

# Power Finance & Risk

Exclusive Insight on Power M&A and Project Financing

## ● MERGERS & ACQUISITIONS

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## ● PEOPLE & FIRMS

### Bankers Pitch for Mountaineer Gas

Investment bankers are jostling for a mandate to put a natural gas distribution business in West Virginia up for sale. [Page 6](#)

### Solar ABS Roundtable 2019/20

**PFR** and **Credit Suisse** brought together an expert panel to discuss what's next in solar securitization. [Pages 7-18](#)

### SoftBank Grows U.S. Energy Team

Softbank subsidiary **SB Energy** has hired a financier from a solar developer, while also growing its project development team. [Page 23](#)

## Wind Developers Persevere in Argentina with DFIs and ECAs

Carmen Arroyo

Developers have brought a handful of wind projects in Argentina to financial close in recent months, having turned to development finance institutions and export credit agency wraps amid a lack of enthusiasm from commercial banks.

Given Argentina's economic situation and the recent change in government, with Peronist **Alberto Fernández** being sworn in as presi-

dent in December, project finance bankers at commercial lenders in New York say they will not be willing to invest in the country in the near future.

This limits the options of the many developers that have secured power purchase agreements for projects in the country's RenovAr program in recent years, but has not stopped financing activity altogether, even after the election.

Last summer, German development bank **KfW** [PAGE 22 >>](#)

Sponsor(s)	Project	Size	Type	Lenders	Debt Amount
Total Eren	Malaspina I	50.4 MW	Wind	KfW, FMO	\$104 m
Goldwind Global	Loma Blanca Portfolio	374.5 MW	Wind	Santander, Bank of China	\$475 m
Neoen	Altiplano 200	208 MW	Solar	Proparco, DEG, ICCF, SG	\$234 m
Central Puerto	La Genoveva I	88 MW	Wind	IFC	\$76 m
Genneia	Chubut Norte IV	82.8 MW	Wind	KfW	\$132 m
	Chubut Norte III	57.6 MW	Wind		
Genneia, CCASA	Vientos de Necochea	38 MW	Wind	FMO	\$51 m
YPF Luz	Cañadón León	120 MW	Wind	BNP Paribas Fortis, DFC (formerly OPIC)	\$150 m
AES Corporation	Vientos Bonaerenses	100 MW	Wind	DFC (formerly OPIC)	\$172 m
AES Corporation	Vientos Neuquinos I	100.5 MW	Wind	DFC (formerly OPIC)	\$123 m

Sources: IJGlobal, PFR

## Sustainable Infra Investor Snaps Up Nevada Cogen

Taryana Odayar

**Rockland Capital** has sold the 27-year-old Nevada Cogeneration Associates 2 (NCA2) cogeneration facility in Nevada to an infrastructure investor that has a plan to repower and optimize the asset "for a renewable future."

San Francisco-based **Ultra Capital**, which focuses on sub-

\$100 million infrastructure projects, is working closely with investor, developer and asset manager **Panamint Capital** on the purchase of the 85 MW gas-fired plant, which is located in Clark County and has just three years left to run on its 30-year power purchase agreement with **Nevada Power**.

The sale of [PAGE 5 >>](#)

### Wind Farm Scrapped in "Increasingly Difficult" Ohio

Shravan Bhat

Developer **sPower** has decided to abandon plans for a wind farm in Ohio amid tough conditions for project development in the state.

The Utah-based developer said on Jan. 21 that it would not refile an application with the **Ohio Power Siting Board** for its proposed 200 MW Seneca wind farm in Seneca County.

"Although we believe the Seneca Wind farm [PAGE 20 >>](#)

### Geothermal Sponsor Plots Financing Following PPA Award

Shravan Bhat

Australian geothermal project developer **Controlled Thermal Resources** is in the process of raising development capital following the award of a long-term utility power purchase agreement to its Hell's Kitchen complex in California.

Financial adviser **KPMG** is running a corporate-level fundraising process that is designed to see CTR through to the start [PAGE 19 >>](#)



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## ● CORPORATE FINANCE

# Atlantic Power Launches TLB Repricing

The bookrunners on a proposed term loan B repricing for **Atlantic Power Corp.** have approached lenders with initial price thoughts.

**Goldman Sachs** is left lead on the \$380 million three-year deal, which was launched on Jan. 17. The senior secured notes are issued through a holding company called **APLP Holdings**.

Following a lender call on Jan. 21, the bookrunners set IPTs at 250 basis points over Libor, which would represent a cut to the margin on the existing loan of 25 bp.

The repriced notes are being pitched at a discount of between 99.875 and par. Commitments are due by Jan. 28.

The maturity date of the loan will remain unchanged at April 2023 (PFR, 10/24/18).

**Bank of America, Industrial and Commercial Bank of China, MUFG, RBC Capital Markets** and **Wells Fargo** retain their roles as joint-bookrunners (PFR, 10/22/18).

Existing holders of the loan include **CVC Credit Partners, Nassau Reinsurance Group** and **Pretium Partners**.

**Latham & Watkins** and **Norton Rose Fulbright** are serving as legal advisers on the transaction.

The senior secured loan is rated Ba2 by **Moody's Investors Service** and BB by **S&P Global Ratings**, which raised its rating from BB- on Dec. 13. Moody's and S&P rate parent company Atlantic Power at Ba3 and B+, respectively.

Atlantic Power owns stakes in 21 operational plants—mostly gas-fired and biomass—in the U.S. and Canada.

The plants have a total combined gross capacity of 1.9 GW, of which Atlantic Power's stakes represent about 1.4 GW.

Atlantic Power is expecting to net approximately \$45 million from the sale of one of the assets in 2022, which it has said it will use to pay down a portion of the loan. The project being sold is the 300 MW Manchief gas-fired plant in Morgan County, Colo. The buyer is the plant's offtaker, **Xcel Energy** (PFR, 5/28/19).

"With 1,484 MW of net generation capacity, Atlantic Power is one of smallest rated independent power producers," noted Moody's analysts in an Oct. 2019 credit report. "For many of Atlantic Power's projects, the PPAs were signed more than a decade ago and are at the later stages of their contract lives; average remaining PPA life is approximately 5.9 years." ■

## PFR Power Finance & Risk

**EDITORIAL**  
**Richard Metcalf**  
Editor  
(212) 224-3259

**Shravan Bhat**  
Reporter  
(212) 224 3260

**Taryana Odayar**  
Reporter  
(212) 224 3258

**Carmen Arroyo**  
Reporter  
(212) 224 3256

**Stuart Wise**  
Data Associate

**Kieron Black**  
Sketch Artist

**PRODUCTION**  
**Sam Medway**  
Manager

**PUBLISHING**  
**Andrew Rolland**  
Senior Marketing  
Manager

**Adam Scott-Brown**  
Director of Fulfillment

**SUBSCRIPTIONS**  
**Jon Ljekocevic**  
Sales Executive  
(212) 224 3043

**ADVERTISING/ REPRINTS**  
**Jonathan McReynolds**  
Head of Business Development  
+1 212.224.3026  
jmc Reynolds@ijglobal.com

**CORPORATE**  
**Andrew Rashbass**  
Chief Executive Officer

**Jeffrey Davis**  
CEO Specialist Information

**Directors:**  
**David Pritchard** (Chairman),  
**Andrew Rashbass** (CEO),  
**Andrew Ballingal**,  
**Tristan Hillgarth**,  
**Imogen Joss**,  
**Jan Babiak**,  
**Lorna Tilbani**,  
**Tim Collier**,  
**Kevin Beatty**,  
**Colin Day**

**Customer Service**  
PO Box 4009, Chesterfield, MO 63006-4009, USA  
Tel: 1-212-224-3043  
Fax: 212-224-3886  
UK: 44 20 7779 8704 Hong Kong: 852 2842 8011  
E-Mail: mailto:customerservice@powerfinancerisk.com

**Editorial Offices**  
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Do you have questions, comments or criticisms about a story that appeared in **PFR**? Should we be covering more or less of a given area? The staff of **PFR** is committed as ever to evolving with the markets and we welcome your feedback.

Feel free to contact **Richard Metcalf**, editor, at (212) 224-3259 or richard.metcalf@powerfinancerisk.com

## GENERATION AUCTION &amp; SALE CALENDAR ●

These are the current live generation asset sales and auctions, according to Power Finance and Risk's database.  
A full listing of completed sales for the last 10 years is available at <http://www.powerfinancerisk.com/AuctionSalesData.html>

## Generation Sale ■ DATABASE

Seller	Assets	Location	Adviser	Status/Comment
● 8minute Solar Energy	Eland Solar & Storage (400 MW)	Kern County, Calif.		Capital Dynamics is acquiring a stake in the project (see story, page 19).
	Eagle Shadow (300 MW Solar)	Clark County, Nev.		Capital Dynamics has acquired the plant (PFR, 1/21).
Ares Management	St Joseph (715 MW Gas 80%)	New Carlisle, Ind.	Citi	The sale process was launched in June (PFR, 9/16).
● Atalaya Capital Management	Atalaya Resi Portfolio (31 MW Solar)	U.S.	Plexus Solutions	Spruce acquired the portfolio on Dec. 23 (see story, online).
Avangrid	Vertex (1.15 GW Wind)	U.S.	Wells Fargo	A process was underway in August (PFR, 8/12).
Caprock Renewables	Portfolio (677 MW[DC] Solar)	Texas	Javelin Capital	The three projects are uncontracted (PFR, 9/23).
Calpine Corp.	High Bridge, Bluestone (224 MW Wind)	New York, Oklahoma	Greentech	Final round bids were received on Oct. 10 (PFR, 10/21).
Caithness Energy	Shepherds Flat (845 MW Wind)	Oregon	Greentech	First round bids were due on Dec. 6 (PFR, 12/9).
Clean Focus Yield	Greenskies Renewable Energy (Solar)	U.S.	Keybank (buyer)	JLC Infrastructure has taken a stake in the platform (PFR, 1/21).
Energy Capital Partners	Terra-Gen (1.3 GW Wind)	U.S.	Citi, PJ Solomon	Bids for the wind developer are due in the coming weeks (PFR, 1/21).
● Engie, Mitsui & Co., Harbert, JEMB, Ares	Astoria I (575 MW Gas)	Queens, N.Y.	PJ Solomon, Morgan Stanley	A consortium including APG, MEAG, Clal Insurance Co. has agreed to buy the project (see story, page 5).
Engie North America	Jupiter (2,300 MW Wind, Solar)	U.S.	BAML	Bids were due in November (PFR, 11/16).
● Harbert, Engie	Astoria II (575 MW Gas, 55%)	Queens, N.Y.	PJ Solomon, Morgan Stanley	A consortium including APG, MEAG, Clal Insurance Co. has agreed to buy the stake in the project (see story, page 5).
Hecate Energy	Hera (500 MW Solar)	Wharton County, Texas	Cantor Fitzgerald	Funding talks are in advanced stages (PFR, 12/9).
● iCON infrastructure, IGS Utilities	Moutnaineer Gas (Utility)	West Virginia	TBC	The owners of the company are planning to appoint an investment bank (see story, page 6).
LS Power	West Deptford (744 MW Gas, 17.84%)	New Jersey	Whitehall	A stake in the CCGT is up for sale (PFR, 11/11).
Macquarie, GE	Brooke County (830 MW Gas)	West Virginia	Macquarie Capital	The sale was launched recently (PFR, 12/9).
Marubeni Power America	Spindle Hill (314 MW Gas/oil, 49%)	Fredrick, Colo.	Guggenheim	Teasers were distributed in November (PFR, 12/2).
	Cannon Falls (357 MW Gas, 49%)	Minneapolis		
	Hardee (370 MW Gas, 49%)	Tampa, Fla.		
NextEra Energy	Scherer (635 MW Coal, 75%)	Juliette, Ga.	Goldman Sachs	The low-key process was launched in 2019 (PFR, 11/16).
NextEra Energy Resources	Bluebell II, Wilmot (215 MW Solar, Storage)	Arizona, Texas	Marathon Capital	NextEra is looking to sell the contracted projects (PFR, 10/7).
New Energy Solar	Boulder Solar I (100 MW)	Boulder City, Nev.	Jefferies	The Australian fund manager is preparing a sale process (PFR, 12/2).
NTE Energy	Killingly (650 MW Gas)	Connecticut	Whitehall	A two-stage equity raise has been launched (PFR, 11/18).
Oaktree Capital Management	Griffith (570 MW Gas)	Mohave County, Ariz.	Barclays	Bids are likely due by the end of January (PFR, 1/21).
Panda Power	Liberty, Patriot (1.65 GW Gas)	Pennsylvania		Carlyle and EIG are buying the two CCGTs (PFR, 1/21).
PSEG	Bethlehem (815 MW Gas)	Albany County, N.Y.	Goldman Sachs	First-round bids were taken on Nov. 22 (PFR, 12/2).
● Rockland Capital	Nevada Cogeneration Associates 2 (85 MW Gas)	Clark County, Nev.	BNP Paribas	Ultra Capital has emerged as the buyer (see story, page 1).
● Soltage	Liberty (16.5 MW Solar)	Connecticut, Massachusetts	Fifth Third	CleanCapital has acquired the community solar portfolio (see story, online).
Southern Company	Ravenswood (250 MW Gas)	New York	Whitehall	A lesser stake is up for sale (PFR, 12/9).
● Southern Power	Mankato (760 MW Gas)	Mankato, Minn.	Barclays	Xcel Energy has acquired the plant through unregulated subsidiary MEC Holdings (see story, page 6).
Stonepeak	RED-Rochester (158 MW Gas)	Rochester, N.Y.	Scotia	The marketing process began in November (PFR, 12/2).
TerraForm Investors	\$TERP (4 GW, 38%)	U.S., Europe		Brookfield Renewable Partners has made a bid (PFR, 1/21).
Unidentified	Astidey (50 MW Wind)	Uruguay		Cubico Sustainable Investments is the buyer (PFR, 1/21).
Virgo Investment Group	Portfolio (31.5 MW Solar)	U.S.	Fifth Third	Nautilus Solar Energy has bought the assets (PFR, 1/21).

## ● New or updated listing

The accuracy of the information, which is derived from many sources, is deemed reliable but cannot be guaranteed.

To report updates or provide additional information on the status of financings, please call Taryana Odayar at (212) 224 3258 or e-mail [taryana.odayar@powerfinancerisk.com](mailto:taryana.odayar@powerfinancerisk.com)

## ● PROJECT FINANCE

Deal Book is a matrix of energy project finance deals that Power Finance & Risk is tracking in the energy sector. A full listing of deals for the last several years is available at <http://www.powerfinancerisk.com/Data.html>

### Live Deals: Americas

Sponsor	Project	Location	Lead(s)	Deal Type	Loan Amount	Tenor	Notes
● Alten Energías Renovables	Puebla Solar (250 MW)	Puebla, Mexico	ING, Bancomext, IDB	Debt			The debt financing is expected to close in April or May (see story, page 22).
Altus Power	Portfolio (180 MW Solar)	U.S.	Blackstone	Securitization			Blackstone Insurance Solutions provided the senior notes (PFR, 1/21).
Antin Infrastructure	Veolia District Energy Networks	Massachusetts	BNP Paribas	Term Loan A	\$625M	7-yr	The loan was priced at L+175 and lenders earned a 50 bp fee (PFR, 1/21).
				Capex Facility	\$80M		
				Revolver	\$65M		
● Clearway Energy Group	NE Community Solar Portfolio (76 MW [DC])	Illinois, Massachusetts, Minnesota, New York	CIT (left), Key, SVB	Term Loan			The financing was announced on Jan. 17 (see story, page 20).
			TBA	Tax Equity			
● Controlled Thermal Resources	Hell's Kitchen (140 MW Geothermal)	Imperial County, Calif.	Lazard (adviser)	Debt			The sponsor expects to launch a project finance bank loan in early 2021 (see story, page 1).
D.E. Shaw Renewable Investments	Orchard (40 MW Wind)	Morrow County, Ore.	Keybanc	Debt			The project has a 15-year PPA with PacifiCorp (PFR, 1/21).
			U.S. Bank	Tax Equity			
Enel Mexico	Dolores (244 MW Wind)	Nuevo Leon, Mexico	IDB Invest	Term Loan	\$150M	7-yr	IDB is in the process of structuring the loan, which is not yet approved (PFR, 1/13).
	Amistad IV (149 MW Wind)	Coahuila, Mexico					
	Magdalena II (220 MW Solar)	Tlaxcala, Mexico					
Helios Infrastructure	Ruff (22 MW Solar)	North Carolina	U.S. Bank	Tax Equity			Helios is owned by Sol Systems and Nationwide Mutual (PFR, 1/21).
Longroad	Jeffers, Community North (70 MW Wind)	Minnesota	KeyBank, HSBC	Debt	\$128M		Xcel Energy will buy the repowered duo (PFR, 1/21).
Mainstream	Huemul, Copihue (730 MW Wind, Solar)	Chile	IDB Invest	Debt	\$150M		The sponsor sent term sheets to commercial banks in December (PFR, 1/21).
ODPEnergy	Sol de Los Andes (100 MW Solar)	Atacama, Chile	SMBC	Term Loan	\$130M		The deal is expected to close in February (PFR, 1/13).
	Estrella (50 MW Wind)	O'Higgins, Chile					
Sonnedit	Portfolio (123.1 MW Solar)	Puerto Rico	City National Bank of Florida	Debt	\$15M		Sonnedit has a 50 MW project in development on the island (see story online).
● Stonepeak	New England Power (1.6 GW Gas)	Massachusetts, Maine	Investec (books), CA, NBF, Nomura	Term Loan	\$485M	7-yr	Stonepeak has increased the size of the term loan by \$10 million (see story, page 20).
				Revolver	\$55M		
SunEnergy1	Ranchland, Holloman (140 MW Solar)	North Carolina	Ares Management	Mezzanine	\$50M		The holdco debt sits behind senior debt from ING Capital (PFR, 1/21).
Termocandelaria	TECAN (324 MW Gas)	Colombia	JP Morgan, Scotia	Unsecured Bonds	\$186M	9-yr	The bond tap will be used to convert the plant to a CCGT (PFR, 1/21).
X-Elio	Xoxocotla (70 MW Solar)	Mexico	IDB Invest	Debt	\$17.2M	20-yr	Two other projects were expected to be financed by the same lender group (PFR, 1/21).
			MUFG		\$8.3M	16-yr	
			ICO (Spain)		\$13.9M	20-yr	
● YPF Luz (YPF, GE)	Cañadón León (120 MW Wind)	Santa Cruz, Argentina	BNP Paribas Fortis	Term Loan	\$100M		The BNP Paribas Fortis tranche was guaranteed by Euler Hermes (see story, page 1).
			DFC (formerly OPIC)	Term Loan	\$50M		

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## MERGERS &amp; ACQUISITIONS ●

# Astoria Energy Interests to Be Sold to Consortium

A consortium of equity investors has banded together to buy stakes in the 1.2 GW Astoria Energy gas-fired facilities in Queens, N.Y., drawing to a close a sale process that kicked off in 2018.

The consortium agreed to buy the Astoria Energy I project and a 55% stake in Astoria Energy II following a nearly two-year-long sale process run by **PJ Solomon** and **Morgan Stanley**. The two projects are both 575 MW in size.

The purchasing consortium includes:

- ◆ Dutch pension fund **APG**,
- ◆ **Munich Re's** asset manager **MEAG**,
- ◆ **Clal Insurance Co.**, and several other undisclosed U.S. institutional investors.

The existing owners of the plants are:

- ◆ **Mitsui & Co.**,
- ◆ **Engie North America**,
- ◆ **Ares Management**, and
- ◆ a partnership between **JEMB** and **Harbert Management**.

They hired PJ Solomon and Morgan Stanley to run a sale process for the assets in 2018 (PFR, 7/11/18).

After initially marketing the assets to a broad range of investors that summer, the investment banks determined that the best strategy for the sellers would be to reach out to potential consortia in a more targeted process, which they did in early 2019, says a person familiar with the situation.

The resultant deal is expected to close in the first half of 2020, subject to regulatory approval.

One of the buyers, Clal Insurance, an Israeli company with some \$65 billion of assets under management, worked with Tel Aviv-based **BLK & Co.** as financial adviser on the transaction.

Meanwhile, **Holland & Knight** and **Sidley Austin** acted as legal counsel to the buying consortium.

## "MARQUEE ASSETS"

Astoria Energy I and II came online in 2006 and 2011, respectively, and are each fitted with a pair of **General Electric** 7241FA combustion turbines. They are located in **Zone J** of **New York-ISO**, one of the most congested electric load pockets in the U.S.

Astoria I has provided merchant energy and capacity into the New York power market since its long-term power purchase agreement with **Consoli-**

**dated Edison** expired in 2016, while Astoria Energy II operates under a long-term tolling agreement with the **New York Power Authority** through mid-2031.

"These really are marquee assets in a marquee market," says PFR's source.

## DEBT

There was about \$672 million outstanding at the end of 2018 under Astoria's senior secured term loan due December 2021, according to the Moody's report. This debt was arranged by **Morgan Stanley** and **Natixis** in 2014 (PFR, 12/4/14).

The deal originally comprised

a \$775 million term loan maturing in December 2021, a \$70 million revolving credit facility that

## "These really are marquee assets in a marquee market"

was due to mature at the end of last year and a \$7 million letter of credit facility that matured in 2016.

The revolver has recently been replaced with a \$55 million credit facility that matures on Dec. 24, 2020, according to **S&P Global Ratings**. ■

# Sustainable Infra Investor Snaps Up Nevada Cogen

◀ FROM PAGE 1

the project follows a two-stage auction process conducted for Rockland by **BNP Paribas** last year. **Neil Davids**, managing director and head of power and renewables sponsor coverage at BNP, led the sale process. The buyer and seller signed an agreement in November.

The auction drew interest from a diverse range of international bidders, including from the U.K., as well as private equity sponsors and a Canadian strategic investor, says a person familiar with the process.

The winning bidder, Ultra Capital, is a private equity firm that focuses on small- to mid-size sustainable infrastructure projects in the energy, waste, water and agriculture sectors in North America and the Caribbean. Its managing directors include **Ian Copeland**, the former managing director of **Bechtel Enterprises** who was president of its fossil power,

renewable energy and communications businesses.

"Ultra invests in power projects and optimizes them for a renewable future," says **Kristian Hanelt**, another managing director at the firm, who has particular responsibility for execution. "We're making this investment to support increasing renewable energy penetration in the region, and are working with Panamint Capital, which led the M&A transaction and will take the lead on management, repowering and integration work for the asset, to support that objective."

Panamint was established in September by CEO **Apolka Totth**, who was previously a partner at private equity firm **Conveyance Capital Partners**. Her resume includes roles in project finance and development at **HSH Nordbank**, **Agile Energy**, **Northfield Power** and **ET Capital**.

**Daniel Englander**, who was

managing partner at Conveyance Capital, is chief investment officer of Panamint.

Besides its PPA with Nevada Power, the NCA2 plant also has a contract to supply hot exhaust gas and chilled water to a gypsum plant owned by **Pacific Coast Building Products**.

Its new owner, Ultra Capital, is understood to be actively marketing the output of the facility for the post-2023 period and expects to enter into one or more long-term offtake contracts before the existing arrangements lapse.

Rockland acquired NCA2 in 2016 from **Quantum Utility Generation** as part of a peaker portfolio that also included the 121 MW Quantum Pasco Power dual-fuel facility in Dade City, Fla. (PFR, 10/4/16, 6/2/16). **Merit Capital Advisors** advised Quantum on the auction process. Quantum had acquired NCA2 from **Chevron** and **Dynegy** in 2014 (PFR, 7/1/14). ■



## ● MERGERS & ACQUISITIONS

# Bankers Pitch for Gas Distribution M&A Mandate

Investment bankers are jostling for a mandate to put **Mountaineer Gas**, the largest gas distribution business in West Virginia, up for sale.

Headquartered in Charleston, W.Va., the company serves more than 220,000 customers and operates about 6,000 miles of pipeline.

The company is owned by a partnership between **IGS Utilities** and British infrastructure fund **iCON infrastructure**, which holds limited partner interests through its iCON Infrastructure Partners II fund.

The infrastructure investor first acquired a stake in the company in February 2011 and increased its holdings in 2012 and 2017.

"Lots of banks have been vying for the mandate and they are close to choosing one," says a project finance banker closely following the process.

### SEVERAL CAREFUL OWNERS

Mountaineer has had several owners since the turn of the millennium, when **Ener-**

**gy Corp. of America** sold it to **Allegheny Power** for \$325 million, including the assumption of \$100 million of debt.

Four years later it passed to a partnership between **ArcLight Capital Partners** and **IGS Utilities** for \$141 million in cash plus the assumption of the remaining \$87 million debt pile. As part of the deal, the

buyers were to settle certain inter-company accounts over a three-year period, estimated to be about \$16 million.

The deal closed in 2005, with ArcLight taking an 89% stake and IGS the remainder. Three years later, the co-owners hired **UBS Securities** to sell the company on again, but the auction was shelved when the

financial markets crashed.

ArcLight made another attempt in 2010, again enlisting UBS (PFR, 4/30/10). This time, ArcLight sold a portion of its ownership interests to **DB Nexus American Investments**.

DB Nexus sold a portion of its passive stake to present owner iCON in 2011 and a year after that ArcLight offloaded its remaining 49% stake to iCON as well for about \$80 million.

In 2017, DB Nexus decided to divest what remained of its stake in the company to meet certain requirements of the **Dodd Frank Act** and iCON stepped in again as the buyer.

As a result of the three transactions, iCON has amassed a 98.6% stake in the gas distributor, with IGS Utilities holding the remainder.

The iCON team was formerly the infrastructure investment arm of **Deutsche Bank**, which was spun out in 2011. Mountaineer is held under iCON's second fund—iCON Infrastructure Partners II. It was the fund's first investment. ■



"So far I'm not seeing potential economies of scale..."

## Xcel Closes Acquisition of Mankato

**Xcel Energy's** purchase of the 760 MW combined-cycle gas-fired Mankato Energy Center in Mankato, Minn., from **Southern Power** has closed after the utility holding company restructured the deal to appease Minnesota regulators.

Xcel bought the facility for \$650 million, having agreed to do so on a "debt free, cash free" basis in 2018, as previously reported (PFR, 11/7/18).

The deal was originally expect-

ed to close in mid-2019, but last summer the **Minnesota Department of Commerce** advised the state's **Public Utilities Commission** to scrap the transaction as it would "increase costs for ratepayers" (PFR, 8/15/19).

In September, the PUC sided with the Department of Commerce and rejected the deal.

The regulator eventually came around after Xcel restructured the transaction such that ratepayers would not bear the costs. In the

restructured deal, Xcel agreed to buy Mankato through an unregulated subsidiary, **MEC Holdings**, so that shareholders rather than ratepayers would bear any risks and receive any benefits.

Through its **Northern States Power** utility subsidiary, Xcel has been buying the output of Mankato's 375 MW first unit since 2006 under a 20-year PPA, and also has a 20-year PPA for the second 345 MW unit which came online last June.

Under the terms of the PPAs, Southern Co. was required to offer Xcel an opportunity to buy the plant, which it did in 2018.

The acquisition comes as Xcel moves ahead with plans to close coal-fired plants in the Upper Midwest a decade earlier than planned as it aims to reduce carbon emissions by 80% by 2030.

**Barclays** acted as financial adviser to Southern Power on the sale of Mankato, while **Baker Botts** provided legal counsel. ■



# Power Finance & Risk



## **PFR Solar ABS Roundtable 2019/20**

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## PARTICIPANTS

**Spencer Hunsberger** Managing Director, Energy Asset Finance, **Credit Suisse**  
**Ben Sunderland,** Director, Capital Markets, **Vivint Solar**  
**Matt Eastwick** Chief Investment Officer, **CleanCapital**

**Eric Neglia,** Managing Director and Head of Consumer ABS, **Kroll Bond Rating Agency**  
**Stephen Henne,** Director, Securitization, **KPMG**  
**Benji Cohen,** Founder and CEO, **T-REX**  
**Richard Metcalf,** Editor, *PFR* (moderator)

## NOTE FROM THE EDITOR

*Originators of residential and other small-scale solar assets have strived for years to cultivate a reliable, efficient, liquid market for solar asset-backed securities, and their hard work is beginning to bear fruit.*

*From the beginning, residential solar loans, leases and power purchase agreements appeared to have all the attributes of an asset class ripe for securitization. What's more, they have an obvious appeal in the era of ESG investment criteria.*

*In the early 2010s, issuers, lawyers and bankers put in the hours to structure and market the first solar ABS bonds to investors, and SolarCity launched its debut offering to much fanfare in 2013.*

*Since then, primary market volume for solar ABS has grown to roughly \$6 billion a year, though it is perhaps best described as several markets rather than just one. Besides the more public 144a bond format, there are many private deals. Then there are the transactions that could be considered securitization-adjacent, such as warehouse facilities, forward-flow agreements*

*and sales of portfolios of whole loans.*

*Having educated investors about solar resource risk and tax equity partnerships and lived through challenges to net-metering, market participants are ready to consider the next evolution of the product—its expansion into the realm of commercial and industrial-scale projects and—who knows?—maybe even utility-scale solar and transmission.*

*Another test that solar ABS has yet to face—a major recession—lurks at some unpredictable point in the future. Nevertheless, deal watchers are monitoring the market carefully for the erosion of investor protections that may seem unnecessary in the good times but that bondholders will wish were in place if things go sour.*

**Richard Metcalf**  
 Editor  
*Power Finance & Risk*



**PFR: Let's get a general overview, to begin with, of how the residential solar ABS market has performed since it kicked off in 2013. We could start in terms of primary issuance.**

**Spencer Hunsberger, Credit Suisse:** I had the team pull together some numbers in anticipation of this. What we were able to find was—and this is talking about public deals; there are private deals that are in addition to this as well, and the private deals could be in loan format, ABS format or otherwise—we see 30 deals [as of the fourth quarter of 2019], excluding a transaction that was part home improvement and part solar loans, and excluding the PACE side of the business. And that's split roughly 50/50 between third-party-owned lease-and-PPA business and the solar loans side. Across the 30 deals, there's \$6.3 billion of debt that has been sold, not counting residual interests that were retained by sponsors or by third parties. And that was \$3.5 billion of lease-and-PPA volume and \$2.8 billion of loan volume. In addition, there is the private market, which is either done through 4(a)(2) private placements or loan syndications that might not have been picked up in these statistics.

**PFR: Does anyone have any idea how big the private market is?**

**Hunsberger, Credit Suisse:** Between loans and 4(a)(2) placements, reported closed deals would be between \$1.5 billion and \$2 billion of total issuance.

**Ben Sunderland, Vivint Solar:** That sounds about right. We've done syndicated deals, for instance when we closed our first securitization in June 2018, where we not only did a public deal, but we did a private deal as well, with the help of Credit Suisse. The private deal was actually almost equivalent in size to our public deal.

**PFR: Was that a 4(a)(2) deal or a loan?**

**Hunsberger, Credit Suisse:** That was a syndication of a warehouse facility. I think the point is that there is another part of the market that is both (1) helpful for sponsors when you think about flexibility and developing markets, and (2) helpful to vary the types of access that you have into the traditional market as well.

Not every investor might be a 144a buyer. They might want a duration asset or a loan asset or something else. And this is all beyond the bank loan market.

**PFR: So, what's the rationale behind perhaps doing two tranches? You just have a wider pool of investors that can look at it?**

**Hunsberger, Credit Suisse:** It could be a wider pool of investors, or it could be flexibility on timing and closing and then actually transferring that to the market in the future, versus having one or a concentrated number of holders for a period of time. There are a variety of reasons. But what we see a lot more of is, when you think about issuers that might be trying to balance their duration profile, the ABS markets tend to be more of a seven-to-ten year ARD [anticipated repayment date] type market, and when you go to an institutional loan format or 4(a)(2) format, that could be a very long tenor, 20 to 25 years. So it's not just how you go to market and whether you're doing a public deal or a private deal, but actually the structure of the investment itself.

**Benji Cohen, T-REX:** A big part of it, though, is also the sophistication of investors. Over the last six years, since Credit Suisse did the initial **SolarCity** issuance in November 2013, you've had institutional investors who have become more familiar with the asset class. There's more data around the asset class, around the performance of these entire portfolios. And so some of them are setting up direct deals, whether it's 4(a)(2)s or whether they're syndicating or doing forward-flows. There are some would-be issuers who don't show up in this at all. **Sunlight Financial** is one of the top originators of residential solar and they've never done an issuance that would show up in any of these statistics. But where's the capital going? They're not holding it long-term. They're selling it on to institutional investors directly. For the reasons that Spencer said, these stats aren't public, but I would say that in 2019 there's at least 75% of volume that is being done directly, and not in the 144a context.

**Eric Neglia, Kroll Bond Rating Agency:** I can echo that. We see the majority of major participants accessing the 144a securitization market. **Mosaic** issued two, **Dividend Solar** issued one and **Sunnova** issued its inaugural

loan securitization in 2019 as well. But, to your point, I think what we've seen is that they do have forward-flow agreements with several banks and credit unions who are buying the whole loans and either holding them on their balance sheet or looking at some sort of long-term private financing that never enters into the capital markets.

**Stephen Henne, KPMG:** We think that the execution that our clients are seeing on some of their 144a securitizations is improving, which makes it more attractive, but obviously there are still some headwinds. We're bullish on securitization issuances going forward.

**Sunderland, Vivint Solar:** Vivint Solar got into the securitization game a little bit late. SolarCity did the first one on the PPA/lease side; **Sunrun** dabbled in it a little bit in 2015; and then we jumped into it in 2018. I think Sunnova was in 2017. And the way we looked at it was, the market just never had enough depth and so pricing wasn't very competitive. But I think what you started to see change is the rise of solar loans. Solar loans created significant deal flow, and so then, all of a sudden, solar loans—which are a more traditional product for consumer finance ABS buyers—brought a lot of investors into the space. And then, as they got comfortable with the solar loan asset-backed securities, they realized: 'Oh! They're not that different than the PPA and lease assets.' And so then the PPA and lease assets started performing better, and that's what I think propelled the two **Tesla** transactions in 2017, plus the Sunnova transaction in 2017. That's what gave us pause, and we said: 'We should re-evaluate this market; there seems to be a lot of positive momentum there.'

To me, SolarCity helped kick things off, but we wouldn't be where we are today without the help of all the volume that the solar loan guys helped create.

**Neglia, KBRA:** To that point, we are seeing strong demand from investors. One case in point is **Mosaic's** most recent 2019-2 transaction. It was a \$208 million deal, significantly oversubscribed, to the point where their senior classes, which KBRA rated AA- (sf) and A- (sf), were oversubscribed and spreads came in tighter than expectations. The junior notes, the Class C and D, priced at the low end of the guidance. That better pricing created addi-

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tional excess spread for the transaction, which allowed us to notch up the ratings of Class B, C & D between initial announcement and closing.

**PFR: Interesting. Moving onto the secondary market, we now have outstanding bonds dating back to 2013, unless those have been refinanced. How have they performed? And is that tied to the performance of the underlying assets?**

**Neglia, KBRA:** I can speak to the performance of the solar loan collateral on the bond side. What we've seen is that losses have been coming in quicker than expected. We don't think it's a cause for concern, where KBRA is going to raise our base case assumptions, at this time. We think it's just a frontloading of the curve. We do see an increase in losses around the ITC payment date, when some of these loans reamortize, and may result in a higher monthly payment if the borrower hasn't paid down at least 30% of their original loan balance. Borrowers are deciding, for a variety of reasons, to default on their loan payment. So we're monitoring performance, but there's nothing that's causing us to increase our lifetime loss expectations at this time. Instead we feel it's more appropriate to shift our timing curves.

**Cohen, T-REX:** I completely agree with that. I think that that's the majority of the answer around performance. What's interesting for us is to look at different loan products, and also look at loan products versus PPAs and leases, and see how they perform. Loans have only been around for a few years, in bulk. How are those performing over time? What do the different originators of those loans do? What is the capital markets activity? How are institutional investors looking at exactly this, at your 18-month flip, when you have a 40% balloon that's meant to mimic the latest that you can get the ITC in. How does that look? And we've seen big differences in private data, between different originators, on losses in a range of half a percent to 1.5%, which is pretty big. And it is determined in no small part by products and, to some extent, credit methodologies at origination.

**Hunsberger, Credit Suisse:** Yes, I would agree with that. There's some helpfulness in separating out loans from third-party-owned

markets, and then, within each of those markets, separating out issuers as well. One thing that has become more apparent, and might even be overdue, is some differentiation of specific issuances in the market, from a pricing perspective. Because the pricing on the primary side is being driven a lot by overall market trends—whether the credit markets are healthy, whether investor demand is there. A lot of them are binary points that Ben touched upon earlier. And now we're seeing people saying: 'We've got this data on this issue over this time period, and that's proving out a certain thesis, and this data from this other issuer over this time period might have a slightly different thesis.' It doesn't mean that one is bankable and one is not, but it does mean two different sets of assumptions.

It's something that the team at Kroll is certainly trying to take into account as well, and we've heard feedback from Eric Neglia and his colleagues about how that's going to flow through.

The other thing that's interesting, if we move on to how trades have performed in the secondary market, is that when we looked at public data on closed loan transactions, what we found is that everyone has slightly different expectations—base case—of what loan defaults would do and what that curve is going to look like. Overall, losses might have come in faster on some asset classes, but, overall, the initial projections have been accurate across the industry as a whole. But one of the things that gets missed is the correlation between prepayments and cumulative defaults. If your prepayment speed comes down, because fewer people are prepaying loans around the ITC date, even at the same constant default rate, your cumulative defaults go up. You have a longer duration investment. I think that part sometimes gets missed.

Although we're seeing the model of cumulative loss go up, the constant default rate may be staying the same. And the duration of the bonds are extending, because prepayments are lower than expected. They're two separate points, but they get conflated in the cumulative default projections.

**Henne, KPMG:** One of the reasons we're bullish is we're seeing our clients securitizing more and more. Securitization's very much a snowball rolling downhill—it's gets easier the more



"We're monitoring performance, but there's nothing that's causing us to increase our lifetime loss expectations at this time. Instead we feel it's more appropriate to shift our timing curves."

**Eric Neglia, Kroll Bond Rating Agency**

you do it. Investors are getting an appetite, they're getting comfortable with your assets, what you're putting out there. But also, if you can bring years of data that says: 'My delinquency's less than 0.1%'—as reported on certain Sunrun transactions<sup>1</sup>—'and when we transfer an asset from one borrower to another, our recovery is over 100%'—I think that gives comfort to the buyers.

**PFR: For the ABS market, the solar deals have been on the smaller side, in terms of the size of the individual deals. Does that impact liquidity? Has there been much trading in these bonds, relative to other asset classes?**

**Hunsberger, Credit Suisse:** The deals average \$200 million to 300 million, when you look across all of the industry together, which I actually don't think is small. It's certainly small relative to mortgages, but versus other esoteric asset classes, it's a pretty good size and we do see efficiency at that size.

To the second point, it's still not an actively traded asset class in the secondary market. There is a market. Bonds do trade. We were able to find TRACE data on four or five bonds that have just traded recently. And those are telling a lot of the story that we were just talking about.

1. At the end of 2018, the average delinquencies in a Sunrun portfolio represented 0.09% of total billings for receivables more than 120 days past due, according to a KBRA pre-sale report dated June 6, 2019

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The overall market looks healthy. At the secondary level, trading is usually inside the primary levels, and the primary levels are 205 to 210 basis points over, when you look at the most recent issuances on the lease-and-PPA side, and slightly inside that on the loan side. We see the secondary market doing what you should see in mature asset classes, which is secondary trading inside of the primary. But there is differentiation: Sponsor differentiation, specific issuance differentiation. If you have a bond go on watch and come off, it may trade behind its peers.

**Cohen, T-REX:** We've seen some trades in the secondary market for some of the oversubscribed bonds, especially for first-time issuers. There isn't always as much information getting out, but some of it is the drama of a new issuer coming to market in a relatively new asset class. We've seen a few funds who have taken those bonds and flipped them very quickly, which is good—that there's secondary market appetite—and not as good—that these guys are not holding them. That speaks to lack of maturity. I don't think it's a huge issue that's rife throughout this market, but it's an interesting one to note, which speaks to availability of information and information flow.

**PFR: We're comparing this market to other esoteric ABS asset classes. Is that where solar ABS is going to stay, do you think, or will it break out of the esoteric category?**

**Hunsberger, Credit Suisse:** I could be accused of being biased here, but I think it is breaking out and it has broken out. When you include the private stuff, this is a pretty healthy, growing market. I don't know whether there's some line in the sand when you have an asset class that's its own asset class as opposed to an esoteric asset class, but if you're getting to the point where you're averaging nearly \$2 billion of issuance a year, if you got that up 50%, you've got \$3 billion of reported data a year—that's an asset class. People set up teams to do just this asset class outside of traditional esoteric investments. And the other thing that's interesting, when we talk about the comparison between a traditional public ABS investor versus a private investor—you've got infrastructure, pension, other long-dated type investment money that's coming into

this asset class that, perhaps, was slower to come in. While the initial momentum came from crossover accounts on the consumer side, once you start seeing buying that could be compared to other infrastructure asset classes in the D.G. [distributed generation] space, that could be compared to other project-financed, long-duration investments, then there's all the more reason to think that interest in these assets is broadening from a specific bucket of ABS into a broader range of buckets including ESG-focused, long-dated consumer-focused, project-focused.

**PFR: From the sponsor's perspective, how does that affect how you think about how to finance these assets?**

**Sunderland, Vivint Solar:** When we entered 2018, we did not have any plans to do securitization, but as we started to assess some of the deals that had closed at the end of 2017, we started to evaluate that option more seriously. And after we closed our first securitization, in June of 2018, we overhauled our perspective and capital markets financing plan.

As a result of the execution in the market and where we think this market's going to go in the long term, we recently closed a private temporary warehouse where we're placing our assets until we've accumulated enough volume to go to the securitization market. We've structured it in a way to make it very easy to just take those assets and drop them into a securitization.

In the past, we were more focused on the bank market, where they're not doing the same type of diligence. A good example of this is that in the securitization market they have a custodian that's going to review literally every single customer contract. That's not something that happens on bank loans, *per se*. So we've completely overhauled our internal processes to make that very easy. We plan to continue to go to this market. We think it's where the low-cost, high advance rates are, and we'll continue to evaluate that. Things could change. Market dynamics change, but right now it's one of our core focuses.

**PFR: So the demands of the bond market and the ABS market actually affect the way your business is set up and the way you do business, to some extent?**

**Sunderland, Vivint Solar:** Yes. Internally, we sometimes wish that it was easier to do certain things, but there is an amount of rigor that's actually helpful to the business and the industry at large. Having every contract reviewed by an independent third party—that actually makes a lot of sense, when you're talking about bundling up large sets of assets. And it forces us to be more accountable internally, as we evaluate our internal processes. The standards that are created, not only in the ABS market, but with some of our other financial partners, go towards making this asset class better and making it more financeable in the long run.

Some of the smaller players, who don't have the same access to the capital markets, aren't held to that same level of scrutiny. Because we're held to a higher level of scrutiny, that's really helped us build out our compliance team, build our supply chain, build out our customer management processes.

**PFR: I wonder how many ordinary members of the public realize what a beneficial effect securitization can have on the business practices of a company. It's not the story that they're most familiar with.**

**Hunsberger, Credit Suisse:** I really appreciate the sentiment.

Everyone around this table picks and chooses the parties that we work with and try to find like-minded people that want to take a long-term approach to the market. That approach goes a long way. It's not about a specific issuance in a month or a year, it's about how we



"We plan to continue to go to this market. We think it's where the low-cost, high advance rates are, and we'll continue to evaluate that."

Ben Sunderland, Vivint Solar



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"Prudent sponsors might want to think about a mix between bank markets, institutional markets, and forward-flow arrangements."

Spencer Hunsberger, Credit Suisse

build tools to build long-term companies.

The capital markets have been around for a long time, there's certainly criticism, and some of that criticism is due. I'm not speaking about our capital markets space, but capital markets as a broader industry. There are things they do very well. There's transparency and pricing transparency, and how things are going to be perceived by a broad pool of the investing public, and they pass useful data on to issuers as well.

**PFR: Matt Eastwick, what's your view?**

**Eastwick, CleanCapital:** The core mission of my company, CleanCapital, is to attract additional institutional investors into the asset class. While we always look at traditional project finance lenders in the bank market or institutional fund market, all else being equal, the structured product investor in the securitization market is an interesting one for us, because they probably haven't seen a lot of our assets in the marketplace. So we've designed our financing strategies to ultimately hit the securitization market.

In fact, we did a financing earlier this year with Spencer's team at Credit Suisse, exactly with that intention in mind. We are aggregating a lot of C&I solar assets and once we get to a critical mass within a specific portfolio, then we'll be able to evaluate these alternatives.

The discipline of working with a bank like Credit Suisse has been very helpful for our team to make sure that we're thinking

about everything the right way as we prepare for securitization.

**PFR: And since CleanCapital's assets are C&I—commercial and industrial—as opposed to residential, that would be a novelty for the ABS market, wouldn't it?**

**Hunsberger, Credit Suisse:** There have been approaches to the market over the past few years, there are some underway currently, and some that didn't ultimately result in a transaction. I think there will be a flurry of announcements in the next six to 12 months in that space, when you think about transactions that have been reported in our industry media as being underway, and when you think about the volume of capital that has been attracted, from the sponsor side, to C&I, over the past 12 to 18 months in particular, where that was an asset class that had been particularly starved of investment relative to the pure utility-scale or pure residential D.G. for a long period of time.

**PFR: When you're looking at commercial and industrial assets rather than residential assets, what impact does that have on the deal?**

**Eastwick, CleanCapital:** Well, it's a different set of characteristics, and they are lumpier assets. Our typical project size is certainly many, many times larger than a residential solar asset, so the goal of trying to get the right level of diversification into the portfolio is more challenging, and that's been something that we've had to focus on. It's probably one of the largest hurdles restricting the amount of C&I securitization volume.

**PFR: Does the fact that the assets are C&I have any effect on the choice of which nook of the market to tap—whether it's 144a or 4(a)(2) or a loan?**

**Hunsberger, Credit Suisse:** That's a good question. I think that you'll see a higher percentage of private deals in the first year to year-and-a-half of development here than you see in resi D.G. That's just because you're going to be working through methodology, generally, and you're going to be working through sponsor-specific considerations around their portfolio.

There isn't a direct map from utility or resi into this asset class. It's lumpier, from an exposure-to-single-credits perspective, and you have to think about rating those credits if they're not publicly rated or comparatively rated already. You have to think about a distributed maintenance plan, because you don't have one asset in one place with dedicated staff. It's a higher current, typically more complex system than in a residential home.

Getting back to Ben's earlier comment about why the lease-and-PPA, third-party-owned side of the residential market was able to grow quickly, it's because we had corollary areas to borrow from. There are corollaries on the C&I side, but we're still figuring all those out right now. A lot of this is going to need to be figured out in the next six to 12 months, at which point in time we will see a healthy public market, a healthy 144a market.

**PFR: There have been approaches to the market, so does that mean deal marketing sent to investors that did not result in a transaction?**

**Hunsberger, Credit Suisse:** Yes, there was a deal a few years ago, that really would have been the first public C&I portfolio. If you look at reported media, there are also transactions in the market right now that have a C&I exposure. And this is in addition to transactions where C&I has been a small subset of the overall pool. If you look back, some of the earlier Tesla transactions might have had less than 5% of assets that might qualify as traditional C&I



"We've designed our financing strategies to ultimately hit the securitization market."

Matt Eastwick, CleanCapital

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blended in, but when we're talking about new, standalone deals, it's 100% C&I.

**PFR: Is that unusual, for an emerging esoteric ABS asset class to have hiccups like that?**

**Hunsberger, Credit Suisse:** I don't think it's unusual. You could have the best-structured transaction, the best sponsor, the best assets, but if you launch it at a time when the capital markets are in a relatively risk-off mode, like we saw in the last month-and-a-half of last year, you might say: 'There are better ways to finance this.' When you think about ABS or capital markets generally as a tool, it's *a* tool. It's not the only tool. I'm not going to come here and say it's the only thing you can do. Prudent sponsors might want to think about a mix between bank markets, institutional markets, and forward-flow arrangements, because those markets are bullish on risk at certain points in time and might be more conservative on risk at other points in time. Part of the sponsor debate

is then how to think about blending those. It's not to say that because the transaction was offered to the market and pulled means that there's something wrong with the transaction.

**Henne, KPMG:** We have seen some of these deals come our way as well and looked at similar portfolios, and the concerns have been diversification of assets, lumpy assets, rated versus unrated offtakers, and, ultimately, several of the clients have decided they felt more comfortable leaving these assets on their books, at least temporarily, until they found another financing solution. They understood some of the risks, but the market hadn't gotten to the place where they were comfortable with some of the things they'd have to look at.

**Cohen, T-REX:** I do think that there are examples where there was inadequate capital. **SunEdison** is a great example. SunEdison doesn't exist anymore. They were trying to take securitizations to market. They never

made it to market. That wasn't the only reason. But capital then stayed on their books, and they had too much capital on their books, for which they didn't have liquidity, and so that was that.

That was years ago, and at this stage in the evolution of this market, which has been quite rapid, a lot more is coming. We're now much more in a place where C&I securitizations can launch. But there are necessary things that happen along the way.

**PFR: Over the past six or seven years, investors have had time to get their heads around some of the things that make solar ABS bonds unique and different to other asset classes. Variable solar production, the regulatory regimes that affect solar installations in different states, and of course tax equity structures. How has the make-up of the investor universe grown? Who are the investors? Is it investors that just buy ABS bonds, or is it a wider or a narrower range?**



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**Hunsberger, Credit Suisse:** We need to differentiate the markets here. Let's put third-party on one side and loans on the other side. A lot of questions around production and tax equity are not going to be as relevant for the loan side, but there's probably more similarities than differences between the investor bases in those two markets. So, who's the traditional public 144a buyer? It's someone who is managing insurance or other institutional capital. The average team that we would work with is coming at this through a long-dated, consumer, unsecured asset class lens, versus a project finance lens. But then we do see infrastructure investors, pension plans being managed by an infrastructure investors, and traditional project finance institutional investors who have come and continue to come into this space as well.

**Neglia, KBRA:** One of the reasons the investor universe is growing is because a lot of the risks in the early days are being addressed. Some of the major risks that you have with a small start-up company are, do they have the operational controls and infrastructure to properly originate the loan, manage their installer relationships and price risk accordingly? As they mature and develop those processes, they are growing into mature, established companies. Another reason is the accumulation of historical performance data. One challenge in the analysis is how to develop loss curves from this data, since it doesn't neatly fit into the box of short-duration consumer loans. We've been able to rely on proxy loss forecasts thus far. As you start gathering actual data, you're able to create the front part of the curve. We're



"There are different things that prime the market. Loans prime it for leases and PPAs. Resi primes it for C&I."

Benji Cohen, T-REX

also starting to see prepayment data come in, which helps improve the accuracy of our forecasts. Addressing some of those issues gets investors more comfortable, which helps expand the investor base.

**Eastwick, CleanCapital:** It's always been a great time to be a lender to solar. The performance has been great for those who've got the experience and have done the work to understand some of the complexities and the structure. What Benji and his firm, T-REX, are doing with the fintech component of helping people understand and analyze is, I think, going to continue to accelerate the participation, so that everyone gets to experience how great it is to be a lender in this space.

**PFR: If they approach it initially through a consumer finance lens, how hard is it then to incorporate everything else? If you're used to seeing consumer finance deals, you're not used to looking at solar production, for instance. How much of a challenge is it for an investor become confident enough to participate?**

**Hunsberger, Credit Suisse:** It's good question. I was just talking about the average investor. I'm not saying everyone's coming from a consumer lens, and, certainly, people came into it from an energy and project finance perspective.

The first deals took a long time, and they had very simple tax equity structures, where there really wasn't any cash diversion component. It's probably a single fund. You might have a cash grant transaction.

Where you started from was, what's the solar resource risk and how is that converted first into power and then into money. The first transactions allowed people to grapple with that, and they realized that the data was showing them that that is one of the most certain aspects of a diverse pool of assets. Versus a utility-scale transaction, where you might have significant P90 variability, this asset class has been characterized by expected production being translated into actual production.

And then they started saying: "Well, what's tax equity?" We started doing transactions with multiple tax equity funds, and we started adding concepts like tax loss insurance to mitigate the risk that an investor could have their cash

flows diverted by virtue of an issue at the tax equity fund level, regarding the eligible basis of the property. People got comfortable with that.

Something pops up every year. In 2016 it would be net metering. No one is really talking about net metering anymore, but for a period of time in 2016 everyone was wondering what Nevada was going to do. And a certain part of the market that, to Matt's point, did some very good lending through that period of time, took the view that it was going to be challenging to retroactively change net metering laws, and when they thought about static pools of assets, that was probably a risk that they could price and take.

It's been an incremental process. It's been the better part of a decade of grappling with this and educating investors one step at a time.

The loan side then brought in a whole other pool of people who could come in and say: "There's this transaction that's being done, and if I'm looking at this, then maybe I want to be looking at this other transaction as well." When you compare the highly-rated tranches of a loan transaction to other consumer credit, both from a pricing and a default perspective, or you compare a C&I pool and the financing you can do there to a utility-scale asset, there's an opportunity for investors to come in and say: "This is a very good place for me to invest my capital, and it's worth spending the time to go through these issues."

**Cohen, T-REX:** That's a fantastic macro market perspective. There are different things that prime the market. Loans prime it for leases and PPAs. Resi primes it for C&I. You have belt and suspenders like tax equity insurance, which was a huge deal a few years ago. And now nobody is talking about it. It is not a requirement in every single one of these transactions because the market is mature, because investors understand it better and there's more data. And they also have more methodology, they have their own lens through which they can evaluate these assets, both at issuance and then on an ongoing basis in surveillance and potential secondary market activity.

**PFR: So, if those things have all been dealt with—or maybe we are still in the process of dealing with C&I—what's the next hurdle for this market?**



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"One of the key, foundational ideas on our side is that we are helping the customer save money, we're not increasing their spending burden. If anything, we're slightly reducing their energy spend."

Ben Sunderland, Vivint Solar

**Cohen, T-REX:** A down credit cycle, because we hadn't had a major one, really, in the history of this asset class. As Matt was saying earlier, this is a great time to be a solar lender, and it has been, basically, for ten years. Solar lending has probably not even been around for ten years, certainly not *en masse*. But what happens to this—it's a probably a bigger question for unsecured consumer lending, the fintech or marketplace lenders, but this is in a similar bucket—what happens to defaults then? What does a default payer look like then? We were talking about the first 18-month threshold, where you have a balloon payment. That's one thing, but what's going to happen if we go into a recession?

**PFR: Well, what is going to happen? Eric Neglia?**

**Neglia, KBRA:** It's to be seen, but the companies originating loans for the transactions that we rated do have strong risk management teams. They're underwriting every loan based on borrower, loan and P.V. system characteristics. They're making sure that the technology and the P.V. systems are going to last the life of the transaction. But the ultimate performance is still to be determined. KBRA comes up with conservative base case loss expectations, applies conservative stresses and models the cash flows of each structure to withstand a credit downturn commensurate with the rating of each note. We'll continue to monitor how it plays out, but the ratings we've assigned are supportive of the risk with each of the rating categories.

**Sunderland, Vivint Solar:** This is where you start to get into the value proposition to the customer, and this is probably one of the biggest distinguishing factors between a PPA and a solar loan. With a PPA, the average customer is saving some amount of money, up front, per year, whereas with a solar loan, the customer's likely not going to be saving money until years 11 through 20. One of the key, foundational ideas on our side is that we are helping the customer save money, we're not increasing their spending burden. If anything, we're slightly reducing their energy spend. So in a credit downturn, if they stop paying our bill, that means their energy bill, overall, might be higher. We have a wide range of savings amongst our customers and some customers could be saving more than others, but that is the general thesis overall.

**Neglia, KBRA:** They look to savings on the loan side as well, especially as loan terms are extended. Longer original term ultimately lowers the monthly payment. We've seen system costs go down, causing the initial financed amount to be lower than what it's been in the past, which makes the loan product more attractive for many customers. From the latest research we've seen, 40% to 48% of the market is being financed through a loan, rather than third-party ownership. Longer loan term and rising energy prices help to create a savings component compared to their regular monthly utility bill.

**Hunsberger, Credit Suisse:** Just two things

to add to those really good points. One is that not every recession is 2008. Recessions are a pretty healthy part of the business cycle. Consensus is that we'll see one in the next couple of years, so we should be ready for that.

The second is, let's make sure we're not making decisions in a boom-time environment that won't survive some sort of downturn. It's on everyone in this room and everyone that's involved in the marketplace to ensure that the safeguards we've put in place over the past decade don't get eroded just because they might not be demanded by the marginal investor on a specific deal. There's a saying I like a lot, which is: 'Before you take a gate down, figure out why it was put up.' That's relevant here. Why do we require certain documentation or legal protections? Why do we require documentation on how system completions occur? It's because the data and the performance we've had so far, which has been extremely strong, was based on those things being present. It's not specific to our asset class. It's in 144a, it's in 4(a)(2), it's in term loan Bs. It's something that you hear a lot in the market right now. When you think about energy finance as a global investment class, it's present in gas-fired refinancings, it's present in other types of LNG facilities—anything that you have right now where you're operating in a prolonged credit bull cycle is going to have safeguards eroded, and it's just a matter of making sure that we think through each of those. I'm not saying that there shouldn't be improvements, but that we think through what improvements are warranted and we've got data around, and which we should say we

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"Securitization's very much a snowball rolling downhill—it gets easier the more you do it"

Stephen Henne, KPMG

actually need some more discovery on first.

**Neglia, KBRA:** I'll agree to that. It starts at the finance company, the originators. We're in a hyper-competitive part of the lifecycle right now. Companies are vying for market share, and origination volumes are growing. So we want to make sure their underwriting standards don't deteriorate, they still have the same quality loan that they originally started with, they're not expanding the credit box too much or they're not failing to verify certain key components of the loan products themselves. We do see the FICO cut off going lower. Earlier on, FICO cut offs were around 650. So we're making sure that those borrowers are underwritten in a diligent manner. We also see loan terms going out a little bit. Overall, we're evaluating trends to make sure that originators don't let asset quality erode just because times are good.

**PFR: Going back to the beginning of this conversation, when we were talking about the different formats for residential and small-scale solar securitization, when sponsors and their financial advisers and banks are looking at the options, what are you trying to maximize? Is it the advance rate, the pricing?**

**Sunderland, Vivint Solar:** It's a great question. I'm sure it's different for everyone, but as we continue to grow, Vivint Solar's a very cash intensive business, especially on the PPA/lease side where we're taking on the up front cost and then the customer's buying energy over

time, as it's produced. So we tend to focus on maximizing the advance rate, but we also are very focused on the cost. There were times when we did have to go to more expensive debt markets, but as we've continued to mature and grow as company, we've started to really drive down the cost of debt. When we closed our securitization in June 2018, we drove down our debt pricing by over 100 bp. So we're continuing to focus on driving down our costs, but we are focusing on advanced rates first and foremost.

**PFR: Do you rank the different products based on what offers the highest rate? Or, when you did a public and a private transaction at the same time, maybe you were able to finesse it and tap two markets in order to maximize the advance rate. Is that how that works?**

**Sunderland, Vivint Solar:** There are also other things to consider. The first time we really entered the debt markets was in the summer of 2016. At that time, the only option to evaluate was the bank loan market. That was the only market that was fully established and had a high degree of execution. That's one of the biggest factors we look at—the likelihood of execution and how quickly we can get that done.

So we focused on the bank market first. We then entered the private placement market shortly thereafter, and that was our first time working with Kroll. That was a privately rated deal. There is a very large private market. Vivint Solar's done at least three private deals in the last three years where we got a rating from Kroll in a private setting. We've done another one where we have an implied rating.

**PFR: What is an implied rating?**

**Sunderland, Vivint Solar:** One of the beauties of working with Kroll, not to pump up Kroll too much, is they have a very open methodology. They explain exactly what they're doing, and we've gotten very comfortable with that, as have all the lenders. So every time we're doing a deal, I believe lenders now essentially do their own implied rating. They understand how Kroll would rate it. They run it through their models and say: 'We think this is an implied rating of BBB. We're not going to actu-

ally go to the rating agency for this, because we don't need it to close this deal.' But they benefit from having that transparency.

That's one of the reasons why we've really enjoyed working with Kroll. That transparency has helped us plan better, because there's no surprises. And if there's any questions, they're helping us understand the methodology.

**Hunsberger, Credit Suisse:** And what Ben's saying there isn't controversial. One of the main aims of the regulatory changes following the last cycle was that for the nationally recognized rating organisations, you have transparent methodology and the ability to compare data and data in and data out from across different rating organizations.

**PFR: And the same question to you, Matt Eastwick. Are you looking for the same things as Ben just mentioned?**

**Eastwick, CleanCapital:** Cost and advance rate are 1(a) and 1(b), for sure. They drive our return profile, the thing we have to focus on the most. But increasingly, the flexibility of the market and lenders is also quite important to us. Traditional project finance is very much a check-the-box approach, and that's not how we look at a lot of these investments. The ability to take emerging investment considerations into account, or things that aren't necessarily a traditional project finance consideration, is something that we pay very close attention to. And that's the way the market's evolving. This is not project finance 1.0. It's going to be 2.0 and 3.0 going forward. And non-recourse financing is its own marketplace, it's not just corporate lending. You've got to pay attention to all the traditional features of the project finance market, but there's a lot of value in these assets and these investments that we want our lenders to appreciate.

**PFR: Can you play these markets off against each other and go to the bank lenders and say: 'Hey, we can get this advance rate and this pricing in the ABS market. What are you going to do about it?'**

**Eastwick, CleanCapital:** There's a lot of time and resource expenditure that goes into preparing these transactions. It's not like you can just flip a switch and go from one market to the

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"When sponsors and their financial advisers and banks are looking at the options, what are you trying to maximize? Is it the advance rate, the pricing?"

**Richard Metcalf, PFR**

other. Doing the diligence and homework and listening to everyone's opinion and advice is part of doing our job correctly.

**Hunsberger, Credit Suisse:** I agree with that. It's part of the responsibility of doing a job correctly and completely. This is not playing people off each other, it's not arbitrage. It's totally the right process people should follow. They're different markets.

If we require a custodial review of every single asset in a portfolio, but that means the advance rate goes up or the pricing comes down, certainly that's a good trade off. If the bank says, we'll give you more flexibility, but the advance rate's lower or the pricing's higher, that's also a trade-off.

The companies and the portfolios that we're talking about here are owned by private equity companies, owned by public markets, owned by yieldcos, owned by family offices. Those investors all have a different profile that they're looking for in terms of how much up front cash they're raising and how much certain cash flow they're going to get over time.

**Sunderland, Vivint Solar:** It's nice to have that competitive element, where there's various markets who want this asset class, but what's driven better advance rates and lower costs is the maturity of these companies. The major players have seven to ten years of operating experience; they have demonstrated a history of operating these assets.

**Eastwick, CleanCapital:** You also want to look for diversity in your funding. You don't want to

completely rely on one source of financing. You want to be able to tap into multiple forms of financing, make sure it's going to be there through both up cycles and down cycles.

**Sunderland, Vivint Solar:** That's right. We have hit every single market. We've also done a forward-flow recently. That's a healthy thing to do. We don't want to be dependent on any one market. But what we have seen is, as we've started to shift our focus to the securitization market, the other markets have realized what's happening and they're trying to find ways to bump up advance rates. The way they're doing that is essentially taking the same terms we give ABS lenders and pulling them into bank loan deals. You're starting to see terms that you would only agree to in a securitization slowly start to sink into these other markets. That's how they're able to be competitive. They can get to the same level of comfort if they get the same terms. Ultimately, there is a competitive process, but it's not about Vivint Solar or other sponsors just getting the very best deal, because to get the highest advance rate, you're going to have to agree to all the same terms as a securitization.

**PFR: What's the benefit of doing a forward-flow agreement?**

**Sunderland, Vivint Solar:** Third-party-owned solar is a very cash intensive business, so we spend a lot of time focusing on working capital and forecasting it. On the traditional financing path, you raise tax equity but you get those proceeds at installation, then you raise some type of temporary debt, and you get that close to the time the system is placed in service, and then, once you've accumulated enough assets, you can hit one of these more permanent take-out markets, whether it's ABS, bank loan or private placement. That whole process, from the system getting installed to the final take-out, can be an 18- to 24-month process. It starts to really drag on working capital. So the idea is, with a forward-flow arrangement, you can condense that capital cycle down to getting all of those proceeds before placing in service or at placing in service. It reduces the strain on the business, but you are giving up the upside, because you have to give away some of the residual. That's the balance you're constantly focused on. How much

upside do you want to give up to help manage your cash position?

**Hunsberger, Credit Suisse:** When we think about forward-flow more broadly, in the context of loans as well, there's another point I think we're just starting to crack now. One of the points of feedback I hear a lot from issuers on the loan side is, they not only like the price and the volume and the terms they might get under a forward-flow arrangement, but also—one of the other points Ben was talking about—selling loans outright during the origination period is less cash intensive.

And also, because of risk retention in an ABS deal, sponsors might not be able to bring in third-party proceeds equal to what the total third-party bid could be on the asset class absent risk retention. That 5% wedge, that classic risk retention, is a material wedge when you think about trying to originate and sell. So this other benefit that we see on the forward-flow side is, (1) the originator of the loan is not going to be subject to retention rules for securitization, and (2) that means that the person who is going to be holding that loan, once it's purchased from the originator, can either hold it on the balance sheet or securitize it themselves. They might be a more efficient risk retention owner over time than somebody who needs every dollar of capital in the door on day one.

**PFR: My next question was going to be, 'What else could be holding back the market?' But maybe the market's doing great. What is the limit? Is it just how many assets can be originated?**

**Hunsberger, Credit Suisse:** If I were to make a prediction for the year ahead, it would be that this type of syndicated institutional investment, whether it's 144a, 4(a)(2) or otherwise, is going to apply to more asset classes than we're talking about today. You can apply ABS methodology, CLO methodology, all these types of diversified pool methodologies, to the C&I assets Matt was talking about, and to even larger assets as well, portfolios of utility-scale assets, or mixed portfolios that include utility-scale assets. We're actually just getting to a point where we're bringing efficient capital markets into the broader power and energy landscape. You see it on the energy side with



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PDP [proved developed and producing oil and gas asset] securitizations that have started to occur. You've had investors be forward-thinking on securitizing underlying leases, on thinking about efficient ownership and financing of transmission assets. So if the limitation is the total amount of assets that come into play, I would expect that pool of eligible assets to grow over a year or two, as we've seen in the total growth in new energy infrastructure in the U.S.

### **PFR: Does anyone else want to make any predictions for solar securitization in 2020?**

**Cohen-T-REX:** I think we'll see a continuation of 2019 versus 2018, which is more of each of these different types of transactions, 144a, 4(a) (2), and forward-flows of all types. I do agree that it's in a broader energy mix, in the same category with oil and gas. The more you have investors that have appetite for securitized products, on the whole, that's good, and that trickles down to this as it does to adjacent asset classes. An interesting question is what happens with the tax equity sunset. What's going to happen around that? It's early days but maybe securitization would actually have to take off to fill in the gap of institutional capital coming into the capital stack for every individual system, whether it's a residential system or a commercial system.

**Hunsberger, Credit Suisse:** It's a really interesting point. There's an argument that PPAs—whether utility-scale, C&I or residential—are being supported through the tax regime for a long period of time and that's not going away overnight. But, at least right now, as we speak today, it's in the sunset phase. If you follow that argument through, as those subsidies go away, the break-even price, absent material future changes and what the cost curve looks like, is going to be a higher-priced PPA and a higher cash price paid for the asset, if you're taking away your tax price paid for the asset. That means more debt finance is going to come into the asset class and that means, to Benji's point, solving across all those different streams in a larger amount.

**Henne, KPMG:** It may not be next year, but the first C&I deal will be a big market mover. And then as the tax equity investors take

a smaller and smaller piece, securitization will probably fill that gap, or other market-places will fill that gap. Speaking to some of the underlying assets that are available to be securitized, both residential and C&I, they don't have conduit deals to aggregate them, at least not as plentifully as they do in some more mature asset classes, but the underlying assets themselves, the raw materials, the residential contracts—whether it's loans or third-party ownership—they're still growing. **SEIA** just put out their Q3 market outlook. In 2018 the resi market in the U.S. grew 8%. Year-over-year in Q2 it grew another 8%. But most importantly, within that growth in Q2, approximately a quarter of all the new installations came from states outside of the top ten, which is a boost for diversification. Looking at some of the PPA deals, third-party ownership deals, California is regularly 40% of the collateral pool. But Maryland has just increased their renewable portfolio standards. Illinois has increased their inducements. That should boost some of the collateral that's available for securitization.

**Neglia, KBRA:** The way we predict volume on the loan side is to start with what headwinds or tailwinds are in place to either increase or decrease originations. In February 2018, everyone was talking about tariffs and how that's going to be a strong headwind—it's going to drive up costs to the detriment of origination volume. But it hasn't had the impact most people were predicting, mainly because the panels and the equipment represent a small share of the total costs. We've seen system costs continue to decrease. The other thing that people like to talk about is the phase-out of the ITC. At the end of 2019 it's going to go from 30% to 26%. But the ITC has accomplished what it was set up to do—help drive investment in solar financings. I don't think that dropping the ITC is going to have a material impact on residential originations. We're already starting to see some finance companies create products in advance of this step-down. Mosaic for instance, rolled out a straight amortizing loan that doesn't reamortize or require a prepayment. Overall, we believe originations are going to increase, for a variety of reasons. Consumers are more comfortable with the technology itself, they see their neighbors starting to have it. Addition-

ally, as you start combining solar and battery, it appeals to a different customer base. Several years ago, you had early adopters that were looking at it for a green standard, but now, customers are going solar for savings and to get off the grid. Especially in California with some of these systematic power-down times to prevent wildfires, being able to produce their own electricity is appealing, which can help drive origination volumes.

### **PFR: On the second Mosaic deal this year, there seemed to be more tranching relative to previous 144a deals. Is that something that is likely to become more of a feature of future 144a deals?**

**Neglia, KBRA:** I believe so. KBRA rated four classes of notes for Mosaic's 2019-2 transaction, AA- (sf) all the way down to B+ (sf).

**Hunsberger, Credit Suisse:** It's interesting. This touches on one of the things we talked about—this isn't an esoteric asset class anymore. How do we think about differences between investors? There's been historically more tranching on the loan side than on the lease and PPA side. The most tranches that lease-and-PPA has seen is two. And sometimes you have an unrated tranche as well. Whereas, on the loan side, you can have four-tranche issuances and there won't be a residual buy beyond that. We have started to get some feedback from investors saying: 'Can we think about time tranching these more? Can we think about even floating-rate structures?' As volume grows, as you need to think about the marginal investor's preference, to keep the total cost of capital down, we should explore some of those tools, whether it's on the loan side or third-party-owned side, and go out to market and get some feedback on how people think about some of those variabilities in how they would price a specific part of the asset class. You do have investors saying: 'I really like this space and it's great from an ESG perspective. But even with an eight-year ARD, it's too long for me.' If we can do a two-year tranche, like you might see on an auto deal or on a credit card deal, that could be very attractive to them. That's something that is collectively on us to think about as we continue to solve for the most efficient path of execution. ■

## MERGERS &amp; ACQUISITIONS ●

## 8minute Finds Buyer for Eland Solar & Storage Project

**Capital Dynamics** has penned a deal to acquire **8minute Solar Energy's** 400 MW Eland Solar & Storage Center in California.

Through its Clean Energy Infrastructure business, CapDyn has entered into a development partnership with 8minute for the equity financing of the project, which is located in Kern County. The \$1 billion project includes a 300 MW/1,200 MWh storage facility, making one of the largest in the world.

The financial terms of the deal were not disclosed.

8minute has been in talks with potential equity investors, lenders and tax equity investors for the financing of the project since late last year, as previously reported by *PFR* (*PFR*, 11/20). The financing, which is in the early stages, will include construction debt, tax equity and back-levered term debt.

Eland has a 25-year power purchase agree-

ment with **The Los Angeles Department of Water and Power** (LADWP), the largest municipal utility in the U.S., for 375 MW of its output, while the city of **Glendale** will buy an additional 25 MW. The project is located 70 miles north of Los Angeles, close to California City.

The contracts for solar generation are priced at less than \$20MW/Wh, a record for U.S. solar, according to 8minute.

"Eland is a breakthrough project, setting records for low-cost solar, and incorporates a large battery energy storage center that demonstrates solar's ability to power California's vibrant and growing economy 24/7," said **Tom Buttgenbach**, president and CEO of 8minute, in a statement.

8minute is overseeing construction of the project, which has already begun, with a view to bringing it online in 2022 and having it

fully operational in 2023. 8minute has a right to re-purchase a portion of the project once it comes online.

"Once operational, the solar project will be the second largest in the US," said **Benoit Allehaut**, managing director in Capital Dynamics' clean energy team, in a statement. "This is our fourth solar project delivering clean and affordable power to LADWP. Eland will also be the third hybrid solar plus storage plant in our portfolio, and we are very happy we will have 8minute Solar Energy as long-term equity partner. Tom runs the uncontested leading solar developer in the country, and it is a privilege to work together on this project."

Spokespeople for Capital Dynamics and 8minute either declined to comment or did not immediately respond to an inquiry regarding the use of advisers. ■

## PROJECT FINANCE ●

## NV Energy Launches Renewables RFP

**NV Energy** has issued a request for proposals to add renewable generation projects to its portfolio.

The RFP, issued on Jan. 21, is seeking solar, geothermal, wind, biomass and biogas projects with a minimum capacity of 20 MW. The utility will also consider both standalone energy storage systems

and storage systems that are integrated into renewable projects.

The tender comes hot on the heels of the **Public Utilities Commission of Nevada's** December 2019 approval of contracts for 1,190 MW of solar generation and 590 MW of battery storage to be built in Nevada by Jan. 1, 2024.

"We continue our commitment to our customers to expand our use of renewable resources while working to reduce energy costs for our customers," said **Doug Cannon**, NV Energy president and CEO, in a statement. "We expect these new projects to provide some of the lowest-cost renewable energy

available, which will directly benefit our customers."

Bids in the latest procurement round are due by 4 p.m. on March 9. An initial shortlist will be issued on April 24, and a final shortlist on May 22. Contracts will be executed on July 16.

Projects proposed by successful bidders will require the approval of the PUC, and should be operational by Dec. 31, 2025. ■

## Geothermal Sponsor Plots Financing Following PPA Award

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of construction of the 40 MW first phase of its proposed 140 MW plant. **Squire Patton Boggs** is serving as U.S. legal adviser.

Investment bank **Lazard**, meanwhile, is advising CTR on the project financing, which was put on hold in 2018 (*PFR*, 6/13/18).

CTR expects to launch the debt financing in the bank market in early 2021 to allow construction to begin in the middle of that year with an 18- to 21-month build time.

The financing could also include a tax equity component.

"We would probably look to raise tax equity

closer to commercial operations in 2023," says CTR's chief operations officer, **Jim Turner**. "It will depend on what appetite there is at that point in the tax equity market."

**Imperial Irrigation District** signed a 25-year PPA for 40 MW of the output of the complex on Jan. 7 with a starting price of \$69/MWh.

The contract includes a two-part escalator which will increase the pricing of the PPA by 0.5% annually for the first 12.5 years and 0.75% a year thereafter.

Turner and CTR's CEO **Rod Colwell** will lead the corporate and project finance efforts, aided

by former **Morgan Stanley** financial adviser **Antonio Bestard**, who joined CTR as financial controller last summer.

Convincing project finance bankers more used to financing low-risk renewables or riskier but well understood combined-cycle gas-fired projects is not expected to be easy. CTR will spend a large part of the coming year verifying and certifying the technical aspects of the geothermal resource.

The company is also developing a lithium mine on the site of the geothermal project, which is in the Salton Sea Geothermal Field in Imperial County. ■

## ● PROJECT FINANCE

# Wind Farm Scrapped in “Increasingly Difficult” Ohio

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would have brought significant value to Seneca County and the state of Ohio, wind energy development has become increasingly difficult in the state,” a spokesperson for the company tells *PFR*, “and we have made the decision to place our resources in other states where there is a greater potential for success.”

Ohio legislators voted to divert some \$200 million to struggling coal and nuclear plants last summer with a law, known as HB6, that also laid the groundwork to weaken the state’s renewable portfolio standard (*PFR*, 7/24/19).

The legislation was opposed by developers of renewable and gas-fired projects alike. **LS Power** said it would ditch plans for an expansion of its 700 MW dual-fuel simple-cycle Troy Generating Facility in Luckey, Ohio, if the legislation was passed.

A further blow to developers in Ohio landed in November when a decision by the **Public Utilities Commission of Ohio** (PUCO) threw plans for two solar projects in the state into disarray.

On Nov. 26, the PUCO rejected two solar power purchase agreements signed in 2018 by utility **American Electric Power Ohio**.

The 20-year PPAs were for two solar projects in Highland County—**Hecate Energy’s**

300 MW Highland project and **Open Road Renewables’** 100 MW Willowbrook project.

PUCO’s rejection of the PPAs left the sponsors looking for other offtake solutions such as large corporate or municipal customers or groups of consumers.

**“We were denied Plan A so we’re pursuing plan B, which is bilateral contracts with individual customers”**

“We were denied Plan A so we’re pursuing plan B, which is bilateral contracts with individual customers,” a person familiar with the situation told *PFR* in December.

Such deals have been done in Ohio before. **Google** signed an agreement with AEP Ohio in November to buy up to 100 MW of renewable energy (*PFR*, 11/5), while **Innervest Renewable Energy** recently signed a PPA with an undisclosed non-utility corporation for its 200 MW Hillcrest Solar project in Brown County (*PFR*, 12/18).

**EDP Renewables North America** has also had success contracting with non-utilities for renewable generation in Ohio. The company’s 126 MW Timber Road IV wind farm, also known as Paulding Wind Farm IV, has two 15-year PPAs with **Microsoft**. The sponsor was working with **JP Morgan** to secure a tax equity investment for the project last year (*PFR*, 7/9/19). ■

## Clearway Closes Community Solar Deal

**Clearway Energy Group** has closed debt and tax equity financing for a community solar portfolio spread across the U.S.

**CIT Bank** led the lender group providing the construction and term debt for the portfolio. The other lenders are **KeyBank Capital Markets** and **Silicon Valley Bank**. An undisclosed investor provided the tax

equity.

The 76 MW (DC) 21-project portfolio spans Illinois, Massachusetts, Minnesota, and New York—states with established community solar models. Most of the projects will begin operations this year.

Clearway has amassed 320 MW (DC) of operational community solar in the U.S. ■

## ● PPA PULSE

# Kentucky Gets Solar

Kentucky’s **Louisville Gas and Electric Company** and **Kentucky Utilities Company** have signed 20-year, fixed-priced renewable energy contracts with chemicals company **Dow Inc.** and automaker **Toyota** to provide power to the companies from the 100 MW Rhudes Creek solar farm.

The facility is proposed by sponsor **ibV Energy Partners**, which was the winning bidder last year in a request for proposals issued by the utilities for up to 200 MW of renewable

energy.

Rhudes Creek will be located in Hardin County, Tenn., and is expected to be operational by 2022.

The utilities have filed with the **Kentucky Public Service Commission** for the approval of the contracts with Dow and Toyota and for the PPA with ibV.

Half of the energy produced by Rhudes Creek will power Toyota’s manufacturing site in Georgetown, Tenn., with 25% of the output going to Dow’s silicones manufacturing facil-

ity in Carrolton, Tenn., and the remaining 25% serving the utilities’ other customers.

*Here is a round-up of the rest of this week’s PPA news:*

### TENNESSEE TITANS

Silicon Ranch has signed a power purchase agreement with the **Tennessee Valley Authority**, **Nashville Electric Service** and **Vanderbilt University** for the output from a new 35 MW solar project under the TVA’s Green Invest program

The partnership is the “first

of its kind” under the new program, which, according to the TVA, “matches demand for green power from large business and industrial customers with cost-effective renewable projects.”

The facility is as yet unnamed but is expected to be operational in Bedford County, Tenn., in the fall of 2022. The contract has a 15-year tenor.

Silicon Ranch and the TVA have partnered in the development of more than 30 solar projects in the region. ■



## PROJECT FINANCE ●

## Stonepeak Upsizes New England Power Loan

**Stonepeak Infrastructure Partners** has increased the size of the refinancing of its 1.6 GW New England Power portfolio of dual-fuel peakers from \$530 million to \$540 million.

The deal now comprises:

- a \$485 million term seven-year term loan, and
- a \$55 million revolving credit facility.

The deal has garnered commitments totaling in excess of \$1 billion from over a dozen lenders. The firm is aiming to close the deal by the end of January.

Price talk is 275 basis points over Libor with one 25 bp step-up in year four, as previously reported (PFR, 12/12).

**Investec** is sole bookrunner on the deal and has been joined by **Crédit Agricole**, **National Bank Financial** and **Nomura** as coordinating lead arrangers.

The New England Power portfolio is made up of the 1,445 MW Canal Generating Plant in Massachusetts and the 161 MW Bucksport Generation peaker in Maine.

Stonepeak reached out to banks for financing proposals earlier this year and mandated **Investec** to lead the deal in November, as previously reported (PFR, 11/6, 11/21).

### CANAL 1-2-3

The Canal plant has three peaking units, two of which, totaling 1,112 MW, have been online since 1968. The 333 MW simple-cycle third unit, in contrast, is brand new, having been brought online this year.

Stonepeak bought all three projects from **NRG Energy** and its then-subsidary **GenOn Energy** during the latter's recent restructuring in March 2018 (PFR, 3/23/18).

**MUFG** and **Investec** arranged the \$285 million acquisition financing for the two older units, while **Natixis** led on the \$200 million construction financing for unit three (PFR, 5/8/18). Both deals will be replaced with the New England Power financing.

### BUCKSPORT

The other asset in the portfolio, Bucksport Generation, was originally built in part to power a **Verso Paper Corp.** mill in the town of Bucksport in Hancock County, Maine.

Stonepeak acquired the asset last November from **AIM Development** (PFR, 10/2). Like the Canal units, it can run on oil as a secondary fuel.

Stonepeak holds the whole portfolio in its Stonepeak Infrastructure Fund II.

The same fund also owns the 116 MW RED Rochester behind-the-meter cogeneration facility in the Eastman Business Park in Rochester, N.Y., which Stonepeak recently put on the market for sale. ■

## LATIN AMERICA ●

## Sponsor Eyes Buyer for Panama LNG

The sponsor behind the Telfers LNG-to-power project in Panama, **Panama NG Power**, is in talks with a preferred bidder to take a majority equity stake in the project.

The developer has been working on a transaction with **Golar LNG** since October and a deal is expected to close in February, say sources close to the situation, who note that the process has been long and drawn out. Golar LNG representatives in London did not respond to inquiries.

**Macquarie Group** had also pre-

viously expressed an interest in the project, which comprises a 656 MW combined-cycle gas facility and an LNG jetty with a floating storage regasification unit in the city of Colón (PFR, 11/12/19).

Bankers at **Natixis** and **SMBC** in New York are waiting for the equity raise to advance before structuring a roughly \$700 million debt package for the project, having been appointed as coordinating lead arrangers.

Financial close is penciled in for June of this year, say deal watchers.

It is at least the third time LNG Group Panama has attempted to finance the project.

"It's a good project, and it doesn't have the problems it had the previous times around," says a deal watcher, though others remain more skeptical.

The project has been around for the last seven years. Panama NG Power obtained 20-year power purchase agreements through a public tender in 2013, but its license was canceled when the developer was unable to reach financial close by an October 2014

deadline. **INTL FCStone Securities** was the financial adviser at the time.

Telfers came back to the market for a second time with **Société Générale** as financial adviser in 2017 (PFR, 9/12/17) but the project did not work out at that time either. Project finance bankers in New York ascribe the lack of a deal in 2017 to the equity group at the time, which included Swiss commodities firm **Gunvor** and a little-known Chinese investor called **Gu Xin Group**. Project finance lenders found the deal unattractive because they were unfamiliar with Gu Xin and its track record. ■

## Engie Buys Transmission Project in Brazil

French developer Engie has acquired a \$831 million transmission project in Brazil from India's **Sterlite Power**.

The project has a 30-year concession contract for the construction, operation and maintenance of a 1,118.5 mile (1,800 km) transmission line, the development of a substation, and the

expansion of three substations in northern Brazil. Construction is expected to start later this year.

This is Engie's second transmission project in the country. The company won the 621.37-mile (1,000 km) Galha Azul project in December 2017 in an auction held by Brazilian regula-

tor Aneel.

Construction of the \$485.5 million Galha Azul project started in March 2018. It is slated to be online in August 2021.

During the past year, Engie has been increasing its presence in the Brazilian power market. In October, the company raised R\$1.26 billion (\$312 million) in debt to finance the first phase of its 605 MW Umburanas wind complex in the state of Bahia. ■

## ● LATIN AMERICA

# Alten Mandates Lenders for Mexican Solar

**Alten Energías Renovables** has mandated a commercial bank and two development finance institutions for the financing of a 250 MW solar project in Mexico.

Amsterdam-headquartered **ING** has won the mandate to structure the debt package along with Mexican development bank **Bancomext** and multilateral **IDB Invest**, after the sponsor started approaching commercial banks in November.

The size of the loan is expected to fall in the range of \$120 million to \$150 million, according to a person close to the deal. The tranche to be provided by IDB will be up to \$45 million. The financing is expected

to close in April or May of this year.

A deal watcher in New York says he is surprised with ING's involvement in the deal, as the bank is generally more conservative.

The project is the Puebla solar park, located in the state of Puebla, and an associated 3.6-mile (6 km) transmission line.

**Sojitz Corp.** owns a stake in the project, which will sell part of its output to corporate offtakers, leaving a portion to be sold spot.

Power purchase agreements with private offtakers have become increasingly common in Mexico since President **Andrés Manuel López Obrador** took office on Dec.

1, 2018, and decided to cancel the country's fourth long-term auction in February 2019 (PFR, 2/4/19).

The government's strategy is to increase state-owned utility **CFE's** presence in the energy market by having it own new plants itself under the *Obras Públicas Financieras* framework (PFR, 1/9).

Although not all investors are comfortable financing projects with corporate offtakers, it depends on the counterparty's financial health, their credit ratings—if they have any—and the details of the PPA.

The Puebla solar project is Alten's second in Mexico. The sponsor

closed the financing for its 290 MW Solem park in El Llano, Aguascalientes, in 2017. Sojitz Corp. acquired a 20% equity stake in Solem, with **Cubico Sustainable Investments** buying a 70% stake. Alten retains 10% of the equity in that project (PFR, 11/4/19).

IDB Invest, the **International Finance Corp.** (IFC), **MUFG**, **Bancomext** and **Banobras** provided the \$230 million project financing for the estimated \$368 million project.

Solem has a 15-year power purchase agreement with Mexico's **Cenace**, awarded in Mexico's second power auction in September 2016 (PFR, 8/14/17). ■

# Wind Developers Persevere in Argentina with DFIs and ECAs

◀ FROM PAGE 1

financed a 141 MW wind portfolio developed by **Genneia** in Patagonia (PFR, 7/18/19) and in September—shortly before the October election that was won by Fernández—the **U.S. International Development Finance Corp.** (DFC, formerly the Overseas Private Investment Corp.) approved \$230 million in loans for two **AES Corp.** wind farms in the country (PFR, 9/12/19).

Since the October election, financing activity has continued, with **YPF Luz** and **Genneia** both recently bringing wind projects to financial close.

## CAÑADÓN LEÓN

YPF Luz—a joint venture between local energy company **YPF** and turbine supplier **General Electric**—has signed a \$150 million financing for its 120 MW Cañadón León wind farm in Santa Cruz.

The debt is split into two tranches:

- a \$100 million loan, guaranteed by German export credit agency **Euler Hermes**, from **BNP Paribas Fortis**, the Belgian subsidiary of **BNP Paribas**, and
- a \$50 million loan from the DFC.

The Cañadón León project won a 20-year power purchase agreement for 99 MW of its output with Cammesa in round 2 of RenovAr in 2018 and will sell its remaining generation to YPF for 15 years.

YPF Luz has also found an equity investor for the project in the shape of **Equinor**. The Norwegian energy company has agreed to buy a 50% stake for \$30 million.

## VIENTOS DE NECOCHEA

The latest Genneia deal, meanwhile, is a \$51 million loan from Dutch development bank **FMO** for the 38 MW Vientos de Necochea wind project in Necochea, Buenos Aires province.

Genneia co-owns the project with state-run power company **Centrales de la Costa Atlántica**. It was awarded a 20-year Cammesa PPA

during round 1.5 of RenovAr.

The 15-year loan from FMO is guaranteed by Danish credit export agency **EKF**. The ECA wrap is justified in this case by the use of Danish turbines—supplied by **Vestas**.

FMO made the first disbursement under the loan on Jan. 15.

There is still work to be done to get some projects over the line, however. Some projects awarded contracts in RenovAr Round 2 have not yet reached financial close, such as **Empresa Provincial de Energía de Córdoba's** 40 MW Arroyo Cabral solar plant in Córdoba (PFR, 11/13/19). ■

# Banco do Brasil to Auction D.G. Solar

Brazilian state-controlled bank Banco do Brasil has issued a request for proposals for solar projects in the states of Bahia and Ceará.

The projects will be contracted under the distributed generation model, with the goal of offsetting the electricity used by the bank's agencies in these states.

The auction is scheduled for Feb. 3 and is expected to lead to the signing of 15-year contracts for a minimum generation capacity of 8 GWh/year in Bahia and 2 GWh/year in Ceará.

With these two projects, Banco do Brasil will

reach a total of seven distributed generation solar plants.

**EDP Brasil** previously won a contract in an RFP run by the bank, and is preparing to bring the associated solar project online in February. It is located in the municipality of Porteirinha, in Minas Gerais.

**Sices Brasil** is also building D.G. solar projects for Banco do Brasil in Araçuaí, Minas Gerais, Distrito Federal and Goiás, while **Yes Energia** won the procurement to build a unit in the state of Pará. ■

## LATIN AMERICA ●

## Eneva Plots Debt Offering to Finance CCGT in Roraima State

Eneva will issue R\$600 million (\$145 million) in debentures to fund part of the construction of the 117 MW Jaguatirica II combined-cycle gas-fired project, which the sponsor has developed according to its reservoir-to-wire business model.

Eneva is developing Jaguatirica II through a special pur-

pose vehicle called **Azulão Gerção de Energia**. The project will be supplied with gas from the Azulão gas field via a pipeline, commercially integrating upstream gas production and electric generation as Eneva has done elsewhere in the country.

Construction is about 28% complete.

The project was selected in 2019 to supply power to the Brazilian state of Roraima, the only state that is not interconnected to the national grid. The auction was held after the state suffered interruptions of electricity imports from Venezuela.

Under its PPA, the power plant needs to commence operations

before June 2021.

The debt issuance will represent roughly 33% of the project's expected R\$1.8 billion total cost. The remaining investment will be funded with a combination of the company's own cash and bank loans or with institutional investors, in a strategy yet to be defined. ■

## Sharma Departs IFC

The IFC's chief investment officer **Arun Sharma** has left the multilateral agency after 30 years.

He established a financial and development advisory firm called **Grovepike Associates** in 2018 and began his duties as its full-time president this month.

He had worked at the IFC's global financial markets department in Washington, D.C., prior to which he was head of global structured finance and founded the IFC's securitization business.

Sharma joined the IFC in 1990 and has worked across a range of sectors, including infrastructure and climate finance in Latin America.

Before joining the IFC, he worked at the **Reserve Bank of India**. ■

## Ibereólica Plots Chile Solar Development

Spain's **Grupo Ibereólica** is plotting the development of a pair of solar plants in Chile totaling 500 MW.

The project, collectively called Antofagasta and located in the Maria Elena commune in the region of Antofagasta, will require a total investment of \$532 million, according to filings with Chile's **Environmental Evaluation Services**.

The two solar facilities each have a capacity of 250 MW and will share a 220 kV substation and a transmis-

sion line that will inject the project's output into Chile's National Electric System grid, effectively making them one project.

If financed and built, the two-phase project would be the largest solar facility in the country. The second largest would be the 400 MW Sierra Gorda solar project being developed by **Enel**, also in Antofagasta (PFR, 12/5/19).

Construction on the Antofagasta project is expected to start by April 2024. ■

## PEOPLE &amp; FIRMS ●

## SoftBank Grows U.S. Energy Team



Gianluca Signorelli

Softbank subsidiary **SB Energy** has brought in a finance official in the U.S. from a solar developer, while also making several other hires on the project development side.

**Gianluca Signorelli** came on board this month as vice president, structured finance, having previously worked at **Lightsource BP**.

The **NRG Energy** structured finance alumnus had been with Lightsource since mid-2018 (PFR, 9/19/18).

His duties at SB Energy will include overseeing a tax equity raise for the development stage solar portfolio that the company acquired from **Intersect Power** last year (PFR, 12/5). SB is also on the lookout for a senior structured finance manager to support Signorelli.

The SoftBank outpost has also boosted its development capabilities, recruiting **Jeff Spinardi** as project manager, operations,

from **Sterling and Wilson** and of **Cynthia Wang** as V.P., procurement, from **Zymergen**. Both are former **SunEdison** staffers. ■

## MORE ONLINE ●

### SPRUCE SNAPS UP ROOFTOP SOLAR PORTFOLIO

Residential solar company **Spruce Finance** has acquired a 31.3 MW portfolio of rooftop solar assets spread across nine U.S. states from **Atalaya Capital Management**.

FOR THE FULL STORY, VISIT [WWW.POWERFINANCERISK.COM](http://WWW.POWERFINANCERISK.COM)

### SOLTAGE SIGNS FIRST SOLAR PORTFOLIO SALE

Distributed solar developer Soltage has closed its first ever solar portfolio sale, following a competitive auction process run by the renewables team at **Fifth Third Bank**.



## ● PEOPLE &amp; FIRMS

## Senior Changes at NY Green Bank

**Nicholas Whitcombe**, who founded the project finance team at NY Green Bank, left the renewables-focused lender at the end of last year with **Kim Erle** coming on board as a managing director shortly thereafter.

Whitcombe was a founding member of the state-sponsored institution in 2014 and oversaw investments of more than \$1 billion in his role as co-head of investment and portfolio management (PFR, 5/8/14).

The lender's other managing director and co-head of investment and portfolio management is **Andrew Kessler**, who joined in 2018.

NY Green Bank has a mandate to support less traditional project finance transactions, ranging from back-leverage for residential solar tax equity deals in the early days to construction and term debt for community

solar and now solar panel safe harbor loans more recently (PFR, 12/21/17).

Last year, the institution also expanded into utility-scale wind, participating in loans to support **The Carlyle Group's** acquisition of **Noble Environmental Power's** 612 MW wind portfolio and **BlackRock's** refinancing of five wind farms bought from **EverPower Wind Holdings** (PFR, 3/4/19, 12/8/17).

Whitcombe began his career in commercial lending with junior roles at **NatWest**, **Industrial Bank of Japan** and **ING Barings** before moving to **Fleet** and then **CIT Group** (PFR, 4/25/04). His last private sector project finance role was at **Jefferies** from 2007 to 2009.

He then moved over to the public sector, spending five years with the U.S. **Department of Energy's** Loan Programs Office

before establishing NY Green Bank. Whitcombe declined to comment on his next move.

### NEW MANAGEMENT

NY Green Bank appointed Erle, a sustainability professional with a background in asset management, as an M.D. this month.

Erle was most recently a financial and strategic adviser on energy efficiency and retrofit projects with **Sunset Green Home**, where she was managing partner. She also previously worked as a portfolio manager in the retrofit project business of **Deutsche Bank's** real estate fund management business, **RREEF**.

NY Green Bank is also looking to fill two more senior positions and is in the process of interviewing candidates. ■

## ● FUND NEWS

## Energy Capital Partners Closes Fund IV

Energy Capital Partners has announced the closing of its ECP Fund IV with capital commitments of \$3.3 billion.

ECP also raised an additional \$3.5 billion for co-investment opportunities over the last two and a half years, the majority of which was for its landmark \$17 billion take-private acquisition of **Calpine Corp.** (PFR, 8/18/17).

The fund was launched in late December 2017 and targets \$6 billion in commitments, with a hard cap of \$6.5 billion. A \$500 million first close was achieved shortly afterwards, and a second one at \$1 billion in February 2018. Third close occurred in March 2018 with the vehicle raising \$2 billion.

In April 2018, **Teacher Retirement System of Texas** committed \$150 million to the fund.

**Kirkland & Ellis** is providing legal advice, **Deloitte** is acting as fund auditor and **Gen II Fund Services** as fund administrator.

Fund IV will continue ECP's strategy of investing in infrastructure within the core sectors of gas-fired generation, renewables and energy storage, midstream, and environmental infrastructure, while avoiding upstream energy.

With this Fund IV close, ECP's total commitments across all of its funds and co-investments now aggregate more than \$20 billion. ECP funds include over 600 limited partner investors from North America, Europe, Asia and the Middle East.

Fund IV already has completed four investments representing around \$1.4 billion of equity commitments across each of ECP's core sectors.

In power generation, the fund has an own-

ership position in **Calpine**, North America's largest generator from natural gas and geothermal resources with a fleet of 78 plants totaling 26 GW and no exposure to coal.

In renewables and storage, it owns **Convergent Energy + Power**, a developer of storage solutions in North America.

The firm is meanwhile in the process of selling renewables developer and operator **Terra-Gen**, which it holds through its third fund, Energy Capital Partners III. ■

## Macquarie Infra Partners Registers North American Fund V

**Macquarie Infrastructure Partners**—the North American division of **Macquarie Infrastructure and Real Assets** (MIRA)—has launched its fifth North American fund.

A U.S. **Securities and Exchange Commission** document filed on Jan. 16 marks the launch of the fund, Macquarie Infrastructure Partners V.

The vehicle's predecessor—Macquarie Infrastructure Partners IV—is a 10-year, closed-ended, unlisted fund managed by

MIRA. The vehicle predominantly invests in core and core-plus infrastructure in the telecoms, utilities, transport, power and waste management sectors in the U.S. and Canada.

The fund targeted between seven and 10 assets. MIP funds invest predominantly in operational assets, but have a mandate for investing up to 25% of capital in greenfield projects.

Final close on MIP IV was reached at the \$5 billion hard cap in January 2019. ■