

# Power Finance & Risk

The weekly issue from **Power Intelligence**

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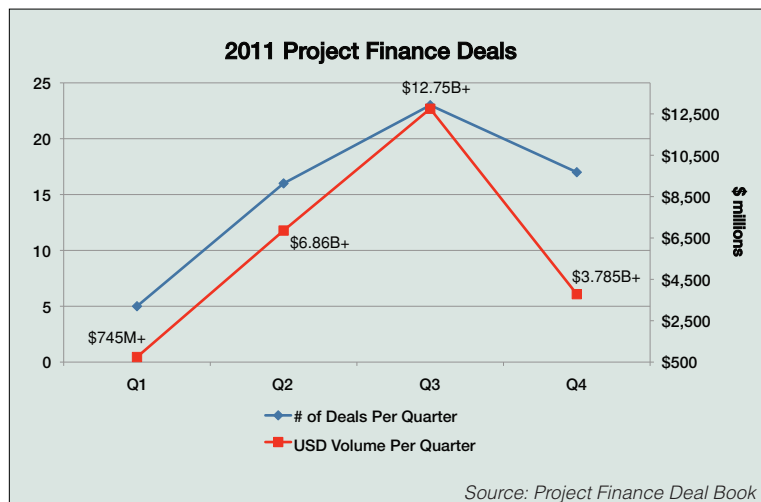
## Project Finance Recap Q4

### Deal Flow Slows, But Still Beats Expectations

Seventeen project finance deals wrapped in the fourth quarter, totaling \$4.2 billion in debt, according to *PI*'s Project Finance Deal Book covering the Americas. The dollar volume is a 66% decrease from \$12.6 billion that closed in the third quarter. But the figure exceeded financiers' expectations for the quarter, when several European players were sidelined due to the European debt crisis.

Roughly \$24 billion of deals cleared the market in 2011, with wind representing 40% of the 60 deals closed. Solar was the

(continued on page 11)



See other charts, pages 10-11

### Energy Storage Co. Hits The Auction Block

Troubled energy storage developer **Beacon Power** is looking for a buyer. A handful of financial players and strategics submitted initial bids for the storage company's assets on Monday to advisor **CRG Partners** in the run up to a bankruptcy court-run auction next month, deal watchers say.

Beacon filed for Chapter 11 in the U.S. Bankruptcy Court

(continued on page 12)

### AES Affiliate Targets \$1.3B Solar Deal

**AES Solar** has begun reaching out to lenders about cobbling together a \$1.3 billion financing to support the first phase of its 709 MW Imperial Valley solar photovoltaic project near Plaster City, Calif. The solar financing would be the largest not to benefit from a federal loan guarantee.

Officials at the developer, a joint venture of the **AES Corp.** and **Riverstone Holdings**, have told lenders it will seek a bank loan and a bond component. Such a structure is necessary for a deal of its size, especially in this increasingly illiquid bank market, financiers say. Bank liquidity has become compressed since August, they note, when European banks' self-funding costs began to mount. Several players have been sidelined,

(continued on page 12)

## THE BUZZ

Several industry heavyweights have either nailed down or are lining up financings, while three players are in the process of selling assets. See *PFR's take on the market*, page 2.

### Our New Look

Based on reader feedback, we've overhauled of our print issue to better highlight our exclusive intelligence & insight with more data, graphics and features.

### Industry Current

This week's authors continue their discussion on solar thermal projects with storage capabilities.

See story, page 9 Felicia Bellows



### Generation Sale DATABASE

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

See calendar, page 3

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## THE BUZZ

Last year closed out with more than \$24 billion in power project financing across 60 deals, according to data compiled from *PI*'s Project Finance Deal Book for the quarterly Project Finance Recap. The European debt crisis, Basel III capital requirements and the expiring cash grant program are leaving many lenders wondering about what this year holds for project finance in the Americas. The uncertainty, however, has not stopped bankers from working on 2012 deals, after wrapping a bevy of financings—mostly wind deals—just before the holidays.

**Edison Mission Energy** is on the hunt for wind funds, while **Competitive Power Ventures** and **NextEra Energy Resources** were among the sponsors that were able to nail down wind deals late last month. Also notable this week is Greek shop **Terna Energy**, which landed roughly \$200 million for projects in Idaho. While rookie developers are fairly common, it's rare to see a new entrant in the U.S. snag this kind of money. The developer has projects in Eastern Europe and expanded into the U.S. last year.

Solar is also making a splash, with **AES Corp.** and **Riverstone Holdings** aiming for a \$1.3 billion financing backing a large solar project in California. **NRG Energy**, **BrightSource Energy** and **SunPower Corp.**, each snagged deals in the \$1 billion-plus range, but they had significant support from the U.S. **Department of Energy's** loan guarantee, which expired in September. The AES deal would be a first without such federal backing.

On the M&A side, reporting centered on the remnants of deals that either launched late in the quarter or quietly traded hands. **Harbinger Capital Partners**, **Beacon Power** and **Perennial Power** are in the medley of companies with on-going sale processes. Perennial, a subsidiary of **Sumitomo Corp.** is flipping a plant that it bought from **Atlantic Power Corp.** and **Northern Star Generation** for an undisclosed sum in 2009. With January almost half gone—and the market place still sleepy—the market imagination seems focused on what could launch later this quarter.

## 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 **Sara Rosner**, managing editor, at (212) 224-3165 or [srosner@iintelligence.com](mailto:srosner@iintelligence.com).

## Power Intelligence

## EDITORIAL

**Steve Murray**  
Editor

**Tom Lamont**  
General Editor

**Peter Thompson**  
Executive Editor (Chicago)  
(773) 439-1090

**Sara Rosner**  
Managing Editor  
(212) 224-3165

**Brian Eckhouse**  
Senior Reporter  
(212) 224-3624

**Holly Fletcher**  
Senior Reporter  
(212) 224-3293

**Katie Segreti**  
Data Editor

**Max Adams**  
Contributor

**Kieron Black**  
Sketch Artist

## PRODUCTION

**Dany Peña**  
Director

**Deborah Zaken**  
Manager

**Melissa Figueroa,**  
**James Bambara,**  
**Douglas Lee**  
Associates

**Jenny Lo**  
Web Production &  
Design Director

## ADVERTISING

**Patricia Bertucci**  
Associate Publisher  
(212) 224-3890

**Adrienne Bills**  
Associate Publisher  
(212) 224-3214

## PUBLISHING

**Allison Adams**  
Group Publisher

**Gauri Goyal**  
Business Director  
(212) 224-3504

**Anna Lee**  
Marketing Director  
(212) 224-3175

**Laura Pagliaro**  
Senior Marketing Manager  
(212) 224-3896

**Vincent Yesenosky**  
Head Of US Fulfillment  
(212) 224-3057

**David Silva**  
Senior Fulfillment Manager  
(212) 224-3573

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ELECTRONIC LICENSES

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**Ken Lerner**  
Account Executive  
(212) 224-3043

## REPRINTS

**Dewey Palmieri**  
Reprint & Permission  
Manager [New York]  
(212) 224-3675  
[dpalmieri@institutionalinvestor.com](mailto:dpalmieri@institutionalinvestor.com)

## CORPORATE

**Jane Wilkinson**  
Chief Executive Officer  
**Steve Kurtz**  
Chief Operating Officer

## Customer Service

Po Box 5016, Brentwood, TN 37024-5016

Tel: 1-800-715-9195

Fax: 1-615-377-0525

UK: 44 20 7779 8704

Hong Kong: 852 2842 8011

E-Mail: [customerservice@iintelligence.com](mailto:customerservice@iintelligence.com)

## Institutional Investor Hotline

(212) 224-3570 and (1-800) 437-9997 or [Hotline@iintelligence.com](mailto:Hotline@iintelligence.com)

## Editorial Offices

225 Park Avenue South, New York, NY 10003

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## GENERATION AUCTION &amp; 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](http://www.powerintelligence.com/AuctionSalesData.html)

Seller	Assets	Location	Advisor	Status/Comments
Abengoa Solar	45% Stake (250 MW Solana Solar CSP)	Gila Bend, Ariz.	TBA	Banco Santander is taking a 45% stake to fund construction and will look to sell slices (PI, 11/28).
AES	Cayuga (306 MW Coal)	Lansing, N.Y.	Barclays Capital	Creditors are the \$300M stalking horse bid for Cayuga and Somerset in a bankruptcy process that will leave the other two plants shuttered (PI, 1/9).
	Greenidge (105 MW Coal) Somerset (675 MW Coal) Westover (83 MW Coal)	Dresden, N.Y. Barker, N.Y. Binghamton, N.Y.		
AES Thames	Thames (208 MW Coal)	Montville, Conn.	Houlihan Lokey	A Texas refurbishment company has bid \$2.35M in cash (PI, 12/12).
AE Investor II	Astoria Energy II (4%, or 23.3 MW)	Queens, N.Y.	Whitehall & Co.	First round bids were scheduled for Sept. 16 (PI, 9/19).
ArcLight Capital Partners	Waterside (72 MW Peaker)	Stamford, Conn.	Citigroup, Barclays Capital	First Reserve is buying everything except Hamakua and Neptune (PI, 12/19).
	Crockett (162 MW Cogen) Hobbs (604 MW CCGT) Hamakua (60 MW CCGT) Borger (230 MW Cogen) Neptune (65-mile Transmission)	Crockett, Calif. Hobbs, N.M. Honokae, Hawaii Borger, Texas Sayreville, N.J., to Long Island, N.Y		
► Beacon Power	Stephentown (20 MW Storage)	Stephentown, N.Y.	CRG Partners	Private equity shops are in due diligence preceding a court-run sale (see story, page 1).
Black Hills Corp.	Stake (29 MW Wind)	Huerfano County, Colo.	No Advisor	Entities with tax appetite have bid for the 50% stake (PI, 11/14).
Constellation Energy Group	Rio Bravo Fresno (24 MW Biomass)	Fresno, Calif.	No advisor	The company has reached out to prospective buyers as it considers selling its stakes (PI, 1/9).
	Rio Bravo Rocklin (24 MW Biomass) Chinese Station (22 MW Biomass)	Lincoln, Calif. Jamestown, Calif.		
Conti Group, Grupo Arranz Acinas	Development pipeline (550 MW Wind)	Texas, Kansas, Minnesota	Alyra Renewable Energy Finance	Teasers went out in late July (PI, 8/1).
Coram Energy	Stake (102 MW Wind)	Tehachapi, Calif.	Marathon Capital	Coram is selling a 50% stake in a wind project co-owned by Brookfield Renewable Power (PI, 8/22).
Edison Mission Group	Stakes	Uinta County, Wyo.	TBA	Teachers Insurance & Annuity Association of America and Cook Inlet Region, Inc., are taking preferred equity stakes (PI, 12/19).
	Mountain Wind I (60 MW Wind) Mountain Wind II (79.8 MW Wind)			
First Solar	Topaz (550 MW PV)	San Luis Obispo County, Calif.	No advisor	MidAmerican Energy has agreed to buy the project (PI, 12/12).
GDF Suez Energy North America	Hot Spring (746 MW CCGT)	Malvern, Ark.	UBS	Quantum Utility Generation has agreed to buy Choctaw while an Arkansas muni is circling Hot Spring (PI, 12/5).
	Choctaw (746 MW CCGT)	Ackerman, Miss.		
► Kelson Holdings	Dogwood (620 MW CCGT)	Pleasant Hill, Mo.	TBA	A trio of munis is buying minority stakes (see story, page 6).
Macquarie Capital, Fomento Económico Mexicano	Stakes (396 MW Wind)	Oaxaca, Mexico	TBA	Bidders are in due diligence (PI, 10/10).
► Perennial Power	Mid-Georgia (300 MW CoGen)	Kathleen, Ga.	Fieldstone	Shortlist will submit bids in February (see story, page 7).
Recurrent Energy	Ajo (5 MW Solar)	Pima County, Ariz.	Credit Suisse	Duke Energy Renewables completed the acquisition (PI, 12/19).
	Bagdad (15 MW Solar)	Yavapai County, Ariz.		
Ridgeline Energy	30% Stake (79.8 MW Wind)	American Falls, Idaho	TBA	Atlantic Power Corp. is taking the stake although Ridgeline has a repurchase option (PI, 12/12).
RPM Access	Elk (41.25 MW Wind)	Edgewood, Iowa	No advisor	MidAmerican Energy bought the Vienna project last month and RPMA is holding onto Elk (PI, 1/9).
	Vienna (150 MW Wind)	Iowa	No advisor	
Signal Hill Power, CarVal Investors	Wichita Falls (77 MW CCGT)	Wichita Falls, Texas	Scotia Capital	Louis Dreyfus Highbridge Energy is buying the Rensselaer plant (PI, 12/26).
	Rensselaer (79 MW Peaker)	Rensselaer, N.Y.		
Tenaska	High Desert (800 MW CCGT) Rio Nogales (800 MW CCGT)	Victorville, Calif. Seguin, Texas	Barclays, Citi	First round bids came in just before Thanksgiving (PI, 12/12).
Terra-Gen Power	Alta VIII (150 MW Wind)	Tehachapi, Calif.		Brookfield Americas Infrastructure Fund is buying the project (PI, 12/26).
Third Planet Wind Power	Petersburg (40.5 MW Wind)	Petersburg, Neb.	Morgan Stanley	Gestamp is buying the project after EME deal unraveled (PI, 12/26).
Tuusso Energy, Akula Energy Ventures	TA High Desert (209 MW Solar)	Tehachapi, Calif.	Marathon Capital	Said to be close to a purchase sale agreement (PI, 10/17).
U.S. Power Generating Co.	Gowanus Barges 1 (160 MW Oil) Gowanus Barges 4 (160 MW Oil)	Brooklyn, N.Y.	Tier One Capital Management	First round bids for the two barges are expected in February (PI, 1/9).

## New or updated listing

The accuracy of the information, which is derived from many sources, is deemed reliable but cannot be guaranteed. To report new auctions or changes, contact Senior Reporter **Holly Fletcher** at (212) 224 3293 or e-mail [hlfletcher@powerintelligence.com](mailto:hlfletcher@powerintelligence.com).

## PROJECT FINANCE DEAL BOOK

Deal Book is a matrix of energy project finance deals that *Power Intelligence* is tracking in the energy sector.

## Live Deals: Americas

Sponsor	Project	Location	Lead(s)	Loan	Loan Amount	Tenor	Notes
Bloom Energy	Unidentified (Fuel Cell)	TBA	RBS	TBA	TBA	TBA	Deal priced at LIBOR plus 250 bps (PI, 12/5).
Boralex, Gaz Métro	Unidentified (69 MW Wind)	Seigneurie de Beaupré, Quebec	TBA	TBA	TBA	TBA	Sponsors expect to finance phase two in 2012 (PI, 11/28).
Compania Energética Veracruz	Veracruz (730 MW Hydro)	Mara_ón River, Peru	TBA	TBA	TBA	TBA	Sponsor puts out early feelers (PI, 1/9).
Competitive Power Ventures	Cimarron (165 MW Wind)	Gray County, Kan.	BoTM, Helaba, Lloyds, Siemens	TBA	\$262.8M	Term	Deal wraps (see story, page 5).
Diamond Generating Corp.	Unidentified (200 MW Gas)	Alameda County, Calif.	TBA	TBA	\$150M	10+-yr	Sponsor to scout funds in March or April (PI, 1/9).
Edison Mission Energy	Unidentified (Wind Portfolio)	Midwest U.S.	BBVA, Key Bank, WestLB	TBA	\$113.5M	TBA	Sponsors taps banks to lead financing (see story, page 5).
Energy Answers International, Energy Investors Funds	Arecibo (80 MW Waste-to-Energy)	Arecibo, P.R.	BNP	TBA	TBA	TBA	Sponsors mandate lenders (PI, 11/28).
	Fairfield (140 MW Combined Heat and Power)	Baltimore, Md.	TBA	TBA	TBA	TBA	Financing expected to wrap by early 2012 (PI, 11/28).
Enova Energy Group, NuPower	Plainfield (37.5 MW Biomass)	Plainfield, Conn.	Carlyle	TBA	\$170M	TBA	Deal wraps (PI, 1/9).
GCL Solar	Various (77 MW PV)	Puerto Rico	Union Bank	TBA	TBA	TBA	Union Bank to participate in deal (PI, 12/19).
Gradient Resources	Patua (132 MW Geothermal)	Reno, Nev.	BNP, Dexia, Scotia	TBA	\$600M	TBA	Project to be financed in phases (PI, 10/17).
Green Energy Team, Standardkessel	Unidentified (6.7 MW Biomass)	Koloa, Hawaii	WestLB	TBA	TBA	TBA	WestLB tapped to lead deal backing \$70 million project (PI, 12/26).
Inkia Energy	Unidentified (400 MW Hydro)	Cerro del Aguila, Peru	BBVA, Crédit Agricole, HSBC, Scotia, SocGen, SMBC	TBA	\$525M	12-yr	Sponsor talks to three additional lenders, including Santander (PI, 12/5).
Invenergy	California Ridge (214 MW Wind)	Vermillion and Champaign, Ill.	TBA	TBA	TBA	TBA	Sponsor reaches out to lenders about deal (PI, 12/19).
Macquarie Mexican Infrastructure Fund, Macquarie Capital, Fomento Económico Mexicano	Oaxaca (396 MW Wind)	Oaxaca, Mexico	Banorte, BBVA, Crédit Agricole, HSBC, IDB	TBA	\$700M	16-yr	IDB plans to lend \$72M to project (PI, 12/5).
NextEra Energy Resources	Redwood Trails (236.8 MW Wind Portfolio)	Oklahoma and California	BoTM, Lloyds, Mizuho, Siemens	Refi	\$236M	18-yr	Deal wraps (see story, page 5).
Northland Power	Manitoulin Island (60 MW Wind)	Maitoulin Island, Ontario	Manulife	TBA	TBA	TBA	Manulife expects to name a second lender (PI, 10/31).
Odebrecht	Chaglla (406 MW Hydro)	Peru	BNP	TBA	\$650M	TBA	Financial close targeted for February (PI, 11/21).
Pattern Energy	El Arrayan (115 MW Wind)	Santiago, Chile	TBA	Term	\$220M	TBA	Sponsor nears mandates for BoTM and SMBC (PI, 1/9).
	Ocotillo (315 MW Wind)	Imperial Valley, Calif.	TBA	TBA	TBA	TBA	Sponsor targets financial close in 2012 (PI, 10/24).
Recurrent Energy	Various (Solar PV)	Northern California	TBA	TBA	\$100M+	TBA	Sponsor discusses deal with BoTM, Lloyds, Mizuho and UniCredit (PI, 1/9).
Sempra Pipelines, Pemex	Various (Gas Pipeline)	Mexico	BBVA	Refi	\$400M	TBA	BBVA snags sole bookrunner mandate (PI, 12/12).
Tenaska Solar Ventures	Imperial Solar Energy Center South (130 MW Solar PV)	Imperial Valley, Calif.	BBVA, BoTM, Lloyds, MUFG, MS, RBS	TBA	\$600M	TBA	Sponsor mulls bond component to deal (PI, 10/31).
Terna Energy	Mountain Air (138 MW Wind Portfolio)	Idaho	NordLB, Siemens	Term	\$200M	10-yr	Deal wraps (see story, page 6).
Wind Capital Group	Post Rock (201 MW Wind)	Lincoln and Ellsworth, Kan.	BayernLB, NordLB, Rabo	Term/Construction	\$300M	TBA	Deal wraps (PI, 1/9).

## New or updated listing

To report updates or provide additional information on the status of financings, please call Senior Reporter **Brian Eckhouse** at (212) 224-3624 or e-mail [beckhouse@iintelligence.com](mailto:beckhouse@iintelligence.com).

## PROJECT FINANCE

## ACCIONA Scopes Mexico Wind Refi

**ACCIONA Energy** is talking to banks about refinancing \$570 million of wind projects in Oaxaca, Mexico. Oaxaca II, III and IV each have a 102 MW capacity and began operating in September.

**BBVA**, **LBBW** and **Banco Espirito Santo** participated in a bridge loan for the projects that closed in 2010. The bridge loan reportedly expires in the first quarter of this year, a banker notes. Officials at BBVA and BES did not return calls. **Miguel Ángel Alonso**, managing

director for **ACCIONA Energy Mexico**, and a spokeswoman for LBBW in Stuttgart, Germany did not respond to e-mails. The size, tenor and pricing of the bridge loan could not be learned.

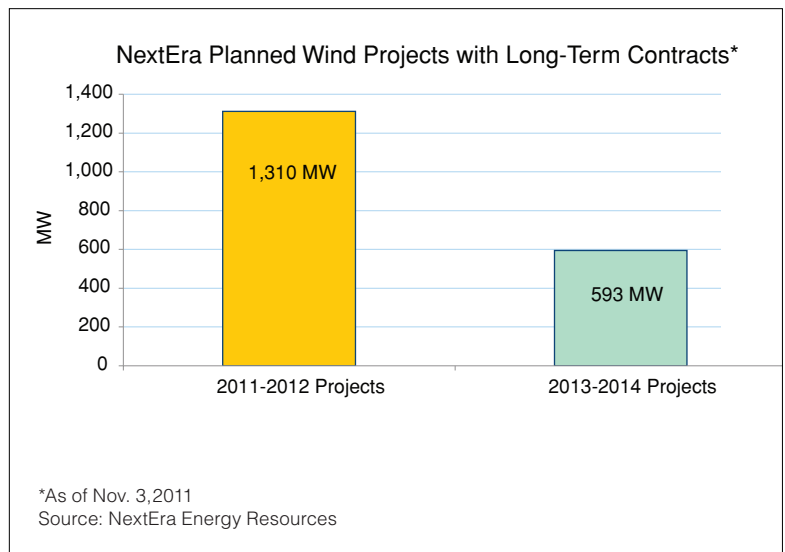
State-backed utility **Comisión Federal de Electricidad** selected ACCIONA over **Iberdrola Renovables** and **Recursos Eólicos de Mexico** to build and operate the projects through a request for proposal process in 2010. The projects use ACCIONA 1.5MW turbines,

## NextEra Scores \$234M Wind Portfolio Refi

**NextEra Energy Resources** has wrapped a \$234 million refinancing supporting 236.8 MW trio of wind projects in Oklahoma and California. **Bank of Tokyo-Mitsubishi UFJ**, **Lloyds Bank Corporate Markets**, **Mizuho Corporate Bank** and **Siemens Financial Services** financed the portfolio, dubbed Redwood Trails Wind.

The term loan has an 18-year tenor. The loan is priced at LIBOR plus 250 basis points (PI, 12/22). NextEra typically finances project development on balance sheet and then takes out that spending with debt financing after project operation (PI, 11/7). This method allows the **NextEra Energy** subsidiary to avoid paying lenders a premium for construction risk.

The size of lender tickets, details of the three projects and the status of offtake agreements couldn't be learned. Bank officials declined to comment or didn't return calls. A NextEra spokesman in Juno Beach, Fla., didn't return a call by press time.



## CPV Lands \$262.8M Wind Deal

A quartet of banks has wrapped a \$262.8 million financing supporting 165 MW at **Competitive Power Ventures'** Cimarron wind project. **Bank of Tokyo-Mitsubishi UFJ**, **Helaba**, **Lloyds Bank Corporate Markets** and **Siemens Financial Services** participated in the deal that closed in late December.

The financing is priced at LIBOR plus 250 basis points. The deal has an 18-year tenor, though its structured as a 10-year mini-perm, says a deal watcher, who did not elaborate. Wind deals sometimes feature amortization schedules that approximate the lengths of the power purchase agreements



though the legal tenors are far shorter, explains a syndicator. The **Tennessee Valley Authority** has a 20-year offtake agreement for Cimarron, in Gray County, Kan.

The size of lender tickets couldn't be learned. Lender

officials declined comment or didn't return calls. A CPV official in Braintree, Mass., declined comment. CPV sold 131 MW at Cimarron—the project's second phase—to **Duke Energy Corp.** in July (PI, 8/1).

## EME Chooses Trio For Wind Portfolio

**Edison Mission Energy** has tapped **BBVA**, **Key Bank** and **WestLB** to participate in a \$113.5 million financing supporting two wind projects in the Midwest.

### FAST FACT

WestLB led a \$242 million financing backing a 204 MW portfolio of wind projects in the U.S.

Details on the projects and the status of offtake agreements couldn't be learned. Pricing and tenor on the deal also couldn't be immediately ascertained. **Craig Howard**, EME treasurer in Irvine, Calif., declined to comment. Bank officials declined to comment or didn't return calls.

WestLB led a \$242 million financing backing a 204 MW portfolio of wind projects in the U.S. (PI, 12/23).



## Gamesa Ropes JPM, Morgan Stanley For Tax Equity

**Gamesa Energy** has lined up a pair of tax equity investors for a pair of projects. **JPMorgan Capital Corp.** and **MS Wind**, a subsidiary of **Morgan Stanley**, have taken full tax equity capacity in the 50 MW Sandy Ridge in Pennsylvania and 80 MW Pocahontas in Iowa, according to a filing with the U.S. **Federal Energy Regulatory Commission**. The transaction is said to have closed by the end of

2011, says an industry official.

The 50 MW Sandy Ridge wind farm in Blair and Centre Counties, Penn., and the 80 MW Pocahontas farm in Pocahontas County, Iowa, were scheduled to come online in December. Whether the projects have power purchase agreements could not be learned.

Neither the total amount of investment nor the breakdown between the two investors could be learned. A Gamesa spokesman did not immediately respond to an inquiry while JPMorgan and Morgan Stanley spokesmen weren't reached.

### FAST FACT

► The 50 MW Sandy Ridge wind farm is in Blair and Centre Counties, Penn., and the 80 MW Pocahontas farm is in Pocahontas County, Iowa.

## Greek Co. Snags Idaho Wind Funds

Greek renewables developer **Terna Energy** has wrapped a roughly \$200 million financing backing 138 MW of wind projects in Idaho. **NordLB** and **Siemens Financial Services** financed Terna's Mountain Air portfolio, a cluster of six projects in Elmore County.

The financing has a 10-year tenor. NordLB and Siemens took roughly \$100 million tickets, says a deal watcher. Pricing and whether the lenders are looking to sell down their exposure couldn't be learned. Officials declined to comment or didn't return calls. Terna officials in Athens didn't immediately address an interview request.

**Idaho Power** has a 20-year power purchase agreement for the Mountain Air projects. Construction is underway on the farms, with Terna targeting operations in October. The projects will use Siemens 2.3 MW turbines. Terna operates wind farms in Greece and Poland and is developing projects in Bulgaria. The company expanded into the U.S. last year.



Siemens 2.3MW Turbines

## MERGERS & ACQUISITIONS

## Kelson Hooks Muni Trio For Dogwood Stakes

**Kelson Holdings** is selling stakes in its 620 MW Dogwood combined cycle facility near Pleasant Hill, Mo., to a consortium comprised of municipal utilities and a city. The City of Independence of Missouri will take the largest minority stake alongside **Kansas Power Pool** and **Missouri Joint Municipal Electric Utility Commission**, according to a Jan. 9 filing with the U.S. **Federal Energy Regulatory Commission**.

The parties want approval from FERC by the middle of February to pave the way for a series of closing dates, according to the Monday filing. Each municipal will have a separate closing date.

The city's municipal utility, **Independence Power & Light**, will use the power from the facility. KPP is a municipal cooperative with 41 members. Columbia, Mo.-based MJMEUC is an independent government agency that serves five dozen municipal members.

Kelson may look to further sell down its remaining 72.5% stake, according to the filing. The private equity shop-owned power company has been selling off power plants over the last two years. It mostly recently sold the 968 MW Magnolia CCGT to the

**Tennessee Valley Authority** (PI, 7/14).

Kelson is owned by two **Harbinger Capital Partner** affiliates, the **Harbinger Capital Partners Master Fund 1** (66.7%) and **Harbinger Capital Partners Special Situations Fund** (33.3%).

Neither the purchase price nor the financing plans could be learned. Neither a spokesman for Harbinger in New York was immediately available nor were officials at the municipals.

### Dogwood Ownership, Post-Transaction

Owner	Stake Size	Controlled MW
Kelson Holdings	72.5%	450
City of Independence, Mo.	12.3%	76
Missouri Joint Municipal Electric Utility Commission	8.2%	51
Kansas Power Pool	7%	43

Source: U.S. Federal Energy Regulatory Commission

## Perennial Bidders Move To Shortlist

**Perennial Power Holdings** has identified a shortlist of bidders for its cogeneration facility in Kathleen, Ga. **Fieldstone Private Capital Group** is running the sale. New York-based Perennial, a subsidiary of **Sumitomo Corp.**, is considering selling stakes or the plant in its entirety.

A handful of prospective buyers, said to include offtaker **Georgia Power Co.** as well as Japanese and infrastructure investors, are doing additional due diligence and expect to submit final bids in February, deal watchers say. The deadline for bids couldn't be learned.



Georgia Power has the first right of refusal on the 300 MW facility under a power contract that matures in 2028. The company was planning to evaluate whether it would make sense to buy the facility rather than have a contract (PI, 12/5). The plant also sells steam to potato chip manufacturer **Frito-Lay** for an adjacent food processing plant. The facility will have \$60.1 million in outstanding debt at year-end.

The number and identity of bidders couldn't be learned. Perennial and Fieldstone officials in New York either declined to comment or didn't respond to inquiries.

## PEOPLE & FIRMS

### BrightSource Hunts PF Director

**BrightSource Energy** is looking to hire a project finance director. The Oakland, Calif.-based company is looking for a candidate with at least 10 years of experience leading financings of utility-scale power projects at a financial institution or an independent power producer, according to the company's Web site.

Responsibilities include leading negotiations with lenders, equity and tax equity investors and managing a project finance team. The company is working with **Angela Stader**, a consultant at Milwaukee-based **Manpower Group Solutions**, to fill the spot. Stader did not return a call by press time. A call to BrightSource' press office was also not returned. The timeline for filling the role and whether a candidate would be filling a new slot or a replacing an employee could not be learned.

BrightSource has 2.6 GW of development projects contracted to **Southern California Edison** and **Pacific Gas & Electric**. It closed a \$1.6 billion loan for its 392 MW Ivanpah project in Southern California provided by the **Federal Financing Bank** under the U.S. **Department of Energy's** loan guarantee program (PI, 4/13).



*BrightSource solar project*

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### CIBC Hires RBS Director

CIBC has hired **Jonathan Kim**, a **Royal Bank of Scotland** director of originations in Stamford, Conn., as a senior project financier. Kim will work out of CIBC's New York office, says a person familiar with the bank's plans. He is scheduled to start later this month.

Kim helped structure a more than \$700 million financing supporting **Sharyland Utilities'** greenfield transmission lines in West Texas, which is part of the Competitive Renewable Energy Zones (PI, 6/27). CIBC participated last winter in a roughly \$260 million financing supporting a portfolio of **Edison Mission Energy** wind projects (PI, 3/2).

Whether RBS plans to replace Kim, his last day at the bank and who he will report to at CIBC couldn't be learned. Senior bankers at CIBC and RBS didn't return calls seeking comment by press time. Kim couldn't be reached.

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## INDUSTRY CURRENT

## Why Solar Thermal Energy With Storage Should Receive Payments Competitive With Non-Renewable Resources – Part II

THIS WEEK'S INDUSTRY CURRENT is written by **Benjamin Israel**, principal at **Benjamin L. Israel, Esq.** in Washington, D.C., and **Felicia L. Bellows**, senior v.p. of development at **Torresol Energy** in San Francisco. Last week the authors discussed the lack of concentrating solar thermal projects in the U.S. and the two-tiered payment system for fossil fuel-fired generation. This week, the authors will examine the typical compensation system for renewable projects and how new technology makes solar thermal projects with energy storage similar to baseload, or dispatchable, generation.



Benjamin Israel, Esq.

Felicia Bellows,  
Torresol Energy

### Renewable Projects Depend On A Single Variable Energy Payment

Unlike fossil-fueled generation facilities, independent power producer-owned generation facilities using renewable resources typically receive a single variable payment on a \$/kWh basis. We say "typically" because some biomass-fueled projects have benefitted from the traditional two-tiered PPA payment structure, but these projects are unique among renewable resources in that they contract for their fuel supply, and therefore look more like traditional IPP fossil-fueled projects. Some geothermal projects receive fixed capacity payments, but these projects are the exception to the rule that most renewable projects receive energy-only payments.

Most state laws, including the renewable portfolio standards that require utilities to generate or purchase a targeted amount of power from renewables, presume that the renewable resource is unpredictable and unreliable—intermittent at best. Because laws focusing on generation from renewable resources generally assume—and on a historical basis fairly assume—the unreliability of these resources, renewable projects are treated as offering only marginal incremental benefits to the grid through the incremental power they generate when their renewable resource is available.

In other words, the existing regulatory structure assumes that renewable facilities cannot be relied upon for baseload support or for intermediate load dispatch, and as a result they have not qualified for capacity payments. In addition, these projects are also ineligible for supplementary payments for any ancillary services which, historically, they couldn't provide. In fact, renewable projects are claimed to cause instability on the grid and some electric utilities would like to *penalize* these resources for such instability.

IPPs developing generation from renewable resources therefore are forced to recoup all of their capital costs, debt service obligations, and variable O&M costs through a single, negotiated variable energy payment, typically based upon time-of-day deliveries (increased rates during peak hours, reduced rates during off-peak hours). In essence, most renewable projects are paid like peaking units without the benefit of always being paid peak power rates. IPPs, and their lenders, must take on the risk that the actual availability of their facilities will allow them to recoup all of these costs and not only be economically viable, but also profitable.

This single payment structure is premised on a legislative and regulatory scheme that is becoming outdated as advances in technology make other renewable technologies dispatchable and capable of providing controllable ancillary services.

### New Technology Gives Some Solar Baseload, Or Dispatchable, Characteristics

As noted earlier, some of the newer solar thermal projects with thermal storage look more like traditional fossil-fueled projects than intermittent resources. These projects can reliably deliver power during peak and shoulder periods even when the sun has set. They can also be operated in a fully-dispatchable mode, allowing for ramping up or down as grid economics may dictate. They can even deliver ancillary services important to ensuring a stable and reliable grid.

A Nov. 2011 **National Renewable Energy Lab** report on the use of CSP technology with thermal storage acknowledged that the use of integrated, high-efficiency thermal storage turns CSP projects into dispatchable resources with the degree of dispatchability being based largely on the amount of storage capacity at any particular facility. Thermal storage technology is

Industry Current is a feature written by industry professionals that highlights and clarifies key issues in the power sector. *Power Finance & Risk* runs the feature periodically and is now accepting submissions from industry professionals for the Industry Current section. For details and guidelines on writing an Industry Current, please call *Sara Rosner* at (212) 224-3165 or email [srosner@iinews.com](mailto:srosner@iinews.com).

evolving, and differs from one CSP project to another.

Torresol Energy's Gemasolar Project is an example of this new integrated technology. It relies on molten salt receiver and storage technologies, coupled with 2,650 heliostats and a central tower. The heliostats set up around the tower reflect and concentrate solar energy onto the molten salt receiver located at the top of the

tower. In the receiver, solar energy is transferred to the molten salt circulating inside, which reaches a temperature of 565° C. The molten salt is stored in thermal storage tanks. Water circulating through the tanks produces overheated steam using a steam generation system, and the steam runs a turbine/generator group to produce electricity. SENER, the engineering partner behind Torresol Energy, states that "the system of molten salts stores the excess thermal energy produced during daylight hours and provides the energy required to ensure that the Plant will remain operational for up to 15 hours in the event of zero solar radiation." As a result, depending upon the operations and amount of solar radiation on a particular day, the project has the potential to generate power for a continuous 24 hours--something it now accomplishes on a regular basis. On average, Torresol says that the plant will provide electricity for about 20 hours each day. Just as important, with the

thermal storage component, the Gemasolar project can be cycled up and down to match rapid fluctuations in consumption.

This means that the project has the ability to run, without intermittency, 18-24 hours per day. It can be scheduled so that it is least likely to be available during the non-peak periods of consumer demand. In addition, the project is available for on-

demand dispatch with ramp rates faster than many coal-fired projects and more comparable to natural gas projects. The NREL report confirms that thermal storage reduces constraints on ramping up and down and allows CSP projects to shift their output to improve coincidence with demand.

Because of these operational characteristics, there is a compelling reason to value these types of projects similar to the value paid for the output from fossil-fueled projects with similar capabilities. At the very least, there is a compelling reason to value

these projects differently than other renewable projects that do not possess such capabilities.

*Next week, the authors will discuss why solar projects with storage capability should be valued similarly to baseload generation in the final installment of this Industry Current.*

**"As noted earlier, some of the newer solar thermal projects with thermal storage look more like traditional fossil-fueled projects than intermittent resources."**

## PROJECT FINANCE DEAL WRAP SHEET Q4

The following power project finance deals closed between Oct. 1 and Dec. 31. For a complete listing of deals closed in 2011, please visit <http://www.powerintelligence.com/ProjectFinanceDeal.html>.

Sponsor	Project	Location	Lead(s)	Loan	Amount
Boralex, Gaz Métro	Unidentified (272 MW Wind)	Seigneurie de Beaupré, Quebec	BoTM, DB, KfW, LBBW, Mizuho, Siemens, SMBC	Term	\$710.34M
Brookfield Asset Management	Cross Sound Cable (24 Miles Transmission)	Long Island Sound	BoTM, Mizuho, SMBC	Refi	\$190M
Competitive Power Ventures	Cimarron (165 MW Wind)	Gray County, Kan.	BoTM, Helaba, Lloyds, Siemens	Term	\$262.8M
Cook Inlet Region	Fire Island (17.6 MW Wind)	Fire Island, Alaska	CoBank	Term	\$46M
Edison Mission Group	Tapestry (204 MW Wind Portfolio)	Oklahoma, West Virginia	WestLB	TBA	\$242M
Enova Energy Group, NuPower	Plainfield (37.5 MW Biomass)	Plainfield, Conn.	Carlyle	Mini-Perm	\$125M
First Wind	Palouse (100 MW Wind)	Whitman County, Wash.	CoBank, Key Bank, NordLB, Santander	Term	\$180M
Invenergy	Bishop Hill (201 MW Wind)	Henry County, Ill.	BayernLB, Rabo	TBA	\$422M
Kruger Energy	KRÉMONT (100 MW Wind)	Montréal, Quebec	Deutsche Bank, MUFG	Term	\$240M
LS Power	West Deptford (738 MW Gas)	West Deptford, N.J.	Citi, CS, ING, Morgan Stanley	TBA	\$300M
Morgan Stanley, Main Street Power	Mom Solar (10 MW Solar DG)	Ontario		WestLB	Term \$35M
NextEra Energy Resources	Lone Star (300 Miles Transmission)	West Texas	BoTM, CA, Mizuho, RBC	Mini-Perm	\$300M+
	Redwood Trails (236.8 MW Wind Portfolio)	Oklahoma and California	BoTM, Lloyds, Mizuho, Siemens	Term	\$234M
Peregrine Midstream Partner	Ryckman Creek (18 BCF Gas Storage)	Uinta County, Wyo.	ING, RBC, SMBC, SEB	TBA	\$160M
Recurrent Energy \$250M	Various (20 PV Projects)	Ontario	Mizuho	Construction Revolver	
Terna Energy	Mountain Air (138 MW Wind Portfolio)	Idaho	NordLB, Siemens	Term	\$200M
Wind Capital Group	Post Rock (201 MW Wind)	Ellsworth and Lincoln, Kan.	BayernLB, MUFG, NordLB, Rabo	Term	\$300M

The accuracy and completeness of our data, which are derived from many sources, are deemed reliable but cannot be guaranteed. To report updates or provide additional information on closed deals, please call Senior Reporter **Brian Eckhouse** at (212)224-3624 or email [beckhouse@iinews.com](mailto:beckhouse@iinews.com).

## Deal Flow *(Continued from page 1)*

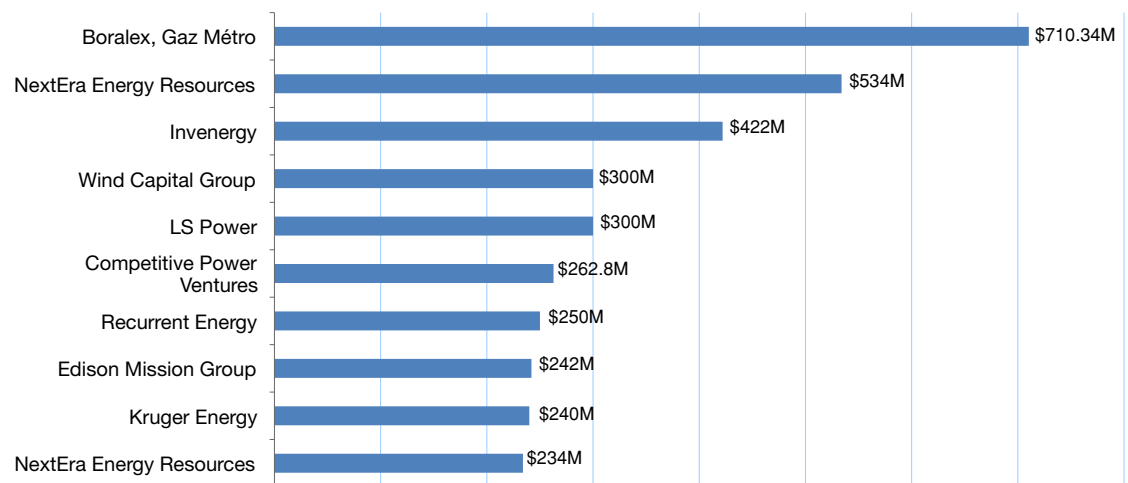
second most-financed resource with 16, or 27% of closed deals.

"I figured the volume of deals in the fourth quarter would've been reduced because of the euro-zone crisis," says **Jonathan Lindenberg, Bank of Tokyo-Mitsubishi UFJ** head of project finance for the Americas. The third quarter, however, was uncommonly robust with 23 deals closing, reflecting the Sept. 30 expiration of the U.S. **Department of Energy's** loan guarantee program, which propelled a bevy of renewables deals (PI, 10/21).

A spate of club deals supporting wind projects boosted deal flow in Q4, led by a \$710.34 million financing **Boralex** and **Gaz Métro's** 272 MW wind project in Seigneurie de Beaupré, Quebec. Fourth quarter activity was driven by the impending expiration of the U.S. **Department of Treasury** cash grant, which covered 30% of qualifying projects' costs (PI, 12/5), and worries that looming Basel III regulations and a murky euro-zone landscape may further constrict the bank landscape in 2012, financiers say.

"What both bankers and sponsors realized is, if we're going to do these deals, we better do them as soon as possible," says **Nicolai Dillow**, managing director of origination at **NordLB** in New York. "Some sponsors didn't know if some banks would still be

### Biggest Deals of Q4 2011



Source: Project Finance Deal Book

around [in 2012]. And sponsors needed to lock in terms that had been casually negotiated for months."

Indeed, the signs pointed to a severe compression in the bank landscape as the fourth quarter began. The self-funding costs of European lenders began increasing—to more than LIBOR plus 160 basis points for several lenders (PI, 9/23). **Allied Irish Bank** and **Bank of Ireland** have been winding down their U.S. project finance presence (PI, 12/23), while others, including **UniCredit**, began pursuing such an effort as the fourth-quarter reached its end (PI, 1/6).

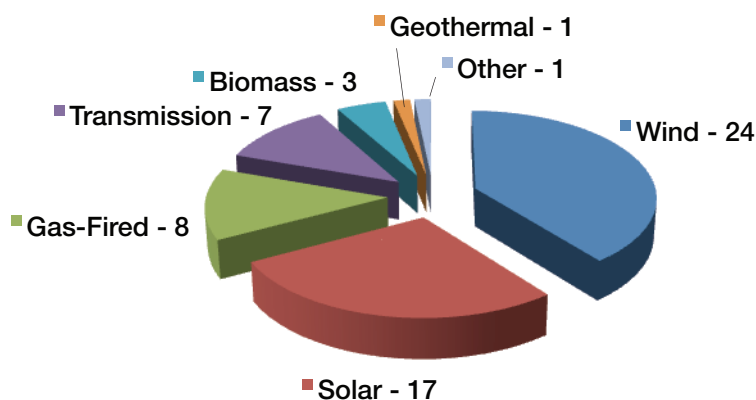
Some lenders remained busy in the fourth quarter. Bank of Tokyo-Mitsubishi UFJ participated in six deals in December alone, Lindenberg notes. NordLB helped finance four projects in the fourth-quarter—the most Q4 project deals for the bank in recent memory, Dillow says.

Despite the solid deal flow (though less than levels achieved in the second and third quarters), the roster of lenders that participated in fourth quarter deals reflected a changing bank landscape. **BNP Paribas**, **Crédit Agricole** and **Société Générale**—traditionally strong players in U.S. project finance—were fairly quiet in the fourth quarter. BNP and SocGen, weighed down with struggling Greek and Italian sovereign debt, are now mostly sidelined, with the exception of mandates and deals sponsored by relationship clients (PI, 10/14). Crédit Agricole is active, but has assumed a lower profile (PI, 10/21).

"In the list of lenders that participated in the fourth quarter, you are not really seeing the big French trio," says **Charles-Henry Kurzen**, director at project finance advisory shop **Saltbox Partners** in New York. "That's a big shift."

—**Brian Eckhouse**

### 2011 Deals by Resource



Source: Project Finance Deal Book

## AES Affiliate *(Continued from page 1)*

including **BNP Paribas**, **Dexia Crédit Local** and **Société Générale**. A New York-based syndicator estimates that 30% of the lenders that participated in deals last summer are now sidelined.

Still, bankers don't doubt AES Corp.'s ability to finance Imperial Valley in this climate—despite the project's size and scope—pointing to the sponsor's standing and clout in project finance. "They always managed to get their deals done," says another syndicator in New York. "Bankers know this." Also, private placement buyers have appetite for project finance debt at long tenors (PI, 12/23).

AES bought Imperial Valley last year from **Tessera Solar**, which had planned to use dish technology at the site. But AES will use photovoltaic panels at Imperial Valley, a switch increasingly

common among U.S. solar sponsors (PI, 9/30). A glut of panels is driving PV pricing down sharply.

Tessera had sought an offtake agreement for Imperial Valley with **San Diego Gas & Electric**. The status of any power purchase agreement related to the project, the size of its phases and details regarding any equity component in the deal could not be learned.

**Citigroup**, **Crédit Agricole**, **Dexia**, **ING**, **Royal Bank of Scotland**, **SocGen** and **Union Bank** are among AES' relationship lenders. AES' desired pricing and tenor couldn't be learned. An AES Corp. spokesman in Arlington, Va., didn't return a call, while a spokesman for Riverstone in New York declined to comment. Bank officials declined to comment or didn't return calls.

—**Brian Eckhouse**

## Energy Storage *(Continued from page 1)*

District of Delaware on Oct. 30 after it tripped a covenant by depleting its debt service reserve on a \$43 million loan guarantee from the U.S. **Department of Energy**. The DOE's priority in the aftermath of the **Solyndra** bankruptcy is to recoup its money, so a bankruptcy sale was preferable, according to the company's Web site. Beacon has drawn \$39.1 million on the loan.

CRG, a New York-based advisory shop, has been on the phone to bankers and industry officials who may have interested clients in the past few weeks, says one official. **Stephen Gray**, managing partner, and **Matt Pascucci**, partner, at CRG are advising. Boston-based **Brown Rudnick** and Wilmington-based **Potter Anderson & Corroon** are legal counsel.

In addition to the private equity shops and strategics that submitted letters of intent, a few more financial players are doing due diligence, says a spokesman at Tyngsboro, Mass.-based Beacon, noting that LOIs are not required to submit binding offers. Final bids are due Wednesday, Feb. 1 with a court-run auction planned for Feb. 3. The dates have been extended by about a week since the papers were filed. The sale is anticipated to close on Feb. 17.

It's too early to know whether all the shops looking at the assets—notably an operational 20 MW merchant facility in Stephentown, N.Y., and a 20 MW development project in Hazle Township, Pa.—will ultimately submit final bids, says another deal watcher. The appetite for storage in the future, which depends on demand growth, is calling the play into question as well as questions about valuation. "The play would be for the future. The question is will the price go up?" says one attorney, referencing that increased demand would raise power prices, making storage assets more lucrative.

The company is also selling its Tyngsboro, Mass.,

manufacturing facility and intellectual property. It has a couple of 20 MW projects outside the U.S. and is in different levels of negotiation regarding sales, according to the teaser released by CRG. Details on the project locations and negotiations could not be learned; the spokesman declined to comment.

Neither details regarding the indicative bids, such as number or valuation, nor the identity of the interested shops could be learned. A message left for Gray in Boston was forwarded to Beacon.

—**Holly Fletcher**

### QUOTE OF THE WEEK

*"What both bankers and sponsors realized is, if we're going to do these deals, we better do them as soon as possible. Some sponsors didn't know if some banks would still be around [in 2012]. And sponsors needed to lock in terms that had been casually negotiated for months."*—**Nicolai Dillow**, **NordLB** managing director of origination in New York, on the rush to wrap deals by the end of the fourth quarter (see story, page 1).

### ONE YEAR AGO

**Capital Power Income LP** was on the presentation circuit, visiting interested buyers of its 1.4 GW fleet of natural gas-fired, biomass and hydro generation in the U.S. and Canada. **CIBC World Markets** and **Greenhill & Co.** were advising. **[Atlantic Power Corp.]** used proceeds from a \$460 million bond issuance and a \$164 million stock sale to fund its acquisition of most of CPILP's fleet (PI, 11/3.)