

Power Finance & Risk

The weekly issue from **Power Intelligence**

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Pattern Targets Novel Lone Star Wind Funding

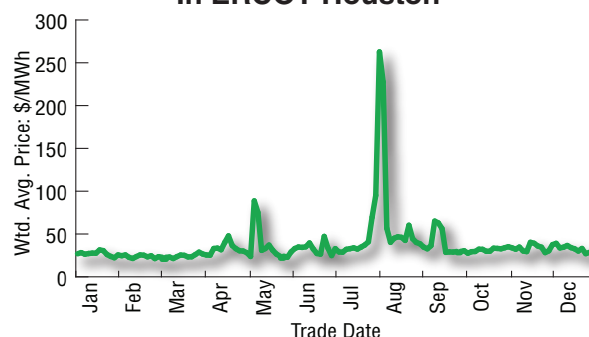
Pattern Energy is talking with lenders about arranging a bridge loan for a wind project in Texas. The two-year, roughly \$500 million loan would finance construction of the 322 MW Panhandle project in Carson County, Texas.

What makes the transaction unusual is the project has a power hedge but no power purchase agreement and Pattern has signed up an unidentified tax equity investor to take out the loan. The two-year tenor gives the developer time for construction should there be any delays; tax equity investments cannot be made until the project is operational.

PPAs have been hard to come by in recent years for wind projects as utilities face lower power demand and the pricing for wind power has been uncertain because of the potential expiration of the production tax credits. Development in the Texas panhandle also has been stymied until recently by

(continued on page 12)

2012 Wholesale Power Prices In ERCOT Houston



Source: Power Intelligence via U.S. Energy Information Administration

Q&A: Pedro Barriuso From Blackstone's Fisterra Energy

Latin America is bustling with opportunities for project development and M&A, according to **Pedro Barriuso**, ceo of Blackstone's new power and energy development company Fisterra Energy. Solar, wind, combined cycle assets, and hydro projects of utility scale are of interest to the shop, which is scoping out Mexico, Columbia, Peru and Chile for deals in the region. "There is a strong appetite for electricity and a strong possibility to develop those projects, because of the offtakers and because of the countries," Barriuso says. Fisterra aims to lever up its assets, and also plans to look at similar facilities in the Middle East, Africa and Europe.



Pedro Barriuso

For the full interview, see page 10.

SolarReserve Eyes Solar Thermal Financing

SolarReserve is talking to lenders for financing backing its \$600 million, 150 MW Rice solar thermal project in Blythe, Calif. "We are starting the roadshow and there have been some preliminary conversations in New York this week," says a company official in Santa Monica, Calif. "All options are still on the table."

Pacific Gas & Electric inked a 25-year power purchase agreement last week, which has set off the search in earnest.

The company has not decided on a structure for the financing, and the official says it will probably look to secure about 70-80% of the final cost in debt. "There is no ITC cash grant anymore, but the ITC still exists, so we can maybe partner with someone that has the tax appetite," the official adds.

A solar thermal facility has not been project financed since

(continued on page 12)

CIT Wraps Rooftop Solar Deal

CIT Energy has financed a rooftop solar project planned for a New Jersey military base.

See feature, page 2



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New Project Finance Loans

We've added updates to our weekly round-up of the latest project finance deals in the Americas, with details on projects, sponsors and debt.

See Deal Book, page 4

Generation Sale ■ DATABASE

Get the rundown on the latest asset trades in *PI's* weekly calendar, compiled from our exclusive Generation Sale Database.

See calendar, page 3

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AT PRESS TIME

CIT Finances Military Rooftop Solar

CIT Energy has financed a rooftop solar project at a private housing complex planned for the Joint Military Base McGuire-Dix-Lakehurst in New Jersey. The project is owned by private equity shop **True Green Capital Management**.

CIT arranged a \$24 million senior credit facility for the 12.3 MW project that has a 20-year power purchase agreement with the U.S. **Air Force**. The installation is hosted by **United Communities**, the privatized military housing operator at McGuire-Dix-Lakehurst.

The financing on the McGuire-Dix-Lakehurst installation was originally planned to take two to three months but wound up between four and five because the number of units was upsized midway through the process, says **Randy Perkins**, partner at law firm **Moore & Van Allen**, which advised CIT and has worked on a number of power financings with it in the past.

This financing piqued CIT's interest because it was the first chance to work on a deal that was a sizeable roof mounted project versus ground-mounted, which can have more problems with permitting and interconnection, says Perkins. "Going through this once, it answers many of the questions you might have," Perkins says, noting the firm would be open to more deals in this sector.

New York-based True Green is investing in distributed generation in the U.S. from its first fund. So far, it has 30 MW in its portfolio and has room in its first fund for several more investments ranging in size from 1 MW to just under 15 MW, says **Jeffrey Brown**, principal and founder. "There have historically been more funds focused on distributed solar in Europe," says Brown, adding that there is burgeoning interest from investment shops in opportunities in the U.S.

Privately owned housing units, particularly military affiliated housing, could be a fertile area of growth for the distributed generation solar sector. Having an offtaker with a strong credit quality is key to arranging financing, making military housing roofs an attractive location. "As principals and managers of long-term costs, [real estate managers] have a quick appreciation for the present value of the energy savings these projects provide to their properties over time," says Brown. In some areas distributed generation can provide a 30-40% discount to retail power costs.

Details on the credit facility such as tenor and pricing could not be learned. Brown and Perkins declined to comment. **Mike Lorusso**, managing director and group head of CIT Energy, was not available to comment.

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Power Finance & Risk is a general circulation newsweekly. No statement in this issue is to be construed as a recommendation to buy or sell securities or to provide investment advice.

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Institutional Investor, LLC

Issn# 1529-6652

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GENERATION AUCTION & SALE CALENDAR

These are the current live generation asset sales and auctions, according to *Power Intelligence's* database. A full listing of completed sales for the last 10 years is available at www.powerintelligence.com/AuctionSalesData.html

Seller	Assets	Location	Advisor	Status/Comments
Algonquin Power & Utilities	Various (46.8 MW Hydro)	Various	TBA	It's quietly shopping the portfolio (PI, 11/26).
Atlantic Power Corp.	Path 15 (84-mile Transmission)	California	Rothschild	The company is quietly shopping it; initial bids due soon (PI, 11/12).
Calpine	Broad River (847 MW Gas)	Gaffney, S.C.	TBA	ECP has tapped CoBank, Union Bank to finance its acquisition (PI, 12/24).
Deutsche Bank, . Katabatic Power Corp	Banks Island (1 GW Wind)	British Columbia	None	Newly founded shop is buying the shelved project in anticipation of load growth (PI, 1/21).
Diamond Generating	Stake (1,178 MW Kiowa CCGT)	Oklahoma	Citigroup	Co-owner Tenaska bought out the stake (PI, 1/21).
► Dominion	Brayton (1,536 MW Coal, Oil, Gas) Kincaid (1,158 MW Coal) 50% Stake (1,424 MW Elwood Peaker)	Somerset, Mass. Kincaid, Ill. Chicago, Ill.	Citigroup, Morgan Stanley	Final bids pushed to Feb. 11 (see story, page 7).
Dynegy	Roseton (1,167 MW Oil-, Gas)	New York		CCI is buying the plant for \$19.5M as part of Dynegy's bankruptcy process (PI, 1/28).
EDF Renewable Energy	50% Stake (201 MW Lakefield Wind)	Minnesota	TBA	TAQA is buying EDF's position as a lessee (PI, 1/21).
Energy Investors Funds	Stake (550 MW Astoria Energy II)	Queens, N.Y.	Barclays	Teasers are out (PI, 12/10).
Energy Investors Funds	Rathdrum (275 MW Gas) Plains End I & 2 (228.6 MW Gas) Stakes (245 MW Cottage Grove Gas) Stakes (249 MW Whitewater Gas)	Rathdrum, Idaho Arvada, Colo. Cottage Grove, Minn. Whitewater, Wis.	Scotiabank	Initial bids due by Sept. 12 (PI, 9/10).
Enova Power Group	Plainfield (37.5 MW Biomass)	Plainfield, Conn.	UBS	Prospective buyers went to an on-site presentation in late Dec (PI, 12/24).
GDF SUEZ Energy North America	Stakes (1,341 MW Hydro)	Northeast	TBA	Project level stake may be up for grabs as part of a parent-led divestiture program (PI, 1/28).
Iberdrola Renewables	Various (Wind, Solar)	Various	JPMorgan, Blackstone	The Spain-based parent is driving the sale of 700 MW of spinning wind plus wind, solar development assets (PI, 7/16).
Invenery	Stakes (1.5 GW Wind)	Various	None	Caisse de depot has taken a \$500M equity stake in 13 farms (PI, 1/14).
JPMorgan Capital Corp.	Tax Equity Stakes (524 MW Wind Portfolio)	Texas	JPMorgan	It's selling its tax equity stakes in a trio of wind farms owned by AES (PI, 1/21).
LS Power	Blythe (507 MW CCGT)	Blythe, Calif.	Bank of America	First round bids came in the week of 1/14 (PI, 1/28).
Maxim Power Corp.	CDECCA (62 MW Gas) Forked River (86 MW Gas) Pawtucket (64.6 MW Gas) Pittsfield (170 MW Gas) Basin Creek (53 MW Gas)	Hartford, Conn. Ocean River, N.J. Pawtucket, R.I. Pittsfield, Mass. Butte, Mont.	Credit Suisse	Looking to sell to refocus on Alberta; teasers not out yet (PI, 12/17).
NRG Energy, Paragon	Saguaro (90 MW Coen)	Henderson, Nev.	None	Has been quietly trying to sell the plant (PI, 1/28).
NextEra Energy Resources	Various (351 MW Hydro)	Maine	TBA	Brookfield has agreed to buy the assets, which faced a missed Q1 interest payment (PI, 1/7).
Olympus Power, Metalmark Capital	Brooklyn Navy Yard (Stake, 286 MW Gas)	Brooklyn, N.Y.	Credit Suisse	EIF has agreed to buy the plant, which was damaged by Hurricane Sandy (PI, 1/14).
PPL Corp.	Various (604 MW Hydro) Colstrip (529 MW Coal) Corette (153 MW Coal)	Various, Montana Colstrip, Mont. Billings, Mont.	UBS	The utility holding company is selling its unregulated Montana operations (PI, 11/12).
► Ram Power	Geysers (26 MW Geothermal)	Healdsburg, Calif.	Marathon Capital	In talks with several buyers amid a reorganization (see story, page 6).
Rockland Capital, John Hancock Life Insurance and Atlantic Power Corp.	Gregory Power Partners (400 MW CCGT Cogen)	Gregory, Texas	TBA	First round bids due around Dec. 14 (PI, 12/17).
Sempra U.S. Gas & Power	Mesquite Power (1,250 MW Gas) Mexicali (625 MW Gas) Copper Mountain 1 (58 MW Solar) Copper Mountain 2 (150 MW Solar) Mesquite 1 (150 MW Solar)	Arlington, Ariz. Mexicali, Baja California, Mexico Boulder City, Nev. Boulder City, Nev. Arlington, Ariz.	TBA	Sold half of Mesquite to Salt River Project (PI, 11/12). The Sempra Energy unit is talking with prospective advisors (PI, 10/22). Infrastructure funds make up the bulk of first round bids for the solar assets (PI, 1/14).
► Tenaska	Brownsville (Stake, 800 MW Gas)	Brownsville, Calif.	No advisor	Brownsville Public Utilities Board is buying a 25% stake of the project that could go into construction next year (see story, page 7).

► 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 Senior Reporter **Holly Fletcher** at (212) 224-3293 or e-mail hffletcher@iintelligence.com.

PROJECT FINANCE DEAL BOOK

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

Live Deals: Americas

Sponsor	Project	Location	Lead(s)	Loan	Loan Amount	Tenor	Notes
AES Gener	Cochrane (532 MW Coal)	Chile	TBA	TBA	\$1B+	TBA	Sponsor rounds up banks, ECAs (PI, 11/26).
Alterra	Dokie II (156 MW Wind)	Fort St. John, B.C.	TBA	Expansion	\$300M	TBA	The sponsor is hoping to close the financing in the next few months (PI, 9/24).
	Upper Toba (124 MW Hydro)	Toba Valley, B.C.	TBA	Expansion	\$40M	TBA	Sponsor is looking for project equity (PI, 9/10).
BluEarth Renewables	Bow Lake (60MW Wind)	Algoma, Ontario.	TBA	TBA	\$80M	TBA	Sponsor will be bringing a few deals to market this year (PI, 1/21).
BrightSource	Rio Mesa (500 MW Solar)	Riverside County, Calif.	TBA	TBA	TBA	TBA	Sponsor has pulled the project from the market.
	Hidden Hills (500 MW Solar)	Hidden Hills, Calif.	TBA	TBA	TBA	TBA	Sponsor has an offtake agreement with Southern California Edison for the Hidden Hills project.
Cameron LNG	LNG Export Facility	Hackberry, La.	TBA	TBA	~\$4B	TBA	Sponsor has tapped RBS as financial advisor as it looks to line up lenders (PI, 1/14).
Cheniere Energy	Sabine Pass Trains 3 & 4 (Trains)	Sabine Pass, La.	TBA	TBA	\$3B	TBA	The sponsor is looking to close the deal in the first half of 2013 (PI, 1/7).
Coronado Power	Edinburg (700 MW Gas)	Edinburg County, Texas	TBA	TBA	\$650M	TBA	The new shop will fire up the financing after some of the final permits are issued (PI, 12/3).
Duke Energy Renewables	Los Vientos (402 MW Wind)	Willacy County, Texas	Mizuho	TBA	\$800M	7-yr	Sponsor aims for \$800 million in debt (PI, 11/5).
EmberClear Corp.	Good Spring (300 MW Gas)	Schuylkill County, Pa.	CCA Capital	TBA	\$400M	TBA	Sponsor taps Boston-based CCA Capital to manage both the debt and equity sale (PI, 12/24).
Energy Investors Funds	Pio Pico (300MW Gas)	San Diego County, Calif.	SocGen	TBA	\$300M	TBA	The sponsor has tapped Société Générale to lead the financing (PI, 10/1).
Geronimo Wind Energy	Black Oak and Getty (42MW & 40MW Wind)	Stearns County, Minn.	TBA	TBA	~\$150M	TBA	The sponsor is waiting to secure an offtake agreement (PI, 12/17).
Greengate	Blackspring Ridge I (300 MW Wind)	Lethbridge, Alberta.	Citigroup	TBA	~\$600M	TBA	Sponsor may be looking for financing or to sell (PI, 9/10).
K Road Power	Moapa (350 MW Solar)	Clark County, Nev.	TBA	TBA	\$1B+	TBA	Sponsor is tracking market precedents and looking at a bank/bond deal (PI, 12/10).
Moxie Energy	Moxie Liberty (850 MW Gas)	Bradford County, Pa.	TBA	TBA	\$800M	TBA	The plant may be financed merchant by the team, made up largely of AES Corp alum (PI, 10/22).
NextEra Energy Resources	Various (Wind)	U.S.	TBA	Refi	TBA	TBA	The sponsor has been talking with lenders to refinance a portfolio of about 10 wind projects (PI, 10/1).
	Limon I & II (400 MW Wind)	Colorado	N/A	N/A	N/A	N/A	State Street, JPMorgan, Bank of America and Wells Fargo make tax equity investments in the projects (PI, 11/5).
OCI Solar Power, CPS Energy	Alamos I - V (400 MW Solar)	Texas	TBA	Term	~\$500M	TBA	Sponsor is likely to decide on an Asian bank to lead the financing (PI, 9/17).
Panda Power Funds	Temple II (750 MW Gas)	Temple, Texas	TBA	TBA	\$700M	TBA	The developer is looking to close the deal in the first half of 2013 (PI, 12/24).
Pattern Energy	South Kent (270 MW Wind)	Haldimand County, Ontario	BTMU, Union Bank, Mizuho	TBA	\$800M	TBA	The sponsor has mandated three banks to lead the financing (PI, 12/17).
	Grand (150 MW Wind)	Haldimand County, Ontario					
Quantum Utility Generation	Various (Unknown)	U.S.	TBA	TBA	TBA	TBA	The sponsor is talking to lenders after the successful close of a roughly \$120 million refinancing last month (PI, 10/8).
Ridgeline Energy	Meadow Creek (120 MW Wind)	Bonneville County, Idaho	TBA	TBA	\$180-200M	TBA	Sponsor discusses financing with lenders, equity with Diamond Generating Corp. (PI, 5/28).
Rockland Capital, Broadway Electric Co.	Mass Solar (60 MW Solar PV)	Massachusetts	TBA	TBA	\$200M	TBA	Sponsors talking to four lenders about financing (PI, 5/14).
Sempra U.S. Gas & Power	Copper Mountain III (250 MW Solar)	Boulder City, Nev.	TBA	TBA	\$600M	TBA	Sponsor is looking to secure a bank loan (PI, 12/17).
SolarReserve	Rice (150 MW Solar Thermal)	Blythe, Calif.	TBA	TBA	\$450M	TBA	Sponsor is looking to become the first entity to back a solar thermal project without a DOE loan (see story, page XXX)
Standardkessel, Green Energy Team	Unidentified (6.7 MW Biomass)	Koloa, Hawaii	TBA	TBA	TBA	TBA	WestLB exits deal; sponsor tap another bank as lead (PI, 5/21).

New or updated listing

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PROJECT FINANCE

Nev. Shop Hunts Renewables Developer

Coyote Springs Investment, a real estate development company behind the \$30 billion master-planned Coyote Springs community in Nevada, has issued a request for proposals to lease land to a renewable facility in Lincoln County, Nev. The deadline for submissions is March 1.

CSI is looking for parties interested in the property for development, construction and long-term operation of one or more utility-scale solar or renewable generation facilities. "CSI prefers that the proposed project be as large as feasible," says **Emilia Cargill**, senior v.p. and general counsel at CSI. "Based on the available area and the outstanding solar installation at the site, we estimate a PV project of 1,000 MW is possible or a concentrating solar tower project could possibly double that capacity."

The company is open to either one company leasing the entire property or to breaking it up. The location is best suited to solar installations, says Cargill, but the company is open to other renewable energy types. The winning bidder or bidders will be responsible for facilitating all transmission design, planning and required interconnections. The proposals will be reviewed and compared in-house and CSI will select one or more projects for further discussion and negotiation. The winning bidder may need to pay CSI royalties, in addition to lease payments, according to RFP documents. The tenor of leases available could not be learned.

BrightSource originally had a lease to build a 960 MW solar project on the site. However, the developer terminated it in June

2011 after an official at CSI affiliate **Wingfield Nevada Group** allegedly threatened the developer with extortion, charges which the official has denied, if it did not make a lease payment, according to [documents](#) filed with the U.S. District Court for the District

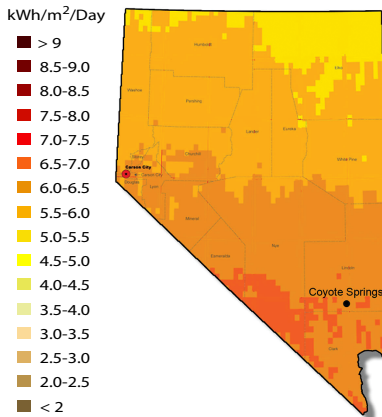
of Nevada. Wingfield was conceived as a partnership between gaming lobbyist **Harvey Whittemore** and members of the **Seeno** family, which is behind a real estate development and construction company **Seeno Construction Co.** based out of Concord, Calif., to build Coyote Springs. Whittemore, the Seenos and **Brad Mamer**, the former ceo of Wingfield, brought various lawsuits against each other last year. CSI and BrightSource are in litigation regarding BrightSource's termination of the lease. The status of those litigations could not be learned by press time.

Spokespeople at BrightSource in Oakland, Calif., did not return calls by press time. Cargill declined to comment on the litigation. The proposed solar thermal facility was set to

connect to the El Dorado substation located south of Las Vegas and had a power purchase agreement with **Pacific Gas & Electric**. A spokeswoman from PG&E did not return calls by press time. The status of the PPA could not be learned.

The proposed Coyote Springs development comprises several golf courses, including one that has been designed by **Jack Nicklaus** and already built, as well as homes, schools and amenities for 50,000-150,000 residents. No residences have been built on the site.

Nevada PV Solar Resource



New Boutique Readies Renewable Investments

Liberty Clean Power, a boutique power and energy investment shop founded by former American Wind Capital staffers, has teamed up with the investment arm of the Secaucus, N.J.-based privately-held **Hartz Capital**, to begin investing in renewable generation projects. Madison, Conn.-based Liberty will manage and select the investments using Hartz funds and will look to make both debt and equity plays.

"Our sweet spot is in the \$2-10 million dollar range," says **Maria Klutey**, managing partner at Liberty. "We are interested in any renewable assets, of any size. Because of the smaller size of our investments, we will probably concentrate on wind to begin with." It will invest in operating projects and those under construction, but would not take on development risk.

Klutey, who was previously cfo at American Wind, started Liberty last April with **Jeffrey Keeler**, managing partner, who was v.p. of business development at American Wind. Prior to American Wind, Klutey and Keeler were at **GE Energy Financial Services**

and **Ibedrola Renewables**, respectively. The two have a number of relationships that they will look to tap, says Klutey, adding that they expect to make about two to five investments totaling \$25 million in 2013. Calls placed to American Wind Capital, a venture headed up by former **Noble Environmental Power** CEO **Chuck Hinckley** ([PI](#), [9/16/2011](#)) were not returned by press time.

The pair sees an opportunity in projects nearing the end of benefits from federal subsidies. "Fewer players are interested in that market at our ticket size," says Klutey. "There are a number of projects with tax equity flip structures that will need new investments with owners looking to monetize the projects."

Hartz Capital is the investment arm of the **Hartz Group**, one of the largest private owners of commercial real estate in the U.S., which also has investments in oil and gas and renewable energy. Hartz, through affiliate **Hartz Mountain Industries**, developed, and now owns and operates, 19 MW of solar photovoltaic generation. A spokeswoman for Hartz directed *PI* to Liberty for comment.

PEOPLE & FIRMS

Investec Banker Joins Brookfield

Jamie Manson, former head of project origination, execution and general marketing for power in North America at Investec in Toronto, has joined **Brookfield Financial Corp.** as a managing partner in Toronto last week. In the newly-created position, Manson will help develop the company's power and energy advisory arm, which focuses on capital raising, securing equity and debt and M&A.

Brookfield has a couple of mandates in power and energy and is looking to expand and grow the advisory business, particularly on the renewable side, says a deal watcher familiar the move. Brookfield expects to grow the 10-member team as it develops its pipeline of deals.

The initial focus will be in North America, but with global offices,

the team may look to opportunities in Latin America and other regions, says the deal watcher. Brookfield Financial works with large clients and smaller private shops, essentially running the full gamut of companies. It will focus on renewable energy, including solar, wind, geothermal and biomass, but will also explore opportunities in the natural gas and storage spaces. Manson reports to **Brydon Cruise**, president and managing partner at Brookfield Financial, and will work alongside **Gregory Smith**, managing partner.

Prior to Investec, Manson was at **GE Energy Financial Services** where he originated and structured equity investments in renewable energy projects in Canada. Investec is currently in the process of replacing Manson. A company official in Toronto did not return calls.

BORROWER STRATEGIES

Cheniere Rides Hot Mart To Upsize Bonds

Cheniere Energy has upsized its 144a offering to \$1.5 billion from \$1 billion after an investor roadshow in New York, Boston and Chicago. "They could have done more. We know the market is really hot and the oversubscription and upsizing is a sign of that," says a deal watcher.

The eight-year senior secured notes have a coupon of 5.625%. The book runners aim to wrap the issue by Feb. 1. The proceeds will be used to fund the construction of the first two liquefaction trains at its Sabine Pass LNG facility in Cameron Parish, La.

Crédit Agricole, Credit Suisse, Deutsche Bank, HSBC, JPMorgan, Mitsubishi UFJ, Morgan Stanley, Royal Bank of Canada, Société Générale and **Standard Chartered** are joint lead book-running managers. **Banco Santander, ING, Lloyds Bank** and

Scotia Capital are joint lead managers. **Mizuho** is a co-manager. The issuer is Cheniere subsidiary **Sabine Pass Liquefaction**.

All of the book runners participated in a \$3.6 billion term loan A backing the Sabine Pass project ([PI, 7/19](#)) and the sponsor will use the proceeds from the 144a in lieu of a portion of that loan ([PI, 1/24](#)). The company had to gain approval from all 21 lenders in the term loan A to suspend \$1.5 billion from that facility, meaning that portion of funds would no longer be available to the borrower. The notes are *pari passu* in right of payment with all existing and future senior debt of the subsidiary, including borrowings under the term loan A.

Standard & Poor's rates the notes BB+, while **Moody's Investors Service** affirms its Ba3 rating.

MERGERS & ACQUISITIONS

Ram Markets NorCal Geo Project

Ram Power is selling its Geysers geothermal project in Northern California as the company shifts its focus from development in the U.S. to Nicaragua.

It considered options such as a joint venture several months ago for the 26 MW project but ultimately decided to sell, says **Steven Scott**, director of investor relations in Reno, Nev. **Marathon Capital** launched an auction earlier this month.

Ram is talking to several prospective buyers and is aiming to come to an agreement by the end of the first quarter, says Scott. The project, located near Healdsburg, Calif., is attractive because it carries the opportunity for both the production tax credit as well as the investment tax credit, Scott says. It has a power purchase agreement with **Northern California Power Agency** for 25 years. The project will need to go into construction this year to take

advantage of the PTC. A targeted date to bring it online could not be immediately learned.

Other company development projects in the U.S. had power purchase agreements but they were terminated over the last 18 months ([PI, 9/7/11](#)). Those projects are being pushed to the back of its development queue, not being sold.

Ram is shifting its efforts to Nicaragua because of financing challenges in the U.S., such as securing early stage development capital for drilling and getting lenders comfortable with construction financing. The extension of the PTCs early this month buoyed the market, although Scott says the company was hoping credits would be extended for longer than a year. "[Developing geothermal] is not for the faint of heart," he says, noting there is a dwindling number of companies trying to develop projects.

Tenaska Ropes Texas Muni As CCGT Partner

Tenaska has brought in the **Brownsville Public Utilities Board** of Brownsville, Texas, as a partner on an 800 MW gas-fired combined cycle project in the city.

BPUB, a municipal utility that serves the 176,000 Brownsville population on the border with Mexico, will own a 25% stake. The municipal's service territory has had more growth than other parts of the state and needs the power, **Greg Kelly**, v.p. of development at Tenaska, told *PI*. Municipal officials were traveling and not available for comment, according to a spokesman.

The project—called the Tenaska Brownsville Generating Station—needs additional offtakers and permits before it can move forward to financing, says Kelly, based in Arlington, Texas. The plan is to secure financing in the first quarter of 2014 and start construction shortly thereafter. Kelly expects the financing will follow Tenaska's traditional route of arranging a non-recourse project finance loan. He declined to comment on how much the project will cost.

Tenaska is working to line up offtakers for the remaining capacity. It prefers tolling agreements but will consider other structures, including selling power over the border to users in Mexico. "We feel good about 2014 as the construction start,"

Kelly says. Tenaska is scheduled to file the last air quality and greenhouse gas permit next week. On average, this process takes about 11 months, he says.

The utility has been a customer with Tenaska affiliate power marketer **Tenaska Power Services Co.** for more than 15 years.

How much BPUB is paying for the stake could not be immediately learned.

E.ON Readies JPM, Wells Tax Equity

E.ON Climate & Renewables has lined up a tax equity investment from **JPMorgan Capital Corp.** and **Wells Fargo Wind Holdings** for a wind farm in Indiana brought online late last year.

JPMCC and Wells Fargo will stake a stake in the 202.5 MW Wildcat 1 farm in Madison and Tipton Counties, Ind. A third investor will be brought into the deal in the coming weeks, according to the filing. A similar scenario played out early last year when Wells Fargo joined JPMCC in an E.ON Climate & Renewables project in Illinois ([PI, 2/6](#))

The farm will sell 100 MW to **Indiana Michigan Power**, a subsidiary of **American Electric Power** for 20 years. The farm sells another 15 MW to an undisclosed offtaker, according to a recent filing with the U.S. **Federal Energy Regulatory Commission**. An E.ON spokesman did not respond to an inquiry. The farm uses **GE** 1.6 MW turbines.

A JPM spokeswoman declined to comment.

Dominion Deadlines Pushed To Mid-February

The deadline for the submission of final bids for three Dominion assets totaling 3.4 GW in Illinois and Massachusetts has been pushed out a week. Bids are now scheduled to come in the week of Feb. 11, says a deal watcher, adding that it's possible there could be another delay.

"[Buyers] are having trouble wrapping their heads around the plants," says a banker, referencing the challenges of valuing coal-fired generation given emission regulations and low power prices.

The assets are:

- **Brayton**, a 1,536 MW facility with three coal-fired units and one oil or gas-fired unit in Somerset, Mass.;
- **Kincaid**, a 1,158 MW facility with two coal-fired units in Kincaid, Ill.; and
- **Elwood**, a 1,424 MW gas-fired peaker near Chicago. Dominion owns half of Elwood; **J-POWER USA Development Co.** owns the other half.

All the entities in the first round are in the second, says a banker. **ArcLight Capital Partners**, **Dynegy**, **Energy Capital Partners**, **Riverstone Holdings** as well as **New Wave Energy Capital Partners**, a financial player based in Pittsburgh, Pa.,

have all taken a look ([PI, 12/7](#)). A couple of other shops working on bids but are less likely to emerge as the buyer because their interest is primarily due to the paucity of assets on the market, says the banker.

Bidders are using the 2.648 GW of coal-fired power in PJM that Riverstone bought from **Exelon** for \$400 million as a data point for comparable pricing. Riverstone paid \$150 per kW on average ([PI, 8/13](#)). The Dominion fleet could fetch around \$510 million using that mark, not accounting for a higher value ascribed to the gas-fired stake.

The portfolio is expected to be financed along the same lines as the Exelon portfolio, bankers say. Riverstone wrapped a six-year \$175 million term loan B that priced at LIBOR plus 600 basis points ([PI, 11/19](#)). Several shops, including **Credit Suisse**, **UBS**, **Barclays** and **Bank of America**, have had conversations about providing a B loan for the acquisition, deal watchers say.

Buyers moved into the second round in early December. **Citigroup** and **Morgan Stanley** are running the sale ([PI, 9/10](#)).

Bank spokespeople either declined to comment or were not immediately available.



Brayton



Kincaid

INDUSTRY CURRENT

Weighing Opportunities To Buy Operating Wind Farms

THIS WEEK'S INDUSTRY CURRENT is written by **Paul Kaufman**, partner in corporate and project finance at **Chadbourne & Parke** in Los Angeles. Prior to joining the firm, Kaufman was the executive v.p. of transactions for **Electricité de France's** North American development arm.



Paul Kaufman

Private equity funds and pension trusts that are unable to use the large tax subsidies on U.S. wind farms may have an opportunity shortly to acquire operating projects.

A significant number of U.S. wind farms will have been in operation for at least 10 years by the end of 2013. These wind farms qualified for 10 years of production tax credits on their output. The credits are 2.2¢ per kWh. The fact that the U.S. subsidizes construction of new renewable energy facilities through tax subsidies has made it difficult for anyone without a U.S. tax base to invest in such projects. Most projects have been financed to date in the tax equity market. There are roughly 20 active tax equity investors.

The U.S. had an installed wind capacity of 6,350 MW at the end of 2003, according to data collected by the U.S. **Department of Energy**. Those projects will be at least 10 years old by the end of this year. Will the developers who still own them be interested in selling?

Developers sell projects for various reasons. A developer may need to rebalance its balance sheet or generate cash to develop other projects. Exhaustion of PTCs may be an opportunity for the developer to exit as the value of the project at that point will be limited to the project's cash flow. The developer may have an added interest in selling if the project has underperformed, since the cash needs of the project for maintenance may be a strain for the developer or the project may need additional capital improvements.

Reliable Revenue Stream?

Purchasing a project that has been in operation for 10 years raises a number of due diligence questions. Knowing where to probe will save time.

One of the first places to focus is the status of the power purchase agreement under which electricity, renewable energy credits and other attributes from the project are being sold.

The first step in evaluating the power contract is to gather all of the documents that govern performance by the parties. Many utilities buying electricity from independent generators under long-term contracts use "administrative guides" or "operating committees" to administer such contracts. A review of the administrative guide or the minutes or records of the operating committee is advisable.

If the electricity is being sold to a regulated utility, another key document is the order by the state public utility commission

authorizing the utility to pass through the electricity price under the contract to its ratepayers. Be sure to check whether the public utility commission imposed any conditions. Some state commissions require periodic review of the rate order.

Check whether the offtaker, or agency that regulates its rates, has developed buyer's remorse. While someone buying a wind farm may see it as a plus that the power contract requires the local utility to pay above-market prices for the electricity from the project, the utility and its regulators may not see it the same way. How great a risk is there that the utility will want at some point to try to get out of the contract? Will it be encouraged to do so by its regulators? Check whether the utility's consent is required to a sale of the project company, as that may give the utility leverage to insist on lower electricity prices.

More recent PPAs demand a higher level of performance from wind developers and give the utility greater operational flexibility than what was found in older PPAs. Older PPAs may have had a mechanical availability guarantee, but were unlikely to include performance guarantees. An availability guarantee requires the project to be available a minimum percentage of the time to generate energy. A performance guarantee requires the project not only to be available, but also requires the wind to blow.

Older PPAs usually made the utility responsible for any curtailments beyond the point of delivery (which was generally the project busbar). The utility had to keep paying for the electricity that was curtailed. Newer PPAs generally require the project to shoulder some portion of the risk of curtailment beyond the busbar.

Be sure to check how the project has performed. Did it breach any availability or performance guarantees? Has the project paid any liquidated damages to the utility or received any notices of noncompliance or default? Have any disputes, formal or informal, been initiated by either party? Has the project company met all of its reporting obligations under the PPA? Have there been any uncompensated curtailments or have all curtailments been compensated by the utility? If the project went uncompensated, has the cause for the curtailment been mitigated or eliminated?

Finally, focus on the market in which the utility is located. What other options are there for selling electricity if the utility defaults? Evaluating the financial strength of the utility is a critical issue. Has

the utility maintained its credit rating? Has there been a substantial change in the utility's load or customer base?

Fully De-Risked Project?

There are a number of other due diligence issues to consider. On the positive side, the performance of the project will be well understood. Wind projections will have been verified or vilified. Further, to some extent, major equipment problems are likely to have surfaced after 10 years of operation. The break-in period for the project will have been enjoyed or suffered by the original owner.

Nevertheless, the buyer should determine whether the project is "broken" or just "broken in."

For example, due diligence should include a review of the project's past operating history, project availability, outages and maintenance records, and a review of the turbine manufacturer's performance across other operating projects. A careful review of the owner's capital investments and expenses for operation and maintenance will be helpful to determine whether maintenance or repairs were deferred.

If possible, the buyer should consider whether the type of equipment in use at the project has met performance expectations at other projects. For example, has the turbine manufacturer been subject to any serial defect claims that might affect the project's turbines?

While warranty periods in turbine supply agreements of the 2002 and 2003 vintage generally lapsed after two years, a purchaser should nonetheless be concerned with the turbine supplier's ability to continue to provide spare parts or be sure that substitutable parts are available from other suppliers. Review how well any outside contractor to whom the project has hired out operation and maintenance has performed.

Does a project stay "developed" once it is fully developed? If a project has been operating for 10 years, is it reasonable to assume

that site control (land and title), permitting and community support are free from issues?

While the project may have been scrubbed for development flaws when it was financed, and development flaws will tend to reveal themselves with the passage of time, it is best not to assume that the project is free of development issues. The passage of time is not always kind to developed projects. The buyer should consider whether the owner has maintained site control as well as the priority of its claim over the site in the chain of title. A new phase I environmental assessment should be ordered to ensure that the site remains in an acceptable environmental condition. Consider asking for a new survey to check for any new crossings, easements or other uses of the land, such as mining or gas drilling, since the project was originally financed.

Wind farms operate under permits that may have conditions on continued operation. Check that the project has complied with all permitting conditions, including any requirement for post-operation reports and studies. Check whether any endangered or threatened species have moved closer to the site since the project was built. Did the project take on any study or reporting requirements with respect to flora or fauna and, if so, are there any open-ended mitigation obligations that spring from the reports?

Unfortunately, regulatory requirements are not frozen in time once a project has been built. Check for any new compliance obligations. For example, in 2002 wind projects were not regulated by the **National Electricity Reliability Council** and its regional reliability councils (such as the **Western Electricity Coordinating Council**). However, it is now clear that wind projects are subject to reliability regulation and, accordingly, every project needs a compliance plan.

Check back next week for the second installment of this Industry Current.

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Pedro Barriuso, Fistera Energy *(Continued from page 1)*

*Pedro Barriuso is ceo of Blackstone's new power and energy development company Fistera Energy in Madrid. He's a former executive chairman of **Element Power** and ex-head of **Iberdrola Renewables**. He sat down with **Nicholas Stone**, PI's senior project finance reporter, to discuss the shop's objectives in Latin America and opportunities for power project finance and M&A in the region.*

PI: What was the motivation for partnering with Blackstone and forming the company now?

Joining a company like Blackstone leaves no doubt; it's always a good thing. They have excellent people, investment expertise and an excellent track record. So the decision was not very difficult. On top of that, in my previous company, **Element Power**, our investment focus was solely in renewable energy. At Blackstone, we are going to invest more broadly in energy, not just renewables. Our scope is much bigger and much wider, which affords us access to more attractive development opportunities.

PI: What is your view on the power and energy project finance landscape in Latin America?

There are countries like Mexico, Colombia, Peru, and Chile that are very good and growing a lot. They need electricity of all kinds, both renewable and non-renewable. We're seeing gas, combined cycle, hydro and a general shift towards power generating facilities which use more diverse fuel types. There are plenty of opportunities in these countries and in Brazil. Perhaps the only problem in Brazil is that investment IRRs are not sufficient, in the sense that everybody is looking to invest there. Brazil has been very fashionable for many years, so right now that market is a little overheated. Also, the price of electricity is low so the opportunities are not that interesting. But in other Latin American countries, there are many opportunities, even for transmission lines and service stations.

PI: What kinds of projects hit the sweet spot for Fistera?

We are going to look at renewables (solar and wind) as well as combined cycle gas and hydro plants in attractive geographic regions. Another type of project that may be of interest to us would be high voltage transmission lines.

PI: Any more specifics on those projects in terms of capital you can deploy?

We are going to concentrate on medium to large projects because there are clear economies of scale. We probably wouldn't invest in a 20 MW wind farm—below 100 MW is too small. The same applies to hydro plants—20 MW is too small. We would like to concentrate on transactions of \$75-100 million in equity and upwards.

PI: How much can Fistera invest in total?

We don't have a limit. We are a company that is now owned 100% by investors of Blackstone, and Blackstone is a very large private equity firm. When we select a project, they will decide whether to approve it or not, but there are no explicit limitations. Let's say the round figure that we would like to invest at the beginning would be \$500 million. It could be \$300 million, or it could be more. It depends on the quality of the projects that we present to them.

PI: What does your pipeline of deals in Latin America look like and how many deals do you think you will do this year?

We are only now pursuing deals because we only created the company last Wednesday. But we have been working in Latin America for many years. In our previous lives, we were with **Iberdrola**, so we know what is happening in the Latin American energy market, from the tenders that we know will launch in Mexico in the coming months, to the hydro plants that are going to be built in Colombia and Chile...I think Latin America is very robust and healthy. Chile is an excellent country, and in Mexico there is the **Comisión Federal de Electricidad**, which is an excellent company and a more reliable offtaker than some of the utilities in Europe or in the United States. There is a strong appetite for electricity and a strong possibility to develop those projects, because of the offtakers and because of the countries.

PI: Are you interested in partnerships or buying entire projects?

In principal, we would like to take majority stakes. Partnerships? Yes, why not? But we would always prefer to have a majority stake in the project. Sometimes it helps to have local stakeholders or local shareholders and sometimes it doesn't. We can go into Colombia with some Colombian investors, or go into Mexico with Mexican investors. That's not a problem for us.

PI: How many people are on your team? Where is it based?

Ten people are on the team. These are the same people who came with me from **Element Power** and **Iberdrola** before that. Some of those people have been installing everything from gas combined cycles to solar plants to wind farms to service stations and high voltage transmission lines. We don't want to have a large overhead structure until we have enough projects and we close one or two significant deals. Then, we'll take on some more people. We are

based in Madrid, although three people on the team have been living in Mexico for five years and others have been living out of Spain, Latin America and Italy. We have to work where the projects are, so if you have a big project in Chile, the guys will have to go to live in Chile for a few years.

PI: How will Blackstone look to finance any development projects or M&A activity?

We are definitely going to look for debt for every project. If you have a strong sponsor and the project is good, once you complete the technical due diligence and structure the offtake, I think there will be a great deal of interest from financial institutions. It's not like pre-2008, when developers were able to leverage the projects up to 90% and more. Now, it's between 70-75%, maybe 80%, depending on the quality of the project. Normally it would be banks or insurance companies. But I would say banks would be more traditional.

NEWS IN BRIEF

News In Brief is a summary of publicly reported power news stories. The information has been obtained from sources believed to be reliable, but **PFR** does not guarantee its completeness or accuracy.



Aubrey McClendon

• **EDF EN Canada** has received approval from Quebec authorities to start construction on its \$800 million, 350 MW Rivière-du-Moulin wind project. The first 150 MW phase will go into construction this year and the second phase will be online by the end of 2015 (*Power Engineering*, 1/31).

• **Midwest Generation**, a subsidiary of **Edison Mission Energy** that has filed for bankruptcy, has asked Illinois officials to delay a 2015-2016 deadline to have \$440 million of emission reducing upgrades online at the Joliet coal-fired plant. The company has asked for a 2017 deadline given its financial troubles (*Midwest Energy News*, 1/31).

• **Southern Power**, the wholesale unit of **Southern Co.**, will expand out of the Southeast into MISO and Texas, says **Thomas Fanning**, CEO of Southern. The company will look to develop new generation that has long-term power purchase agreements (*Platts*, 1/30).



Thomas Fanning

• **Minnesota Power** is planning a series of efforts to cut-down on its coal-fired generation. It will convert the 110 MW Laskin plant to natural gas, install \$350 million of emission reducing equipment at its Boswell 4 unit and retire a portion the Taconite Harbor plant (*Duluth News Tribune*, 1/30).

• **Dominion** posted a \$795 million loss in the fourth quarter primarily from write-downs it made on the merchant generation, including two coal-fired plants that it is trying to sell (*Fox Business*, 1/30).

• **Kinder Morgan Energy Partners** has agreed to buy the natural gas services company **Copano Energy** in an all-stock deal worth \$3.2 billion. The acquisition values Copano at about 24% above the company's closing share price on Tuesday. Including debt, the deal is worth around \$5 billion (*The New York Times*, 1/30).

• **Southern California Edison** intends to redeem all of the outstanding shares of its Series B and Series C preference stock. The redemption date will be Feb. 28 and the redemption price will be \$100 per share plus accrued and unpaid dividends. SCE will use the proceeds of a recent securities offering to redeem the shares (*Yahoo! Finance*, 1/29).

• **Aubrey McClendon**, CEO and co-founder of **Chesapeake Energy Corp.**, will retire on April 1. McClendon stepped down as its chairman last year under pressure from investors upset with his unorthodox management of the Oklahoma City-based company (*Marketwatch*, 1/29).

• **Brett Carter**, president of **Duke Energy North Carolina** since 2008, has been named chief distribution officer and senior v.p. for the company's utility operations in six states. **Paul R. Newton**, currently senior v.p. and special advisor to Chairman, President and CEO **Jim Rogers**, will succeed Carter (*The Sacramento Bee*, 1/29).

• Some natural gas-fired plants are now cheaper to operate than nuclear facilities, leading companies to consider shuttering them, according to a report by **UBS Investment Research**. **Exelon Corp.**'s Clinton plant in Illinois and Ginna plant in New York, as well as **Entergy Corp.**'s Vermont Yankee and FitzPatrick plants in Vermont and New York, respectively, are vulnerable (*The Wall Street Journal*, 1/29).



Vermont Yankee

• The **California Public Utilities Commission** has approved a **Pacific Gas & Electric** 25-year power purchase agreement for **SolarReserve's** 150 MW Rice solar thermal project, which will include an eight-hour energy storage element (*New Energy World Network*, 1/29).

• There is an effort to ramp up a coal to gas-fired conversion project at the Thunder Bay plant in Ontario. Local politicians are concerned about a shortage of power between the end of next year when coal-fired generation is online and later in the decade when transmission projects ship power from Manitoba (*The Chronicle Journal*, 1/29).

SolarReserve Eyes *(Continued from page 1)*

the expiration of the U.S. **Department of Energy** loan guarantee program and the technology is perceived as riskier than straight photovoltaic modules. **BrightSource Energy** was in the market last to secure financing for a 500 MW concentrating solar thermal facility in Riverside County, Calif. (*PI*, 8/28). But the sponsor shelved the project and cancelled its PPA with **Southern California Edison** earlier this month, citing delays and additional environmental studies. **Solar Trust of America** decided to convert several concentrated solar projects to photovoltaic technology and had to seek extra financing (*PI*, 4/20). SolarReserve received a \$737 million DOE loan guarantee for its inaugural project, the 110 MW Crescent Dunes CSP project near Tonopah, Nev. (*PI*, 10/4/2011).

Pricing on a loan backing a solar thermal facility would have to be at least 300 basis points over LIBOR, a financier says, above the current generation market floor of LIBOR plus 250-275 bps. Solar thermal financings will need to look for sizeable tax equity investments to help get them done, adds another deal watcher.

The Rice facility has a concentrated solar power tower with a thermal energy storage unit and uses a molten salt system technology from **Pratt & Whitney Rocketdyne**. SolarReserve is hoping to close financing by the end of the year, with construction expected to begin in early 2014. I

—**Nicholas Stone**

Pattern Targets *(Continued from page 1)*

a lack of transmission capacity.

It's possible that Pattern is taking the hedging route now to get the project financed and under construction by year-end to meet the new PTC expiry date. The company could still line up a PPA between now and when the project goes online, say bankers. The power hedge details could not be determined by press time.

"There are enough people looking at this deal," says a financier. "It will be about getting lenders comfortable with the hedges you have and the financial security of that. It wouldn't get done without the production tax credit and that tax equity [agreement]."

A Pattern spokesman declined to comment on the financing plans or the project's offtake arrangements.

A roster of banks is looking at the loan that is being talked about at LIBOR plus 225 basis points, which bankers say is a fair price. **CIBC Capital Markets**, **Deutsche Bank**, **Keybank**, **Royal Bank of Canada**, **Royal Bank of Scotland** and **Société Générale** are reportedly among those that have looked at the financing. Japanese banks are said to be looking as well. Financing talks kicked off in December and the details of the financing are not near being finalized, observers say.

The contract and the tax equity investor and its credit quality will be key for lenders. "No bank wants to be left owning a project," says a banker. **MetLife** made a tax equity investment in Pattern's Gulf Coast wind farm in 2010.

Calls to MetLife were not returned.

—**Holly Fletcher & Nicholas Stone**

ALTERNATING CURRENT

Little Sun Goes A Long Way

From the man who put a sun inside the **Tate**

Modern's Turbine Hall and a waterfall next to the Brooklyn Bridge, now comes a plan to bring light to the world. Artist **Olafur Eliasson** has teamed up with engineer **Frederik Ottesen** to develop the **Little Sun** solar-powered lamp. A hand-sized, flower-shaped, solar-powered device that the two hope will bring light to the 1.6 billion people worldwide who live off the electric grid.

Little Sun is a work of art, according to Eliasson. He has been in Davos, Switzerland, for the **World Economic Forum** extolling the virtues of his invention. He has created a company with Ottesen, **Little Sun GmbH**, which produces the solar-powered lamps and distributes them worldwide by establishing trade routes and jobs in those off-grid communities. The company assists in the creation of small businesses, supplying them with Little Sun lamps at a reduced rate and providing retailers with the support they need to profit.

All funds generated by Little Sun are reinvested in the project to push it forward and expand its boundaries. The lamp needs five hours of sunlight to generate one evening of what they call Little Sunlight. It can run three years before needing a battery replacement and can save users 90% over three years when compared with kerosene lamps. The solar panel uses a 60 x 60 mm mono crystalline solar panel, which generates 0.4 watts. And being the shape of a little yellow sunflower, it even looks nice.

It is now available in off-grid shops in Ethiopia, Zimbabwe, Kenya, South Africa, the Philippines, Indonesia, and Myanmar—as well as in various museum bookshops and online.



QUOTE OF THE WEEK

"At **Blackstone**, we are going to invest more broadly in energy, not just renewables. Our scope is much bigger and much wider, which affords us access to more attractive development opportunities."—**Pedro Barriuso**, ceo of Blackstone's new power and energy shop **Fisterra Energy** in Madrid, on the company's development strategy (see Q&A, page 10).

ONE YEAR AGO

Tenaska affiliate **Tenaska Solar Ventures** had opted to use only a bank loan to finance its \$600 million Imperial Solar South project in Imperial County, Calif., and dropped its hunt for a bond tranche. [**Bank of Tokyo-Mitsubishi UFJ** and **Union Bank** led a \$500 million, 10-year deal backing the 130 MW project (*PI*, 4/9). **BBVA**, **DZ Bank**, **Helaba**, **Key Bank**, **Lloyds Bank Corporate Markets**, **Royal Bank of Canada** and **Sovereign Bank** also participated.]