



Solar Run-Off Assets (SRO)

Acquiring Operating Assets in Solar

PREPARED BY

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Introduction

Since the expansion of the US solar market in 2009, JJR has been active as a developer, owner, operator and advisor across the US. Our strategy is to accelerate our evolution by assembling a fund to acquire operating assets.

The Value Proposition

We are presented with a cyclical opportunity whereby post-recapture, mid-market solar assets are “cheap to the market”. With our experience and relationships we are able to deliver higher returns without proportionately more risk. This assumes that –

- a) There are inefficient markets (yes), and
- b) That we have the skill, market knowledge and process needed to exploit this opportunity.

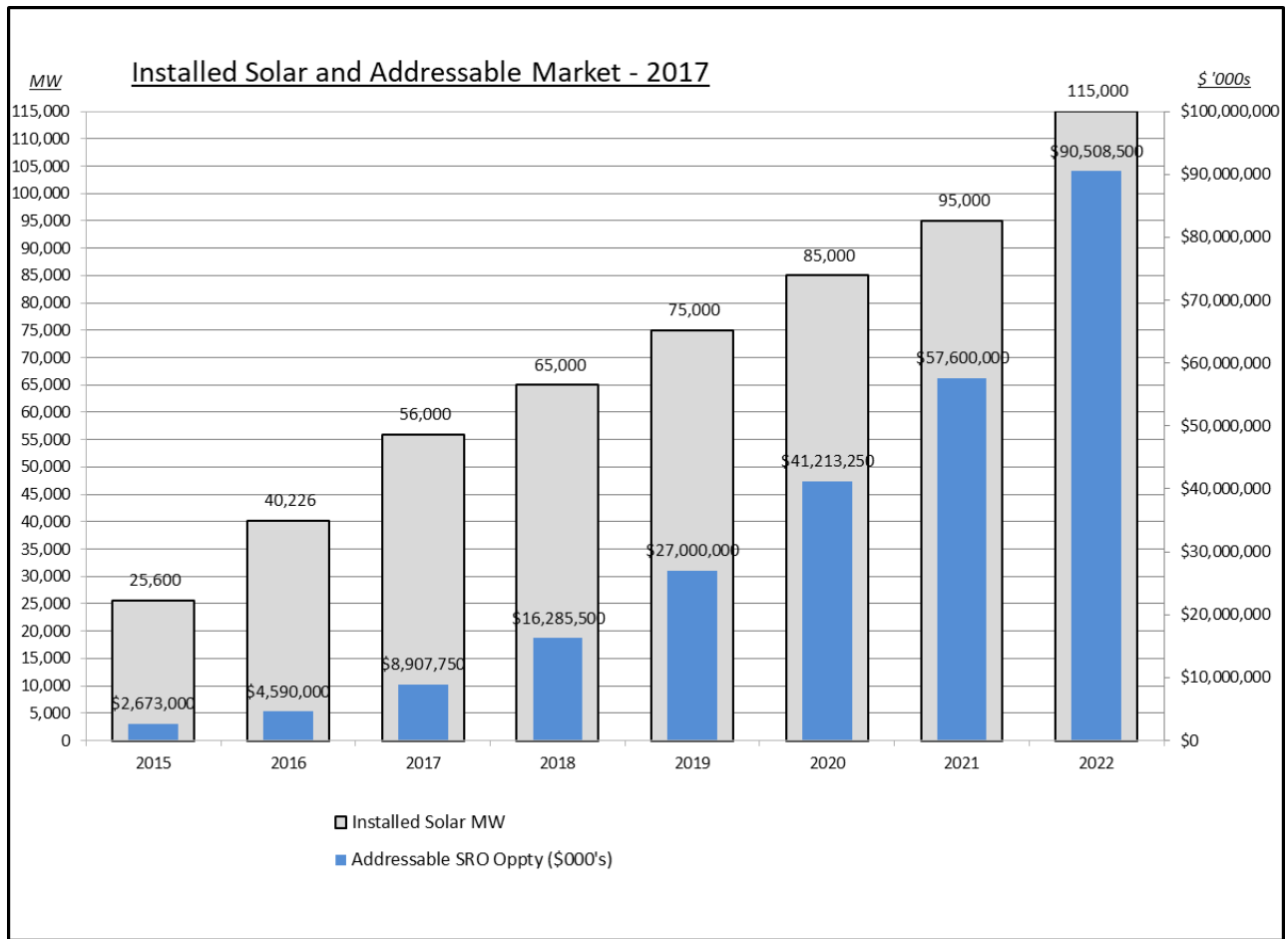
Market

The US solar market has grown from 1,000 MW in 2009 to 55,000 MW in 2018 and is expected to reach 115,000 MW (10% total US generating capacity) over the next decade. It can be segmented into thirds: *residential* (under 10 kW), *distributed, or “DG”* (50 kW to 5,000 kW) and *utility-scale* (above 5,000 kW).

	<u>actual</u>		<u>est.</u>
	2009	2017	2023
US Generating Capacity MW (all types)	1,064,000	1,064,000	1,064,000
Installed Solar (MW)	1,000	55,000	115,000

All U.S. solar development since 2009 has been supported by either a 30% cash grant or tax credit creating a tax recapture provision which restricts the sale of the asset until after five years. Many tax-driven investors are seeking to monetize their remaining contract values. This is expected to create hundreds if not thousands of sellers. (Solar cash flows are valued at a discount rate of around 8.0% IRR.)

The opportunity is ultimately worth in excess of \$100B.



JJR Power

JJR Power is an energy finance and development firm founded in 2006 by John Jaffray. Our practice has been to identify a market opportunity where we have a competitive edge, assemble the capital and build the platform around the management of the assets and market activities.

Deal Flow, Origination

JJR has extensive, national relationships in energy and solar specifically. In any market, the bidder who has the best bid and fastest close often gets the most volume. As the size of the SRO market grows, sellers will look for where they can get a good bid and where they can transact quickly.

There are two databases that we use to focus origination efforts; first, the 1603 grant database of 8,000 solar projects and the SEIA database of 2,000 operating projects over 1 MW (average size 5.9 MW, total 13,000 MW). These databases, combined with our market knowledge and relationships, will provide ample opportunity to acquire a significant pool of assets.

Here is a snapshot of the market:

Acquiror Company	(date)	Seller	MW	Price	\$/W	"Yield"	Notes
Dominion Energy	2017	Cypress	79.0	\$154,000,000	\$1.95		COD June, 2017
	2016	Comm. Energy Solar	100.0	\$205,000,000	\$2.05		COD 2017
	2016	Solar Frontiers Americas	30.0	\$78,000,000	\$2.60		
	2017	Hecate Energy	30.0	\$60,000,000	\$2.00		
	2017	Strata	19.0	\$45,000,000	\$2.37		
			258.0	\$542,000,000			
Greenbacker (C&I only)	2015	<i>not disc</i>	9.79	\$17,250,000	\$1.76	12.10%	East West Solar
	2015	<i>not disc</i>	2.1	\$4,150,000	\$2.02	14.50%	Gainesville, FL
	2015	<i>not disc</i>	7.6	\$8,399,000	\$1.10	9.80%	NC Tarheel
	2016	<i>not disc</i>	5.3	\$10,850,000	\$2.05	11.60%	Magnolia Sun
	2015	<i>not disc</i>	7.4	\$17,012,000	\$2.30	12.40%	Green Maple
	2015	<i>not disc</i>	6.2	\$750,000	\$0.12	7.60%	Six States Solar
	2014	<i>not disc</i>	0.8	\$920,000	\$1.15	12.00%	Sunny Mtn.
			39.2	\$59,331,000			
Clean Capital	2014	<i>not disc</i>	40.0	\$70,000,000	\$1.75		CC nbrs. est. and/or CC target values
		<i>not disc</i>	1.3	\$2,300,000	\$1.77		all provided by Clean Cap.
		<i>not disc</i>	44.0	\$100,000,000	\$2.27		"reviewing" by CC
		<i>not disc</i>	2.4	\$7,000,000	\$2.92		
		<i>not disc</i>	0.5	\$1,000,000	\$2.00		
		<i>not disc</i>	10.0	\$24,000,000	\$2.40		
		<i>not disc</i>	24.0	\$60,000,000	\$2.50		"pre-lim"
		<i>not disc</i>	10.0	\$30,000,000	\$3.00		
		<i>not disc</i>	20.0	\$40,000,000	\$2.00		
		<i>not disc</i>	12.0	\$30,000,000	\$2.50		
		<i>not disc</i>	1.5	\$3,000,000	\$2.00		
		<i>not disc</i>	5.0	\$10,000,000	\$2.00		
		<i>not disc</i>	2.0	\$5,000,000	\$2.50		
			172.7	\$382,300,000			
Cypress Creek Renew.	Nov-16	FLS Energy	350.0	<i>not disc</i>			New Energy Capital Investor in FLS
Axiom Infrastructure	Jan-18	Transcanada	105.0	<i>not disc</i>			Ontario
Axiom Infrastructure	Nov-16	Renew. Energy Trust	110.0	<i>not disc</i>			Ontario, CA, GA
Capital Dynamics	Sep-17	Solar Frontier Americas	28.0	<i>not disc</i>			Fresno, dev deal
X-ELIO	Dec-17	Solar Frontier Americas	66.0	<i>not disc</i>			KKR- backed, dev deal w/USB
Turner Renewable	Feb-16	Solar Frontier Americas	20	<i>not disc</i>			
Sammons Renewable	Nov-17	Heelstone	194.0	\$241,000,000	\$1.24		36 projects
TBD	in market	Mills Capital	5.3	\$13,342,500	\$2.50	10.50%	in exclusive negoc., schools
Not Announced	Q1 2018	PES	13.0	\$33,878,000	\$2.60	9.00%	\$24M Bridge Bank loan, schools etc.
ATN Ahana	2014	Various	45.0	\$103,000,000	\$2.29		US assets only
TBD	in market	SoCore Energy	200.0				Edison selling dev arm (Marathon)
Terra Nova (JP Morgan Asset)	2015	Dominion	425.0	\$301,000,000	\$0.71		merchant
Altus	2017	Solar Power Inc.	6.0	<i>not disc.</i>			
VEPCO	2017		155.0	\$280,000,000	\$1.81		2018 COD
			1,722.4				

Competition

As with any market, there is competition, with the greatest competition in the residential and utility sectors. This leaves the DG market, which has been, historically, the most problematic to underwrite in scale. It has been approached in a traditional, credit-underwriting fashion – data room, due diligence, investment committee memo, take to committee. This is old school. Our approach is to bid faster, underwrite faster and use more creative bidding practices. Most importantly, is to have a demonstrated ability to close multiple transactions with certainty and speed.

The Management Ecosystem

The management of solar assets is straightforward. JJR is active, effectively, today, in each aspect of the ecosystem below.

