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Power Finance & Risk

Exclusive Insight on Power M&A and Project Financing

By the publisher of GlobalCapital

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Equity Sought for Transmission Line Under Railroad

Whitehall & Co. has been tapped to raise development-stage capital for a novel transmission cable project.

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HIGH YIELD

TerraForm Power, NRG Yield, Stoneway Capital

Three high yield power names tapped the bond market last week, as **Calpine Corp.** repriced three term loan Bs.

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P.E. Firm Agrees to Buy IC Power's LatAm Business

Fotios Tsarouhis

A private equity firm has agreed to acquire the majority of **IC Power**'s generation assets through the purchase of its Latin American subsidiary **Inkia Energy**.

I Squared Capital's ISQ Global Infrastructure Fund II will acquire the company for $1.2 billion, adding 3.4 GW of capacity in eight Latin America countries and Jamaica, as well as approximately 63,000 miles of transmission lines in Guatemala.

The majority of the assets owned by Inkia are diesel-fired and gas-fired plants, though the portfolio also includes hydro assets in Peru and Bolivia and two wind facilities in Nicaragua.

Adil Rahmathulla, partner at I Squared Capital, said the deal "reinforces I Squared Capital's commitment to infrastructure in Latin America" in a statement issued on Nov. 27.

The New York-based private equity firm agreed to purchase all of **Duke Energy**'s Latin American assets outside Brazil for the same price, $1.2 bil-

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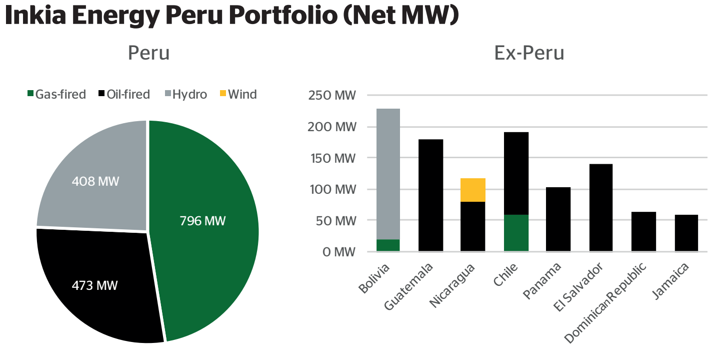
Inkia Energy Peru Portfolio (Net MW)



Source: IC Power

CalPERS Inks Wind Purchase Despite Tax Reform Risk

Richard Metcalf

The **California Public Employees' Retirement System** announced that it is acquiring a stake in a wind project duo in Kansas and Oklahoma on Nov. 30, despite uncertainty around tax reform that deal watchers say is putting a chill on other M&A processes for wind assets and development platforms.

Through **Gulf Pacific Power**, an existing partnership between CalPERS and **Harbert Management Corp.**, the retirement fund manager is buying an 80% stake in the 349 MW portfolio from **Enel Green Power North America**.

The portfolio comprises the 200 MW Caney River project in Elk County, Kan., which sells its output to the **Tennessee Valley Authority**, and the 149 MW Rocky Ridge project in Kiowa and Washita Counties,

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Fitch, Moody's Enter Back-levered Debt Rating Arena

Richard Metcalf

Competition among rating agencies to provide credit ratings for back-levered renewable project finance deals is heating up, with **Fitch Ratings** and **Moody's Investors Service** both said to have assigned their first ratings to this kind of debt.

Among the handful of such deals rated by Fitch was **sPower**'s recent $421 million back-levered private

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Hedge Fund Hires D.G., Battery Ace

Fotios Tsarouhis, Richard Metcalf

A banker who worked on several distributed solar financings and an innovative battery storage deal at **CIT Bank** in New York has joined a hedge fund.

Rhys Marsh, who was a director at CIT with a focus on renewables, joined **Avenue Capital Group** as a managing director, impact investments, in November. He had no

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POWER UP: CHECK OUT A SELECTION OF THE WEEK'S POWER AND UTILITY NEWS ON TWITTER @POWERFINRISK

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Fitch, Moody's Enter Back-levered Debt Rating Arena

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placement backing an almost 600 MW renewables portfolio in the U.S.(PFR, 11/20).

Citi was the placement agent on the deal, which financed nine tax equity funds and was due to close last week. The issuer was viewed as a BBB- credit, according to a banker away from the deal.

"We have been able to rate back-leveraged portfolios which include tax equity investors at the investment grade level," said **Greg Remec**, senior director at Fitch in Chicago, while declining to comment on specific deals. "They required sufficient structural and cash-flow protection in order to be consistent with that investment grade rating."

Back-leverage is project finance debt raised at the holding company level in order to get around the aversion of tax equity investors to banks lending directly to the project company.

The structure, though complex, has become dominant in the U.S. renewable project finance market because of the crucial role played by tax equity in making renewable projects economic.

As banks have become increasingly comfortable with the additional complexity and risk associated with back-leverage, competition to participate in the deals has become fiercer.

As a result, the premium sponsors pay for back-levered debt versus vanilla project finance has been compressed arguably to zero, said **Ralph Cho**, co-head of power and infrastructure at **Investec**, in a **Norton Rose Fulbright** *Currents* podcast.

Rating agencies have been slower to catch up, however, sometimes to the frustration of bankers who would like to place back-levered debt in the institutional market.

Kroll Bond Rating Agency was, until recently, considered to be the most advanced, having gained experience rating solar asset-backed securitizations involving multiple tax equity funds of distributed solar portfolios, but the other rating agencies having been working to catch up.

"The sales people are trying to move the ball forward to get their agencies up to speed on back-levered and not be so draconian," says a power banker.

A spokesperson for **S&P Global Ratings** confirmed that it had not yet rated this type of transaction, but declined to comment on future ratings. ■

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TELL US WHAT YOU THINK!

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 & 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
Alpek	Altamira (350 MW Gas)	Tamaulipas, Mexico		ContourGlobal is in exclusive talks to buy the projects (PFR, 11/20).
	Cosoleacaque (100 MW Gas)	Cosoleacaque, Veracruz		
Apex Clean Energy	Portfolio (12 GW, Wind, Solar)	U.S., Canada	CohnReznick	A sale process for the developer moved into a second round in summer (PFR, 8/14).
ArcLight Capital Partners	Portfolio (1.6 GW Wind)	U.S.	BAML	ArcLight has put the portfolio, known as Leeward Renewable Energy, up for sale (PFR, 10/9).
ArcLight Capital Partners	New Covert (1,040 MW Gas)	Van Buren County, Mich.	BNP, Whitehall	ArcLight has mandated banks to execute a potential sale of the asset (PFR, 10/30).
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).
Dayton Power & Light	Portfolio (973 MW Gas)	Midwestern U.S.		DPL is seeking a buyer for the assets (PFR, 9/11).
Edison International	SoCore Energy (160 MW DC Distributed Solar)	U.S.	Marathon Capital	The auction for the company is entering a second round (PFR, 10/30).
● Enel Green Power North America	Caney River (200 MW Wind)	Elk County, Kan.		CalPERS has agreed to acquire an 80% stake in the contracted portfolio (see story, page 1).
	Rocky Ridge (149 MW Wind)	Kiowa and Washita counties, Okla.		
Energy Capital Partners	Wheelabrator Technologies (1.2 GW Biomass)	U.S., U.K.		ECP has put the company up for sale (PFR, 8/21).
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).
Infinity Renewables	Portfolio (6.6 GW Wind, Solar)	U.S.	CIBC	The company is for sale (PFR, 6/5).
Innovative Solar Systems	Portfolio (460 MW Solar)	Texas		The company is seeking a buyer for the three-project portfolio (PFR, 10/9).
● Kenon Holdings	Inkia Energy (3.4 GW Gas, Oil, Hydro, Wind)	Peru, Bolivia, Guatemala, Nicaragua, Chile, Panama, El Salvador, Dominican Republic, Jamaica	Credit Suisse	I Squared Capital has agreed to buy the business through its ISQ Global Infrastructure Fund II for $1.2 billion (see story, page 1).
Lincoln Clean Energy	Amazon (253 MW Wind)	Scurry County, Texas	Whitehall & Co.	Whitehall is running a sale for the assets (PFR, 11/6).
	Willow Springs (250 MW Wind)	Haskell County, Texas		
LS Power	Columbia (540 MW Gas)	Gaston, S.C.		SCANA Corp. subsidiary South Carolina Electric & Gas Co. plans to acquire the project (PFR, 11/27).
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).
NextEra Energy Resources	Portfolio (244.5 MW Wind)	California, Pennsylvania, West Virginia		Quinbrook Infrastructure Partners is acquiring the assets (PFR, 11/27).
● NRG Energy	Jeffers (50 MW Wind)	Cottonwood County, Minn.		Longroad Energy Holdings closed its acquisition of the projects on Oct. 10 (PFR, 7/24).
	Community Wind North (30 MW Wind)	Lincoln County, Minn.		
Pacific Gas & Electric	DeSabla (26.7 MW Hydro)	Butte Creek and West Branch Feather River, California	Bodington & Co.	Bodington is running an auction for the assets (PFR, 9/25).
	Miocene (2.9 MW Hydro)			
Renergetica	Portfolio (24 MW Solar)	O'Higgins Region, Chile		Sky Solar is acquiring the projects (PFR, 11/27).
● Solar Frontier Americas	Midway I (50 MW Wind)	Imperial County, Calif.		KKR and Gestamp closed their acquisition of respective 80% and 20% stakes in the project on Nov. 14 (PFR, 7/24).
Southern Power	Portfolio (1,760 MW Solar)	U.S.	Citi	Southern Power has hired Citi to sell an up to one-third stake in the portfolio (PFR, 11/6).
Starwood Energy Group Global	Electra (230 MW, 51 %)	Wilbarger County, Texas	Whitehall & Co.	Starwood is marketing its majority stakes in the projects (see story, page 7)
	Horse Creek (230 MW, 51%)	Haskell and Knox counties, Texas		
Texas Municipal Power Agency	Gibbons Creek (450 MW Coal)	Grimes County, Texas		The plant is up for sale again after an earlier attempt to offload it fell through (PFR, 11/20).

● **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 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	TBA	TBA	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.	BAML, Fieldstone (advisers)	Debt, Equity	$900M		The sponsor plans to have equity commitments by the end of the year (PFR, 11/13).
● Avangrid	Coyote Ridge (98 MW Wind)	Brookings County, S.D.	TBA	TBA			Google has signed PPAs for the full output of both projects (see story, page 6).
	Tatanka Ridge (98 MW Wind)	Deuel County, S.D.					
● Boralex	Moose Lake (15 MW)	Peace Region, British Columbia	KfW IPEX-Bank	Term Loan	C$51.3M	C+25-yr	The project has a 40-year PPA with BC Hydro and the all-in-cost of the debt, including heding costs, is 4.9% (see story, page 6).
				Letter of Credit Facility	C$2M		
● Central Puerto	La Castellana (99 MW Wind)	Buenos Aires province, Argentina	IFC, IDB Invest, C2F	Debt	$105M	15-yr	The project has a 20-year power purchase agreement with Cammesa (see story, page 6).
Clean Energy Future	Trumbull (940 MW Gas)	Trumbull County, Ohio	BNP Paribas (adviser)	Debt	TBA		Deal watchers have tipped the Trumbull project to reach financial close before the end of 2017 (PFR, 9/11).
				Equity	TBA		
● EDF Renewable Energy	Glaciers Edge (200 MW Wind)	Cherokee County, Iowa	TBA	TBA	TBA		Google has signed a PPA for the project's output (see story, page 6).
● Enel Green Power North America	Red Dirt (300 MW Wind)	Kingfisher and Logan counties, Okla.	Allianz, MUFG	Tax Equity	$340M		Google will purchase 140 MW of the project's output through a recently signed PPA (see story, page 6).
● IENova (Sempra Energy)	Unnamed project (108 MW Wind)	Baja California, Mexico	TBA	TBA	TBA		IENova has signed a PPA with fellow Sempra subsidiary SDG&E for the output of the project, which the sponsor says will cost $150 million (see story, page 6).
Indeck Energy	Niles (1 GW Gas)	Niles, Mich.	Whitehall & Co.	Debt	$500M		The sponsor aims to close debt financing in the first quarter of next year (PFR, 11/6).
LNG Group Panama, Gunvor, Gu Xin Group	Telfers (656 MW Gas)	Panama	Société Générale (adviser)	Mini-perm	$661M	7-yr	The sponsors of the LNG-to-power project were aiming to close the debt financing by the end of September (PFR, 9/18).
				Letter of Credit Facility	$75M		
NRStor	Portfolio (300 MW Storage)	U.S.	SUSI Partners	Loan	C$120M		The Canadian developer will use the proceeds of the loan to finance C&I behind-the-meter projects (PFR, 11/27).
NTE Energy	Reidsville (500 MW Gas)	Rockingham County, N.C.	TBA	Debt	$595M		The sponsor took proposals from banks on Oct. 6 (PFR, 10/16).
Panda Power Funds	Mattawoman (990 MW Gas)	Prince George's County, Md.	BAML, BNP Paribas, Investec, NH Financial Group	Debt, Equity	$500M		Bank of America Merrill Lynch has joined the lender group (PFR, 10/30).
Pattern Development	Henvey Inlet (300 MW Wind)	Parry Sound County, Ontario	TBA	Term Loan	C$1B		Pattern has mandated banks to raise debt, including a fixed-income bond (PFR, 11/20).
			MUFG	Bond			
Quantum Utility Generation	Moundsville (643 MW Gas)	Marshall County, W.Va.	TBA	Debt	TBA		Quantum could launch a debt financing for the project this year (PFR, 2/6).
			BNP Paribas	Equity			
Quinbrook Infrastructure Partners	Unknown project (200+ MW)	U.S.	TBA	Tax Equity	$200M		The sponsor has shortlisted several tax equity investors (PFR, 11/13).
● Canadian Pacific, Shumard Family Foundation, TWTP	SOO Green Renewable Rail (2,100 MW, 349-mile Transmission)	Iowa, Illinois	Whitehall & Co. (adviser)	Equity	$70M		The project's owners are looking to sell an up-to-100% stake to raise $70 million of development-stage capital (see story, page 5).
sPower	Portfolio (650 MW Solar, Wind)	U.S.	Citi	Private Placement	$421M	19.1-yr	The private placement, backing wind and solar assets in 11 states, has a weighted average life of 10.6 years (PFR, 11/27).
SunPower	Portfolio (Resi)	U.S.	Investec	Debt	$53M	TBA	Investec arranged the loan (PFR, 10/30).
Sunrun	Portfolio (Resi)	U.S.	TBA	Debt	$303M	7-yr	The back-leveraged debt is secured on cash flows from leases and PPAs (PFR, 10/30).
UKA Group	Portfolio (400 MW Wind)	U.S.	TBA	Debt, tax equity	TBA	TBA	The Germany-based developer is seeking debt and tax equity for its first U.S. assets (PFR, 10/30).
Zuma Energía	Santa María (148 MW Solar)	Galeana, Mexico	Bancomext, Banobras, Nafin, North American Development Bank	Debt	$155	TBA	The projects are due to be online in mid-2019 (PFR, 11/27).
	Orejana (135 MW Solar)	Hermosillo, Mexico			$137M	TBA	

● **New or updated listing**

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MERGERS & ACQUISITIONS

CalPERS Announces Wind Acquisition Despite Tax Reform Uncertainty

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Okla., which has an offtake contract with **Western Farmers Electric Cooperative**.

The projects have been online since 2011 and 2012, respectively.

Several other sale processes are underway, including for developers **Apex Clean Energy**, **Infinity Renewables** and **EverPower Wind**, and **ArcLight Capital Partners**' Leeward Wind portfolio, but the uncertainty surrounding the tax reform bill's potential impact on tax equity investments adds a huge element of risk.

"I'd be very shocked if anyone can close a deal with any uncertainty around tax credits and tax rates," says a banker working on one of the M&A processes. "I don't know how you could."

Some deals could be agreed with holdbacks and mechanisms to adjust the purchase price depending on what provisions make it into final tax reform bill, says an official at a wind project developer.

A spokesperson for CalPERS declined to comment on the timing of the deal and the potential impact of tax reform.

BEAT IT

The latest worry for the renewables industry is set of provisions known as the base erosion anti-abuse tax in the Senate version of the bill, which "undermine our capacity to use renewable energy tax credits," according to a joint letter to Senators from a group of industry associations.

"For multi-national companies covered under the BEAT provisions, the renewable tax credits would, as drafted, be subject to a new 100 percent tax," they write, adding that financial institutions have indicated that they would no longer be able to provide tax equity if they were implemented.

"This would absolutely destroy the market," says a renewables-focused banker. "It has the potential to do some very serious harm to this market and put everything on stop."

Tax equity deals themselves appear to be progressing despite the uncertainty. **EDF Renewable Energy** filed with the U.S. **Federal Energy Regulatory Commission** on Nov. 9 for permission for a pair of tax equity deals (PFR, 11/14).

Deals are being sized in such a way that the tax equity investors will be made whole even if corporation tax is reduced to the lowest expected rate, 20%, while "the project owner is basically required to take 100% of the change-in-tax-law risk," says the developer.

The Senate bill cleared the Senate Budget Committee in a 12-11 party-line vote on Nov. 28 and the full Senate was reportedly close to voting on its tax reform bill at press time. ■

Whitehall Hired to Raise Equity for Transmission Line Under Railroad

Whitehall & Co. has won a financial advisory mandate for the sale of a 349-mile subterranean transmission line project that would lie beneath existing railroads between **MISO** and **PJM Interconnection** in exchange for development-stage capital.

The project company, **SOO Green Renewable Rail**, aims to raise about $90 million through the sale of an up-to-100% stake in the project.

Direct Connect Development Co. (DC DevCo), which is led by energy and environmental markets and policy lawyer **Trey Ward** as ceo and solar developer **Joe DeVito** as president, is developing the high voltage direct current project but does not own it.

"SOO Green is an innovative project that seeks to replicate the model used to build Amerca's fiber optic network, by burying an underground HVDC transmission line along an existing railroad to transport renewable energy," Ward tells *PFR* via e-mail.

Ward approached transcontinental freight rail company **Canadian Pacific**, which owns the railroad that traces the route of the planned project for 285 miles, with the idea for the co-located line and persuaded the company to partner on it.

While following the route of an existing railroad simplifies the right-of-way issues faced by large transmission projects, burying it underground "reduces neighboring landowner objections, limits impacts to the environment, streamlines the permitting process, and allows the project to be approved and constructed faster," he adds.

The developer has secured 85% of the route of the planned cable. Besides the 285 miles that lie beneath Canadian Pacific's rails, the developer has signed a memorandum of understanding for 11 miles with **OmniTRAX**, leaving 53 miles to be secured.

As well as the $90 million of development capital, potential investors will be able to place up-to-$700 million of equity in the project at a later stage to finance construction.

"Providing the development capital is a great way to assure that large strategic or institutional investors can place the permanent equity needed for the project," says Ward. "However, it is also possible that some investors may be interested solely in the development opportunity."

ARBITRAGE

The transmission line is designed to take advantage of arbitrage between the **MidAmerican Energy Co.** zone of MISO and PJM's **Commonwealth Edison** area by transmitting up-to-2,100 MW of low-cost wind generation from Iowa, Minnesota and the Dakotas to Illinois.

SOO Green is in talks with generators in MISO, load-serving entities and non-utility offtakers in PJM and traders interested in the power price differential between the two markets with a view to signing 20-year capacity contracts for the generation. The project would also bid 1,800 MW into PJM's base residual capacity auctions.

The **Shumard Family Foundation** has sponsored the development of the project so far and owns a stake alongside Canada Pacific and an entity co-owned by Ward.

The developer has lined up **Siemens** as the supplier for the high voltage direct current technology. The German company will also provide development support at no cost and operations and maintenance services once the project begins commercial operations.

The project is expected to take about three years to construct and the developer aims to reach financial close on project financing by 2020 with a view to bringing the project online by the first quarter of 2024. ■

PROJECT FINANCE

Argentine IPP Signs Development Bank Loans for Wind Project

Independent power producer **Central Puerto** has agreed $105 million of loans for a 99 MW wind farm and transmission line in the province of Buenos Aires, in the latest round of international investment to pour into Argentina's power sector.

The project finance package is split between a $64 million loan from the **International Finance Corp.**, $36 million from **IDB Invest** (formerly the Inter-American Investment Corp.) and $5 million from the **Canadian Climate Fund for the Private Sector in the Americas**, known as C2F. IDB Invest is part of the **Inter-American Development Bank** (IDB) group, while C2F is administered by the IDB.

The proceeds of the 15-year package will go toward the construction, operation and maintenance of Central Puerto's La Castellana wind farm and associated facilities, which include a 23-mile 132 kV transmission line.

The La Castellana project has a 20-year power purchase agreement with Argentina's wholesale electric market administrator **Cammesa** under the RenovAr program.

Buenos Aires-headquartered Central Puerto, which owns a 3.79 GW portfolio of operational gas-fired, hydro and wind projects in Argentina, bid a price of $61.50/MWh for the La Castellana project. It is expected to become operational in June 2018.

It is the second time in as many weeks that Argentina's power sector has received more than $100 million in international funding.

Two weeks ago, Canada's **Stoneway Capital Corp.** tapped its 10-year dollar-denominated bonds for a further $165 million to finance upgrades to a gas-fired plant, also in the province of Buenos Aires (see story, page 11). ■

Boralex Inks 25-year Loan for B.C. Wind Project

Boralex has sealed a C$53.3 million ($41.6 million) debt package to finance a 15 MW wind project in British Columbia.

KfW IPEX-Bank is providing the debt, which is split between a $51.3 million ($40.2 million) 25-year term loan and a C$2 million letter of credit facility.

The all-in interest on the loan, including the cost of an interest rate hedge for a portion of the debt, is 4.9%.

Boralex believes the term loan is "one of the first in the Canadian wind power finance market" to be fully amortizing over a 25-year tenor, according to a statement.

Located in the Peace Region, the project, called Moose Lake, was awarded a 40-year power purchase agreement with **BC Hydro** in December 2015. It is expected to be online in the second half of next year.

Boralex owns 70% of the project, while **Aeolis Wind Power Corp.** owns the remaining 30%. ■

PPA PULSE

Google Signs PPA Trio — IENova Goes Cross-border

This week, PFR *is trying something new—giving you all of the latest power purchase agreement news in a weekly installment rather than every two months. Subscribers will get all the same offtake info, just a bit sooner! Let us know what you think by e-mailing the editor at richard.metcalf@powerfinancerisk.com.*

GOOGLE INKS PPAS TOTALING 536 MW

Google has signed power purchase agreements with three wind project sponsors for more than 500 MW spread across three states:

GLACIERS EDGE

EDF Renewable Energy has inked a PPA with the internet company for the output of its 200 MW Glaciers Edge wind project in Iowa.

Located in Cherokee County, the project is expected to be operational by December 2019.

It is not the first time EDF RE has partnered with the internet company. Google made its debut $200 million tax equity investment in the sponsor's 161 MW Spinning Spur wind project in Oldham County, Texas, in 2012 and signed a PPA for the output of its 225 MW Great Western Wind Project in Ellis County, Okla., in December 2016.

RED DIRT

Google has also entered into a power purchase agreement with Oklahoma's **Grand River Dam Authority** for 140 MW of generation from **Enel Green Power North America**'s 300 MW Red Dirt wind project, which is under construction in Kingfisher and Logan counties, Okla.

GRDA is signed up to buy the 140 MW from Enel under a previously signed PPA, while wireless telephone carrier **T-Mobile** will take the remaining 160 MW. The facility is expected to be operational in January.

COYOTE RIDGE, TATANKA RIDGE

Finally, the **Alphabet** subsidiary has also contracted the entire output of two 98 MW **Avangrid** wind projects in South Dakota.

The PPAs, for the output of the Coyote Ridge and Tatanka Ridge projects in Brookings and Deuel counties, are the first to be signed between Avangrid and Google.

Construction is expected to begin on the two projects by 2019.

IENOVA INKS CROSS-BORDER CONTRACT

Infraestructura Energética Nova has inked a 20-year power purchase agreement with **San Diego Gas & Electric Co.** for the output of a 108 MW wind project in Tecate in Baja California, Mexico.

The parties, both of which are subsidiaries of **Sempra Energy**, signed the PPA on Nov. 26. according to a statement.

IEnova says it will invest roughly $150 million in the project, which is subject to regulatory approval, including from the **California Public Utilities Commission** and the U.S. **Federal Energy Regulatory Commission**.

The project is expected to be online in the third quarter of 2020. ■

Zuma Chose Development Bank Deals to Save Time and Costs

Zuma Energía opted for development-bank only loans for its recent Mexican solar project financings to save time and money, says the company's ceo, **Adrián Katzew**, who adds that innovative structures are required for commercial banks to participate in the market.

Zuma, a joint venture between **Actis** and **Mesoamerica**, signed the loans for the 283 MW portfolio on Sept. 18, with **North American Development Bank** as coordinating lead and **Bancomext**, **Banobras** and **Nafin** taking tickets (PFR, 11/20).

While commercial banks had made bids to provide debt for the projects, a range of factors including timing, tenor and jurisdiction resulted in an all-development bank line-up, Katzew tells *PFR* from Mexico City.

The larger of the two 18-year deals, a $155 million debt package, will finance the 148 MW Santa María project in Galeana, Chihuahua, while the other $137 million loan package will finance the 135 MW Orejana project in Hermosillo, Sonora. The projects represent a total combined investment value of $277 million. Pricing could not be learned by press time.

MEXICAN LAW

A hurdle that proved insurmountable for at least one commercial bank was Zuma's decision to document the deals under Mexican law.

This allowed the sponsor to save legal costs—the sponsor and lender group only needed to use one law firm each, whereas for deals done in Mexico under New York law, both parties typically hire separate local and New York counsel—but at least one commercial bank dropped out of the deal as a result.

Local firm **Mijares Angoitia Cortes y Fuentes** advised Zuma on the deals, while the lenders worked with **Haynes and Boone**, a Dallas-headquartered firm with an office in Mexico City.

The location of key decision makers at the local development banks on the ground in Mexico was also a factor.

The commercial banks would have needed to run deals past risk committees in their home countries, which would have extended the financing timeline, says Katzew. "From the perspective of managing costs, the variable of making sure we would close on time was the first priority," he says.

UNIQUE PPA

Novel elements of the Mexican power purchase agreement also meant that local development banks were better placed than commercial lenders to provide the loans.

For instance, the 20-year contracts assigned in Mexico's recent auctions include an obligation to deliver fixed volumes per year, adjustable pricing and a merchant tail of five years after the PPA expires when the project is still generating *certificados de energía limpia* (clean energy certificates).

"The Mexican development banks, as a function of their mandate, were clearly ahead in their understanding of all of these issues," says Katzew. "They have a very clear mandate to support the [energy market] reforms."

INNOVATION

Both of the loans for Zuma's solar projects have tenors of 18 years, a duration that commercial banks are finding it increasingly difficult to stretch to as they implement the latest bank capital requirements under the Basel III regime.

> **"We did have bids from commercial banks for 18 years."**

In order for commercial banks to participate in renewable project finance deals, sponsors and lenders will have to innovate, says Katzew.

For example, **Santander** was able to participate in an 18-year loan signed in August for Zuma's Reynosa wind farm in Tamaulipas in part thanks to a guarantee provided by Danish export credit agency **EKF**. Zuma is fitting the project with turbines supplied by Denmark's **Vestas** (PFR, 8/9).

Another option is having a shorter-term mini-perm tranche for commercial banks alongside the long-term loan, says Katzew, adding: "That said, we did have bids from commercial banks for 18 years."

LATEST AUCTION

Zuma did not participate in the third Mexican power auction, the preliminary results of which

Adrián Katzew

were announced on Nov. 16, because the team was focusing on sealing the financing for its projects that already had PPAs, but Katzew hailed the record low pricing that emerged from the process as "amazing."

The average price of the PPAs was $22.57/MWh, down from $33.47/MWh in the second auction in October of last year and $50.70/MWh in the first, in April 2016.

"It's great for the energy transition and it's great for the potential to continue to attract massive volumes of capital into Mexico," says Katzew. "At those prices, no one is going to question renewables based on the cost of energy any longer. This is where we wanted to be."

Some market participants have questioned the ability of developers to deliver projects that are economically feasible at such low prices, but Katzew says the caliber of the winning bidders in the latest round was reassuring. "I might have had a similar thought, but the profile of the firms there—two thirds are big European utilities—they are not playing around," he says.

France's **Engie** and Italy's **Enel** were among the winning bidders, picking up four contracts each. ■

MERGERS & ACQUISITIONS

P.E. Firm Agrees to Buy IC Power's LatAm Business

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lion, last year (PFR, 10/11/17). That deal netted I Squared Capital generation assets in Argentina, Chile, Ecuador, El Salvador, Guatemala and Peru, as well as 454 miles of transmission lines in Peru.

IC Power will retain its Israeli business, **OPC Energy**, which owns two gas-fired projects in Israel totaling 458 MW.

Credit Suisse acted as I Squared Capital's financial adviser on the acquisition, with **Norton Rose Fulbright** providing legal counsel.

PERUVIAN POWERHOUSE

The bulk of Inkia's owned capacity comes from generation assets located in Peru, where the company's headquarters are located, in Lima. Peru hosts the 1,063 MW Kallpa gas-fired facility in Chilca, the 632 MW Puerto Bravo diesel-fired peaker in Mollendo, Arequipa, and the 545 MW Cerro del Aguila hydro project in Tayacaja, Huancavelica, all of which are 74.9%-owned by Inkia.

The company owns Kallpa and Cerro del Aguila through **Kallpa Generation**, a key subsidiary alongside Guatemalan regulated distribution companies **Distribuidora de Electricidad de Occidente** and **Distribuidora de Electricidad de Oriente**, according to a **Moody's Investors Service** report published in the run up to a recent unsecured bond issuance (PFR, 10/31).

ElectroPeru's contract for 200 MW of Cerro del Aguila's output expired at the end of 2016, though 200 MW will be contracted with **Luz del Sur**, **Edelnor** and **Edecañete** from January 2018 through December 2027. An additional 81 MW from Cerro del Aguila will be sold to Edelnor and Luz del Sur from January 2022 through December 2031.

Kallpa has power purchase agreements with Edelnor, Luz del Sur, Edecañete, **Hidrandina** and **Electosureste**, as well as **Sociedad Minera Cerro Verde**, **Compañía Minera Ancatapaccay**, **Southern Peru Copper Corp.** and **Inretail Properties Management**.

Besides Peru and Guatemala, Inkia operates in Chile, Colombia, the Dominican Republic, Bolivia, El Salvador, Jamaica, Nicaragua and Panama. However, its subsidiaries in those countries do little to strengthen Inkia's creditworthiness, according to Moody's.

"Most of those subsidiaries operate under less predictable market frameworks including several non-investment grade Latin American and Caribbean countries and they largely operate as either merchants or under short-term contracts," write the ratings agency's analysts.

Here is a rundown of the rest of the portfolio:

BOLIVIA

Inkia's wholly-owned Bolivian subsidiary, **Compañía Boliviana de Energía Eléctrica** (CBEE), owns a 15-project portfolio comprised of 14 hydro projects and one gas-fired plant spread throughout the country and totaling 228 MW.

The Bolivian portfolio includes 10 run-of-river facilities in the Zongo River valley with capacities between 7 MW and 30 MW, four run-of-river facilities in the valley of the Miguillas River with capacities between 4 MW and 19 MW, as well as the 19 MW two-turbine El Alto-Kenko gas-fired project located near La Paz.

Sumitomo-owned **Compañía Minera San Cristóbal** had a PPA for 43 MW of generation from the CBEE assets from 2008 until October, when the contract expired. The projects sell into the Bolivian spot market.

GUATEMALA

In Guatemala, besides the two distribution companies held through **Energuate**, which owns over 63,000 miles of transmission assets in the country, I Squared will pick up the single generation asset that Inkia owns there—the 179 MW Puerto Quetzal project, situated on barges in the port of the same name. The project burns heavy fuel oil.

NICARAGUA

Inkia's only wind assets are in Nicaragua, where the company owns a 61% stake in the 40 MW Planta Amayo I and 23 MW Amayo II projects near Managua. **Distribuidora de Electricidad del Sur** has PPAs with the projects that expire in 2024 and 2025, respectively.

The rest of the company's Nicaraguan portfolio comprises 65% interests in the 71 MW Corinto project and the 51 MW Tipitapa project. Both of the projects are oil-fired and contracted with **Distribuidora de Electricidad del Norte** and Distribuidora de Electricidad del Sur through December 2018.

CHILE

Inkia also owns the 58 MW Colmito gas-fired project in Valparaiso, Chile, which has a PPA with **ENAP Refinerías** for 35 MW of its output, and an 87% stake in the 153 MW uncontracted diesel-fired Cardones peaker in Copiapo, also in Chile. Las Condes, Santiago-based **South World Consulting**, the project's former controlling shareholder, owns the remaining 13%.

PANAMA, EL SALVADOR

Inkia also wholly-owns the 92 MW diesel-fired Kanan project in Port of Colon, Panama, 21% of the 54 MW diesel-fired Pedregal project near Panama City, and 100% of the 140 MW Nejapa diesel-fired project in Apopa, El Salvador.

Empresa de Distribución Eléctrica Metro-Oeste, **Empresa de Distribución Electrica Elektra Noreste**, **Empresa de Distribución Eléctrica Chiriqui** have offtakes for 45 MW, 34 MW and 7 MW of Kanan's output, respectively.

Pedregal was contracted with the same three offtakers through the end of 2016.

Until this summer, Nejapa was contracted with 21 distribution companies. A four-year contract that seven companies held for 39 MW of its output expired in July. Seven distribution companies have a PPA for 71 MW that expires in January, while an additional seven have contracts for 30 MW under a two-year contract that expires next month.

DOMINICAN REPUBLIC

Through **Compañía de Electricidad de Puerto Plata**, Inkia owns 96.7% the 16 MW CEPP I and 51 MW CEPP II projects in Puerto Plata, Dominican Republic.

JAMAICA

Only one project, the 60 MW Jamaica Private Power diesel-fired project in Jamaica's capital, Kingston, is located outside Latin America's Spanish-speaking countries. The project is contracted with **Jamaica Public Services Co.** through 2024 as a result of an extension of its original PPA that was signed in November. The PPA was originally due to expire in January. ■

STRATEGIES

TerraForm Power Prices Dual-tranche H.Y. Offering

TerraForm Power, the former **SunEdison** yield company, priced two tranches of high yield bonds on Nov. 28 after increasing the overall size of the offering from $1 billion to $1.2 billion.

RBC Capital Markets was the left lead on the deal, which comprises a $700 million 10-year note and a $500 million five-year.

Following an investor call at 10am, initial price talk of between 5% and 5.125% was given for the 10-year, along with guidance that the five-year would price 62.5 basis points to 75 bps tighter.

The deal was then launched at the tight end of those ranges for both tranches, with the 10-year at 5% and the five-year at 4.25%. The bonds were priced at par with those coupons in the afternoon.

The yieldco, which owns a 2.6 GW portfolio of wind and solar projects in the U.S., Canada and Chile, will use the proceeds to repay $950 million of existing bonds that mature in 2023 and drawings under its revolving credit facility.

The 2023 series, TerraForm Power's maiden corporate bond offering, was priced at 5.875% in January 2015 in a deal that was heralded at the time as a sign of the of the yieldco's recognition in the capital markets (PFR, 1/27/15).

The yieldco and its bondholders have not had a smooth ride since then, however. The issuer avoided a technical default in September 2016, as its bankrupt then-sponsor was in talks to sell its controlling 51% stake, by permanently increasing the coupon on the bonds to 6.375% and paying special interest of 3% for a limited period (PFR, 9/1/16).

> **"The market is strong and even with a flurry of activity since Thanksgiving, receptivity for high-quality names has been good,"**

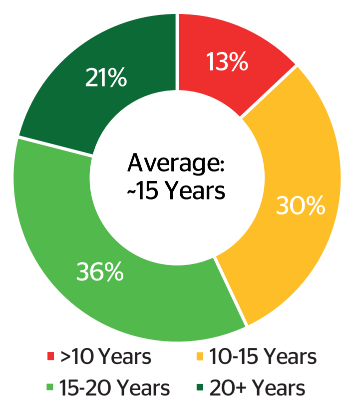
Brookfield Asset Management ultimately emerged as the buyer in a deal that implied a total enterprise value of $6.6 billion for the yieldco. The deal closed in October, prompting multiple-notch upgrades from both **Moody's Investors Service** and **S&P Global Ratings** (PFR, 10/17).

On Nov. 27, **Fitch Ratings** became the third credit agency to assign ratings to the yieldco, meaning that the senior unsecured high yield offering bore one B2 rating and two at BB-.

TerraForm Power's senior secured term loan B, which it refinanced at the beginning of the month, is meanwhile rated Ba1 and BB+ by the three ratings agencies.

"The market is strong and even with a flurry of activity since Thanksgiving, receptivity for high-quality names has been good," says a high yield banker in New York, noting that a refinancing by upstream energy company **Endeavor Energy** was also upsized, from $800 million to $1 billion. "A lot of the things that are in the market are not new money but the market seems to be receptive." ■

TerraForm Power Weighted Remaining PPA Life



Source: TerraForm Power investor presentation

Terms Set for Calpine Term Loan Repricing

Calpine Corp. was set to allocate three repriced three senior secured term loan Bs totaling $2.6 billion on Dec. 1.

The deals were priced at 250 basis points over Libor, the wide end of talk on the spread, but sold without a discount.

Credit Suisse is the bookrunner on the transaction, which will reprice $540 million of debt maturing in January 2023, $555 million maturing in May 2023 and $1.56 billion maturing in January 2024.

Price talk was between 225 bps and 250 bps for all three loans with a 0% Libor floor and an issue price between 99.75% and par. The independent power producer was "simply being opportunistic" in taking advantage of market conditions to cut the margins on its corporate loans, said a source close to the deal. The loans originally paid 275 bps.

Calpine took out the longest-dated of the three loans, originally a $1.6 billion deal, in 2015 with **Morgan Stanley**, **Goldman Sachs**, **MUFG**, **Barclays** and **RBC Capital Markets** acting as lead arrangers (PFR 6/3/15).

Private equity outfit **Energy Capital Partners** and a group of co-**investors led by Access Industries** and **Canada Pension Plan Investment Board** are in the process of acquiring the independent power producer and its 26 GW generation fleet for $5.6 billion (PFR, 8/18).

Moody's Investors Service changed the outlook on its Ba2 rating for the senior secured debt from stable to negative on Aug. 18 in response to the proposed acquisition.

"Calpine's negative outlook reflects our view that ECP will more aggressively look to extract value from Calpine's portfolio of assets, primarily through asset divestitures," said **Toby Shea**, vice president and senior credit officer at Moody's, in a report announcing the outlook revision.

Fitch Ratings affirmed its existing BB ratings for the debt on the same day. The loans also have a BB rating from **S&P Global Ratings**.

Officials at Calpine in Houston and Credit Suisse in New York did not immediately respond to inquiries. ■

STRATEGIES

Stoneway Taps 2027 Bonds After Argentina Auction Win

Canada's **Stoneway Capital Corp.** reopened its 10-year dollar-denominated bonds for another $165 million twp weeks ago to fund the conversion of a gas-fired plant in Argentina from simple-cycle to combined-cycle, a move that will add 120 MW of capacity to the under-construction facility.

The borrower issued the tap at a yield of 9.263%—almost 80 basis points inside where the initial $500 million note was printed in February this year. The original 144A/Reg S trade was priced at par with a 10% coupon.

The additional funds will be used to turn the San Pedro simple-cycle plant in the province of Buenos Aires into a combined-cycle plant with a capacity of 806.5 MW.

The construction risk inherent in Stoneway's use of proceeds is a tricky ask for some of the more mainstream emerging markets investors.

"We decided against doing the original deal in the end because of the construction risk," said a fund manager in Washington, D.C. "This also meant we were out of the tap."

To push the deal through, Stoneway had to run a consent solicitation process with its existing bondholders in October to waive and amend some of the terms on the 2027 bonds to allow additional fund raising.

The vast majority—some 99%—of the noteholders agreed to the revised terms, according to law firm **DLA Piper**, which advised the borrower.

Jefferies, the bookrunner when the bond was originally issued, was the agent for the consent solicitation and also arranged the tap.

Stoneway is expanding and converting the plant after the company won extra capacity in the latest Argentine power auction.

As part of the award, a new 15-year power purchase agreement will be signed with offtaker **Cammesa**, according to **Moody's Investors Service**. The terms and conditions for the offtake are expected to be similar to those for Stoneway's four other plants in Argentina, and will likely lead to further business in the country.

"Moody's understands that the new capacity will secure other relevant contracts that also will have similar terms and conditions to Stoneway's existing contracts for the other four plants," said the ratings agency.

The terms and conditions relate to engineering, procurement and construction, operations and maintenance and long term service programs. ■

FAST FACT

9.263%

The yield on Stoneway's tap of its 10-year bond.

Stoneway's Project Portfolio

Project	Capacity
Matheu	254 MW
Las Palmas	202 MW
Luján	127 MW
San Pedro	104 MW

Source: Stoneway Capital Corp.

Second Time's the Charm for NRG in H.Y. Mart

About three weeks after **NRG Energy** pulled a planned high yield bond offering amid market volatility, the independent power producer returned on Nov. 30, this time successfully raising $870 million.

The deal was slightly tweaked on its second outing, larger and with a substitution to the line-up of the bookrunners.

In the place of **Crédit Agricole**, **JP Morgan** joined **Citi** and **Deutsche Bank** on the deal, which was $90 million larger than before and three months shorter.

The use of proceeds, however, remained the same—to fund a tender offer for existing bonds.

The Princeton, N.J.-based company is offering $1,036.25 in cash per $1,000 face value of its notes maturing in 2023, which bear interest at 6.625%, until Dec. 13, after which the offer is reduced to $1,006.25 per $1,000 of principal tendered until Dec. 23.

About $869.2 million of the 2023 notes was outstanding when the borrower launched the tender offer.

The new 10-year non-call-five deal was announced with price talk of 5.75% to 6%, and was priced at the tight end of that range, at par.

SHEDDING ASSETS

NRG is undergoing a major transformation, seeking to sell about half of its assets—including a subsidiary, **GenOn Energy**, that is undergoing a Chapter 11 restructuring, and its stake in its renewables yield company, **NRG Yield**—and reducing its leverage (PFR, 7/12).

The transformation plan is beneficial to NRG's creditworthiness, according to a **Moody's Investors Service** report published on Oct. 6.

"Our positive outlook reflects the view that the benefits of having lower leverage will outweigh the higher business risk associated with being a smaller, less contracted company," said **Toby Shea**, vice president and senior credit officer at the rating agency.

Moody's rates NRG's senior unsecured notes Ba3 with a positive outlook, while **S&P Global Ratings** rates them BB- with a stable outlook. ■

FAST FACT

2.5B-$4B

NRG Energy aims to raise between $2.5 billion and $4 billion from asset sales (PFR, 8/3).

PEOPLE & FIRMS

Allianz Capital Partners Taps New Renewables Chief

Marc Groves-Raines is taking over as head of **Allianz Capital Partners**' London-based renewables group, which inked a string of U.S. tax equity deals in 2016.

Raines, who has spent a dozen years at German insurance group **Allianz**'s in-house asset manager, will replace **David Jones**, who is stepping down at the end of the year. Raines will report to chief investment officer **Christian Fingerle**.

Jones launched the renewables team at Allianz Capital Partners in 2005 and led it, initially through an initiative called **Allianz Specialised Investments**, for 12 years.

During that time, Jones oversaw upwards of €4 billion of investments, said **Jürgen Gerke**, ceo of Allianz Capital Partners, in a statement, adding: "We wish David all the best in his new endeavours."

Allianz Capital Partners made its first tax equity investments in U.S. renewables in early 2016, partnering with seasoned tax equity player **Bank of America Merrill Lynch** on two **EDF Renewable Energy** projects, the 250 MW Roosevelt and the 50 MW Milo wind facilities in Roosevelt County, N.M.

Soon after, the firm teamed up with **State Street** to invest in **E.On Climate & Renewables North America**'s 200 MW Colbeck's Corner wind project in Carson and Gray counties, Texas (PFR, 2/8/16, 5/25/16).

Having tested the waters, the investment manager made its first solo tax equity investment later the same year, financing EDF Renewable Energy's 184 MW Kelly Creek wind project in Ford and Kankakee counties, Ill. (PFR, 11/14/16). ■

Hedge Fund Hires Banker with D.G. Solar, Battery Storage Skillset

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immediate comment to make on the move when contacted by *PFR*.

Marsh spent seven years at CIT, where he led on what was claimed to be the first non-recourse project financing backing battery storage assets in the U.S. The deal bankrolled a $200 million portfolio of **Tesla** Powerpack 2 lithium-ion batteries in California that are owned by **Macquarie Capital** (PFR, 3/27).

Other deals he worked on included residential and commercial distributed solar loans for **Sunnova**, **SolarCity**, **Vivint**, **Sunlight Financial** and a joint venture between **AES Distributed Energy** and **Morgan Stanley** called **MySolar**.

He was also involved in CIT's entry into the Property Assessed Clean Energy sector through a warehouse facility for **Ygrene**, which led to a co-manager role on a $176 million asset-backed securitization.

Marsh has previous experience working at a hedge fund, having been a senior research analyst and trader at **LibertyView Capital Management** from July 2007 to November 2010, according to his **LinkedIn** profile.

His new firm, Avenue Capital, which focuses on distressed assets, owns several gas-fired projects in the U.S.

The hedge fund acquired three gas-fired facilities—the 743 MW High Desert gas-fired project in Victorville, Calif., the 300 MW Big Sandy gas-fired project in Kenova, W.Va., and the 250 MW Wolf Hills gas-fired project in Bristol, Va.—from **Tenaska Capital Management** last year (PFR, 2/18/16).

Avenue Capital also owns a stake in the 965.4 MW La Paloma merchant gas-fired project in McKittrick, Calif., which is in the process of being transferred to **Beal Bank** as part of a restructuring process (PFR, 10/12).

CIT's plans for replacing Marsh could not immediately be learned. Representatives of CIT in New York did not respond to inquiries by press time. ■

ALTERNATING CURRENT

Cryptocurrency Mining: Looming Energy Crisis or Offtake Opportunity?

AC

Whether or not one believes bitcoin is the decentralized future of money or a pyramid scheme masquerading as currency, the reality is that mining bitcoins consumes enormous amounts of energy.

According to U.K. think tank **Power Compare**, the combined energy usage of bitcoin miners outpaces that of 159 countries. Bitcoin miners' energy consumption increased by almost 30% in the past month alone. At that pace, the energy required to mine new bitcoins will consume all of the world's electricity production by 2020, according to Power Compare.

Because of bitcoin's astronomical price appreciation over the last year, miners have engaged in an arms race to create larger and more powerful computational rigs that can mine more bitcoins. And since it takes a huge and skyrocketing amount of computing power to run a bitcoin mine, the energy requirements are getting higher and higher. Some estimates peg the energy needed for a single transaction as the equivalent to that of one-and-a-half U.S. homes per day.

Some bitcoin mines have begun powering their operations with renewable generation. **HydroMiner**, for instance, is a cryptocurrency mining operation in Europe that meets its demand using hydro projects in the Alps. The company touts its cost of power as 85% less than the rest of Europe. Meanwhile, mines in Iceland have harnessed the island's geothermal energy to keep the bitcoins flowing.

Which prompted us to wonder whether, in the age of socially responsible investing, a "green" bitcoin ought to be worth more than a "brown" one. On reflection, however, the distinction might not matter if the whole scheme is the house of cards **Jamie Dimon** believes it to be. ■