## SUNTUN



## Investor Overview Presentation

March 2020

#### Safe Harbor & Forward Looking Statements

This presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forwardlooking statements in this presentation include, but are not limited to, statements related to financial and operating guidance and expectations for our first guarter and full year 2020, the expected size and timeframe of our stock repurchase program, investment tax credit safe harbor strategy, momentum in our business strategies, expectations regarding utility rates, expectations regarding our solar + storage offering, expectations regarding our capital structure, expectations regarding our energy services business and the energy services market generally, expectations regarding module supplies, expectations regarding market share, market position, market penetration, gross orders and demand, customers, cost reductions, project value, Megawatts Deployed, product mix, proceeds raised on assets deployed and NPV as well as our ability to raise debt, tax equity, and project equity and manage cash flow and liquidity, leverage our platform services and deliver on planned innovations and investments as well as expectations for our growth, the growth of the industry, our ability to manage supply chains, factors outside of our control such as public health emergencies and natural disasters, macroeconomic trends and the legislative and regulatory environment of the industry.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot

guarantee that the future results, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. These forward-looking statements are subject to a number of risks, uncertainties and assumptions which could cause our results to differ materially and adversely from those expressed or implied including, but not limited to: the availability of additional financing on acceptable terms; changes in the retail prices of traditional utility generated electricity; changes in policies and regulations including net metering and interconnection limits or caps; the availability of rebates, tax credits and other incentives; the availability of solar panels and other raw materials; our limited operating history, particularly as a new public company; our ability to attract and retain our relationships with third parties, including our solar partners; our ability to meet the covenants in our investment funds and debt facilities; our continued ability to manage costs associated with solar service offerings; our business plan and our ability to effectively manage our growth and labor constraints our ability to meet the covenants in our investment funds and debt facilities: and such other risks and uncertainties identified in the reports that we file with the U.S. Securities and Exchange Commission, or SEC, from time to time. You should not rely on forward-looking statements as predictions of future events.

All forward-looking statements in this presentation are based on information available to us as of the date hereof, and we assume no obligation to update publicly these forward-looking statements for any reason, except as required by lawnrun

# Sunrun at a glance.

#### **OUR MISSION**

To create a planet run by the sun.

#### **OUR BEGINNINGS**

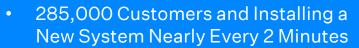
- Founded in 2007
- HQ in San Francisco
- Pioneered Residential Solar Service

#### **OUR MODEL**

- Providing Superior Power with Rooftop Solar & Battery Storage
- Average Bill Savings of 10-40%<sup>(1)</sup>
- Back-Up During Power Outages



#### OUR GROWTH (2)





4,800 Sunrun Employees

## (\$)

#### **2019 FINANCIAL PERFORMANCE**

- 22% Cumulative Customer Growth
- Generated \$102 Million of Cash<sup>(3)</sup>
- \$353 Million of Net Present Value Created

See appendix for glossary of terms.

<sup>(1)</sup> Estimated savings measured over typically 20 or 25 year initial contract term and assumes annual utility rate increases. Actual savings may vary by customer.

<sup>(2)</sup> Customer count as of 12/31/2019. Employee count as of 12/31/2019. Installation rate based on 115,000 work-day minutes divided by 2019 full-year customer deployments.

<sup>(3)</sup> Cash generation is defined as the change in consolidated total cash balance (including restricted cash) less any increases in recourse debt balances. In 2019 Cash Generation includes an adjustment for business acquisition of \$2.7 million, safe harboring activity of \$27.5 million and repurchase of common stock of \$5 million.

#### Utilities Fail to Address Customer Needs

Consumer-Centered Resources Deliver Superior Value Today

#### Expensive

The cost of electricity has **increased 3% per year** on average for the last 15 years. (1)

#### Unreliable

In 2017 there were **3,526 outages** affecting 36 million people across all 50 states. (2) Of the outages, 86 major disturbances resulted in customers collectively experiencing **over 1 billion hours without power**. (3)

#### Polluting

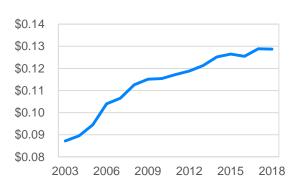
**ANNUAL EMISSIONS (4)** 

Carbon Dioxide = 1.9 billion tons

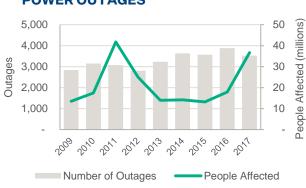
Sulfur Dioxide = 1.6 million tons

Nitrogen Oxides = **1.5 million tons** 

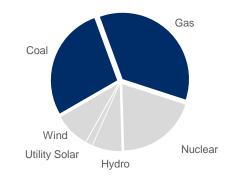
#### **COST OF UTILITY ENERGY** (1)



#### **POWER OUTAGES**



#### **GENERATION SOURCES (4)**



- (1) Energy Information Agency. Average price per KWhr of electricity for the residential sector in Sunrun's current markets. Rate reflects the Compounded Average Growth Rate (CAGR) from 2003 through 2018.
- (2) Eaton's 2017 Blackout Tracker Annual Report
- (3) Sunrun analysis of "Electric Emergency Incident and Disturbance Reports" published by the Energy Information Agency as of November 2017.
- (4) Energy Information Agency. US Net Electricity Generation by Source and Emissions for 2018.





It didn't take much thought to go with Brightbox. I would have paid a lot to have backup or have to otherwise tend to a generator. This way, I don't have to think about it if something like Superstorm Sandy ever happens again.

Mike & Michelle Passeri ocean gate, new Jersey

- Brightbox Customer with Custom PPA
- \$0 Upfront Cost
- Average Monthly Utility Decreased by \$19
- 20-Year Expected Savings: ~\$8,750

Mike and Michelle Passeri are the first Brightbox customers in New Jersey. Mike is a U.S. Air Force Veteran who works on the local base and is not an environmentalist. They are, however, thankful to have clean, reliable backup power because they know what it's like to lose \$500 worth of food and electricity for 13 days. Having survived Superstorm Sandy, Brightbox gives them peace of mind - something both Mike and Michelle can't put a price tag on. Plus, as Mike nears retirement, any extra money they can save while their two kids are in college is a bonus.

Initial customer inquiry	Site survey completed	Customer approved plan	1-day install	Flip the switch	First bill received
	•	•	•	•	•
4.14.18	5.15.18	6.18.18	8.15.18	10.15.18	11.12.18

Note: Savings results may not be typical but the average customer saves up to 20% on their electric bills over the typical 20 or 25 year initial contract term.





Sunrun made it 100% simple to switch to clean energy. We were 100% satisfied with the outcome and would encourage anybody to get it!

The Carrion Family TAVARES, FLORIDA

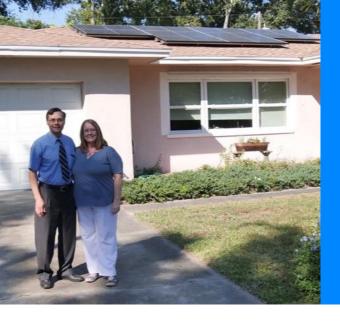
- Custom Lease
- \$0 Upfront Cost
- 6.7 KW System

Joe, Carol, and Joey Carrion learned about Sunrun from Carol's mother, Elizabeth Digiovanna. They had thought about going solar but Carol says, "the prices scared us." When they decided to join Elizabeth's consultation with Paul Dudley, however, they learned that Sunrun offered solar for \$0 down. Excited to make the switch to clean energy, Carol exclaimed "we pretty much joined right away!" It was the maintenance-free option that really sealed the deal for the Carrions and they are very excited to have clean, affordable energy for years to come!

Initial customer inquiry	Site survey completed	Customer approved plan	1-day install	Flip the switch	First bill received
	•	•	•	•	•
6.19.18	7.5.18	7.9.18	9.22.18	10.25.18	11.22.18

Note: Savings results may not be typical but the average customer saves up to 20% on their electric bills over the typical 20 or 25 year initial contract term.





The power was only out for about an hour but it gave me the assurance that Brightbox works just like we hoped it would.

"

Paul & Debbie McMaster CLEARWATER, FLORIDA

- Custom Solar Lease
- \$5,999 Upfront Cost
- Peace of Mind During Outages

Paul and Debbie McMaster knew they wanted to invest in a home solar and battery system after living through 4 hurricanes in a single season. Prior to learning about Sunrun on the evening news, however, they thought they couldn't afford to go solar. "The leasing caught my attention because I didn't want to have to buy panels that would take me their full lifespan to pay for," Paul recounted. After seeing that Sunrun had a battery option, Paul made the call. Remembering their consultation Paul says he "told her we were getting a battery. She didn't even have to ask...I wanted something to keep the power on during an outage beside noisy, smelly, dangerous generators."

Initial customer inquiry	Site survey completed	Customer approved plan	1-day install	Flip the switch	First bill received
	•	•	•	•	•
6.15.18	6.22.18	6.29.18	8. 9.18	8.24.18	9.21.18

Note: Savings results may not be typical but the average customer saves up to 20% on their electric bills over the typical 20 or 25 year initial contract term.

#### Customer Value Proposition will Continue to Improve

Cost advantage for consumer-centered resources is systematic 2008 - 2028

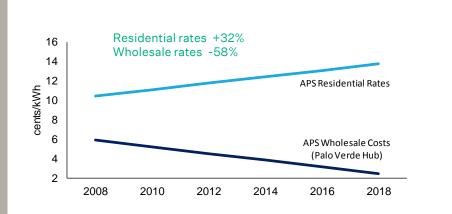
## **Declining Wholesale Rates Disguise Cost Of Capex**<sup>(1)</sup>

COST



With the expected capex trends and stagnant demand, even if wholesale prices fall to zero, retail rates will accelerate over the next ten years. (2)

Aging infrastructure and extreme weather are likely to increase the frequency of outages.

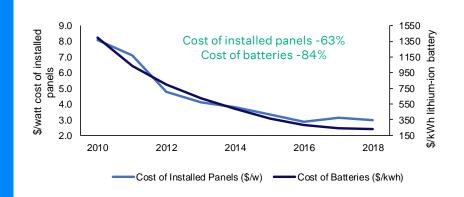


## Costs Of Solar Modules And Batteries Have Declined Significantly<sup>(3)</sup>

COST



Market researchers forecast the cost of installed solar panels will decline 61% while the cost of batteries declines 49% over the next 10 years. (4)



- (1) APS Residential & APS Wholesale Data: eia.gov
- 2) Projected retail rates based on historic actual CAGR adjusted for current market conditions and wholesale rates based on 2% inflation
- Historic solar costs represent costs of residential systems according to Wood Mackenzie Research Solar Market Insight reports (2012-2018) and the California Solar Statistics database (2010-2011); Historic battery cost estimates according to Wood Mackenzie "US Energy Storage Monitor" (March 2019).
- (4) Projected Cost of Panels Data: Bloomberg New Energy Finance 2H 2017 U.S. Renewable Energy Market Outlook & Projected Cost of Lithium Ion Battery Data: Lux Research

# Home Batteries Accelerate Transition to Consumer-Centered Resources



Power outages are increasing in frequency and home batteries enable backup power for customers.



Distributed home solar and batteries are more nimble and cost effective than continuing to over-invest in bulky centralized infrastructure.



# Sunrun is building not to disrupt but to displace.

Home solar and batteries are more flexible and efficient than traditional centralized infrastructure, unlocking a new \$13 billion to \$50 billion annual market of utility capex. (1)

The market capitalization of the top 20 utilities is over \$500 billion.

#### Virtual Distribution Capacity

Avoids substation overhauls by dropping excess load when needed locally.



#### **SOLUTION:**

- 600 solar + storage homes on a residential circuit with 6,000 homes
- 4.5 MWh / 3 MW storage manage circuit load to safe limits

#### Virtual Transmission Capacity

Provides generation and reliability in congested areas where new transmission lines are difficult to build.



#### **SOLUTION:**

- 10,000 solar + storage homes in load zone with 200k homes
- Daily peak shaving + reliability in loss of transmission capacity

#### Virtual Power Plants

Provides clean, cost effective peaking capacity.

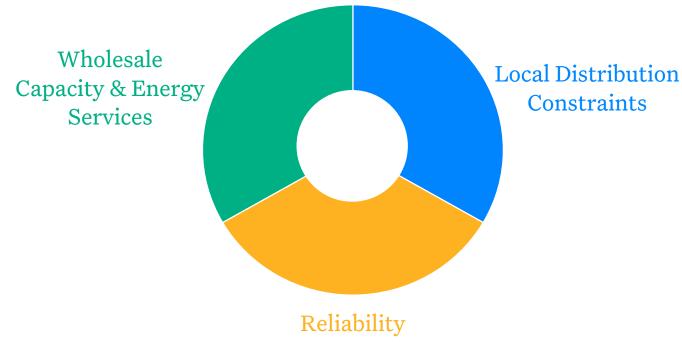


#### **SOLUTION:**

- 50,000 solar + storage homes in utility territory with 1M residential customers
- 92MW, 4-hour duration resource

#### Sunrun is Leading in Grid Services

We offer Brightbox in 9 states and Puerto Rico and have installed more than 9,000 Brightbox battery systems. The attachment rate is approaching 20% across all geographies.



#### Contracts awarded to date:

- ISO New England deliver 20 MW of wholesale energy capacity
- Hawaiian Electric Company Grid Services Purchase Agreement with Open Access Technology International, Inc.
- East Bay Community Energy replace the retiring jet-fuel Oakland Power Plant
- Green Mountain Power Bring-Your-Own-Device Battery Program
- PSEG Bring-Your-Own-Device-Battery Program



## Brightbox home batteries are superior to generators



A Brightbox home battery can backup critical circuits and recharge when the sun shines, so customers can power through even multiday power outages.

In many places, customers can get solar and storage for less than or equal to what they pay for electricity today.

#### Sunrun Brightbox

A clean, reliable and long-term solution for blackouts

- No hassle (Sunrun takes care of maintenance)
- ✓ silent
- ✓ clean
- reliable
- ✓ automatic
- ✓ cheaper
- ✓ safe
- ✓ long-term

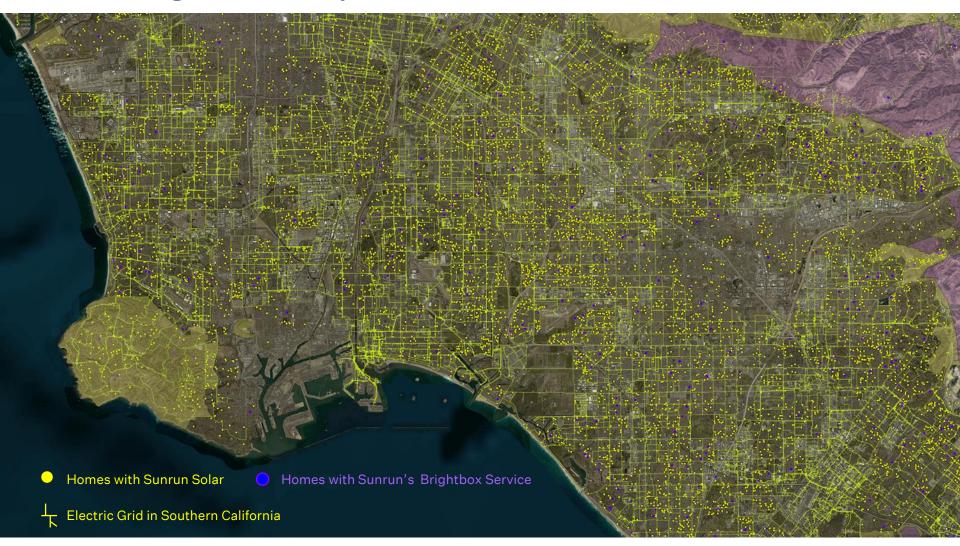
#### Generator

A polluting and short-term fix, with multiple safety risks

- X annual maintenance
- X loud
- X polluting
- X unreliable
- X manual
- X high cost (upwards of \$10K)
- X safety risks
- X short term
- X requires refueling (which can be difficult finding a fuel station with power)

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#### **Building Resiliency**





#### Sunrun Overview

#### Who We Are

Formed in 2007, Sunrun pioneered residential solar service. We have



#### 285,000 customers

and have sold our solar service in 22 states, DC & Puerto Rico.

We provide a superior solar energy service with fixed pricing under 20 or 25 year agreements, that generate recurring, contracted revenue for multiple decades with an experienced loss rate of ~1%.<sup>(1)</sup>

Sunrun has the industry's leading customer acquisition platform, customer experience capabilities, and extensive financing experience, all of which drive significant barriers to entry and high incremental returns.

#### All figures represent fleet wide statistics as of December 31, 2019 unless otherwise noted. Losses include uncollected recurring billings 5 months after invoice date, write downs and appearement credits.

(4) The Solar Foundation's National Solar Jobs Census 2019

#### Our Compelling Value Proposition

#### **VALUE TO CUSTOMERS**

- Customers on average save between 10-40% on electricity.<sup>(2)</sup>
   We have delivered more than \$300 million in savings for our customers.
- Storage provides premium power, including backup capabilities to enable customers to power through storms.

#### **VALUE TO SUNRUN**

- 20+ year customer relationship which can be monetized beyond core solar energy product
- 20+ year value stream is financed upfront to fully cover creation costs and generate cash immediately

#### **VALUE TO SOCIETY**

- Residential solar is a cost-effective way to modernize the country's infrastructure to make it more resilient, affordable and environmentally sustainable.
- Sunrun's systems have prevented greenhouse-gas (GHG)
  emissions totaling 3.7 million metric tons of carbon dioxide
  equivalent (CO2e), an amount comparable to eliminating
  more than 9 billion passenger-vehicle miles.<sup>(3)</sup>
- The solar industry employs 250,000 workers in America and is estimated to be one of the fastest growing segments of the economy.<sup>(4)</sup>



<sup>(2)</sup> Estimated savings measured over typically 20 or 25 year initial contract term and assumes annual utility rate increases.

<sup>(3)</sup> Based on Sunrun's estimates and United States Environmental Protection Agency's Greenhouse Gas Equivalencies Calculator

#### Massive, Underpenetrated Market. Consumer Interest and Early Results Support High Penetration.

A 10-year >15% CAGR in new customer originations leads to ~13% penetration of U.S. houses. Value proposition will support a much greater number.

#### 75 MILLION

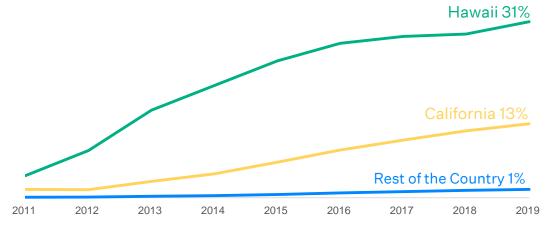
Potential Homes<sup>(1)</sup>

13%

Projected market penetration in 2029<sup>(2)</sup>

#### **HIGH PENETRATION PROVEN...**

In markets where the value proposition was evident first, **penetration has** reached 31% and growth continues<sup>(3)</sup>



#### Notes:

- Current market penetration and potential homes calculation uses the U.S. Census 2017 American Community Survey data on detached, occupied single-family housing units and number of residential installations from EIA Form 826 Residential PV Customers (through October 2019).
- (2) Estimated 2029 market penetration assumes housing units grow at 0.7% (Census data). Customers added in 2019 are calculated using Wood Mackenzie Research residential MW installation estimates and 2018 Wood Mackenzie Research average system sizes. Sunrun internal estimates for 2020 and beyond.
- (3) State penetration data uses EIA Form 826 Residential PV Customers (through October 2019) and housing stock uses U.S. Census 2017 American Community Survey data on detached, occupied single-family housing units.

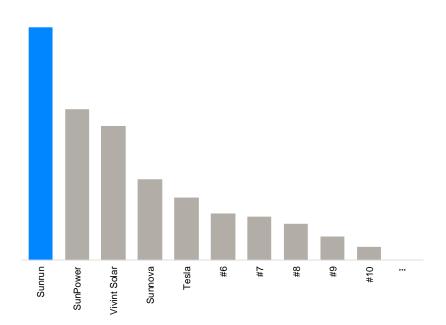


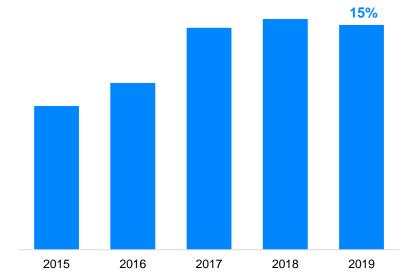
Residential solar has reached only a small portion of the market today<sup>(1)</sup>

#### Sunrun Is The Residential Market Leader

Sunrun is the #1 residential market leader<sup>(1)</sup>

And has steadily gained share (2)





#### Notes:

(1) Source: Wood Mackenzie Research, Sunrun's reported MW Deployments, Sunnova's reported MW Deployments and SunPower's reported SPES Residential Deployments. As of Q3 2019.
(2) Represents trailing 12-month market share using Wood Mackenzie Research industry data and Sunrun's reported MW Deployments. As of Q4 2019.

#### Strong Customer Value Proposition Across the U.S.

Customer value propositions include utility bill savings, sustainability, peace of mind along with battery backup power and energy control with our Brightbox product.



#### **SAVINGS**

Average utility bill savings of 10-40%<sup>(1)</sup>



#### **SUSTAINABILITY**

Protect our planet



#### **BACKUP**

Protection against blackouts



#### **ENERGY CONTROL**

Use your energy when it's most valuable



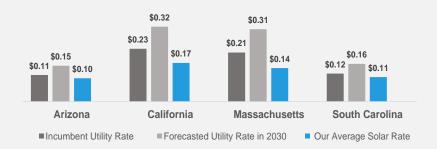
#### **PEACE OF MIND**

World class install & 20 year no hassle service with predictable pricing

#### Typical Sunrun Solar Service Agreement Characteristics

- Price per unit of energy (KWhr): ~\$0.135
- Solar System Size: 7.5 KWs (7,500 watts)
- Estimated Annual Solar Production: ~10,200 KWhrs (~1,350 KWhrs per KW per year) which usually generates ~87% of the customers electricity needs (only ~40% of solar production is net metered)
- Annual escalator: 2.9% (with options for lower or no escalator)
- Contract Duration: typically 20 or 25 years
- Solar Power Purchase Agreement (PPA)
- Production Guarantee & Warranty
- All Service Included

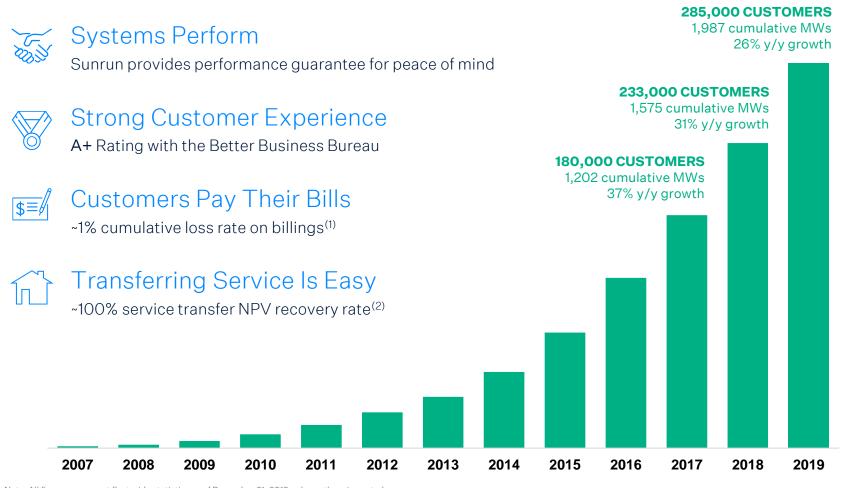
#### AVERAGE SAVINGS BY REGION(3)



- Estimated savings measured over initial typically 20 or 25 year contract term and assumes annual utility rate increases.
- (2) Forecasted Utility Rates in 2030 are based on an analysis conducted by Lawrence Berkley National Laboratory using Energy Information Data and published January 2017. The analysis includes nominal cost increases by region which have been applied to each state's rate forecast.
- (3) Select markets pricing per KWhr of electricity shown and represent our average price quotes during 4Q17 for our solar-only product.

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## Over 13-Year Operating History Delivering Consistent Growth and Value Creation



Note: All figures represent fleet wide statistics as of December 31, 2019 unless otherwise noted.

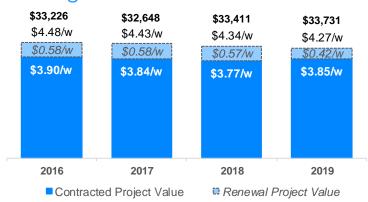


Losses include uncollected recurring billings 5 months after invoice date, write downs and appeasement credits.

Recovery percentage is equal to the (i) the sum of (a) the remaining customer agreement cash flows after the service transfer discounted at 6% and (b) prepayments received in connection with the service transfer, divided by (ii) the remaining customer agreement cash flows before the service transfer discounted at 6%. Based on analysis of completed service transfers for monthly customers; Recoveries >100% arise from prepayments.

## Strong Customer Values and Cost Improvements Drive Continued Margin Expansion

#### Strong Customer Values



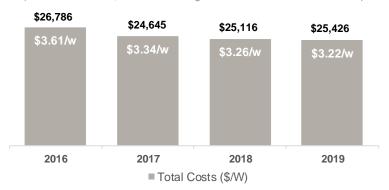
#### Improving Customer Net Margins



■Contracted NPV (\$/W) ■ Renewal NPV (\$/W) Unlevered NPV (\$/W)

#### Continued Cost Improvements(1)(2)

(Includes Installation, Sales & Marketing and General & Administrative Costs)



### Additional value streams beyond initial net contracted customer margins:

- Purchase or Renewal after Initial 20- or 25-year Contract
- Selling Additional Services, Such as Batteries or Grid Service Revenues
- Customer Acquisition Benefits through Referrals and Home Moves

<sup>(2)</sup> Creation Cost for Q1 2016 excludes exit costs in Nevada. Creation Cost for 1Q 2018 excludes two non-recurring items totaling approximately \$7 million: charges related to establishing a reserve for litigation and an impairment of solar assets under construction by a channel partner that ceased operations. Creation Cost for 2Q 2018 excludes a non-recurring item of \$1.9 million related to a legal settlement related to the state court class action lawsuit related to the IPO.

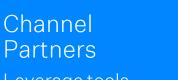


<sup>(1)</sup> The presentation of Creation Cost for periods commencing with March 31, 2018 reflects changes made to the calculation owing to the adoption of new accounting standards, as described in materials available on our investor relations website. The presentation of Creation Cost for periods prior to March 31, 2018 remain as previously reported, as the new calculation and recast financials would have resulted in immaterial changes in the Creation Cost for such prior periods. Please see our recast financials summary available on our investor relations website.

#### Expanding Our Moat with Customer Acquisition Capabilities

Sunrun's diverse proprietary customer acquisition channels drive reach advantages today and investments in brand and customer experience will augment advantages over time





Leverage tools and brand



Direct Marketing

Best in class direct to consumer



Strategic Partners

National brands & retailers such as Costco and Home Depot deliver broad reach

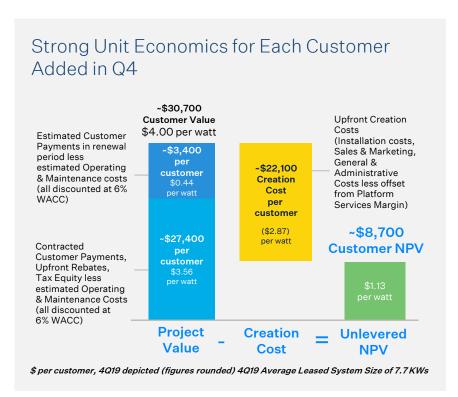


Referral Network

285,000 Sunrun customers

#### Compelling Value Creation

#### Each leased asset represents significant value with 20-30 years of expected cash flows



Significant Present \	/alue	of Dep	oloyed	d Asse	ets
(\$ in millions)	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019
Gross Earning Assets, Contracted <sup>(1)</sup>	\$2,100	\$2,153	\$2,252	\$2,297	\$2,537
Gross Earning Assets, Renewal (1)	\$963	\$1,014	\$1,060	\$1,106	\$1,147
Total Gross Earning Assets <sup>(1)</sup>	\$3,062	\$3,167	\$3,312	\$3,403	\$3,684
Total project-level non-recourse debt	(\$1,502)	(\$1,585)	(\$1,724)	(\$1,806)	(\$2,015)
Pro forma debt adjustment for debt within project equity funds (1)(2)	\$183	\$182	\$182	\$181	\$179
Pro forma debt adjustment for safe harboring activity	-	-	-	-	\$14
Pro-forma pass-through financing obligation <sup>(3)</sup>	(\$339)	(\$331)	(\$341)	(\$340)	(\$339)
Net Earning Assets	\$1,404	\$1,432	\$1,429	\$1,438	\$1,522
Estimated future cash flows from asse	ets deploy	ed throug	ıh 4Q19, le	ess all pro	ject

debt, represents \$1.5 billion in present value or approximately \$12 per share.

See Appendix for glossary of terms. Numbers may not tie due to rounding.

The pass-through financing obligation used to calculate Net Earning Assets is reduced to the extent we expect the liability to be eliminated when the pass-through financing provider receives investment tax credits on assets it has funded, at which time the value of the credits is recognized as revenue. This amount is reflected in the current portion of the pass-through financing obligation. In the second, third and fourth quarter of 2018 the adjustment was \$36.2 million, \$53.9 million and \$25.0 million, respectively. In the first quarter of 2019 the adjustment was \$9.3 million. There was no amount reflected within short-term pass through financing in the second, third and fourth quarters of 2019.



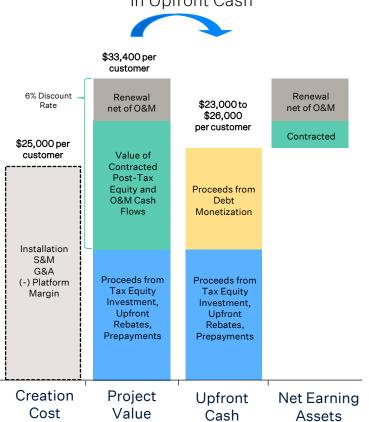
Gross Earning Assets excludes the pro-rata share of forecasted unlevered cash flows attributable to project equity financing partners, allocated based on the estimated pro-rata split of cash flows. Because estimated cash distributions to our project equity financing partners are deducted from Gross Earning Assets, so is a proportional share of the corresponding project level debt from Net Earning Assets.

In the fourth guarter of 2019, pro forma debt adjustment is calculated as carrying value of non-recourse debt for funds supported by cash equity, totaling \$180.7 million as of Q4 2019 outlined in Note 12 in the 10K filing, multiplied by 99%, the pro rata share of cash flows with the project equity investor.

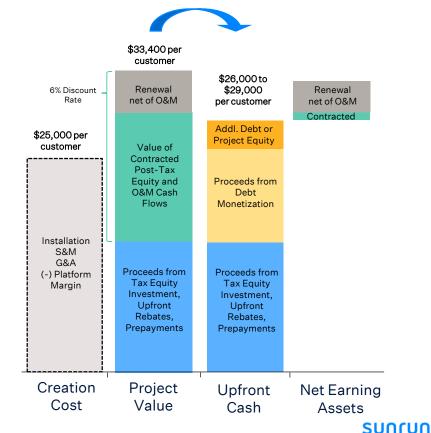
#### How We Turn Customer Contracts Into Cash

We employ a mix of funding options to cover upfront costs while continuing to build our long-term stream of cash flows

Traditional Project Debt Structures Monetizes \$23,000 to \$26,000 in Upfront Cash

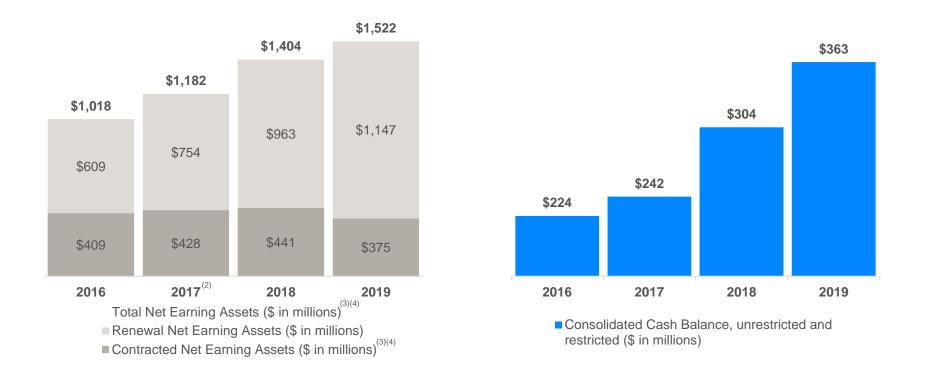


Subordinated Project Debt and/or Project Equity Monetization Generates \$26,000 to \$29,000 in Upfront Cash



#### Growing Cash Flow & Long-Term Value

#### Sunrun is cash flow positive while accumulating future cash flows<sup>(1)</sup>



Notes: See Appendix for glossary of terms. Numbers may not sum due to rounding.

- (1) Cash generation defined as change in consolidated total cash balance (including restricted cash) less any increases in recourse debt balances, adjusted for one-time items.
- (2) In the fourth quarter of 2017, Gross Earnings Assets under Energy Contract and Total Gross Earning Assets were reduced by \$13 million to reflect changes related to modifications to the Federal Tax Code for assets deployed through December 31, 2017, including a reduction held as a reserve pending final tax regulation guidance based on the company's best estimate of the potential effect.
- (3) The pass-through financing obligation for periods from December 31, 2016 through December 31, 2017 reflect recast financials following the adoption of certain accounting standards, as described in our 1Q 2018 Quarterly report on Form 10-Q filed with the Securities and Exchange Commission (SEC) on May 9, 2018. Please also see our recast financials summary available on our investor relations website.
- (4) The pass-through financing obligation used to calculate Net Earning Assets is reduced to the extent we expect the liability to be eliminated when the pass-through financing provider receives investment tax credits on assets it has funded, at which time the value of the credits is recognized as revenue. This amount is reflected in the current portion of the pass-through financing obligation. In the second, third and fourth quarter of 2018 the adjustment was \$36.2 million, \$53.9 million and \$25.0 million, respectively. In the first quarter of 2019 the adjustment was \$9.3 million. There was no amount reflected within short-term pass through financing in the second, third and fourth quarters of 2019.

#### Industry Leading Financing Execution

We have a strong track record of attracting low-cost capital from diverse sources. Capital cost <6%.

Our access to capital markets puts us in a position to offer more advantageous financing options to consumers while creating long term value for investors.

We continue to set new records for capital cost and advance rates, demonstrating that the market and ratings agencies increasingly recognize both the high quality of residential solar assets as well as our industry leading performance.

We've raised financing for



in cumulative value of solar energy systems across dozens of investment funds.

Date	Туре	i Principal	Advance Rate	Spread	Pricing
Oct 2019	ABS - New Assets	\$312M	80.0%	205 bps	The A rated notes priced at a yield of 3.63%.
Jun 2019	Repriced Senior Term Loan A	\$251M	72.0%	213 bps	Reduced the interest rate to LIBOR +212.5 bps from LIBOR +275 bps.
IMay 2019	ABS - Seasoned Assets	\$204M	80.3%	200 bps	The A- rated notes priced at a yield of 4.00%.
Dec 2018	ABS - New Assets	\$322M	72.3%	265 bps	The A- rated notes priced at a yield of 5.55%.

#### Guidance

15% Growth

IN DEPLOYMENTS FOR FULL YEAR 2020

102 MW

**DEPLOYED IN Q1** 

Note: Guidance provided on February 27, 2020 in the  $4Q\ 2019$  earnings release. The company assumes no obligation to update such guidance and the guidance is effective only as of February 27, 2020, not the date of this presentation.



#### **GAAP Income Statement**

	_	10010		~				10010	
Consolidated GAAP Income Statement (\$ in millions)	FY	/2016	FY2	017	FY	2018	FY	′2019	
Revenue:	•								
Customer agreements	\$	156	\$	211	\$	273	\$	345	
Incentives		36		24		132		42	Ĺ
Customer agreements and incentives		192		234		404		388	
Solar energy systems		128		114		187		283	
Products		158		184		169		187	
Solar energy systems and product sales		285		298		356		471	
Total revenue		477		533		760		859	
Operating expenses:									
Cost of customer agreements and incentives		154		186		241		280	
Cost of solar energy systems and product sales		239		254		294		365	Ĺ
Sales and marketing		169		146		207		275	
Research and development		10		15		19		24	
General and administrative		92		107		117		125	
Amortization of intangible assets		4		4		4		5	
Total operating expenses		669		714		882		1,074	
Loss from operations		(192)		(181)		(122)		(216)	
Interest expense, net		73		92		132		174	
Other expenses (income), net		(1)		2		(3)		9	
Loss before income taxes		(265)		(275)		(251)		(399)	
Income tax expense (benefit)		56		12		9		(8)	
Net loss		(321)		(288)		(260)		(391)	
Net loss attributable to NCI and non redeemable NCI		(396)		(413)		(287)		(417)	
Net income (loss) attributable to common stockholders		75		125		27		26	
(									
EPS, diluted	\$	0.72	\$	1.16	\$	0.23	\$	0.21	
Wt avg basic shares		102		105		110		116	
Wt avg diluted shares		105		108		117		124	
•									

Customer Agreements and Incentive Revenue is comprised of ongoing revenue from customers under long-term agreements, amortization of prepaid systems, and incentive revenue. The value of the Investment Tax Credits (ITC) are recognized as Incentive revenue, when monetized using a pass-through financing structure.

The majority of Customer Agreements and Incentives COGS is depreciation (~\$187m total depreciation & amortization in 2019). This also includes operating & maintenance costs and non-capitalized costs associated with installation-related activities.

A large portion of our Sales & Marketing spend is expensed in period, while it relates to customers with ~20 or ~25 years of contracted revenue.

The Loss Attributable to Non-Controlling Interests is primarily driven by our monetization of the Investment Tax Credit (ITC) with our Tax Equity partners with partnership flip structures. Assume a tax investor contributes about ~\$1.8 per watt in cash and then immediately receives back a tax credit worth \$1.3 per watt. After receipt of the tax credit, the investor's remaining non-controlling interest in Sunrun's solar facility is now only \$0.5 per watt, which is repaid over about 6 years through cash distributions and depreciation deductions. Like the elimination of a liability, the reduction in the tax investor's non-controlling interest from ~\$1.8 per watt to ~\$0.5 per watt is income to Sunrun common shareholders. Because Sunrun received this \$1.3 per watt in cash through a partnership, this income is accounted for under GAAP using the hypothetical liquidation at book value (HLBV) method as a "loss attributable to non-controlling interests," rather than revenue.

#### **GAAP** Balance Sheet

Consolidated GAAP Balance Sheet (\$ in millions)	FY2016	FY2017	FY2018	FY2019
Cash	\$ 206	\$ 203	\$ 227	\$ 270
Restricted cash (current and long term)	18	39	78	94
Accounts receivable	53	60	66	78
Inventories	67	94	79	261
Prepaid expenses and other current assets	24	20	11	32
Solar energy systems, net	2,499	3,162	3,820	4,493
Property and equipment, net	48	36	35	57
Intangible assets, net	18	14	10	20
Goodwill	88	88	88	95
Prepaid tax asset	379	-	-	-
Other assets	196	246	336	408
Total assets	3,596	3,963	4,750	5,806
Accounts payable, accrued expenses and other liabilities	135	212	230	372
Other current liabilities	11	14	16	16
Deferred revenue (current and long-term)	525	565	592	729
Deferred grants (current and long-term)	234	236	230	227
Finance lease obligation (current and long-term)	23	13	19	23
Non-recourse debt (current and long-term)	654	1,048	1,502	2,015
Recourse debt (current and long-term)	244	247	247	239
Pass-through financing obligation (current and long-term)	137	138	364	339
Other liabilities	36	43	48	141
Deferred tax liabilities	460	83	94	66
Total liabilities	2,459	2,599	3,341	4,168
Redeemable noncontrolling interests in subsidiaries	141	124	126	307
Stockholders' equity	743	882	949	965
Noncontrolling interests in subsidiaries	253	359	334	367
Fotal liabilities and shareholders' equity	3,596	3,963	4,750	5,806

Deferred revenue is primarily Customer Prepayments which are recognized over 20 years (\$577m balance of Payments Received Under Customer Agreements at the end of 2019).

\$2.0 billion of our debt is non-recourse project debt and solely secured by the solar assets.

\$339 million of pass-through financing obligations represent obligations to investors who receive the Investment Tax Credit and a portion of cash flows from funds predominantly under an inverted lease structure.

Non-controlling interests represent our Tax Equity (under partnership flip structures) and Project Equity investors' interests in our funds (such as National Grid's interests).

#### GAAP Cash Flow

Consolidated GAAP Statement of Cash Flow (\$ in millions)	FY:	2016	FY2	2017	FY2	018	FY2	2019
Operating Activities:								
Net loss	\$	(321)	\$	(288)	,	260)	\$	(391
Depreciation and amortization, net of amortization of deferred grants		98		129		156		187
Deferred income taxes		56		12		9		8)
Stock-based compensation expense		19		22		28		26
Interest on pass-through financing obligations		13		13		19		24
Reduction in pass-through financing obligations		(45)		(18)		(25)		(39
Other noncash losses and expenses		16		24		25		26
Changes in operating assets and liabilities		(36)		10		(15)		(30
Net cash provided by (used in) operating activities		(200)		(96)		(62)		(204
Investing activities:								
Payments for the costs of solar energy systems		(678)		(769)	(8	306)		(815
Purchases of property and equipment		(13)		(8)	,	(5)		(25
Acquisitions of businesses, net of cash acquired		(5)		-		-		(3
Net cash used in investing activities		(696)		(777)	(6	311)		(843
Financiae estitica.								
Financing activities:								
Proceeds from grants and state tax credits		9		14		11		40
Proceeds from recourse debt		458		170		17		18
Repayment of recourse debt		(411)		(167)		(17)		(193
Proceeds from non-recourse debt		336		749		981		1,182
Repayment of non-recourse debt		(23)		(363)		518)		(671
Payment of debt fees		(14)		(14)		(25)		(29
Proceeds from pass-through and other financing obligations		16		6		217		(
Repayment of pass-through financing and other obligations		- (40)		- (40)		-		(8
Payment of finance lease obligations		(13)		(10)		(9)		(14
Contributions received from NCI and redeemable NCI		574		595		345		712
Distributions paid to NCI and redeemable NCI		(40)		(55)		(78)		(77
Acquisiton of non-controlling interests		-		(35)		-		(5 16
Proceeds from exercises of stock options		7		1		13		
Repurchase of common stock		-						(5
Net cash provided by financing activities		899		891		936	1	1,107
let change in cash and restricted cash		3		17		63		59
Cash and restricted cash, beginning of period		221		224		242		304
Cash and restricted cash, end of period		224		242		304		363
Cash paid for interest		26		42		76		99
740.1 paid 10. 11.10.100t						, 0		0.

Cash Flow From Operations is negative as ~19% of our Creation Costs are expensed in the period, while revenue is recognized over 80 periods or more. Additionally, we raise Debt and Project Equity to fund our growth, which covers CFO and CFI.

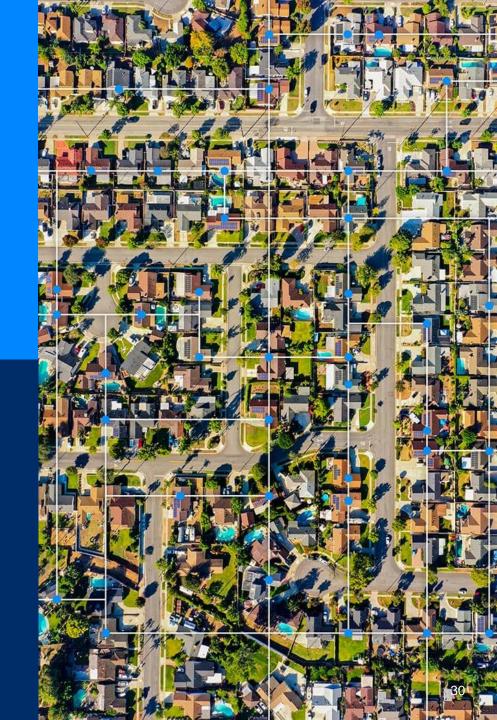
These investments are the capex for our solar energy systems. Approximately 81% of our Creation Costs are capitalized, the rest are expensed in-period on our income statement.

We raise non-recourse project debt on assets, which is serviced by cash flows from contracted customer payments

Proceeds from pass-through and other financing obligations primarily represents Tax Equity investors in inverted lease structures, where the investor receives the Investment Tax Credit (ITC), certain depreciation attributes, and a share of cash flows. Following adoption of ASC 606 in 2018, proceeds received related to ITC revenues are treated as operating cash flows.

Proceeds from NCI represent investments from (1) Tax Equity investors in partnership flip funds, where they receive the Investment Tax Credit, certain depreciation attributes, and a share of cash flows, along with (2) Project Equity investors such as National Grid, which receive a share of cash flows from the funds. In 2019, proceeds from NCI and proceeds from pass-through and other financial obligations averaged ~\$2 per watt.

## Appendix



#### **Operating Metrics Summary**

For a description of how the below metrics are calculated, see (i) our 2019 Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC) on February 27, 2020,

(ii) the quarterly earnings releases and presentation materials for each applicable period available on our investor relations website and (iii) the accompanying notes therein.

	FY2017	1Q18	2Q18	3Q18	4Q18	FY2018	1Q19	2Q19	3Q19	4Q19	FY2019
Customers Deployed (1) (in period)	44,600	9,400	12,100	13,200	14,700	49,400	11,400	12,600	14,200	15,600	53,900
Lease Customers Deployed (1) (in period)	39,200	8,000	10,400	11,100	12,100	41,500	9,500	10,000	11,400	11,600	42,500
Cumulative Customers (1)	180,000	189,000	202,000	218,000	233,000	233,000	242,000	255,000	271,000	285,000	285,000
Megawatts Deployed	323.3	67.6	90.7	99.8	114.6	372.8	86.2	102.7	107.2	116.6	412.7
Cumulative Megawatts Deployed	1,201.8	1,269.4	1,360.1	1,459.9	1,574.6	1,574.6	1,660.8	1,763.5	1,870.7	1,987.3	1,987.3
Leased Megawatts Deployed	289.0	58.7	78.9	85.3	96.4	319.3	72.8	85.3	88.3	89.1	335.6
Leased Megawatts as % of total Megawatts Deployed	89%	87%	87%	85%	84%	86%	84%	83%	82%	76%	81%
Cumulative Leased Megawatts Deployed (2)	1,063.7	1,122.4	1,201.3	1,286.6	1,383.0	1,383.0	1,462.1	1,547.4	1,635.7	1,724.9	1,724.9
y/y growth	37%	33%	32%	30%	30%	30%	30%	29%	27%	25%	25%
Project Value (per watt)	\$ 4.43	\$ 4.61	\$ 4.10	\$ 4.34	\$ 4.38	\$ 4.34	\$ 4.52	\$ 4.44	\$ 4.18	\$ 4.00	\$ 4.27
Contracted	3.84	4.03	3.51	3.79	3.80	3.77	4.01	4.04	3.82	3.56	3.85
Renewal	0.58	0.58	0.59	0.55	0.58	0.57	0.51	0.40	0.36	0.44	0.42
Creation Cost (per watt) (3)(4)	\$ 3.34	\$ 3.51	\$ 3.12	\$ 3.34	\$ 3.17	\$ 3.26	\$ 3.46	\$ 3.33	\$ 3.28	\$ 2.87	\$ 3.22
Installation	2.68	2.65	2.35	2.52	2.48	2.49	2.58	2.50	2.48	2.25	2.45
Sales & Marketing (expensed & capitalized)	0.52	0.75	0.69	0.73	0.65	0.70	0.78	0.80	0.81	0.69	0.77
General & Administrative	0.29	0.30	0.25	0.23	0.22	0.24	0.29	0.28	0.25	0.23	0.26
(-) Platform services margin	(0.14)	(0.19)	(0.16)	(0.14)	(0.17)	(0.17)	(0.20)	(0.25)	(0.26)	(0.31)	(0.26)
Sunrun Built Install Cost (per watt)	\$ 1.89	\$ 1.92	\$ 1.95	\$ 2.06	\$ 1.96	\$ 1.98	\$ 1.95	\$ 1.82	\$ 1.90	\$ 1.96	\$ 1.91
Unlevered NPV (per watt)	\$ 1.09	\$ 1.10	\$ 0.98	\$ 1.00	\$ 1.21	\$ 1.08	\$ 1.06	\$ 1.11	\$ 0.90	\$ 1.13	\$ 1.05
NPV created (\$ in millions)	\$ 314	\$ 65	\$ 77	\$ 86	\$ 116	\$ 344	\$ 77	\$ 95	\$ 79	\$ 100	\$ 353
y/y growth	47%	16%	4%	(7)%	28%	10%	19%	23%	(7)%	(14)%	3%
Gross Earning Assets, contracted (5)(6)	\$ 1,459	\$ 1,583	\$ 1,715	\$ 1,912	\$ 2,100	\$ 2,100	\$ 2,153	\$ 2,252	\$ 2,297	\$ 2,537	\$ 2,537
Gross Earning Assets, renewal (5)	754	800	863	917	963	963	1,014	1,060	1,106	1,147	1,147
Gross Earning Assets (\$ in millions) (5)(6)	\$ 2,213	\$ 2,383	\$ 2,578	\$ 2,829	\$ 3,062	\$ 3,062	\$ 3,167	\$ 3,312	\$ 3,403	\$ 3,684	\$ 3,684
q/q growth	22%	8% 24%	8% 36%	10% 37%	8% 38%	38%	3% 33%	5% 28%	3% 20%	8% 20%	200/
y/y growth											20%
(-) Project level debt	(1,048)	(1,137)	(1,251)	(1,318)	(1,502)	(1,502)	(1,585)	(1,724)	(1,806)	(2,015)	(2,015)
(+) Pro forma debt adjustment for debt within project equity funds (5)	155	182	186	186	183	183	182	182	181	179	179
(+) Pro forma debt adjustment for safe harboring facility	-	-	-	-	-	-	-	-	-	14	14
(-) Pro forma pass-through financing obligation (7)(8)	(138)	(138)	(224)	(308)	(339)	(339)	(331)	(341)	(340)	(339)	(339)
Net Earning Assets (\$ in millions) (7)	\$ 1,182	\$ 1,289	\$ 1,290	\$ 1,389	\$ 1,404	\$ 1,404	\$ 1,432	\$ 1,429	\$ 1,438	\$ 1,522	\$ 1,522
q/q growth y/y growth	16%	9% 20%	0% 18%	8% 17%	1% 19%	19%	2% 11%	(0)% 11%	1% 3%	6% 8%	8%
Contracted Net Earning Assets (\$ in millions) (7)											
q/q growth	\$ 428	<b>\$ 489</b> 14%	<b>\$ 427</b> (13)%	<b>\$ 472</b> 11%	\$ <b>441</b> (7)%	\$ 441	\$ 418 (5)%	<b>\$ 369</b> (12)%	\$ <b>331</b> (10)%	<b>\$ 375</b> 13%	\$ 375
y/y growth	5%	14%	(13)%	(2)%	3%	3%	(14)%	(12)%	(30)%	(15)%	(15)%
Cash Generation (\$ in millions) (9)	\$ 14	\$ 2	\$ 27	\$ 5	\$ 29	\$ 63	\$ 14	\$ 44	\$ 22	\$ 22	\$ 102
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<sup>(1)</sup> Customer counts are rounded.

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<sup>(2)</sup> Cumulative Leased Megawatts Deployed was increased by 6.3 MW following a fund buy-in during 1Q19. Cumulative Leased Megawats Deployed was reduced by 6.3 MW in 1Q18 following accounting standard changes implemented in 1Q18 based on transactions prior to 2015. These adjustments have no effect on Cumulative Megawatts Deployed.

<sup>(3)</sup> The presentation of Creation Cost for periods commencing with March 31, 2018 reflects changes made to the calculation owing to the adoption of new accounting standards, as described in materials available on our investor relations website. The presentation of Creation Cost for periods prior to March 31, 2018 remain as previously reported, as the new calculation and recast financials would have resulted in immaterial changes in the Creation Cost for such prior periods. Please see our recast financials summary available on our investor relations website. (4) Creation Cost for 1Q 2018 excludes two non-recurring items totaling approximately \$7 million: charges related to establishing a reserve for litigation and an impairment of solar assets under construction by a channel partner that ceased operations. Creation Cost for 2Q 2018 excludes a non-recurring item of \$1.9 million for settlement of the consolidated state court class action lawsuit related to the IPO.

<sup>(5)</sup> Gross Earning Assets excludes the pro-rata share of forecasted unlevered cash flows attributable to project equity financing partners, allocated based on the estimated pro-rata split of cash flows. Because estimated cash distributions to our project equity financing partners are deducted from Gross Earning Assets, so is a proportional share of the corresponding project level debt from Net Earning Assets.

<sup>(6)</sup> In the fourth quarter of 2017, Gross Earnings Assets under Energy Contract and Total Gross Earning Assets were reduced by \$13 million to reflect changes related to modifications to the Federal Tax Code for assets deployed through December 31, 2017, including a reduction held as a reserve pending final tax regulation guidance based on the company's best estimate of the potential effect.

<sup>(7)</sup> The pass-through financing obligation for periods from December 31, 2016 through December 31, 2017 reflect recast financials following the adoption of certain accounting standards, as described in our 1Q 2018 Quarterly report on Form 10-Q filed with the Securities and Exchange Commission (SEC) on May 9, 2018. Prior periods are presented as originally reported for total lease pass-through financing obligations.

<sup>(8)</sup> The pass-through financing obligation used to calculate Net Earning Assets is reduced to the extent we expect the liability to be eliminated when the pass-through financing provider receives investment tax credits on assets it has funded, at which time the value of the credits is recognized as revenue. This amount is reflected in the current portion of the pass-through financing obligation. In the second, third and fourth quarter of 2018 the adjustment was \$3.6.2 million, \$3.9 million and \$25.0 million respectively. In the first quarter of 2019 the adjustement was \$9.3 million. There was no amount reflected within short-term pass through financing in the second and third quarters of 2019.

#### Consolidated Financial Statement Summaries

(\$ in '000s, except per share amounts)	FY2017	1Q18	2Q18	3Q18	4Q18	FY2018	1Q19	2Q19	3Q19	4Q19	FY2019
Income Statement (1)											
Customer agreements & incentives revenue	\$ 234,276	\$ 66,990	\$ 91,605	\$ 114,572	\$ 131,299	\$ 404,466	\$ 99,850	\$ 92,439	\$ 96,249	\$ 99,297	\$ 387,835
Solar energy systems & product sales	298,266	77,373	78,933	90,388	108,821	355,515	94,654	112,156	119,293	144,640	470,743
Total revenue	532,542	144,363	170,538	204,960	240,120	759,981	194,504	204,595	215,542	243,937	858,578
y/y growth	12%	37%	31%	42%	58%	43%	35%	20%	5%	2%	13%
Cost of customer agreements & incentives	186,435	54,576	57,769	63,195	65,317	240,857	69,493	70,594	67,359	72,898	280,344
Cost of solar energy systems & product sales	254,131	64,579	64,268	76,179	89,040	294,066	77,799	86,348	92,031	109,307	365,485
Total COGS	440,566	119,155	122,037	139,374	154,357	534,923	147,292	156,942	159,390	182,205	645,829
y/y growth	12%	29%	15%	19%	23%	21%	24%	29%	14%	18%	21%
Gross margin from customer agreements & incentives	20%	19%	37%	45%	50%	40%	30%	24%	30%	27%	28%
Gross margin from systems & product sales	15%	17%	19%	16%	18%	17%	18%	23%	23%	24%	22%
S&M	146,426	44,079	49,237	56,758	57,158	207,232	55,953	70,038	77,478	71,679	275,148
R&D	15,079	3,896	5,052	4,604	5,292	18,844	5,474	6,555	6,435	5,099	23,563
G&A	107,400	32,893	28,130	26,720	28,916	116,659	29,063	33,044	31,059	31,857	125,023
Amortization of intangible assets	4,204	1,051	1,051	1,051	1,051	4,204	893	814	1,524	1,524	4,755
Total operating expenses	713,675	201,074	205,507	228,507	246,774	881,862	238,675	267,393	275,886	292,364	1,074,318
EBIT	(181,133)	(56,711)	(34,969)	(23,547)	(6,654)	(121,881)	(44,171)	(62,798)	(60,344)	(48,427)	(215,740)
Interest & other expense (income)	94,129	26,506	32,380	29,965	40,132	128,983	46,096	43,697	47,021	46,686	183,500
Tax expense (benefit)	12,353	8,203	4,378	(5,988)	2,729	9,322	(3,361)	(1,910)	5,169	(8,116)	(8,218)
Net loss	(287,615)	(91,420)	(71,727)	(47,524)	(49,515)	(260,186)	(86,906)	(104,585)	(112,534)	(86,997)	(391,022)
Net loss attributable to NCI and redeemable NCI	(413,104)	(119,452)	(79,136)	(44,628)	(43,627)	(286,843)	(73,044)	(103,292)	(141,524)	(99,497)	(417,357)
Net income (loss) available to common stockholders	125,489	28,032	7,409	(2,896)	(5,888)	26,657	(13,862)	(1,293)	28,990	12,500	26,335
Diluted EPS	\$ 1.16	\$ 0.25	\$ 0.06	\$ (0.02)	\$ (0.05)	\$ 0.23	\$ (0.12)	\$ (0.01)	\$ 0.23	\$ 0.10	\$ 0.21
Balance Sheet (1)											
Cash, restricted & unrestricted	241,790	243,328	270,403	275,133	304,399	304,399	309,934	353,867	373,412	363,229	363,229
Solar energy systems, net	3,161,570	3,285,804	3,437,822	3,618,125	3,820,017	3,820,017	3,976,504	4,149,883	4,333,387	4,492,615	4,492,615
Non-recourse debt	1,047,945	1,137,029	1,250,609	1,317,598	1,501,922	1,501,922	1,585,187	1,724,147	1,806,274	2,015,455	2,015,455
Pass-through financing obligation	138,210	138,287	260,167	361,997	363,743	363,743	340,782	340,634	339,999	339,005	339,005
Recourse debt	247,000	247,000	247,000	247,000	247,000	247,000	239,035	239,035	239,035	239,485	239,485
Cash Flow (1)											
Cash Flow from Operations	(96,103)	(45,754)	(11,967)	16,987	(21,727)	(62,461)	11,415	(68,030)	(49,493)	(98,379)	(204,487)
Cash Flow from Investing	(777,319)	(164,711)	(185,013)	(224,536)	(237,056)	(811,316)	(201,397)	(200,983)	(215,663)	(225,212)	(843,255)
Cash Flow from Financing	890,849	212,003	224,055	212,279	288,049	936,386	195,517	312,946	284,701	313,408	1,106,572
Proceeds from NCI	594,921	143,604	23,864	80,236	97,443	345,147	152,149	178,162	241,184	140,419	711,914
Proceeds from pass-through financing & other obligations	6,221	1,502	96,670	85,448	33,462	217,082	1,785	3,497	1,941	1,917	9,140
Proceeds from non-recourse debt	748,806	95,900	154,332	238,144	492,168	980,544	181,652	359,597	140,801	499,499	1,181,549
Additional items (1)											
Depreciation & Amortization	128,687	36,186	37,794	39,731	42,296	156,007	43,661	45,358	49,601	48,543	187,163
Stock Based Compensation (SBC)	22,042	10,694	5,547	5,741	5,874	27,856	5,783	6,783	6,854	6,886	26,306
COGS - customer agreements and incentives SBC	2,299	611	667	648	642	2,568	632	624	594	584	2,434
COGS - solar energy systems and product sales SBC	609	170	186	188	174	718	167	190	209	278	844
S&M SBC	5,196	4,150	834	1,102	1,105	7,191	1,128	1,303	1,352	1,379	5,162
R&D SBC	836	295	311	313	334	1,253	336	408	404	291	1,439
G&A SBC Other Adjustments for Creation Costs	13,102	5,468	3,549	3,490	3,619	16,126	3,520	4,258	4,295	4,354	16,427
Other Adjustments for Creation Costs S&M: Amortization of intangibles	3,797	630	615	596	886	2,727	638	506	485	460	2,089
S&M: Amortization of intangibles S&M: Amortization of costs to obtain contracts	3,797	1,902	2,048	2,217	2,424	2,727 8,591	2,659	2,876	3,166	3,066	11,767
G&A: Amortization of costs to obtain contracts	1,277	272	2,048	185	373	1.056	200	193	189	179	762
Other Adjustments	1,277	7.082	1.900	-	-	8,982	-	-	-	.,,,	702
Other Augustinetts		1,002	1,300	-		0,302	-	-	-	· · ·	-

Note: Numbers may not sum out to Tourning.

(1) Income Statement, Balance Sheet and Cash Flow Statement figures for periods from Full-year 2016 through Full-year 2017 reflect recast financials following the adoption of certain accounting standards, as described in our 1Q 2018 Quarterly report on Form 10-Q filed with the Securities and Exchange Commission (SEC) on May 9, 2018. Other items, including "Additional Items" listed above, except for depreciation & amortization, for all periods prior to 1Q 2018, along with Income Statement, Balance Sheet and Cash Flow Statement figures prior to 4Q 2016, are presented as originally reported in financial statements, quarterly earnings releases and presenation materials for each applicable period. Depreciation & amortization listed above reflects recast financials for all periods between Full-year 2016 through Full-year 2017.

#### IRS Guidance Increases Margin Opportunity

#### Federal Investment Tax Credit (ITC) Effectively Extended

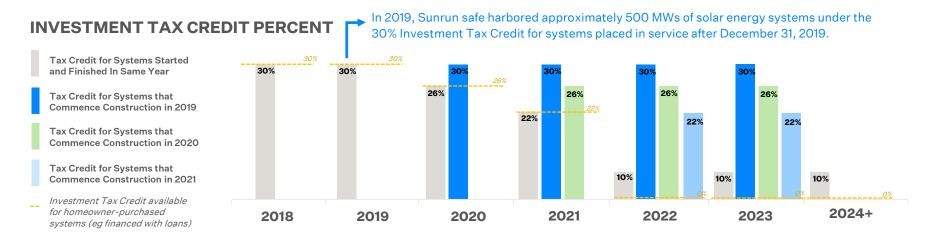
Although the ITC statutorily steps down gradually from 26% today to 10% in 2022, **the IRS issued rules in June 2018 that allow solar developers to delay the step-downs**. In any year a developer incurs at least 5% of a project's cost, even if only through an inventory purchase, that year's ITC will apply if construction is completed before December 2023. Continuous construction is not a requirement. (1)

This new guidance should drive market share towards solar-as-a-service beginning in 2020: Commercially owned systems, such as Sunrun's solar-as-a-service offering, benefit from this guidance. Homeowners buying a solar system with cash or a loan do not. (2) Today, Wood Mackenzie Research estimates that approximately 65% of the US Residential solar market is customer-owned (vs leased). (3)

Approximately 85-90% of Sunrun's business is solar-as-a-service.

#### Federal Investment Tax Credit Subsidy

The Investment Tax Credit (ITC) gradually steps down over 5 years from 30% to 10%, however systems are able to receive the credit in effect during the year construction started. (1)



<sup>(1)</sup> See IRS Notice 2018-59 on the ITC under Section 48 for a full description.



<sup>(2)</sup> Business owners claim ITCs under Section 48. Homeowners claim ITCs under Section 25D. The IRS guidance only exists for Section 48. Further, the Section 48 ITC is set at 10% permanently beginning 2022. The Section 25D credit expires entirely on December 31, 2021.

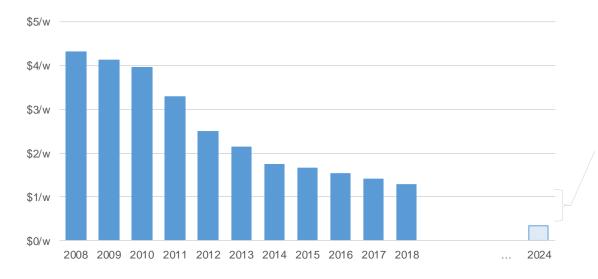
<sup>3)</sup> Wood Mackenzie Research report, "U.S. Residential Solar Finance Update, H2 2019"

## Sunrun Has Grown Margins & Volumes as Incentives Declined

Even conservative assumptions in future utility rate increases and Sunrun's cost curve would create 2024 margins (with a 10% ITC) at or above the levels obtained with a 30% ITC. Sunrun can offset the decline in the ITC from 30% to 10% by 2024 by reducing costs just under 4% per year (from 2019 to 2024) and increasing pricing by ~2% per year on average. Both are conservative assumptions considering Sunrun has reduced Creation Costs by an average of 6% per year over the last five years and utility rates are projected to increase by a 3.6% CAGR over the next decade. We plan to exceed these minimum levels.

#### Incentive Declines & Minimum Required Annual Improvements for Neutral Margins

Over the last 10 years, Sunrun has grown through and adjusted to a >\$3/watt reduction in incentives<sup>10</sup>



#### Illustrative Improvements to Simply Maintain Neutral NPV Margins (from 2019 to 2024)

ITC Step-down from 30% to 10%	\$(1.0)
~4% Annual Cost Improvements	+\$0.7
~2% Annual Price Escalation	+0.3
Net Effect on NPV per watt	\$0.0

Notes: Includes Federal Subsidies and State Rebates; Excludes (a) customer-owned systems, (b) systems in NJ and MA owing to limited data on historic SREC values; 2018 Subsidies reduced by an additional \$0.10 owing to the reduction in corporate tax rates and the corresponding reduction in value attributable to depreciation. Analysis reflects systems that have received permission to operate (PTO) through June of 2018.

#### Utility Rates Forecasted to Rise While Our Costs Fall

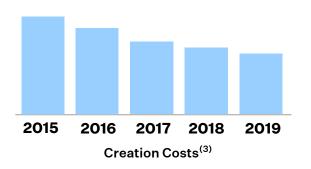
## Incumbent Utility Rates Forecasted to Increase by a 3.6% CAGR over the next decade (a 42% absolute increase)

In a June 2018 study conducted by PA Consulting, the residential utility rates in Sunrun's 10 largest markets are expected to increase at a 3.6% CAGR over the next 10 years. PA Consulting analyzed historical financial data to develop a separate revenue requirement for generation, transmission, distribution, and general customer costs. The calculated components of the revenue requirement were translated into average rates per kWh. PA Consulting has advised on the purchase, sale, financing, and valuation of over \$130 billion in energy infrastructure assets and electric utilities since 2011.

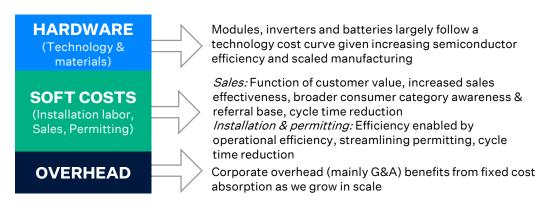
Utility rates have increased at a 3% CAGR over the last 15 years. The Edison Electric Institute estimates that utilities need to spend as much as \$2 trillion on energy infrastructure between 2010 and 2030. Yet with demand for electricity remaining flat since 2010, this means more cost spread over the same amount of power, and painful monthly cost increases to everybody who pays a power bill. In 2017, the major US utilities spent over \$100 billion in Capex, exceeding depreciation expense by 2.5x.

#### **PROVEN COST REDUCTION**

Average cost reduction of 6% over the last five years



#### **DRIVERS OF CONTINUED COST REDUCTION**

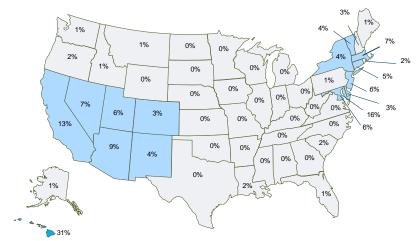


- (1) 10 largest markets determined using Sunrun's 2017 MW Deployments.
- (2) The referenced study was conducted by PA Consulting Group in June 2018 at the request of Sunrun. The study should not be construed as investment advice or an inducement to make an investment. The study is based upon predictions and estimates of future events and behavior, and is not a promise or guarantee as to the occurrence of these events and behavior. Your use of the information from the study is at your sole risk and discretion.
- (3) Please see our Investor Relations website for details regarding the calculation of Creation Costs for each relevant period.

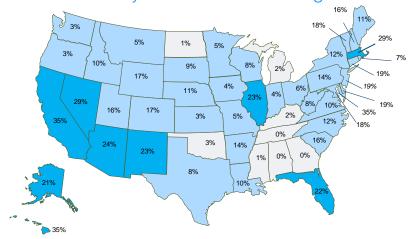


#### Market Size is Massive and Underpenetrated Today

#### Residential Solar is 3% of the market today

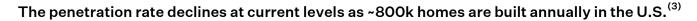


Projected ~13% market penetration in 2029, even after 10 years of >15% annual growth



Source: U.S. Census 2017 American Community Survey data on occupied single-family detached units and residential installations from GTM Research (through 10/2019)

- 75 million U.S. single family homes today<sup>(1)</sup>
- 2.1 million residential solar customers across the industry (2)
- 298,700 solar customers added in 2018<sup>(2)</sup>



In May 2018, The California Energy Commission passed rules that effectively mandate that new homes have solar panels starting in 2020. California builds approximately 114,000 new homes annually. For context, there were approximately 131,000 new residential solar customers added in California during 2018. (2)

#### Notes:

- (1) US Census 2017 American Community Survey data on detached, occupied single-family housing
- (2) EIA Form 826 Residential PV Customers (through Oct 2019)
- (3) U.S. Census Bureau 2018 New Residential Construction statistics. 840,200 new single family home completions in 2018.



#### Modeling Residential Solar - Key Drivers of Project Cash Flows: Sun, Utility Rates, Site Specifics, Costs

The economics of a system are driven by how much energy the solar system produces (a function of the site conditions and sunshine), how much Sunrun charges for the energy (which is driven by the prevailing utility rates and local incentives which vary significantly across the country), and the cost to build systems, which also varies by location.

A unit of energy we bill for is called a kilowatt hour, which is 1000 watts of power for 1 hour, abbreviated KWhr. We typically offer Power Purchase Agreements (PPAs) or Leases which stipulate the effective rate we charge per KWhr of energy the solar system produces.

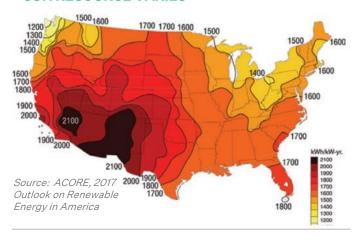
The amount of energy a solar system produces varies by how much sunshine the area receives, the angle of the panels on the roof, and any nearby obstructions which may cause shading. The productivity of a system is measured in Capacity Utilization Factor (%) or colloquially as "Sunhours per year", both of which measure the amount of time a system is fully productive, on average, throughout a year. We present these utilization metrics in terms of Alternating Current (AC), which is the type of power homeowners consume and already considers the transition of the energy from Direct Current (DC) to AC through an inverter.

The unlevered returns we generate are a function of (1) the PPA price, which is typically initially set at a discount to prevailing utility power prices, (2) the upfront cost to construct the system, including module, inverter, racking, installation labor, permitting and sales expense, which can vary by region, (3) the amount of energy the system produces, which is a function of the geographic location and associated sunshine, along with site-specific factors such as roof angles and nearby shading.

For example, a 7 kilowatts sized system (7,000 watts of capacity) could produce about 10,500 KWhrs in Northern California, based on Sunhours of ~1,500/yr (a Capacity Utilization Factor of 17%).

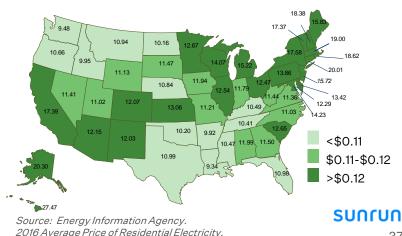
Name	Value	Units	Calculation/Notes
Solar System Size	7.0	Kilowatts (KW,dc)	Typical size of system
Sunhours	1,500	Hours/year	Based on Sunshine
Year 1 System Production	10,500	KWhrs,ac	Size X Sunhours
Capacity Utilization Factor	17%	%	Sunhours per year / (365 X 24)
PPA Price	\$0.15	\$ per KWhr	Typical PPA price in region
Year 1 Revenue	\$ 1,575	\$	PPA price X Production

#### **SUN RESOURCE VARIES** (Average Sunhours)



#### **INCUMBENT POWER PRICES VARY**

Price per KWhr, State Average Price Presented Note: Rates also vary within the same state by utility and customer tariff

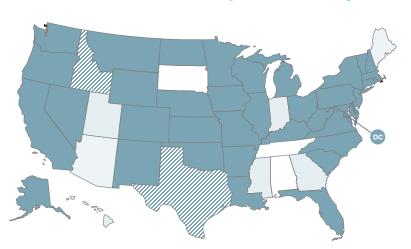


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#### Regulatory environment supportive

Net metering is a well-established, durable policy which allows excess power generation to be credited at retail energy rates as it is supplied to the grid and consumed by neighbors

38 States + DC, along with territories AS, PR, VI and GU have mandatory Net Metering Rules



- State-developed mandatory rules for certain utilities (38 states + DC+ 3 territories)
- No statewide mandatory rules, but some utilities voluntarily offer net metering (2 states)
- Statewide distributed generation compensation rules other than net metering (7 states + 1 territory)

Net Metering is a Durable Policy

#### HOUSEHOLDS IN STATES WITH NEM POLICY ACTIONS

(millions of Households)



NEM Sustained or Expanded

NEM Setbacks (ultimately reversed)

■ NEM Setbacks (not subsequently reversed)

Source: EQ Research, analysis of Net Metering policy decisions or regulatory actions from 2013-1H2017

#### Sunrun is Well Positioned Even in an Economic Recession



Demand for Sunrun's service should be **counter-cyclical** because it is a savings product. Consumers are likely to seek ways to save money in a recession. Sunrun approaches its capital structure to be resilient through an economic cycle by utilizing fixed-rate long-term debt, swaps and low recourse leverage.

#### **Durable Sources of Long-Term Financing**

- Asset level financing is a durable market that is least sensitive to credit market disruptions, especially compared to unsecured corporate debt or equity. Sunrun uses a combination of tax equity, bank debt, third party lenders and asset back securitizations for financing and is not overly reliant on one source of capital for growth.
- Our current capital runway takes us out a year. If financing costs increase, we could adjust our pricing or operational footprint over 6 to 12 months to mitigate or offset impacts to our margins.
- For existing assets we lock-in interest rates using 15-20 year swaps or fixed-rate debt. More than 70% of our expected debt service over the next 10 years is subject to swaps or fixed rate loans.
- Sector spreads are improving over a multiple year time horizon as we continue to demonstrate a strong track record of system performance and customer payment history.
- Sunrun maintains a healthy balance sheet with more than \$270 million in unrestricted cash, which exceeds the \$239 million in recourse debt at the end of 4Q 2019.

#### **Increasing Competitive Advantages**

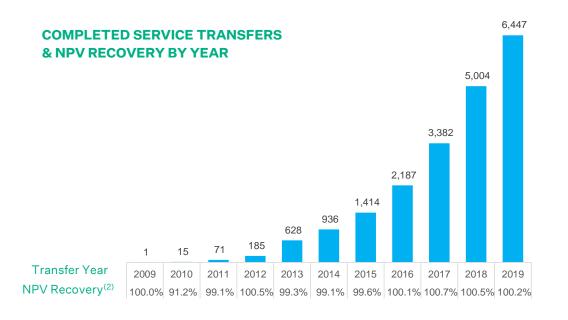
• Unsecured consumer credit will likely increase in cost during a recession, increasing the relative advantages for solar as a service.

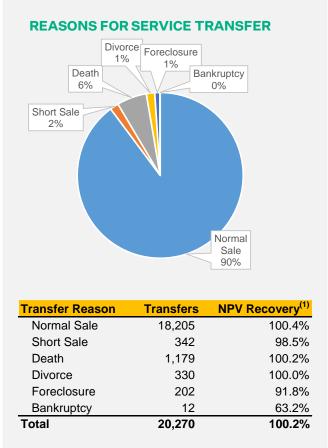
#### Strong Service Transfer Performance

When customers move or their service is otherwise transferred to a new homeowner, Sunrun has maintained ~100% of expected contract value



Zillow conducted a study in 2019 and found that solar increases the average sales price of a home<sup>(1)</sup>





Note: Data as of December 31, 2019 for Sunrun host customer agreements with monthly payments only. The sum of the percentage columns and the balance columns may not equal 100.0% or the total, as applicable, due to rounding. Excludes new home transfers, transfers that occurred prior to PTO and prepaid contracts.



<sup>(1)</sup> https://www.zillow.com/research/solar-panels-house-sell-more-23798/

<sup>(2)</sup> Recovery percentage is equal to the (i) the sum of (a) the remaining customer agreement cash flows after the service transfer discounted at 6% and (b) prepayments received in connection with the service transfer, divided by (ii) the remaining customer agreement cash flows before the service transfer discounted at 6%.

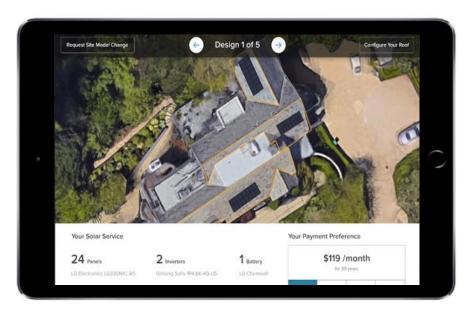
## Expanding Moat with Technology Capabilities

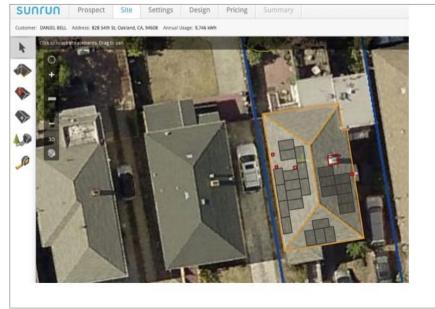
We have invested over \$94 million in R&D<sup>(1)</sup> to usher the change to a distributed energy system while building more entry barriers

Sunrun leads the industry with advanced solar system design, monitoring, and customer engagement tools.

Sunrun is investing in advanced energy service capabilities and has obtained grants in addition to collaborating with National Grid.

Moat increasing with growing customer engagement in energy selection, advanced regulatory constructs (such as time-variable pricing), and energy storage integration.





#### Notos:

(1) Cumulative Research and Development Expenses from 2013 through 2019

## Sunrun is Making an Impact

Our approach is to benefit everyone: our customers, our employees, and the communities in which we operate, as well as our business and financial partners.



In 2018, Sunrun was recognized by Comparably for Best Company Culture, Best

Best Company Culture, Best CEO, & Best Company for Women.

Fortune magazine named our CEO Lynn Jurich one of the 40 Under 40 in business.



As part of our commitment to being global citizens and doing business legally and ethically, we adopted our first ever Vendor Code of Conduct
On January 1, 2019



Sunrun committed to and achieved 100% gender pay parity

For its employees in 2018, becoming the first national solar company to do so.



Sunrun supported GRID Alternatives, a non-profit serving low-income communities, in installing more than

2,000 home solar systems

over the past few years. These installations will save customers more than \$64 million in energy costs over their lifetimes.



Sunrun announced a commitment to develop a minimum of

#### 100 megawatts of solar

on affordable multi-family housing, where 80% of tenants fall below 60% of the area median income, over the next decade in California.

This will directly benefit

50,000 families.



Sunrun's systems have prevented greenhouse gas (GHG) emissions totaling

#### 3.7 million metric tons

Of carbon dioxide equivalent (CO2e), an amount comparable to



eliminating more than

#### 9 billion

passenger vehicle miles



recycling nearly

#### 1.3 million

tons of waste

The GHG emissions prevented by Sunrun's systems through 2018 are also comparable to the emissions prevented by not burning



421 million gallons of gasoline



1.86 million

Please see Sunrun's 2018 Impact Report, available on the company's Investor Relations website for more information, including information on the calculations and statistics referenced above.

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#### Sunrun is Led by Seasoned Professionals with Extensive **Industry Experience**







**BOB KOMIN** Chief Financial Officer





Tellme. Convergys



CHRIS DAWSON **Chief Operating Officer** 



J.ICON

#### Glossary

Creation Cost includes (i) certain installation and general and administrative costs after subtracting the gross margin on solar energy systems and product sales divided by watts deployed during the measurement period and (ii) certain sales and marketing expenses under new Customer Agreements, net of cancellations during the period divided by the related watts deployed.

**Customers** refers to all parties (i) who have executed Customer Agreements or cash sales agreements with us and (ii) for whom we have internal confirmation that the applicable solar energy system has reached notice to proceed or "NTP", net of cancellations.

**Customer Agreements** refers to, collectively, solar power purchase agreements and solar leases.

Gross Earning Assets represent the remaining net cash flows (discounted at 6%) we expect to receive during the initial term of our Customer Agreements (typically 20 or 25 years) for systems that have been deployed as of the measurement date, plus a discounted estimate of the value of the Customer Agreement renewal term or solar energy system purchase at the end of the initial term. Gross Earning Assets deducts estimated cash distributions to investors in consolidated joint ventures and estimated operating, maintenance and administrative expenses for systems deployed as of the measurement date. In calculating Gross Earning Assets, we deduct estimated cash distributions to our project equity financing providers. In calculating Gross Earning Assets, we do not deduct customer payments we are obligated to pass through to investors in pass-through financing obligations as these amounts are reflected on our balance sheet as long-term and short-term pass-through financing obligations, similar to the way that debt obligations are presented. In determining our finance strategy, we use pass-through financing obligations and long-term debt in an equivalent fashion as the schedule of payments of distributions to pass-through financing investors is more similar to the payment of interest to lenders than the internal rates of return (IRRs) paid to investors in other tax equity structures. We calculate the Gross Earning Assets value of the purchase or renewal amount at the expiration of the initial contract term assuming either a system purchase or a five year renewal (for our 25-year Customer Agreements) or a 10-year renewal (for our 20-year Customer Agreements), in each case forecasting only a 30-year customer relationship (although the customer may renew for additional years, or purchase the system), at a contract rate equal to 90% of the customer's contractual rate in effect at the end of the initial contract term. After the initial contract term, our Customer Agreements typically automatically renew on an annual basis and the rate is initially set at up to a 10% discount to then-prevailing power prices. Gross Earning Assets Under Energy Contract represents the remaining net cash flows during the initial term of our Customer Agreements (less substantially all value from SRECs prior to July 1, 2015), for systems deployed as of the measurement date.

Gross Earning Assets Under Energy Contract represents the remaining net cash flows during the initial term of our Customer Agreements (less substantially all value from SRECs prior to July 1, 2015), for systems deployed as of the measurement date.

Gross Earning Assets Value of Purchase or Renewal is the forecasted net present value we would receive upon or following the expiration of the initial Customer Agreement term (either in the form of cash payments during any applicable renewal period or a system purchase at the end of the initial term), for systems deployed as of the measurement date.

Megawatts Deployed represents the aggregate megawatt production capacity of our solar energy systems, whether sold directly to customers or subject to executed Customer Agreements (i) for which we have confirmation that the systems are installed on the roof, subject to final inspection, (ii) in the case of certain system installations by our partners, for which we have accrued at least 80% of the expected project cost, or (iii) for multi-family and any other systems that have reached NTP, measured on the percentage of the project that has been completed based on expected project cost.

**Net Earning Assets** represents Gross Earning Assets less both project level debt and pass-through financing obligations, as of the same measurement date. Because estimated cash distributions to our project equity financing partners are deducted from Gross Earning Assets, a proportional share of the corresponding project level debt is deducted from Net Earning Assets.

NPV equals Unlevered NPV multiplied by leased megawatts deployed in period.

NTP or Notice to Proceed refers to our internal confirmation that a solar energy system has met our installation requirements for size, equipment and design.

Proceeds equals the sum of proceeds from non-recourse debt, proceeds from passthrough financing obligations, contributions received from redeemable and nonredeemable noncontrolling interests, proceeds from state tax credits, and estimated customer upfront payments and utility rebates. Estimated customer upfront payments and utility rebates is estimated by averaging the beginning period deferred revenue (current portion) and end period deferred revenue (current portion) divided by the portion of the year being analyzed.

Project Value represents the value of upfront and future payments by customers, the benefits received from utility and state incentives, as well as the present value of net proceeds derived through investment funds. Specifically, Project Value is calculated as the sum of the following items (all measured on a per-watt basis with respect to megawatts deployed under Customer Agreements during the period): (i) estimated Gross Earning Assets, (ii) utility or upfront state incentives, (iii) upfront payments from customers for deposits and partial or full prepayments of amounts otherwise due under Customer Agreements and which are not already included in Gross Earning Assets and (iv) finance proceeds from tax equity investors, excluding cash true-up payments or the value of asset contributions in lieu of cash true-up payments made to investors. Project Value includes contracted SRECs for all periods after July 1, 2015.

Unlevered NPV equals the difference between Project Value and estimated Creation Cost on a per watt basis.

## SUNTUN



#### **Sunrun Investor Relations**

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