8-9%	Class A – 4.32% Class B – 6.90%	Class A – 4.974% Class B – 6.094% Class C – 7.5%	4.50%
Bond Size	\$54.4M Class A – \$54.4M Class B – \$0 Class C – \$0	\$70.2M Class A – \$70.2M Class B – \$0 Class C – \$0	\$201.5M Class A – \$160.0M Class B – \$41.5M Class C – \$0	\$111.0M Class A – \$100.0M Class B – \$11.0M Class C – \$0	\$123.5M Class A – \$103.5M Class B – \$20.0M Class C – \$0	Series 2015-1	\$185M Class A – \$151.55M Class B – \$33.45M Class C – \$0	\$57.45M Class A – \$52.15M Class B – \$5.30M Class C – \$0	\$227M	\$83.78M Class A – \$73.49M Class B – \$10.29M Class C – \$0	\$145M Class A – \$123M Class B – \$8.75M Class C – \$13.35M	\$138.95M Class A – \$138.95M Class B – \$0 Class C – \$0
Collateral	Resi Leases/PPAs (71%)/non-resi (29%)	Resi Leases/PPAs (87%)/non-resi (13%)	Resi Leases/PPAs (86%)/non-resi (14%)	Resi Leases/PPAs	Resi Leases/PPAs	CIMJ (70.5%)/ Resi (29.5%)	MyPower Loans	Resi Leases/ PPAs	Resi Leases (73%)/ Commercial Leases/ PPAs (27%)	Unsecured Energy Efficiency Loans (77.2%)/Solar Loans (22.8%)	MyPower Loans	Secured consumer loans for grid-tied resi solar systems
FICO	762	767	763	759	742		733	750		728	728	746
Installed Capacity	44 MW	47 MW	118 MW	56 MW	108 MW		65 MW	36 MW		49 MW	55 MW	47 MW
Tax Equity	NA	NA	Master Lease	Inverted Lease	Partnership Flip/Back Leverage/Tax Loss Insurance	NA	NA	Master Lease (90.8% of ADSAB)	?	NA	NA	NA
ADSAB/ADSLB ² (PV of cash flows)	\$87.8M	\$106.2M	\$276.0M	\$146.5M	\$182.0M	\$128.0M	\$249.5M	\$76.4M	[201MW]	\$105.37	\$191.6M	\$177.9M
Overcollateralization ³	38%	34%	27%	24.23%	32.10%	21.88%	25.90%	24.80%	?	Initial 14.5% Target 19.0%	24.30%	20.53%
Advance Rate ⁴	62%	66%	73%	75.77%	67.90%	78.12%	74.10%	75.20%	?	79.50%	75.70%	79.47%
Senior (Class A) Notes Rating	\$54.4M BBB+(sf)	\$70.2M BBB+(sf)	\$160M BBB+(sf)	\$100M A(sf)	\$103.5M A(sf)	\$92.5M BBB(sf)	\$151.55M BBB (sf) ¹²	\$52.15M BBB(sf) [S]/ BBB+(sf) [K]	NA	\$73.49M A(sf)	\$123M/A-(sf)	\$138.95M/A (sf)
Subordinated (Class B) Notes Rating	NA	NA	\$41.5M/BBB(sf)	\$11M/BBB(sf)	\$20M/BBB(sf)	\$7.5M B(sf)	\$33.45M BB(sf) ¹³	\$5.3M BB(sf) [S]/ BB+(sf) [K]	NA	\$10.29M BBB(sf)	\$8.75M/ BBB(sf) ¹⁰	NA
Rating Agency Utilized	S&P	S&P	S&P	Kroll	Kroll	Kroll	S&P/Kroll ⁶	S&P/Kroll	NA	Kroll	Kroll	Kroll
Lead Underwriter	Credit Suisse	Credit Suisse	Credit Suisse	Credit Suisse	BAML		Credit Suisse	Credit Suisse & GS		Citibank	Credit Suisse	Guggenheim

¹The Yields for these deals are a weighted average based on the size of two tranches offered in each capital structure.

²Aggregate Solar Discount Asset Balance ("ADSAB") is calculated as the discounted payment streams from leases and PPAs; ADSLB is calculated as the discounted payment stream from notes.

³Calculated as (ADSAB (or ADSLB) – total Bond Size) ÷ ADSAB (or ADSLB).

⁴Ratio of total Bond Size to ADSAB/ADSLB.

⁵Not priced or closed.

⁶S&P rated Senior Notes only.

⁷Based on reported data, actual data not available. Transaction structured as a one-off cash equity monetization with John Hancock Insurance Co. as counterparty, with no rating and with SCTY retaining ~5% of the 20-year cash flows.

⁸Based on preliminary pre-sale report dated June 8, 2016, of Kroll Bond Rating Agency.

⁹Based on preliminary pre-sale report dated January 20, 2017 of Kroll Bond Rating Agency.

¹⁰Class C (\$13.25M) rated BB+(sf)

¹¹Based on preliminary pre-sale report dated January 24, 2017 of Kroll Bond Rating Agency

¹²Upgraded to A(sf) February 6, 2017

¹³Upgraded to BBB-(sf) February 6, 2017

U.S. Solar ABS Issuance Score Card (Cont'd)

Helios Issuer, LLC, Solar Asset-Backed Notes, Series 2017-1	Mosaic Solar (2017-2) - June 2017	Dividend Solar Loans 2017-1	Mosaic Solar Loans 2017-2	TES 2017-1, LLC, Series 2017-1	TES 2017-2, LLC, Series 2017-2
Class A – 4.95% Class B – 6% Class C – 8%	\$300M forward flow to Goldman Sachs	Class A – 4.084% Class B – 5.308% Class C – 7.103%	Class A – 3.854% Class B – % S+185bp Class C – 5.75% S+275bp Class D – 9.75%	Class A – [S+ 200 BP] Class B – [7.75%]	Class A – [S+ 185BP] Class B – [7%]
\$254.75M Class A – \$254.75M Class B – \$0 Class C – \$0		\$128.95M Class A – \$115.376M Class B – \$6.787M Class C – \$6.787M	\$307.5M Class A - \$246.25M Class B - \$14.5M Class C - \$28M Class D - \$18.75M	\$340M Class A – \$265M Class B – \$75M Class C – \$0	\$130.915M Class A – \$99.02M Class B – \$31.895M
13,838 Leases, PPAs & Hedged SRECs	DG Loans	Secured Consumer Solar Loans (Empower Loans)	Secured Consumer Solar Loans	PPAs (42.5%) Leases: (57.5%) (resi systems)	PPAs (96.7%) Leases: (3.3%) (resi systems)
737		753	738	733	745
94 MW		NA	NA	NA	NA
NA		NA	NA	Partnership Flip	Inverted Lease (Lessee = tax equity + O+M provider)
PPAs/ Leases: \$276.1M SRECs: \$23.5M		\$135.736M	\$275.01M \$68.75 Reserve	\$483.1M (Securitization Share: \$403.2M)	\$170.1M
Class A – 21% Class B – 15%		Class A - 16% Class B - 11%	Class A - 29.36% Class B - 25.15% Class C - 17% Class D - 11.54%	Class A – 34.3% Class B – 15.7%	Class A – 41.8% Class B – 23.1%
85%		95% (initial)	89.0%	65.7%	76.9%
\$191.75M/A(sf)		\$115.376M/A(sf)	\$246.25M/A(sf)	\$265M/A-(sf)	\$99.02M/A-(sf)
\$18M / BBB(sf)		\$6.787M/BBB(sf)	\$14.5M / BBB+(sf) \$28M / BBB-(sf)	\$75MNR	\$31.895M/BB(sf)
Kroll		Kroll	Kroll	Kroll	Kroll
Credit Suisse		Credit Suisse	Deutsche Bank	Credit Suisse	Citi & Credit Suisse

¹The Yields for these deals are a weighted average based on the size of two tranches offered in each capital structure.

²Aggregate Solar Discount Asset Balance ("ADSAB") is calculated as the discounted payment streams from leases and PPAs; ADSLB is calculated as the discounted payment stream from notes.

³Calculated as (ADSAB (or ADSLB) – total Bond Size) ÷ ADSAB (or ADSLB).

⁴Ratio of total Bond Size to ADSAB/ADSLB.

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⁶S&P rated Senior Notes only.

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¹²Upgraded to A(sf) February 6, 2017

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The SEFAC C & I Solar Securitization Project

- Solar Energy Finance Advisory Council (SEFAC) a working group organized under auspices of Solar Energy Industries Association (SEIA), the largest solar industry trade organization in the U.S.
- SEFAC's purposes are to identify and assist in overcoming barriers and friction points impeding access of the U.S. distributed solar industry to the U.S. capital markets
- SEFAC's premier project for 2017-2018 is to assist the C&I solar market, which has, unlike residential and utility scale solar, been unsuccessful in accessing the capital markets, in overcoming barriers to entry to those markets

Hypothesis of the SEFAC C & I Solar Securitization Project

Lack of access to capital market for C&I Solar is caused by an array of inter-related barriers:

- Insufficient Scale
- Granular Pools Requiring Shadow Ratings on Each Off-Taker
- Concentration Risk
- Inconsistent Underwriting Protocols
- Non-Standard Documentation and Project Risks
- Inter-Creditor Complexities

Breaching The Barriers

Barriers

- Insufficient Scale

- Granular Pools

Mitigants

- Pursue C & I pooling strategies and structures
 - Identify C & I sponsor to serve as “lead” sponsor
 - Identify other C & I developers to participate in pooled securitization
 - Identify structures for pooling that address participants’ concerns
- Identify inflection point for migrating from shadow rating to statistical pool rating analysis
 - Other rating methodology analogues

Breaching The Barriers (Cont'd)

Barriers

- Concentration Risk
- Inconsistent Underwriting Protocols
- Non-Standard Documents
- Non-Standard Installation and O&M Protocols

Mitigants

- Adopt concentration limits from other rating analogues
- Promulgate underwriting best practice standards
- Promulgate standard C & I PPAs/Leases
- Adopt Industry Best Practice Standards
 - Promulgate installation and O&M best practice standards
 - Include master O&M provider in transaction structure

Breaching The Barriers (Cont'd)

Barriers

- Inter-Creditor Complexities
 - Tax Equity v. Note Holder Tensions
 - Cash flow sweeps for IRS basis reductions
 - Tax Equity resistance to solar asset encumbrance

Mitigants

- Structural and Insurance Solutions
 - Insurance policy
 - Sweep at level of capital structure not disruptive of ABS cash flow
 - Back-Leverage Structure
 - Inverted Lease Structure
 - Foreclosure Forbearance Agreement
 - Springing pledge after recapture period or tax equity buy-out

Demonstration Project

- Lead sponsor (“HoldCo”) for the C & I Solar Demonstration Project has been identified
- HoldCo is a private C & I solar project originator which has aggregated ~ \$70M of C & I projects and intends to acquire an additional 30-40M of projects by end of Q1 2018, with assistance from warehouse line
- HoldCo intends to sponsor a C & I Solar securitization in Q2 2018, and is desirous of maximizing scale
- HoldCo and SEFAC have agreed on general protocols for a collaborative effort to launch the first C & I Solar securitization not using the Property Assessed Clean Energy (PACE) tax assessment program

General Principles and Protocols of C & I Solar Demonstration Project

- SEFAC to make available to HoldCo all research and data accumulated by it, as well as rating agency methodologies and legal structures developed by the volunteer members (Note: Same research and data is also available to other SEIA Members)
- SEFAC to serve as convenor to reach out to other possible pool participants and service providers and to socialize on a conceptual basis the structural solutions deployed and application of analogous ratings methodologies with rating agencies
- SEFAC to offer feedback to HoldCo's portfolio distribution and proposed structural features of offering
- HoldCo to consider pooling structures (offered by SEFAC and others) which will maximize scale of transaction by incentivizing other C & I solar originators to participate in pool

General Principles and Protocols of C & I Solar Demonstration Project (Cont'd)

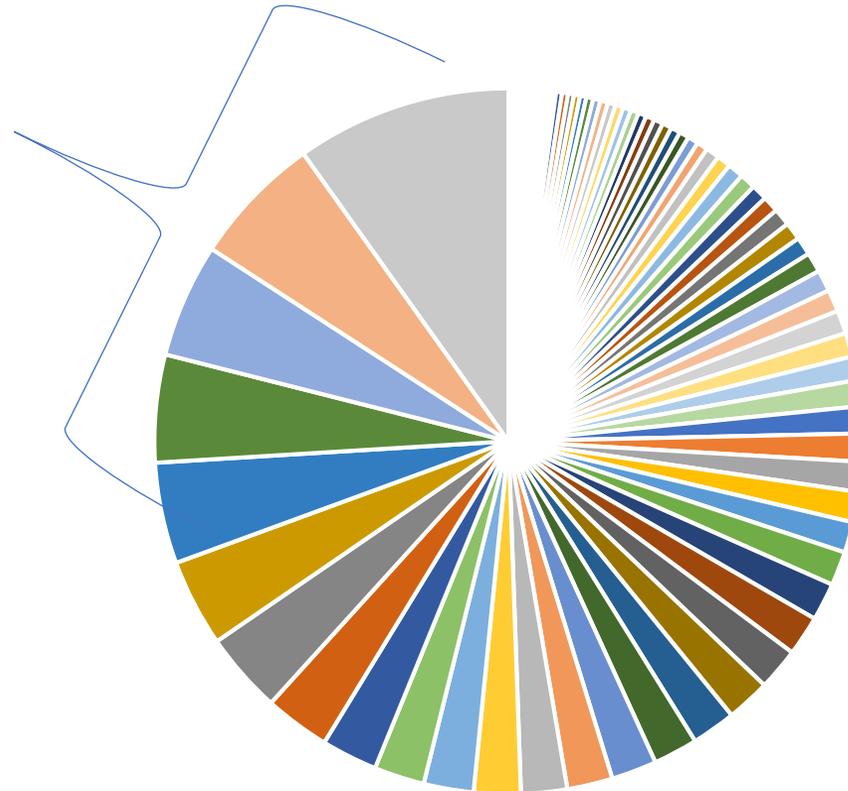
- All arrangements between HoldCo and other C & I originators (including those identified by SEFAC) will be strictly bi-lateral and private
- All meetings of deal team and between deal team and ratings agencies will be private to protect confidentiality and to preserve securities law exemptions
- Post-closing, SEFAC to be given access to anonymized data from transaction to be used in a publishable report

C & I Solar Demonstration Project

HoldCo C & I Portfolio Data (as of 12-19-17)

Top Project: 2,702 kW, 9.8% of port.

Top 5 Projects: 8,413 kW, 30.6% of portfolio



81 Projects:

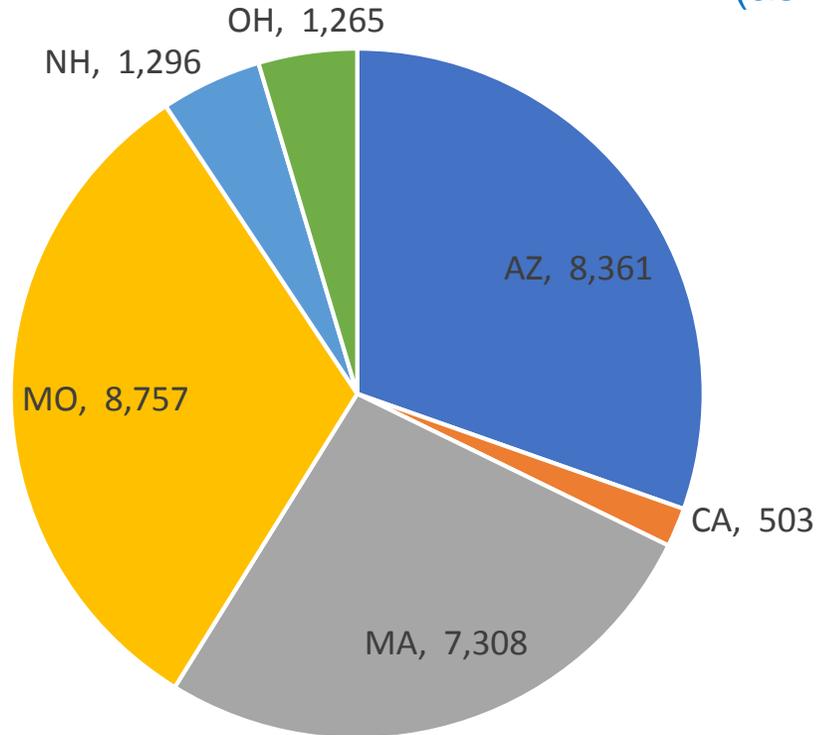
- 27.49 MW
- 339 kW Average
- Wtd. Avg. Escalation: 1.0%
- Wtd. Avg. PPA Rate: \$0.117

Seasoning (Yrs):

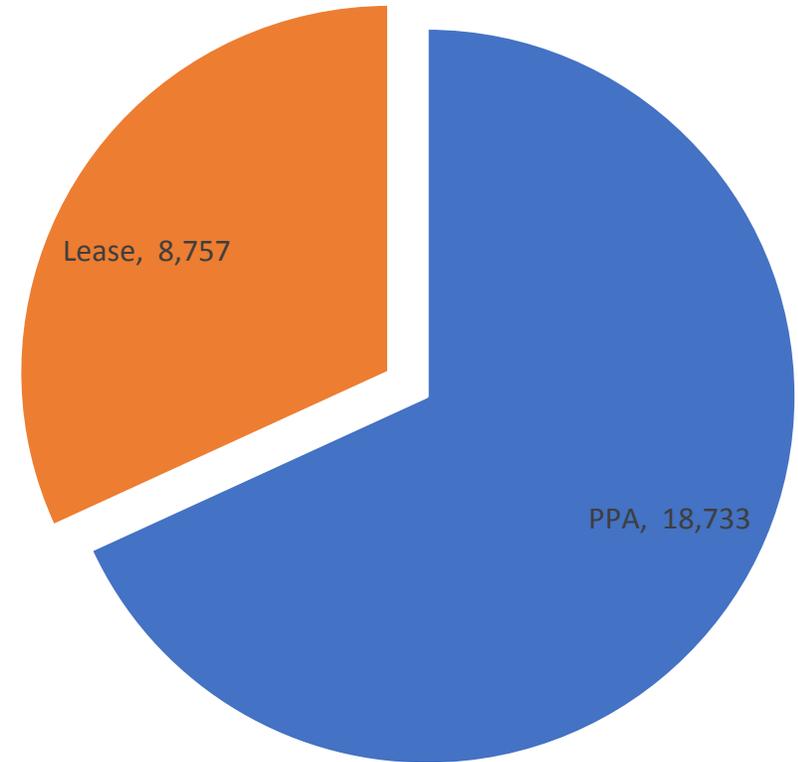
- *Min: 0.2*
- *Max: 7.2*
- *Wtd. Avg.: 3.9*

C & I Solar Demonstration Project

HoldCo C & I Portfolio Concentrations By State & PPA/Lease (as of 12-19-17)



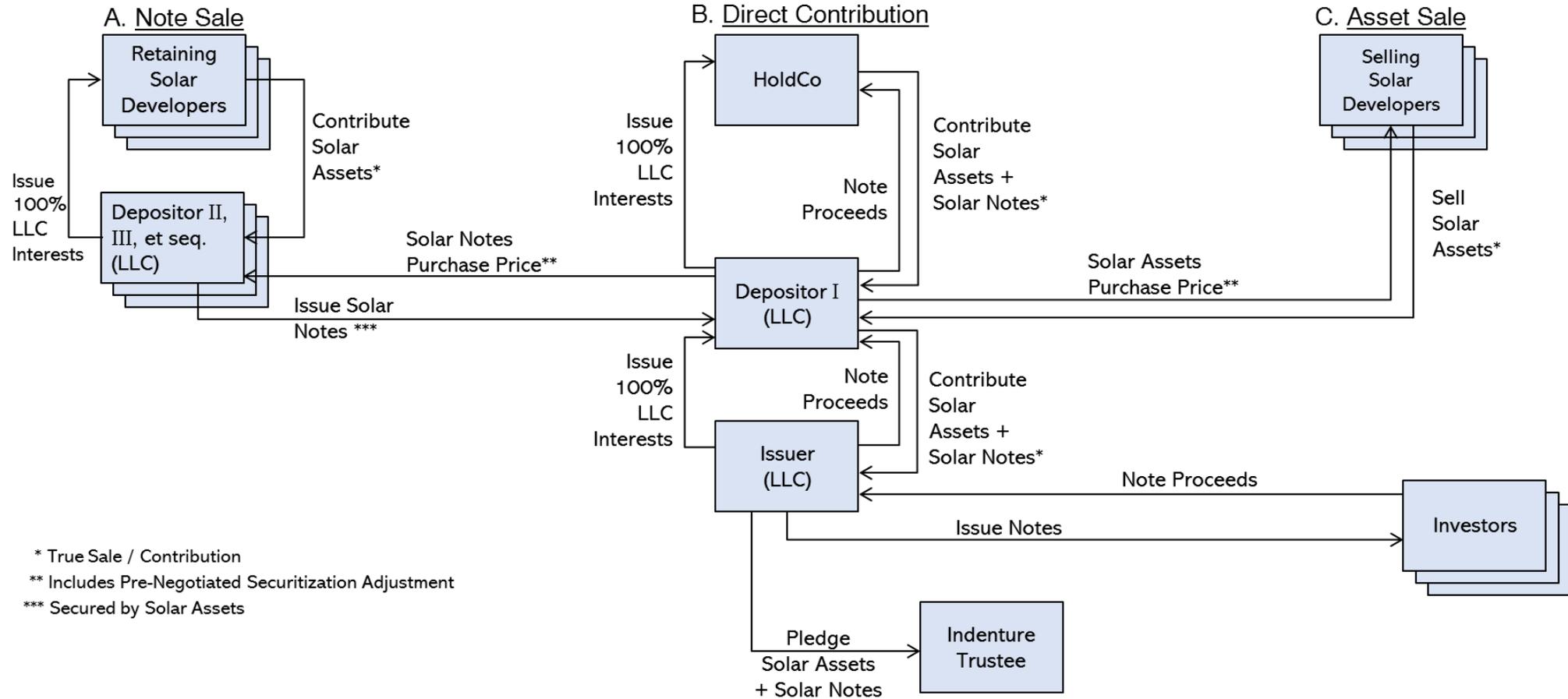
By State



By PPA v. Lease

C & I Solar Demonstration Project

Structural Options For Achieving Scale



C & I Solar Demonstration Project

Rating Agency Analysis

- Equipment Loan & Lease Securitizations
 - SCF Equipment Leasing 2017-1 (Equipment Contract Backed Notes)
 - Senior tranche rated Moody's/Kroll A1/A (sf) (\$24.95M)
 - Total issuance size \$311.4M (including 3 sub tranches)
 - Total advance rate (overall): >91%
 - Collateral Pool: variety of equipment types and industry sectors (highest industry concentration: railcar at 30.8%)
 - Rating agency notably relied on credit history of similar assets originated by SCF's senior management at prior firms, due to limited history of SCF

C & I Solar Demonstration Project

Rating Agency Analysis (Cont'd)

- Equipment Loan & Lease Securitizations (Cont'd)
 - New Star Commercial Lease Funding 2015-1 LLC
 - Senior Tranche \$83,970,000, rated AA(sf) by DBRs
 - Junior Tranche \$13,984,000, rated BBB(low)(sf) by DBRs
 - Collateral Pool: commercial small-, mid- and large- ticket equipment leases and loans
 - 10 largest obligors account for 62% of discounted pool balance
 - Credit quality of largest obligors in CCC (high) to B (low) range
 - Relatively high sector concentration, with 21% exposure to aircraft, >16% exposure to trucks and trailers, and 16% exposure to oil and gas production sector
 - Otherwise well diversified geographic and equipment type exposure

C & I Solar Demonstration Project

Rating Agency Analysis (Cont'd)

- Multi-Originator Trade Receivable Securitization
 - Trade MAPS 1 Ltd. (Series 2013-1)
 - 2 participating banks (Citibank and Santander)
 - Each bank sold trade receivable assets to a separate asset – purchasing entity (APE)
 - Each APE issues “funding securities” to pay for percentage of purchased assets and the funding securities are sold to issuer
 - Issuer generates proceeds to purchase the funding securities by selling rated notes and subordinated notes
 - Rated notes to be purchased by institutional investors, and subordinated notes to be purchased by participating banks
 - Use of APEs insulates proprietary data of participating banks from other participating banks

C & I Solar Demonstration Project

Rating Agency Analysis (Cont'd)

- Multi-Originator Trade Receivable Securitization (cont'd)
 - Trade MAPS 1 Ltd. (Series 2013-1) (cont'd)
 - Sub notes purchased by each participating bank from its APE will not provide credit support for rated notes backing trade assets originated by any other participating bank
 - Also no cross – collateralization among funding securities sold to Issuer by different APEs and used to collateralize rated notes
 - Master Trust structure used to facilitate multiple sequential issuances of rated notes as other participating banks sell trade assets to other APEs, or original participating banks sell additional trade assets

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