Power Finance & Risk

Exclusive Insight on Power M&A and Project Financing

By the publisher of GlobalCapital

PROJECT FINANCE

MERGERS & ACQUISITIONS

PEOPLE & FIRMS

Tenaska Refis Project with Green Bond

The independent power producer has closed a refinancing of a solar project via a private placement.

Dayton Power & Light Takes Bids

The Ohio-based utility is in the second round of an auction to sell its entire portfolio of assets.

Ex-Morgan Stanley Banker Joins Solar Shop

A former banker has joined a Colorado-based solar developer as an executive and group head.

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Panda Reworks PJM Project with South Korean Capital

Page 5

Richard Metcalf

Panda Power Funds is revising the structure of a financing for a greenfield gas-fired project in Maryland that has attracted interest from South Korean investors.

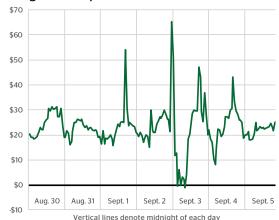
The Dallas-based private equity firm mandated BNP Paribas, ICBC and Investec to arrange a debt financing for the 990 MW Mattawoman project late last year (PFR, 11/29), but the bank group is in flux, says a deal watcher.

BNP Paribas and Investec are continuing to work on the deal, but ICBC is no longer involved, he says, adding that the sponsor is modifying the transaction to enhance its credit and make it more appealing to investors.

A representative of ICBC in New York did not respond to an inquiry and officials at BNP Paribas and Investec, also in New York, PAGE 2 »

PJM Aggregate Spot Price **PEPCO Transmission Zone**

Aug. 30 to Sept. 6



Panda's Mattawoman project is located in the PEPCO zone of PJM. Source: PJM Interconnection

Sponsor Closes Debt, Tax Equity Financing for Solar Portfolio

Olivia Feld

Greenwood Energy has closed a \$52.8 million debt and tax equity financing for a 26 MW portfolio of utility-scale solar assets.

The deal is the fourth portfolio financing by the New York and Boston-based sponsor since its first in 2013, Jonathan Cole. senior counsel at Greenwood Energy, tells PFR.

Santander provided the debt financing for the portfolio and U.S. Bank subsidiary U.S. Bancorp Community Development Corp. supplied a tax equity investment, the company announced in a statement on Sept. 5.

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It is the first time that Santander has worked with Greenwood PAGE 6 » Energy and the

CPV to Fire Up **N.Y. Project Despite Pipeline** Setback

Richard Metcalf

Competitive Power Ventures plans to bring its 720 MW Valley Energy Center gas-fired project online using its back-up fuel, oil, after the **New York Department** of Environmental Conservation denied a water certificate to a pipeline project that is intended to supply the facility with natural gas.

The state regulator wrote to Millennium Pipeline Co., the developer of the 7.8-mile Valley Lateral pipeline, on Aug. 30 to inform the company that its application for a water quality certificate was conditionally denied.

The DEC cited an "inadequate and deficient" environmental review of the project by the U.S. Federal Energy Regulatory Commission as the reason for the denial.

On the same day, the DEC filed a motion with FERC requesting the reopening or rehearing of FERC's November PAGE 5 »

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PROJECT FINANCE

Panda Reworks PJM Project with South Korean Capital

« FROM PAGE 1

declined to comment.

Panda is considering including a mezzanine debt tranche in the deal and a consortium of South Korean financial institutions, including **NH Financial Group**, is looking to participate.

"NH Financial Group is investing a lot in Mattawoman," says a second deal watcher. "Debt, mezzanine and some equity. They are pretty confident they can successfully close the deal."

A representative at NH Financial in Seoul, South Korea, declined to comment.

Panda was initially looking for between \$600 million and \$650 million of debt for the \$1.2 billion project and was aiming to tie up with an equity investor in the first quarter of this year. **Whitehall & Co.** is advising on the equity raise.

Whether one or more equity investors has been lined up for the project could not immediately be learned. **Brian Burchfield**, who is leading on the transaction for Whitehall in New York, declined to comment.

LOWER LEVERAGE

Sponsors seeking to finance gas-fired projects in PJM have had to lower their leverage expectations since the disappointing results of the grid operator's most recent capacity auction were announced in summer (PFR, 5/24).

How this has affected Panda's plans and the tenor of the debt the firm intends to raise remains unclear.

The Mattawoman project is located about 12 miles southeast of Washington, D.C., in Prince George's County, Md., and will interconnect with **Potomac Electric Power Co.**

Capacity cleared the base residual auction for delivery year 2020/2021 at \$86.04/MW-day in PEPCO's territory, down from \$100/MW-day for 2019/2020.

A representative of Panda in Dallas did not respond to multiple inquiries.

Deal watchers have also tipped **Advanced Power**'s 1.1 GW South Field project in Columbiana County, Ohio, and **Clean Energy Future**'s 940 MW Trumbull project in Trumbull County, Ohio, as likely candidates to reach financial close before year-end.

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

GENERATION AUCTION & 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		
•	Abengoa	Norte III (907 MW Gas)	Samalayuca, Mexico	Carl Marks	Macquarie Capital and Techint Engineering & Construction have closed their acquisition of the project (see story, page 9).		
	Ares-EIF	Newark (705 MW Gas)	Newark, N.J.	Citi	Indications of interest were expected this summer (PFR, 7/3).		
		Plum Point (670 MW Coal)	Osceola, Ark.	Citi	Bids for the portfolio were due the first week of June (PFR, 5/30).		
		Carneys Point (262 MW Coal)	Carneys Point, N.J.				
		Logan (219 MW Coal)	Logan Township, N.J.				
		Morgantown (62 MW Waste coal)	Morgantown, W.Va.				
	Ares-EIF, I Squared Capital	Oregon Clean Energy Center (869 MW Gas)	Lucas County, Ohio	Barclays, Credit Suisse	A sale process for the project is underway (PFR, 5/15).		
	Apex Clean Energy	Portfolio (12 GW, Wind, Solar)	U.S., Canada	CohnReznick Capial A sale process for the developer has moved into a second round (PFR, 8/14).			
	Calpine	Entire portfolio (26 GW)	U.S.	Lazard (seller), Barclays (buyer)	A consortium led by Energy Capital Partners has agreed to acquire the company (PFR, 8/28).		
	Canadian Solar	Portfolio (703 MW DC Solar)	U.S.	BAML, Scotiabank	Canadian Solar is in talks with a potential buyer for its U.S. portfolio (PFR, 8/21).		
	Constellation	Albany Green Energy (46 MW Biomass)	Albany, Ga.		DCO Energy is acquiring a 49% stake in the project from the Exelon subsidiary (PFR, 8/28).		
	Competitive Power Ventures	Benson (62.3 MW Biomass)	Swift County, Minn.		Xcel Energy's Northern States Power Co. is acquiring the project (PFR, 9/5).		
•	Consórcio Guimarania	Guimarania (60 MW Solar)	Minas Gerais, Brazil		Canadian Solar has acquired the project (see story, page 9).		
	Dayton Power & Light	Portfolio (973 MW Gas)	Ohio, Indiana		DPL is seeking a buyer for the assets (see story, page 8).		
	Diamond Generating Corp.	Goshen II (124.5 MW Wind, 37.5%)	Bonneville County, Idaho		ArcLight Capital Partners is acquiring equity stakes in the projects (PFR, 9/		
		Rockland (79.2 MW Wind, 50%)	Power County, Idaho				
	Edison International	SoCore Energy (160 MW DC Distributed Solar)	U.S.	Marathon Capital	Edison International has launched a formal sale process for the subsidiary (PFR, 8/28).		
	Energy Capital Partners	Wheelabrator Technologies (1.2 GW Biomass)	U.S., U.K.		ECP has put the company up for sale (PFR, 8/21).		
	Eversource Energy	Portfolio (1.2 GW Biomass, Coal, Hydro, Oil)	New Hampshire	JP Morgan	The auction for the assets is in a second round and final bids are due in August (PFR, 7/3).		
•	FirstEnergy	Bath County (713 MW Hydro)	Warm Springs, Va.	Barclays (seller)	FirstEnergy has renegotiated its purchase agreement with buyer LS Power, which will pay \$100 million less than it initially agreed to and will now acquire Buchanan in addition to the other five projects that have been included in the deal since last year (see story, page 11).		
		Springdale (638 MW Gas)	Springdale Township, Pa.				
		Chambersburg (88 MW Gas)	Guilford Township, Pa.				
		Gans (88 MW Gas)	Springhill Township, Pa.				
		Hunlock Creek (45 MW Gas)	Hunlock Creek, Pa.				
		Buchanan (43 MW Gas)	Oakwood, Va.				
	GE Energy Financial Services	Fairview (1,050 MW Gas, 25%)	Jackson County, Pa.	Citi	GE EFS is marketing its stake in the project (PFR, 9/5).		
	Green States Energy	Portfolio (18.7 MW Solar)	Massachusetts, New Mexico and North Carolina		BlueNRGY has signed a letter of intent to acquire the company (PFR, 8/28).		
	Infinity Renewables	(6.6 GW Wind, Solar)	U.S.	CIBC	The company is for sale (PFR, 6/5).		
	Kenon Holdings	IC Power (3,894 MW Gas, Hydro, Oil, Wind)	Latin America, Caribbean, Israel		Kenon has entered negotiations to sell the subsidiary (PFR, 7/31).		
	LS Power	Carville (501 MW Gas)	St. Gabriel, La.	RBC Capital Markets	LS Power has hired RBC to sell the merchant facilities (PFR, 8/14).		
		Hog Bayou (237 MW Gas)	Mobile, Ala.				
	Morgan Stanley	NaturEner USA (399 MW Wind)	Montana	Morgan Stanley	Morgan Stanley is selling NaturEner, which owns development wind assets in Alberta as well as the 399 MW operational wind portfolio in Montana (PFR, 5/15).		
•	ReneSola	Portfolio (24 MW Solar)	North Carolina		Panda Green Energy Group has agreed to acquire the assets (see story, page 9).		
•	Starwood Energy Group Global, Tavistock Group, individual investors	Gainesville (100 MW Biomass)	Gainesville, Fla.		The City of Gainesville is acquiring the asset (see story, page 8).		
	Terra Firma	EverPower Wind (752.25 MW Wind)	U.S.	Barclays, KeyBanc	Terra Firma is marketing the U.S. wind shop, whose assets also include an up-to-1,759 MW development pipeline (PFR, 3/6).		
	Westar Energy	Portfolio (6.7 GW Coal, Gas, Wind)	Kansas, Missouri, Oklahoma	Guggenheim (seller), Goldman Sachs, Barclays, Lazard (buyer)	Westar and Great Plains have begun the process of refiling for their renegotiated merger (PFR, 9/5).		

New or updated listing

 $\textit{The accuracy of the information, which is derived from many sources, is deemed \textit{reliable but cannot be guaranteed.} \\$

To report updates or provide additional information on the status of financings, please call Fotios Tsarouhis at (212) 224 3294 or e-mail fotios.tsarouhis@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
	Advanced Power	South Field (1.1 GW Gas)	Columbiana County, Ohio	GE EFS	Debt	ТВА	ТВА	GE EFS is left lead on the debt raise. Other joint lead arrangers will be selected later this year (PFR, 5/1).
	American Power Ventures	Renaissance (1 GW Gas)	Greene County, Pa.	Fieldstone (adviser)	Debt, Equity	\$900M		Fieldstone Private Capital Group is raising debt and equity for the project (PFR, 4/17).
	Canadian Solar, EDF	Pirapora I (150 MW Solar)	Minas Gerais, Brazil	BNDES	Debt	R\$529M (\$163M)		The financing represented the development bank's first loan to a solar project (PFR, 8/14).
	Capital Dynamics	California Flats (280 MW Solar)	Monterey County, Calif.	Allianz GI, Hana, IFM	Debt	\$270M	20-yr	Capital Dynamics acquired the project from First Solar and closed financing for it on the same day, Aug. 21 (PFR, 8/28).
				NordLB, Rabobank	Bridge Loan	\$450M	Construction	
				Goldman Sachs, US Bank	Tax Equity	\$450M		
		Mount Signal 3 (328 MW Solar)	Calexico, Calif.	Allianz GI, Samsung	Debt	\$250M	20-yr	Capital Dynamics closed financing for the project, which it acquired from SunEdison earlier this year on Aug. 21 (PFR, 8/28).
				NordLB, Santander	Bridge Loan	\$250M	Construction	
				Wells Fargo	Tax Equity	\$250M		
	Clean Energy Future	Trumbull (940 MW Gas)	Trumbull County, Ohio	BNP Paribas (financial adviser)	Debt	ТВА		Deal watchers have tipped the Trumbull project to reach financial close before the end of 2017
					Equity	TBA		(see story, page 1).
	EDP Renewables North America	Hog Creek (66 MW Wind)	Hardin County, Ohio	BNY	Tax Equity	TBA		Bank of New York Mellon, a relationship investor of EDP's, will invest tax equity in the project (PFR, 8/21).
		Waverly (199 MW Wind)	Coffey County, Kan.	JPM (50%), New York Life (50%)	Tax Equity	ТВА		JP Morgan and New York Life are acquiring Google's tax equity interest in the project (PFR, 8/14).
	EDF Renewable Energy	Nicolas-Riou (224.25 MW Wind)	Bas Saint Laurent, Québec	ТВА	Debt	≤\$500M		EDF and its co-owners, groups representing several municipalities and a First Nation, are seeking debt financing for the project (PFR, 7/10).
	EIG Global Energy Partners	Cerro Dominador (210 MW Solar)	Antofagasta, Chile	ТВА	Debt	ТВА		The sponsor is aiming to close a second round of financing for the project by the end of the year (PFR, 9/5).
	Enel Green Power North America	Red Dirt (300 MW Wind)	Kingfisher and Logan counties, Okla.	Allianz, MUFG	Tax Equity	\$340M		Allianz and MUFG are investing tax equity in the project, which has offtakes with T-Mobile and the Grand River Dam Authority (PFR, 8/28).
	Greenwood Energy	Portfolio (26 MW Solar)	Florida, New York, Vermont	Santander	Debt	\$52.8M		Greenwood has closed the debt and tax equity financing (see story, page 1).
				U.S. Bank	Tax Equity			
	Invenergy	Campo Palomas (70 MW Wind)	Salto, Uruguay	DNB, IIC	Private Placement	\$135.8M	19.5-yr	The private placement refinances a construction loan from DNB and the Inter-American Investment Corp. (PFR, 8/14).
		Wind Catcher (2 GW Wind)	Cimarron and Texas counties, Okla.	ТВА	Debt	\$2B		Invenergy is preparing to raise financing for the project (PFR, 7/31).
	Panda Power Funds	Mattawoman (990 MW Gas)	Prince George's County, Md.	BNP, Investec	Debt	ТВА		ICBC is no longer a co-lead arranger. NH Financial
				Whitehall	Equity	ТВА		Group is said to be interested in participating in every part of the capital stack (see story, page 1).
	Pattern Development	Henvey Inlet (300 MW Wind)	Ontario	ТВА	Debt	ТВА		Pattern is seeking debt for the project (PFR, 6/19).
	Quantum Utility	Moundsville (643 MW	Marshall County, W.Va.	ТВА	Debt	ТВА		Quantum could launch a debt financing for the project this year (PFR, 2/6).
	Generation	neration Gas)		BNP Paribas	Equity			
•	Tenaska Corp.	Imperial Solar Energy Center West (150 MW)	Imperial Valley, Calif.	Morgan Stanley, MUFG, BNP	Private Placement	\$400M		Tenaska has closed a refinancing of the project (see story, page 5).
	Tyr Energy	Hickory Run (1 GW Gas)	Lawrence County, Pa.	BNP, BAML, Crédit Agricole	Debt	ТВА		MUFG, Development Bank of Japan, SMBC, ABN Amro, National Australia Bank and Shinhan Bank participated in the loan (PFR, 8/28).
				Kansai Electric Power Co., Siemens Financial Services	Equity	ТВА		Kansai and Siemens have acquired equity stakes in the project (PFR, 8/21).

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 Managing Editor Olivia Feld at (212) 224-3260 or e-mail olivia.feld@powerfinancerisk.com

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PROJECT FINANCE

CPV to Fire Up N.Y. Project Despite Pipeline Setback

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of the pipeline.

2016 order issuing a certificate for the construction and operation

Gary Lambert, president and ceo of CPV in Braintree, Mass., strongly criticized the DEC's decision, describing it as "without merit and disappointing", in a statement issued on Aug. 31.

"Millennium is awaiting issuance of a notice to proceed with construction from the Federal Energy Regulatory Commission, as the state has waived its right to deny the permit because DEC exceeded its statutory limit of 12 months to rule by nearly a year," he wrote.

Millennium submitted its application for the water quality certificate to the DEC on Nov. 23, 2015.

The DEC's decision to deny the pipeline a water permit is not based on the direct environmental impact of the pipeline, but rather on the future greenhouse gas emissions of the CPV Valley Energy Center project, which is located in Wawayanda, New York, and is about 80% complete.

REGULATOR'S REASONING

Explaining the rationale for its denial, the DEC cites the Aug. 22 decision of the U.S. Court of Appeals for the District of Columbia Circuit to vacate a FERC order authorizing three gas pipeline projects, collectively known as the Southeast Market Pipelines, that would supply natural gas to a generation

project in Martin County, Fla., pursuant to a challenge by the Sierra Club.

"The D.C. Circuit found that [greenhouse gas] emissions from the burning of natural gas that will be transported by the Southeast Market Pipelines project will contribute to climate change and are reasonably foreseeable indirect effects that must be considered by FERC in its [National Environmental Policy Act] review," the DEC wrote in its Aug. 30 motion.

CPV's Lambert argues that replacing older

"The decision completely ignores the significant improvements to air quality that the addition of newer. more efficient generation in New York is having"

facilities with new gas-fired combined-cycle generation projects actually reduces greenhouse gas emissions.

"The DEC's regulatory responsibility was to rule on a water quality certificate. Instead, it issued a confusing denial based on air emission considerations which have been exhaustively studied and are part of the record which the DEC itself used to issue the required air permits for the CPV Valley Plant several years ago," he wrote. "The decision completely ignores the significant improvements to air quality that the addition of newer, more efficient generation in New York is having."

"COLLATERAL ATTACK"

The CPV Valley Energy Center was financed in June 2015 with a roughly \$540 million construction-plus-five-year mini-perm arranged by MUFG and Crédit Agricole (PFR, 6/15/15).

Diamond Generating Corp. acquired a stake in the project as part of the \$985 million debt-and-equity financing.

"Our financial partners, including a consortium of lenders, placed their trust in the state by committing significant capital based on the many permits and approvals issued for the project by numerous state agencies over the course of 7 years," wrote Lambert.

"For the DEC to take the position that air emissions are a concern after the project has undergone a comprehensive permitting review and is 80% complete is a collateral attack and may impact the ability for the state to attract investment required to build new infrastructure in the future," he adds.

A spokesperson for the DEC in Albany did not directly respond to Lambert's criticisms, but said that the regulator "subjects all applications for environmental permits to an extensive and transparent review process that encourages public input at every step, and DEC's determination included consideration of nearly 6,000 public comments."

Tenaska Refis Solar Project with Private Placement

Tenaska has closed a refinancing of its 150 MW Imperial Solar Energy Center West project in California through a private placement.

Morgan Stanley, MUFG and BNP Paribas acted as co-placement agents for the issuance of \$400 million of senior secured notes.

The tenor and pricing of the notes was not disclosed by the Omaha, Neb.-based sponsor. Greg Van Dyke, the company's cfo, was not immediately available for comment.

MUFG and BNP Paribas are also providing letters of credit and working capital facilities as part of the financing.

Rating agency Kroll has given the private placement a BBB rating. The notes have been desig-

nated as green bonds, according to a statement issued by the sponsor on Sept. 6.

Located in Imperial Valley, Calif., the project has a 25-year offtake agreement with San Diego Gas and Electric and has been operational since April 2016.

Riverside Risk Advisors helped Tenaska design and execute an interest rate risk management program for the project.

MUFG, BNP Paribas, Royal Bank of Canada. Santander Bank. Helaba and DZ Bank arranged a construction-plusseven-year loan for the project when it was initially financed in 2014. The pricing and tenor of the original deal were not disclosed (PFR, 6/19/14).

\$400M

The size of the senior secured notes issuance backing the project.

PROJECT FINANCE

Sponsor Closes Debt, Tax Equity Financing for Solar Portfolio

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fourth consecutive

tax equity investment the sponsor has sealed with U.S. Bank. The terms of the deal were not disclosed.

CCA Capital acted as Greenwood's financial adviser and Boston-based **Foley Hoag** as its legal counsel on the transaction.

Competition has increased between prospective lenders to finance utility-scale assets, says a project finance banker, adding that the trend is causing banks, in particular, to look at smaller-sized deals.

"The market is shrinking and there's a lot of competition, especially in renewables," says

the banker

The projects in Greenwood portfolio all have investment grade offtakers, says Cole. "The credit is very strong on these projects," he says. "It's never easy to do a closing, but this is exactly the type of projects that all project finance lenders want to lend against."

The portfolio consists of six utility-scale projects in Florida, Vermont and New York. The offtake agreements vary in length but are all for 20 years or longer, says Cole, who adds that the counterparties include the **Orlando Utility Commission**, **Green Mountain Power** in Vermont and the **City of Ithaca** in New York.

Construction of the Florida and Vermont projects is finished and they are slated to be operational by the end of August and September, respectively. The New York projects are due to reach competition early next year.

Including these projects, Greenwood Energy has developed 84 MW of solar generation in the U.S., much of it in the North East. The sponsor is also active in Latin America, with an office in Panama and portfolios of generation assets in Panama, Peru and Chile.

A spokesperson for U.S. Bank did not respond to an inquiry and a representative for Santander declined to comment.

STRATEGIES

No Major Hurricane Damage at LNG Terminals, Says Ratings Agency

The LNG export terminals being built in Texas and Louisiana have so far not experienced major damage due to Hurricane Harvey, says **Fitch Ratings**.

"Early reports suggest a lower likelihood that Hurricane Harvey will adversely affect various liquefaction project ratings," wrote Fitch in a report issued on Aug. 31.

The agency rates the Free-

"The LNG export terminals being built in Texas and Louisiana have so far not experienced major damage due to Hurricane Harvey"

port LNG project in Quintana, Texas, and the Cameron LNG project in Hackberry, La. As of Sept. 8, the Freeport project is rated BBB with a stable outlook and Cameron LNG is rated A-, also stable.

"Each project has endured substantial rainfall that tested emergency preparedness and flood management systems." says Fitch in the report, adding that the facilities have experienced some disruption including temporary pauses on construction.

The report notes that the **Cheniere Energy** Corpus Christi facility in San Patricio County, Texas, which it does not rate, has sustained "only minor cosmetic impacts," according its owner. Cheniere also reported no interruption to operations at the site of another of its projects, Sabine Pass LNG, which Fitch rates BBB with a stable outlook.

The agency says it will continue to monitor the situation to assess the full impact of the storm on the projects it rates in the region.

Duke to Add 700 MW of Solar in Florida

Duke Energy Florida is planning to procure 700 MW of solar generation as part of a four-year plan in the Sunshine State.

The announcement by the St. Petersburg, Fla.-based utility was part of a revised settlement with the **Florida Public Service Commission**, which replaces a prior settlement agreed to in 2013.

In addition to accelerating the company's previous 10-year solar installation plan, the **Duke Energy** subsidiary has agreed to install a 50 MW battery storage pilot program and 500 electric vehicle charging stations.

The company has also announced that it intends to cancel plans to build the Levy nuclear project in Levy County. The project's reactors were supposed to be provided by **Westinghouse**, which declared bankruptcy earlier this year.

"There are hundreds of details to finalize as we advance 700 MW of solar in Florida," writes a spokesperson for Duke Energy Florida in an email to *PFR*. "We will of course utilize reasonable competitive solicitation processes per the settlement, and consider buying existing potential projects in any stage of development", she writes.

"Similar to Duke Energy Florida's 74.9 MW Hamilton Solar Power Plant that was just

> "There are hundreds of details to finalize"

announced, our future solar projects will be driven by constructability, location, and the ability to deliver low cost renewable power to our Florida customers."

The utility plans to begin construction on the Hamilton solar project in early 2018. How Duke plans to finance the project could not be established by press time.

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This Year's Can't-Miss Keynote Address Infrastructure's Role In The Energy Market And The Funding Behind It



Pat Eilers, Managing Director, BlackRock, Inc.

Industry Power Players Discuss Strategic Investment Moves



Esben Pedersen, Chief Investment Officer, Pattern Energy



Ravi Ganti, Senior Vice President, Portfolio Management and Strategy, Constellation



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Matthew Mazzucchi, Managing Director, Head, Power and Utilities Group, Houlihan Lokey



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MERGERS & ACQUISITIONS

DPL Takes Bids for Peaker Portfolio

Dayton Power & Light is in the second round of an auction to sell its 973 MW portfolio of peakers in **PJM Interconnection**.

Bidders in the auction for the gas and oil-fired projects have contacted banks to obtain acquisition finance proposals, says a deal watcher.

Whether DPL is working with a financial adviser on the sale could not immediately be learned.

"We're going through an extensive process with regard to the Ohio peakers," says a spokesperson for the company in Dayton, Ohio

DPL's peaker portfolio includes the 101 MW Yankee Street gas-fired project in Washington Township, Ohio, where the company also has a 1.1 MW solar project called Yankee Solar.

The company also owns three gas-fired units totaling 256 MW and one 10 MW oil-fired unit at the Tait facility in Dayton.

Through **AES Ohio Generation**, DLP owns a further four gas-fired units totaling 320 MW at the Tait plant and a 236 MW gas-fired project in Poneto, Ind., called Montpelier.

Finally, DLP owns a 25 MW gas-fired unit

at the Hutchings Station facility in Miamisburg, Ohio, having retired six coal-fired units at the site, and two 12 MW oil-fired projects—the Monument facility in Dayton

"The ultimate goal is to transform DPL into a stable and growing T&D business"

and the Sidney plant in Sidney, Ohio.

The sale is part of DPL's divestment from the generation business, which will allow it to focus solely on transmission and distribution.

"The ultimate goal is to transform DPL into a stable and growing T&D business," said **Thomas O'Flynn**, executive v.p. and cfo of DLP's parent company **AES Corp**. on its second quarter earnings call on Aug. 8.

"To that end, DPL is selling or exiting all of its 2.1 GW of coal-fired capacity by mid-2018 and is exploring strategic options for the remaining 1 GW of gas-fired peaking capacity," he added.

DPL committed to reduce its coal-fired capacity to zero as part of a rate case settle-

ment in January through retirements and asset sales (PFR, 1/31).

The company agreed to sell its 28.1% stake in the 1,324 MW Zimmer coal-fired plant in Moscow, Ohio, and its 36% stake in units 7 and 8 of the 740 MW Miami Fort coal-fired project to **Dynegy** on April 21 for a combined \$50 million in cash (PFR, 4/28).

The company has also said it will shutter the 600 MW Killen and 2,308 MW Stuart

"DPL is selling or exiting all of its 2.1 GW of coal-fired capacity by mid-2018"

coal-fired projects, both of which are in Adams County, Ohio, by June 2018.

DLP is also seeking to separately sell its

FAST FACT

973 MW

Total DP&L non-coal generation capacity for sale.

Municipal Utility to Acquire Biomass Plant

A municipal utility in Florida is acquiring a 100 MW biomass project from a group of investors including private equity firms **Starwood Energy Group Global** and **Tavistock Group**.

Gainesville Regional Utilities, which has a 30-year power purchase agreement with the Gainesville Renewable Energy Center, will acquire the facility from the consortium for \$750 million, according an asset purchase agreement filed with the U.S. Federal Energy Regulatory Commission on Sept. 5.

The utility company, which is

owned by the city of Gainesville, plans to close the acquisition on or before Nov. 24.

Starwood owns the largest share of the project, having acquired a 40.32% stake from **Tyr Energy** in 2011, when the project was still under construction (PFR, 1/20/12).

Family-owned engineering, procurement and construction contractor **Fagen** holds the next largest stake, at 17.7%, while Tavistock portfolio company **BayCorp** owns 17.2% and **Jim Gordon**, ceo of **Energy Management** and president of **Cape**

Wind Associates, owns approximately 14%.

The remaining ownership interests in the facility are divided among individual investors that each hold less than 10%.

American Renewables, an affiliate of Energy Management, developed the project and financed it with debt arranged by MUFG, Crédit Agricole, ING, Natixis, Rabobank and Société Générale (PFR, 4/13).

The rationale for the sale could not immediately be learned. Officials at Starwood in Greenwich, Conn., Tavistock in Windermere, Fla., and Fagen in Granite Falls, Minn., did not immediately respond to inquiries. Calls and e-mails to Jim Gordon in Boston were not returned. City officials in Gainesville could not immediately be reached.



Remaining contract life of Gainesville Regional Utilities' power purchase agreement. www.powerfinancerisk.com Power Finance & Risk

MERGERS & ACQUISITIONS •

Developer to Acquire ReneSola Assets

ReneSola has agreed to sell a 24 MW portfolio of solar projects in North Carolina to **Panda Green Energy Group**, having announced several other divestitures earlier this year.

The projects are expected to be online in December and are contracted with a local utility, according to a statement announcing the agreement.

The names, locations and sizes of the individual projects could not immediately be established. Representatives of ReneSola in Oakland, Calif., and Panda in Shanghai did not immediately respond to inquiries.

Duke Energy has power purchase agreements for several ReneSola projects in the state.

SALE MODE

The deal is the latest in a series of asset sales ReneSola has either agreed to or closed this year. In the first half of the year, the company sold a 6.75 MW project in North Carolina to **Greenbacker Renewable Energy** and two projects totaling 1.3 MW in Holyoke, Mass., to **C2 Energy Capital**.

Last month, it agreed to sell a 13.3 MW community solar portfolio in Minnesota to **Nautilus Solar** (PFR, 8/16).

Shanghai-based ReneSola owns 99.5 MW of shovel-ready solar projects in the U.S. and 8.9 MW in Canada, according to the company's earnings report for the first quarter of 2017.

The company was founded in 2005 and debuted on the **New York Stock Exchange** in 2008, peaking at around \$140 a share in the months after its listing. In August, however, the exchange put the company on notice for noncompliance with listing standards because its average market capitalization had fallen below the requisite \$50 million over the course of a 30-day trading period.

The company's chairman and ceo, **Xian-shou Li**, is in negotiations with a committee of independent directors to acquire its manufacturing and LED distribution business and convert \$200 million of trade payables the company owes to those businesses into shares, as part of the company's effort to retain its listing.

The company had \$678.6 million of debt at the end of the first quarter.

PANDA PROJECT

The buyer of the North Carolina portfolio, a Hong Kong-based company formerly known as **United Photovoltaics Group**, owns solar assets in 13 provinces and autonomous regions of China, including Tibet, as well as in the U.K.

The company made headlines earlier this summer when it completed the first 50 MW phase of a 100 MW panda-shaped solar project in Datong, Shanxi province.

Abengoa Offloads Norte III Project

Spain's Abengoa has completed the sale of its 907 MW Norte III combined-cycle gas-fired project in Mexico to **Macquarie Capital** and **Techint Engineering & Construction** in a deal that analysts say will have a \$33 million net positive effect on the seller's balance sheet.

Abengoa, which went through a lengthy debt restructuring last year to stave off insolvency, agreed the sale as part of its global divestment plan. New York-based advisory firm **Carl Marks** advised the company on the sale of the Norte III project.

An acquisition finance package for the project was launched into syndication in March. The size and tenor of the deal and the identities of the banks arranging the transaction could not immediately be established (PFR, 3/30).

The project was awarded a 25-year power purchase agreement with Mexico's **Federal Electricity Commission**

in 2015.

Besides the PPA, the new owners will also take on Abengoa's previous commitment to engineer, design and build the project and provide operation and management services for the duration of the contract. Abengoa will still build a water treatment facility for the plant, which is due to be operational in 2019.

At the time the PPA was awarded, Abengoa said the project would require a total investment of \$1.55 billion. The sale will bolster Abengoa's balance sheet by \$33 million, according to Spanish corporate research company Market Consensus.

The deal is the latest in a string of divestments that Abengoa has made globally as it looks to shore up its balance sheet. Other assets sold include a solar thermal plant in Israel and a desalination plant in China.

An Abengoa spokesperson did not respond to questions about the sale by press time.

Canadian Solar Buys Brazilian Project

Canadian Solar has bought the 60 MW Guimarania solar project in Brazil from a consortium of developers.

The Guimarania project comprises two 30 MW phases in the state of Minas Gerais which both won 20-year power purchase agreements in an auction run by Brazil's **Chamber for the Commercialization of Electric Energy** in 2015. The PPAs are priced at R\$290/MWh (\$91.77/MWh).

Construction is slated to start early next year and commercial operations are due to begin in the last quarter of 2018.

The seller, **Consórcio Guimarania**, is 49.95% owned by a subsidiary of **Solatio Energia**, 49.95% by **NSG Indústria de Construção e Participações Eireli - Líder**, and 0.01% by **Sindustrial Engenharia**, according to the **National Electric Energy Agency** (ANEEL).

"We will continue to evaluate additional opportunities in this important emerging market so as to accelerate the adoption of the affordable, reliable and clean solar energy across the country," writes **Shawn Qu**, chairman and ceo of Canadian Solar, in a statement.

In June, Canadian Solar sold an 80% stake in the 90 MW Pirapora II solar project in Brazil to **EDF EN do Brasil** (PFR, 6/20). ■

PPA PULSE

PPA Pulse: Solar PPA Pricing Falls Below \$30/MWh

While there has been no announcement yet of a sponsor signing a hedge contract for a solar project instead of a power purchase agreement, the price of solar generation is continuing to fall almost as low as wind.

Demonstrating this trend. Arizona's **Tucson** Electric Power recently inked a 20-year PPA with NextEra Energy Resources for the output of a 100 MW solar facility and accompanying 30 MW storage project in the state.

The solar portion of the PPA is priced at less than \$30/MWh, is reportedly the lowest price for solar recorded in the U.S.

In March 2016, a \$37/MWh PPA between the city of Palo Alto, Calif. And a Hecate Energy solar project was said to hold the record (PFR, 3/11/16).

The NextEra solar-plus-storage project. which was not named in the announcement of the PPA, is expected to be online by the end of 2019.

Here is a round-up of other offtake agreements signed or approved in the last four months:

TEXAS

- General Mills has signed a 15-year virtual PPA for 100 MW from the 150 MW Cactus Flats wind project in Concho County, Texas, that Renewable Energy Systems recently sold to Southern Power (PFR, 8/1). The project is expected to be online in the third quarter of 2018.
- Alterra Power Corp. inked a 13-year hedge with **Citigroup** for its 200 MW Flat Top wind project in Comanche and Mills counties, Texas, which was financed in summer and is expected to be online in the first half of 2018 (PFR, 5/26).

GEORGIA

■ Electric co-operative **Green Energy EMC** has agreed to purchase the output of four Silicon Ranch solar projects totaling 200 MW in Georgia. The co-op will resell the power to local co-operatives including **Sawnee EMC**, which will take 20 MW. The four unidentified projects are expected to come online over the next four years.

NEVADA

■ An **Ormat Technologies** subsidiary has received approval for a 26-year PPA priced at \$75.50/MWh for a portfolio of operating INDIANA and under-construction geothermal projects in Nevada. Under the contract, Southern California Public Power Authority will purchase 150 MW and resell it to the Los Angeles Department of Water and Power. The PPA will be served by nine "primary" facilities, including some that are online, under construction or already contracted under PPAs that are due to expire. A further 16 "secondary" facilities could replace or supplement the primary portfolio. Deliveries of generation under the portfolio PPA are due to begin in the fourth quarter of this year.

ILLINOIS

■ WPPI Energy has signed a 22-year PPA with Invenergy for the output of its 132 MW Bishop Hill III wind project in Henry County, Ill. The project is scheduled to be online in mid-2018. WPPI serves 51 member utilities in Wisconsin, Upper Michigan and Iowa.

CALIFORNIA

■ Southern California Edison has signed a 15-year PPA with **EDF Renewable Energy** for 125 MW of generation from the 500 MW Maverick solar project near Desert Center, Calif. The contracted delivery date is Dec. 1, 2020.

MINNESOTA

■ The Southern Minnesota Municipal Power Agency has a signed a long-term PPA with EDF Renewable Energy for the output of the 100 MW Stoneray wind project in Pipestone and Murray counties, Minn. EDF plans to begin construction in early 2018 and bring the project online in December of the same year. The project will begin supplying the municipal utility under the PPA in 2020.

NORTH DAKOTA

■ Capital Power Corp. has signed a 12-year hedge with an unidentified "investment grade U.S. financial institution" that will cover 87% of the output from its 99 MW New Frontier Wind project in McHenry County, N.D. The project is slated to be online in December 2018. The sponsor intends to raise The Colorado Springs Utilities Board has tax equity to finance the project.

■ EDP Renewables North America has inked a virtual PPA with Indiana-based power technology manufacturer **Cummins** for a 75 MW expansion of its 600 MW Meadow Lake wind project near Brookston and Chalmers, Ind. Cummins says the contract will meet the demand of its Indiana facilities.

PENNSYLVANIA

■ Goldman Sachs has signed a long-term PPA with a subsidiary of NextEra Energy Resources for an unnamed 68 MW wind project in Pennsylvania.

VIRGINIA

■ The University of Virginia has signed a 25-year PPA with **Dominion Energy** for the output from the 15 MW UVA Puller solar project in Middlesex County, Va. The PPA will meet about 9% of the school's needs. Construction is scheduled to begin in late 2017 and the facility is slated to go online by the end of 2018. Coronal Energy originally developed the project.

NEBRASKA

■ The South Sioux City Council has approved a PPA between the Nebraska city and NextEra Energy Resources for 15 MW from the sponsor's 90 MW Cottonwood wind project, which is under construction in Webster County, Neb. The project is expected to be online by the end of the year and the PPA is expected to meet 33% of the city's power needs.

MICHIGAN

■ Michigan State University has signed a 25-year PPA with Alterra Power Corp. and Ino**vateus Solar** for the energy produced by the 11 MW Spartan Solar project located on the school's campus in East Lansing, Mich. The sponsors inked a \$19.9 million project financing from 1st Source Bank in August. The lender is providing \$9.7 million in tax equity and a \$10.2 million six-year mini-perm loan for the facility, which is expected to be online in December.

COLORADO

approved a 10-year PPA between Colorado

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PPA PULSE •

Springs Utilities and the U.S. Army's Fort Carson base for half of the output of a 7 MW hydro project being developed near Pueblo, Colo., by the Southeastern Colorado Water Conservancy District. The utility company will act as an intermediary, buying about 3.5 MW from the Pueblo Dam project and selling it on to the military base at the same tariff. The remaining 3.5 MW will be sold to Fountain Utilities, a municipal utility company, until the Fort Carson PPA expires, at which point the town will purchase 100% of the project's generation for the following 10 years. The \$19.7

million project will be financed with "lowinterest hydroelectric project financing available through the Colorado Water Conservation Board," and is slated to be online in May 2018, according to SCWCD's website.

ARKANSAS

■ Clarksville Light & Water Co. has entered into a 30-year PPA with Scenic Hill Solar for the output from a 5 MW project in Clarksville, Ark. The Clarksville project is expected to be online by mid-2018 and will be the thirdlargest solar facility in the state, according to

a statement issued by the Little Rock, Ark.based developer. The proposed pricing of the PPA was \$58/MWh, according to CLW commission meeting agendas.

MARYLAND

■ Monumental Sports & Entertainment has signed an agreement with WGL Energy Services for 3.5 MW from an unidentified solar project in Frederick County, Md. The PPA is expected to meet 25% of the needs of the Verizon Center, home of the Washington Wizards, **Capitals**, **Mystics** and **Valor** sports teams.

MERGERS & ACQUISITIONS

FirstEnergy, LS Power Rewrite Terms of Portfolio Sale

An LS Power-owned fund has knocked \$100 million off the purchase price for a 1,615 MW portfolio of generation assets it is acquiring from two FirstEnergy subsidiaries.

As part of a revised deal, the fund will also take on an additional gas-fired project in Virginia.

LS Power Equity Partners III, which agreed to buy the portfolio for \$925 million in January, will now pay \$825 million under the terms of a revised sale agreement signed on Aug. 30.

"The terms of the transaction continued to evolve after we first announced an agreement in January and the \$825 million reflects prevailing market conditions," a spokesperson for FirstEnergy tells PFR from Akron, Ohio.

A letter of intent that FirstEnergy entered into with a prospective buyer on Dec. 1, originally put the purchase price for the assets at \$885 million.

Whether that initial buyer was LS Power could not immediately be learned.

The divestiture is part of FirstEnergy's planned exit from unregulated generation markets, a move it announced last fall (PFR, 11/7).

FirstEnergy's transition to a fully-regulated utility is set to be complete by mid-to-late 2018, James Pearson, executive v.p. & cfo at FirstEnergy, said at Barclays' Ceo Energy-Power Conference at the **Sheraton** New York Times Square on Sept. 7. Barclays is advising the FirstEnergy subsidiaries on the sales.

LS Power agreed to acquire five facilities from FirstEnergy subsidiaries Allegheny Energy Supply Co. and Allegheny Generating Co. in January (PFR, 1/20). At that stage, the group of assets comprised:

- five units of the Springdale gas-fired project in Springdale Township, Pa., totaling 638 MW,
- ◆ two units of the Chambersburg gas-fired project in Guilford Township, Pa., totaling 88 MW,
- ◆ two units of the Gans gas-fired project in Springhill Township, Pa., totaling 88 MW,
- ♦ the 45 MW Hunlock Creek gas-fired project in Hunlock Creek, Pa., and
- ♦ an interest representing 713 MW of the 3,003 MW Bath County hydro project in Warm Springs, Va.

As part of the amended deal, LS Power is also set to acquire a stake in Allegheny Energy Supply's 88 MW Buchanan gas-fired project in Oakwood, Va., representing 43 MW.

FirstEnergy plans to close the sale of the Springdale, Chambersburg, Gans and Hunlock projects in the final quarter of this year, with the Bath and Buchanan projects to follow in the first quarter of 2018. The proceeds of the sales may go toward the repayment of debt, the company said in a statement.

FINANCING PLANS

LS Power mandated ING, BNP Paribas, Citigroup and Morgan Stanley earlier this year to arrange a seven-year mini-perm for the four gas-fired assets included in the original deal, as a portfolio called **Aspen Generating**, while the Bath County hydro project stake was expected to be financed separately with a private placement

"LS Power is required to obtain binding commitments for the financing of [the deal] within 60 days," said Pearson, speaking at the Barclays conference. "If they are not able to achieve that. then any party can pull out of the transaction without any penalty."

A spokesperson for LS Power in New York declined to comment.

STILL TO COME

Should the deal close, FirstEnergy will still own some 9.9 GW of competitive generation. The company is exploring the sale of further assets, including the 545 MW West Lorain gas-fired project in Lorain, Ohio, and it plans to retire the rest.

Among the facilities to be shuttered are four units totaling 720 MW at the 1,490 MW W.H. Sammis coal-fired plant in Stratton, Ohio, and one 136 MW unit at the Bay Shore coal-fired project in Oregon, Ohio. Both are slated to be retired in 2020.

FirstEnergy also owns two other coal fired projects-the 2,490 MW Bruce Mansfield facility in Shippingport, Pa., and the 1,300 MW Pleasants project in Willow Island, W.Va.

The company has requested permission from the West Virginia Public Service Commission to transfer the Pleasants asset from Allegheny Energy Supply to two regulated utility subsidiaries, MonPower and Potomac Edison, for \$195 million.

Pearson says he expects the transfer to close in early 2018.

FirstEnergy also owns the 1,815 MW Beaver Valley nuclear plant in Shippingport, Pa., the 1,268 MW Perry nuclear facility in Perry, Ohio, and the 908 MW Davis-Besse nuclear project in Oak Harbor, Ohio.

• PEOPLE & FIRMS

Tax Credit Investor Expands into Renewables

Foss & Co., a tax equity investment firm, has hired a managing director with solar industry experience to raise its maiden renewables fund.

Alex Tiller, a serial entrepreneur in the solar industry, started at Foss Renewable Energy Partners in Denver on Aug. 28 and reports to George Barry, Foss's president and owner in San Francisco.

Founded in 1985, Foss has focused on real estate-related tax credit investments until now,

but the firm is aiming to raise \$300 million to deploy in renewable tax equity deals by 2018.

The firm has already received strong interest from its existing investor base, which comprises insurers and other large corporations, Tiller tells *PFR*.

The company's debut renewables fund will initially invest tax equity primarily in commercial and industrial-scale solar projects, an area where Tiller sees a gap in the market.

"That's going to be our sweet spot," he says. "We think that market is underserved at the moment by traditional tax

equity players."

Alex Tiller

As the firm ramps up for its renewables push, Tiller will be building out the team

in Denver.

Tiller's interest in renewables stems from his time working at **AGERCO Management**, a private equity firm focused on farmland, in 2008 and 2009.

"That taught me about renewable energy," he says. "We were looking at how do we utilize U.S. farmland not only for commodity production

and trading but can we put wind turbines on it? Digesters? Solar?"

He went on to join Hawaiian solar installer **Sunetric** as ceo in 2010 and set up **Sunetric Capital**, the company's solar financing and asset management affiliate. Tiller sold Sunetric to **RGS Energy** in May 2014.

Ayear earlier, he co-founded **Autowatts**, a residential solar technology company, where he remains a board member, according to his **LinkedIn** profile. More recently, in 2016, Tiller joined San Diegobased renewable developer **Solar Alliance** as president.



Analysts Point to Marijuana Growers' High Electric Demand



The power generation industry is always on the lookout for new pockets of demand for the electrons it produces.

For instance, the prospect of electric vehicles taking over from gas-fueled cars and trucks on the highways is music to the ears of independent power producers and utility companies alike. But a report from **Barclays** highlights another source of demand for potentially millions of megawatt-hours: cannabis farming.

As the drug becomes legal for medicinal and recreational use in states across the U.S., the electric demand of indoor marijuana farmers, who use powerful lighting to spur the growth of their plants, has the potential to reach ever greater highs.

"Using Colorado's increase in electricity demand for marijuana production, we see the potential for 13 [million MWh] or 2 GW of need to fuel demand from 16 states that have or could adopt recreational cannabis," write the Barclays analysts in the report, entitled 'Mary Jane Gets a New Car', which reviews the impact of electric vehicles and indoor farming on electricity sales.

As power purchase agreements with traditional utilities remain scarce, is it only a matter of time before the 'green' growing industry looks to procure some green energy to match?

Former M.S. Banker Joins Colo.-Based Solar Developer

An ex-**Morgan Stanley Commodities** banker has joined a Colorado-based solar shop as executive vice president and head of origination and project finance.

Jorge Vargas started his new role at **Spear Point Energy** in Aspen, Colo., Sept. 1, he tells *PFR*.

Vargas reports to Spear Point's ceo, **Sam Houston**. Before cofounding the company, Houston

was an m.d. at **Camco North America**.

Spear Point develops, owns and operates commercial and industrial solar projects in Maryland, Arizona, New York, Ohio, California, Florida and Colorado. Spear Point also owns California-based solar developer **PFMG Solar**.

Vargas left his previous role

as an executive v.p. and head of Americas at **AMP Solar** in New York in May, having spent just over a year at the company (PFR, 5/17).

Before joining AMP Solar, Vargas was co-head of solar at Morgan Stanley Commodities in Purchase, N.Y., from 2011 to 2016. The team sits within the North America power and gas unit in the bank's commodities division.

Before he moved to Morgan Stanley, Vargas spent a year as a v.p. at **Rialto Capital Management**, and prior to that, five years as a v.p. at **Lennar** in



Jorge Vargas

Miami. Vargas started his career as an analyst first at **JP Morgan** and then at **Bank of America**. ■