

Power Finance & Risk

Exclusive Insight on Power M&A and Project Financing

By the publisher of GlobalCapital

● PROJECT FINANCE

● CONFERENCE COVERAGE

● MERGERS & ACQUISITIONS

Lender Drops Out of Amended Revolver

Essential Power has secured a one-year extension of its revolving credit facility, but one lender declined to participate. [Page 6](#)

Platts New York: Panelists Talk Asset Sales

The prospect of asset divestitures was a key theme of discussions at the **Platts Financing U.S. Power Conference**. [Page 7](#)

Deadline Looms for Panda Asset Bids

First round bids for 2.5 GW of **Panda Power Funds** gas-fired projects are due next month, say deal watchers. [Page 8](#)

Q3 League Table: Crédit Agricole Climbs in Quieter Quarter

Richard Metcalf

There was little movement in the North American power project finance league table in the third quarter of the year, which was quieter than the same period in 2015. However, **Crédit Agricole** rose up the ranks, buoyed by its role in a \$283 million wind project deal in July.

Seven power project finance loans totaling just over \$1.47 billion closed between July and September, compared to 21 deals

totaling \$3.13 billion in the same period last year, according to data provided by **Dealogic**.

Those transactions bring the total for the first nine months of the year to about \$11.9 billion, well below the \$16.8 billion that had been chalked up by the same point in 2015.

GREEN RACER

One of the largest deals that closed in the last [PAGE 2 »](#)

North American Power Project Loan Arrangers First Nine Months, 2016

dealogic

Pos.	Mandated Arranger	Amount (\$m.)	No	% Share
1	MUFG	1,969.767	22	17.748
2	Société Générale	506.976	5	4.568
3	Citigroup	506.767	4	4.566
4	KeyBanc	433.555	4	3.906
5	Morgan Stanley	430.500	2	3.879
6	Crédit Agricole	410.556	7	3.699
7	Rabobank	362.041	3	3.262
8	GE Energy Financial Services	360.500	3	3.248
9	Jefferies	360.000	1	3.244
10	ICBC	356.357	4	3.211
Total eligible loans		11,098.795	35	100.000

All bookrunners, data to October 28, 2016

New England Clean Energy RFP Shortlist Revealed

Richard Metcalf

Seven bids in the New England clean energy request for proposals have been selected to advance to the next stage of the process.

Officials representing Massachusetts, Connecticut and Rhode Island have finished evaluating the bids and selected 11 solar and wind projects totaling

460 MW to progress to the contract negotiation phase.

The biggest winner, in terms of capacity, is a joint venture between **Ranger Solar** and **MAP Royalty** called **Juniper Renewables**, whose bid for five solar projects totaling 220 MW was among those selected.

The shortlisted bids are the 20 MW Enfield Solar project in Enfield and Som- [PAGE 5 »](#)

Arrangers Launch Dual-tranche Lackawanna Debt Financing

Olivia Feld

Four arrangers have launched a close-to-\$1 billion dual-tranche debt financing for the 1.5 GW **Invernergy** Lackawanna combined-cycle gas-fired project in Jessup, Pa.

BNP Paribas, **GE Energy Financial Services** and **MUFG** are joint lead arrangers on the debt financing for the project, in **PJM Interconnection**, which launched two weeks ago. [PAGE 6 »](#)

Hundreds of Expressions of Interest Received for Veresen Assets

Richard Metcalf

Veresen has received more than 200 expressions of interest for a 625 MW portfolio of generation assets it is selling in Canada, according to a person familiar with the process.

The potential buyers include private equity firms, corporations, pension funds and private wealth managers, the person adds.

"A lot of money has been raised to acquire these [PAGE 8 »](#)



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● PROJECT FINANCE

Q3 League Tables: Crédit Agricole Climbs in Quieter Quarter

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quarter was a \$283 million seven-year term loan backing a 299 MW portfolio of three operational **NextEra Energy Resources** wind projects, according to Dealogic data.

The portfolio, called Green Racer Wind, comprises the 99 MW Ensign project in Gray County, Kan., the 100 MW Endeavor project in Osceola County, Iowa, and the 100 MW Tuscola II project in Tuscola and Bay counties, Mich., says a deal watcher.

MUFG, CoBank, Siemens Financial Services and **Crédit Agricole** were the lead arrangers on the loan, which was priced at between 200 and 225 basis points over Libor and closed on July 14, according to Dealogic data.

Law firm **Squire Patton Boggs** advised NextEra on the deal, and **Simpson Thacher & Bartlett** advised the lenders.

Crédit Agricole's \$70.8 million allocation of league table credit for its role in the deal pushed the bank up to sixth place, below MUFG, **Société Générale**, **Citigroup**, **Keybank** and **Morgan Stanley**.

MUFG DOMINATES

MUFG remained in its dominant position at the top of the table, having been mandated lead arranger on 22 of the year's league table-eligible deals.

"We're proud that we have been able to continue to be successful and lead the market," says **Erik Codrington**, m.d. in project finance at MUFG in New York, noting that the bank has worked on deals across the Americas, from Canada to Chile, during the year.

"I think overall we see market volume as being roughly the same as last year," he says, noting that much of the deal flow has been driven by the development of renewables projects.

While pricing has inched up since the beginning of the year because of an increase in the cost of funds for banks, tenors of up to 18 years are still available.

"Things like Brexit have rippled through," says Codrington, referring to the effect of the U.K.'s decision to leave the European Union on banks' funding costs, which has fed through to project finance loan margins. "All in all, it hasn't been a big increase," he adds. ■

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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.

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GENERATION AUCTION & SALE CALENDAR ●

These are the current live generation asset sales and auctions, according to Power Finance and Risk's database.

A full listing of completed sales for the last 10 years is available at <http://www.powerfinancerisk.com/AuctionSalesData.html>

Generation Sale DATABASE

Seller	Assets	Location	Advisor	Status/Comment
Abengoa	Norte III (924 MW Gas)	Ciudad Juárez, Mexico	Carl Marks	Abengoa is talks with several interested parties over a potential sale of the projects (PFR, 9/26).
ArcLight Capital Partners	New Covert (1.04 GW Gas)	Van Buren County, Mich.	BNP Paribas, Whitehall & Co.	ArcLight is preparing to launch a sale of the asset (PFR, 9/12).
● ArcLight Capital Partners	Combine Hills (41 MW Wind, 50%)	Umatilla County, Ore.		Eurus Energy America is taking full ownership of the project (see story, page 9).
Brookfield Renewable Partners	Price (189 MW Wind), Comber (166 MW Wind), Gosfield (51 MW Wind)	Sault Ste. Marie, Lakeshore, and Kingsville, Ontario	Scotiabank, TD Securities (seller)	Brookfield Renewable is selling the three facilities, plus an expansion project, in a portfolio (PFR, 7/18).
Canadian Solar	Pirapora I (191.5 MW Solar, 80%)	Minas Gerais, Brazil		EDF EN do Brasil is acquiring an 80% stake in Pirapora I (PFR, 10/24).
Cogentrix Energy Power Management	Red Oak (823 MW Gas)	Sayreville, N.J.		The Carlyle Group's Cogentrix is selling the gas-fired project (PFR, 10/3).
Cogentrix, Quantum Utility Generation	James River Genco (115 MW Coal)	Hopewell, Va.		Cogentrix and Quantum are selling their 50-50 ownership stakes to Michigan-based Novi Energy, which will repower the project with a gas-fired turbine (PFR, 10/3).
Energy Capital Partners	Empire (635 MW Dual-fuel)	Rensselaer, N.Y.		Tyr Energy, Tokyo Gas Co. and Kansai Electric Power Co. are acquiring the merchant asset (PFR, 10/24).
● Energy Capital Partners	Broad River (850.5 MW Dual-fuel)	Gaffney, S.C.	Credit Suisse	An investment fund managed by Arroyo Energy Investors has closed its purchase of the project (PFR, 8/10).
● Eurus Energy America	Crescent Ridge (54.5 MW Wind, 25%)	Bureau County, Ill.		An ArcLight fund is taking full ownership of the project (see story, page 9).
Exelon Corp.	Mystic Generating Station (1,998 MW Gas and Dual-fuel)	Charlestown, Mass.	JP Morgan	Exelon has launched a sale process for the project (PFR, 10/24).
First Energy	Bay Shore Unit 1 (136 MW Coal)	Lucas County, Ohio		FirstEnergy is soliciting offers for the plant (PFR, 8/1).
First Reserve	Portfolio (1.7 GW Gas)	U.S. (California, New Mexico, Texas) and Trinidad and Tobago	Goldman Sachs	First Reserve is selling the project to a joint venture of Harbert Power Fund V, UBS Asset Management Funds and The Northwestern Mutual Life Insurance Co. (PFR, 9/26).
First Solar	Desert Stateline (300 MW Solar)	San Bernardino, Calif.		First Solar is in negotiations with its jointly-owned yield company, 8Point3 Energy Partners, over the potential dropdown of Desert Stateline (PFR, 10/17).
● Geronimo Energy	Blazing Star 1 (200 MW Wind)	Lincoln County, Minn.		Xcel Energy is acquiring the projects (see story, page 9).
	Blazing Star 2 (200 MW Wind)			
● Invenergy	Freeborn (200 MW Wind)	Freeborn County, Minn.		Xcel Energy is acquiring the project (see story, page 9).
● ITC Holdings Corp.	ITC Holdings Corp. (2,800 miles Transmission)	U.S.		Fortis and GIC have closed their acquisition of ITC (PFR, 4/25).
Macquarie Infrastructure Partners III	Lordstown (940 MW Gas)	Lordstown, Ohio		The fund has hired a financial adviser and is considering bids for its 73% stake in the project (PFR, 8/15).
● Martifer Group	Martifer Solar	Brazil, Mexico, Canada		Volitalia has closed its purchase of Martifer's solar business (PFR, 8/24).
Mercuria	Danskammer (500 MW Dual-fuel)	Hudson Valley, N.Y.	Guggenheim Partners	The first round of a two-stage auction is underway (PFR, 10/3).
● NextEra Energy Resources	Foxtail (150 MW Wind)	Dickey County, N.D.		Xcel Energy is acquiring the project (see story, page 9).
● Panda Power Funds	Liberty (Gas 829 MW), Stonewall (778 MW), Patriot (829 MW)	Bradford County, Pa., Loudoun County, Va., Lycoming County, Pa.	Goldman Sachs	First round bids for the 2.5 GW portfolio are due next month (see story, page 8).
● Pattern Development	Armow (90 MW Wind)	Kincardine, Ontario		Pattern Development has closed its dropdown of a 50% stake in the project to yieldco Pattern Energy Group (PFR, 8/17).
Quantum Utility Generation	Quantum Pasco Power (123 MW Gas, Oil)	Dade City, Fla.	Merit Capital Partners (seller)	Rockland Capital is acquiring the assets (PFR, 10/10).
	Nevada Cogeneration Associates 2 (85 MW Gas)	Las Vegas		
sPower	Portfolio (6.7 GW Solar)	U.S.	Barclays (lead), Marathon Capital, CohnReznick Capital Markets Securities and Citi (co-leads)	The independent power producer is exploring a sale of its entire portfolio and development platform (PFR, 10/3).
● SunEnergy1	Summit Farms (60 MW Solar)	Currituck County, N.C.		Dominion Resources has acquired the project (see story, page 9).
SunPower	Boulder Solar II (50 MW)	Boulder City, Nev.		Iberdrola subsidiary Avangrid is acquiring the project, which has a 20-year PPA with NV Energy (PFR, 10/3).
● Veresen	Portfolio (625 MW Gas-fired, Hydro, Wind)	Canada	TD Securities	A sale of the assets has formally launched (see story, page 1).

● New or updated listing

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

To report updates or provide additional information on the status of financings, please call Fotios Tsarouhis at (212) 224 3294 or e-mail fotios.tsarouhis@powerfinancerisk.com

PROJECT FINANCE

Deal Book is a matrix of energy project finance deals that Power Finance & Risk is tracking in the energy sector.

A full listing of deals for the last several years is available at <http://www.powerfinancerisk.com/Data.html>

Live Deals: Americas

Sponsor	Project	Location	Lead(s)	Loan	Loan Amount	Tenor	Notes
8minutenergy Renewables	Redwood 4 (28 MW Solar)	Kern County, Calif.	TBA	Debt, Tax Equity	TBA	TBA	8minutenergy Renewables is planning to finance a number of projects in the coming months (PFR, 10/24).
	SpringBok 3 (100 MW+ Solar)			Debt, Tax Equity	TBA	TBA	
Advanced Power	Cricket Valley (1 GW Gas)	Dover, N.Y.	BlackRock	Equity	TBA		BlackRock is buying a minority stake in the project (PFR, 8/22).
			GE EFS, BNP Paribas, Crédit Agricole, ICBC, BAML	Debt	TBA	TBA	Arrangers of the debt financing are meeting with other financial institutions about backing the deal (PFR, 6/20).
Ares-EIF	Birdsboro (450 MW Gas)	Birdsboro, Pa.	CIT, GE EFS, Investec	Debt	\$300M	C+3	A group of three banks have been mandated as coordinating lead arrangers on a debt financing (PFR, 10/24).
Andes Mining & Energy, Cheniere Energy, EDF	Penco Lirquén (423 ft ³ /day LNG)	Concepción Bay, Chile	BNP Paribas (sole adviser), Crédit Agricole, DNB, MUFG, Société Générale	Mini-perm	\$850M	8-yr	The arrangers are expected to syndicate the loan at the end of September or beginning of October (PFR, 10/3).
	El Campesino Phase I (640 MW Gas)	Bulnes, Chile					
D.E. Shaw	North Star (100 MW Solar)	Chisago County, Minn.	BAML	Tax Equity			BAML has closed its purchase of the project's tax equity interests (PFR, 6/24).
Deepwater Wind	Block Island (30 MW Wind)	Block Island, R.I.	Citi, GE EFS	Tax Equity	TBA		Citi and GE EFS have acquired the tax equity associated with the project (PFR, 10/17).
Development Partners	St. Joseph Energy Center (700 MW Gas)	New Carlisle, Indiana	TBA	TBA	TBA	TBA	Construction of the second phase of the 1.4 GW St. Joseph project is expected to begin within the next 12 to 18 months (PFR, 9/6).
Enel Green Power North America	Chisholm View II (64.8 MW Wind)	Garfield and Grant counties, Okla.	GE EFS	Tax Equity	TBA		GE Energy Financial Services is investing tax equity in the project (PFR, 10/24).
Enel Green Power North America	Lindahl (150 MW Wind)	Williams County, N.D.	Goldman Sachs	Tax Equity	\$168M		EGP North America has requested regulatory approval for a tax equity investment by Goldman Sachs (PFR, 10/24).
Enel Green Power North America	Cimarron Bend (400 MW Wind)	Clark County, Kan.	BAML, JP Morgan, MetLife, Wells Fargo	Tax Equity	\$500M		Wells Fargo has joined the other three investors in the deal (see story, page 5).
Exelon Corp.	Bluestem (198 MW Wind)	Beaver County, Okla.	BAML, State Street	Tax Equity	TBA		BAML and State Street have agreed to invest tax equity in the project, which has a PPA with Google (see story, page 5).
Falvez Energy	Falvez Astra (163 MW Wind)	Randall, Castro and Deaf Smith counties, Texas	GE EFS, Capstar Partner (BNP Paribas)	Tax Equity	\$129M		GE EFS and Capstar will commit 50% each of the tax equity for the merchant project. The remaining \$129 million project cost will be financed with sponsor equity (PFR, 10/3).
Invenergy	Lackawanna (1.5 GW Gas)	Jessup, Pa.	BNP Paribas, GE EFS, MUFG	Debt	-\$1B		The four arrangers have closed a nearly \$1 billion financing (see story, page 1).
NextEra Energy Resources	Portfolio (414.9 MW Wind)	Kansas	BAML, BNY	Tax Equity	TBA		BAML and BNY are jointly investing tax equity in the projects (PFR, 10/17).
NextEra Energy Resources	Ensign (99 MW Wind)	Gray County, Kan.	MUFG, CoBank, Siemens Financial Services, Crédit Agricole	Debt	283.3M	7-yr	The loan was priced at Libor+200-225 basis points and closed in July (see story, page 1).
	Endeavor I (100 MW Wind)	Osceola County, Iowa					
	Tuscola II (100.3 MW Wind)	Tuscola and Bay counties, Mich.					
Novatus Energy	Sunflower (104 MW Wind)	Stark and Morton Counties, N.D.	Goldman Sachs	Tax Equity	TBA		Novatus Energy has requested regulatory approval for a tax equity investment by Goldman Sachs (PFR, 10/24).
NTE Energy	Portfolio (2 GW Gas)	Connecticut, North Carolina, Ohio	TBA	Debt	\$2B		NTE is planning to raise \$2 billion to finance the Killingly, Reidsville and Pickaway energy centers (PFR, 4/25).
Panda Power Funds	Mattawoman (850 MW Gas)	Brandywine, Md.	TBA	TBA	TBA		Panda is considering launching financing for the project (see story, page 8).
Quantum Utility Generation	Moundsville (549 MW Gas)	Marshall County, W. Va.	TBA	Debt	\$500M	TBA	Quantum has approached prospective arrangers to raise debt and has mandated BNP Paribas to sell a stake in the project (PFR, 6/6).
Transmisora Eléctrica del Norte	TEN (379 mile Transmission)	Chile	KfW-IPEX Bank, MUFG, Mizuho, Sumitomo-Mitsui Trust Group Santander, Banco de Chile, Banco Estado de Chile, Banco BCI	Term Loan (Dollar) Term Loan (Chilean Peso)	\$739M	18-yr	The expected closing date of the financing has been pushed back due to negotiations over interest rate swap provisions (PFR, 10/17).

New or updated listing

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To report updates or provide additional information on the status of financings, please call Managing Editor Olivia Feld at (212) 224-3260 or e-mail olivia.feld@powerfinancerisk.com

PROJECT FINANCE ●

New England Clean Energy RFP Shortlist Revealed

◀ FROM PAGE 1

mers, Conn., the 50 MW Chinook Solar project in Fitzwilliam, N.H., the 50 MW Farmington Solar project in Farmington, Maine, the 50 MW Quinebaug Solar project in Brooklyn and Centerbury, Conn., and the 50 MW Sanford Airport Solar project in Sanford, Maine.

The largest individual project to progress to the negotiating phase is **Terra Firma**-backed **EverPower Wind**'s 126 MW Cassadaga wind project in Chautauqua County, N.Y.

The successful projects also include **Deepwater Wind**'s first solar project, a 26.5 MW facility called Simsbury in Simsbury, Conn. Deepwater is the sponsor behind the first U.S. offshore wind project, the 30 MW Block Island facility off the coast of Rhode Island.

"There is a huge demand for

clean energy in the U.S. Northeast," **Jeffrey Grybowski**, ceo of Deepwater, told *PFR* in February. "We are actively developing a variety of utility-scale projects to help meet that need, including wind, solar, and energy storage across several markets" (*PFR*, 2/8).

Meanwhile, **Ameresco** reached the negotiating phase with its 20 MW Candlewood solar project in New Milford, Conn., while **Eolian Renewable Energy** and **Walden Green Energy**'s joint bid for the 28.8 MW Antrim wind project in Hillsborough County, N.H., also progressed to the next stage.

The three states also selected **RES Americas**' two submissions to the RFP. However, the public version of RES's paperwork was heavily redacted, so that the names, locations and sizes of the two projects were not disclosed.

A spokesperson for RES in Den-

ver said that the company's successful bids were for 20 MW in Connecticut and 20 MW in Rhode Island.

The award of the PPAs is "conditional upon successful negotiation of contracts and required regulatory approvals," the administrator of the RFP noted in a statement revealing the successful bidders. "As such, not all projects selected to advance to contract negotiation at this stage will necessarily obtain approved contracts."

The states expect to execute contracts by Jan. 15, 2017 and to submit the PPAs for regulatory approval by March 1, 2017.

Notable among the projects that failed to make it to the second stage was the 600 MW King Pine project.

Pattern Energy had agreed to acquire the project from **SunEdison** for \$26.5 million, but only on the condition that it won a power purchase agreement by Oct. 27, according to bankruptcy filings (*PFR*, 6/20). ■

Wells Fargo Joins Tax Equity Group for Enel Project

Wells Fargo has joined a group of financial institutions investing tax equity in a Kansas wind project owned by **Enel Green Power North America**.

The Andover, Mass.-based Enel Green Power subsidiary announced last month that **Bank of America Merrill Lynch**, **JP Morgan** and **MetLife** would make a combined \$500 million investment in the 400 MW project (*PFR*, 9/16).

The revelation that Wells Fargo would join the deal surfaced in documents EGP North America filed with the U.S. **Federal Energy Regulatory Commission** on Oct. 17.

Tradewind Energy is constructing the project in Clark County and it is expected to be online in December.

Google and the **Kansas City Board of Public Utilities** will each purchase 200 MW of the project's generation under separate long-term power purchase agreements.

EGP North America has recently sought regulatory approvals for tax equity investments by **Goldman Sachs**, **GE Energy Financial Services** and **MUFG** (*PFR*, 10/21, *PFR*, 10/20, *PFR*, 9/29).

Officials at EGP North America in Andover and Wells Fargo in New York were not immediately available for comment. Spokespeople for JP Morgan and MetLife in New York declined to comment. A spokesperson for Bank of America Merrill Lynch in New York did not respond to inquiries. ■

Exelon Readies Tax Equity for Project with Google PPA

Exelon Generation has lined up tax equity financing for a wind project in Oklahoma that it acquired at the end of last year. The project has a power purchase agreement with **Google**.

BAL Investment & Advisory and **Antrim Corp.**, the tax equity arms of **Bank of America Merrill Lynch** and **State Street**, respectively, will invest tax equity in the 198 MW Bluestem wind project in Beaver County, Okla., according to a filing with the U.S. **Federal Energy Regulatory Commission**.

The size of the tax equity commitment and how it is divided between BAML and State Street could not immediately be learned.

Representatives of Exelon in Baltimore and State Street in Boston were not immediately available for comment. Spokespeople for BAML in New York did not immediately respond to inquiries.

DATA CENTER PPAS

The Bluestem project, which the **Exelon Corp.** subsidiary acquired from **Renewable Energy Systems** last December, will supply Google's data cen-

ter in Mayes County, Okla., under a 15-year power purchase agreement. The PPA includes an option to extend the commitment further (*PFR*, 1/20).

The Mayes County data center is one of nine Google data centers in the Americas, eight of which are located in the U.S.

BAML is also one of the tax equity investors in **Enel Green Power North America**'s 400 MW Cimarron Bend project in Clark County, Kan., which will supply half of its output to a Google data center in Council Bluffs, Iowa. **JP Morgan**, **MetLife** and **Wells Fargo** are also investing tax equity in the project (see story, right).

Earlier this year, a joint venture between **Southern Power** and **Turner Renewable Energy** acquired the 74 MW Rutherford Farm wind project in Rutherford County, N.C., which powers another of Google's data centers in Lenoir, N.C. (*PFR*, 7/8).

The rest of Google's data centers in the Americas are located in Jackson County, Ala., Douglas County, Ga., The Dalles, Ore., Berkeley County, S.C., Montgomery County, Tenn., and Quilicura, Chile. ■

● PROJECT FINANCE

Essential Power Amends Senior Secured Loans

The Carlyle Group's Essential Power has renegotiated the terms of its senior secured debt, including an extension of its revolving credit facility. However, one of the revolver lenders has dropped out of the deal, according to a report by **Moody's Investors Service**.

Essential Power, which Carlyle acquired in mid-June from **IFM Investors**, has replaced its \$100 million revolver maturing in August 2017 with a \$75 million facility due in August 2018.

The line of credit will be reduced further to \$67.5 million at the original due date, when the lender that declined to participate in the extension drops out.

"We understand from management that all the banks have agreed to the extension except for one, which will then exit the revolver at its current maturity date of August 2017," wrote the Moody's analysts in a report dated Oct. 21.

Credit Suisse has replaced **Barclays** as the agent on the amended revolving credit facility, a person close to the deal tells *PFR*. The source declined to identify the other lenders of the revolver, but said that Barclays was not the bank that declined to participate in the deal.

A spokesperson for Barclays in New York declined to comment and a spokesperson for Credit

Suisse, also in New York, did not respond to an inquiry by press time.

The revolver was launched on Oct. 21 with pricing at 375 basis points over Libor, and was due to be signed by the end of the week.

PROPOSED AMENDMENTS

Moody's has changed the outlook on the B1-rated loan from negative to stable to reflect the proposed amendments to the terms of Essential Power's senior secured loans, including a loosening of the financial covenants and a reduction in the amount outstanding under Essential's senior secured term loan B, in addition to the extension of the revolving credit facility.

S&P Global Ratings has affirmed the BB- rating with a negative outlook that it had assigned to the loans.

The \$565 million term loan, which matures in August 2019, was priced at par at 325 basis points over Libor with a 1% Libor floor in 2013. Barclays was the lead left on the deal, which refinanced an earlier \$665 million loan (*PFR*, 4/18/13).

The amount outstanding under the term loan, which stands at \$531 million, will be reduced by \$33 million to \$498 million as a result of the renegotiation, according to the

Moody's report.

Essential will pay back the debt under the term loan with cash released through a re-engineering of the company's letters of credit.

The borrower is replacing its cash-collateralized letters of credit with revolver-backed letters of credit, which will release \$41 million of restricted cash and \$30 million of excess cash from the balance sheet, according to the report. "These proposed changes improve Essential's financial flex-

"These proposed changes improve Essential's financial flexibility during a period of low natural gas and power prices"

ibility during a period of low natural gas and power prices and alleviate concerns we have previously cited in the negative outlook," the Moody's analysts wrote.

The independent power producer also benefits from the financial strength of its sponsor, Carlyle, wrote the analysts.

The amendments to the term loan B require the consent of more than 50% of the lenders, **Richard**

Donner, v.p., senior credit officer and the lead author of the report at Moody's tells *PFR*, adding that Carlyle had already obtained the agreement of about 41% of lenders. "They should get to the 50% hurdle," he says.

Carlyle agreed to acquire the 1,767 MW gas-fired, oil-fired and hydro Essential Power portfolio from **IFM Investors** in February following an auction run by **Morgan Stanley** (*PFR*, 2/2).

As well as repaying some of the term loan, \$29 million of the cash released by the restructuring of the letters of credit will be paid to Carlyle as a dividend, according to the report.

IMPROVING MARKET

When Carlyle was working on the acquisition of the portfolio in December, it decided to assume the existing debt rather than refinancing. The decision was made in light of market conditions and provisions in the existing loans which allowed a change of control, according to the person close to the deal.

A full refinancing of Essential Power's debt may follow in the future, says the source, noting that the tone of the market has improved since the beginning of the year, with term loan Bs being repriced and new deals getting done.

Market participants considered the term loan B market effectively closed to power projects at the beginning of the year, but a series of borrowers have tapped the market since **Atlantic Power** closed a \$700 million deal in April (*PFR*, 4/20).

Matt O'Connor, m.d. and co-head of **Carlyle Power Partners** in New York declined to comment on the deal because it has not yet closed. ■

Arrangers Launch Dual-tranche Lackawanna Debt Financing

◀ FROM PAGE 1

Prudential has joined the roster as a fourth arranger and is providing a fixed-rate institutional tranche, which will rank *pari passu* with the bank debt, **Louise Pesce**, m.d. in structured finance at MUFG told delegates at

the **Platts 18th Annual Financing U.S. Power Conference** at the Crowne Plaza Times Square in New York on Oct. 25.

The financing package will include a roughly \$800 million to \$900 million term loan, as first reported in *PFR*.

Invenergy was said to be looking to raise around \$200 million in the institutional market, which would lessen the size of the term loan (*PFR*, 9/15).

Lazard is advising the Chicago-based sponsor on an equity raise for the project. ■

CONFERENCE COVERAGE ●

Platts N.Y. 2016: More Divestments to Come?

Asset divestitures were the talk of the **Platts 18th Annual Financing U.S. Power Conference** both on and off the panel discussions. The conference took place on Oct. 25 and Oct. 26 at the Crowne Plaza Times Square in New York.

The number of power generation assets for sale in the U.S. is expected to increase, said **Julien Dumoulin-Smith**, executive director in the U.S. utilities and IPP group at **UBS**, during a panel on key trends affecting the U.S. power market.

“Are we at the top of the cycle for combined-cycle assets—is a key question”, said

“Are we at the top of the cycle for combined-cycle assets—is a key question.”

Dumoulin-Smith. “That’s what folks want to transact in right now and many companies are divesting their assets. That’s a question you’ve got to ask yourself, where are we in this cycle? Can spark spreads really get better?”

The recovery in commodities has not been reflected in power prices, added Dumoulin-Smith. In the Northeast, spark spreads remain high and there has been a substantial amount of new build projects, he said, estimating that roughly 4 GW of projects will bid into the next **PJM Interconnection** capacity auction.

“BACK TO BASICS”

“If you look at what’s going on out there, integrated and diversified utilities are going back to basics”, said Dumoulin-Smith.

“For instance, the fact that Exelon might

be out there marketing their assets in New England and perhaps evaluating other assets in tandem, comes back to the core

“If you look at what’s going on out there, integrated and diversified utilities are going back to basics.”

question—does a diversified utility, which pays a dividend, want to own something that’s volatile like a power plant? And to what extent is it seeing the topping of the cycle as coincident with its own strategic priorities?”, the analyst added.

Exelon Corp. publicly stated that it is seeking to sell assets to pay down debt in its third quarter earnings call on Oct. 26.

The utility recently launched a sales process for the 1,998 MW **Mystic Generating Station** in Charlestown, Mass., *PFR* has learnt. **JP Morgan** is advising Exelon on the sale of the multi-unit gas-fired and oil-fired plant (*PFR*, 10/19).

In the renewable sector, independent power producers **NRG Energy** and **Calpine Corp.** are seeking to increase their footprint in the renewable space.

“Does a diversified utility, which pays a dividend, want to own something that’s volatile like a power plant?”

NRG recently acquired a 2,138 MW portfolio of solar and wind development assets. Last year Calpine hired two staffers from **EDP Renewables North America** (*PFR*, 2/10/15).

POSITIONING OF ASSETS

The positioning of assets is key, said **Bill Nordlund**, partner at **Panda Power Funds**, on the same panel, adding that new development assets in Panda’s portfolio will take advantage of the low gas prices from the Marcellus shale region.

Panda is said to be considering launching financing for the 850 MW **Mattawoman** combined-cycle gas-fired project in Brandywine, Md., in the coming months and is also developing a 550 MW project in New Milford, Conn. (*PFR*, 10/26).

The boom in combined-cycle new builds is a consequence of the significant number of coal retirements, Nordlund added. However, the barriers to entry, especially higher pricing, are making new project development more difficult for sponsors.

Nordlund did not mention that an auction is underway for three Panda gas-fired projects in PJM. First round bids are due next month for the 2.5 GW portfolio, *PFR* has learnt. **Goldman Sachs** is advising Panda on the auction (see story, page 8).

LIVE AUCTIONS

A number of auctions are taking place for several large scale portfolios in the U.S. and Canada.

TransCanada’s auction of a 560 MW portfolio of gas-fired, dual-fuel and hydro facilities in the U.S. is drawing to a close and a winner is expected to be announced imminently, according to someone close to the deal on the sidelines of the conference.

Unsuccessful bidders have been instructed to destroy information on the projects, which is typically a sign that a buyer has been identified, he adds. **JP Morgan** is advising TransCanada on the sale (*PFR*, 4/12).

Other assets on the block include **Veresen’s** 625 MW portfolio of contracted gas-fired, wind and hydro projects in Canada (*PFR*, 26/10) and **Mercuria’s** 500 MW **Danskammer** gas and oil-fired peaker project in lower Hudson Valley, N.Y. (*PFR*, 9/30). ■

FAST FACT

Oct. 26

The date of the earnings call in which Exelon Corp. executives stated that it is selling assets to pay down debt.

FAST FACT

2.5 GW

The combined size of the Panda Power Funds portfolio of three CCGTs for sale

● MERGERS & ACQUISITIONS

Hundreds of Expressions of Interest Received for Veresen Assets

« FROM PAGE 1

types of assets,” says the source. “And because Veresen is willing to sell in blocks, it lets people with smaller check books take part.”

Three run-of-river hydro assets in British Columbia, which are part of the portfolio, seem to be particularly attractive to private endowments and family trusts, the source adds.

TD Securities is advising Veresen on the sale. Teasers were distributed in the last two weeks, according to a deal watcher.

The company intends to use the proceeds of the sale to repay debt and develop contracted mid-stream gas and LNG projects.

Veresen announced its plans to sell the portfolio, which comprises contracted gas-fired, wind and hydro projects, in addition to district energy and waste heat businesses, in August.

“We have grown our power business into a high quality portfolio of scale, and while these are great assets, they are not complemen-

tary to our core natural gas and NGL infrastructure business,” **Don Althoff**, president and ceo of Veresen, said in a statement announcing the sale.

“The time is right to monetize our power business into a strong market for assets of this nature,” he added.

In May, Veresen agreed to sell its last remaining U.S. generation asset, the 33 MW Glen Park hydro project in Watertown, N.Y., to **I Squared Capital** for \$61 million plus working capital (PFR, 6/14).

THE PORTFOLIO

The largest asset in the Canada portfolio, in terms of capacity, is Veresen’s 50% stake in York Energy Center, a 393 MW gas-fired peaker near Newmarket, Ontario. The project has a power purchase agreement which expires in 2032.

Harbert Power owns the remaining 50% of the facility.

Veresen wholly owns two other gas-fired plants in Ontario, the 84

MW East Windsor Cogeneration project in Windsor and the 20 MW London Cogeneration Facility in London. Both projects are contracted through PPAs expiring in 2029.

The company’s wind portfolio comprises 75% stakes in two projects in Ontario, the 20 MW Grand Valley 1 & 2 project in Grand Valley, and the 40 MW Grand Valley 3 project in Dufferin County, as well as a 90% stake in the 33 MW St. Columban project in Huron County, also in Ontario.

The three run-of-river hydro assets in British Columbia comprise a 99% stake in the 11 MW Furry Creek project in the Squamish-Lillooet Regional District and 100% stakes in the 22 MW Clowhom project to the northeast of Sechelt and the 20 MW Dasque Middle project southwest of Terrace.

Veresen also owns two district energy systems, one 72 MW facility located in London, Ontario, and one 100 MW facility in Charlottetown, Prince Edward Island. Five

waste heat projects in Saskatchewan and Alberta totaling about 50 MW, which Veresen co-owns through its 50% stake in **NRGreen**, complete the portfolio.

The deadline for bids could not immediately be established. The company expects a two-phase auction process to result in a sale announcement in the first quarter of 2017, according to a note by **Robert Kwan**, equity analyst at **RBC Dominion Securities**, published after Veresen’s investor day in late September. The company expressed confidence the business would be sold, Kwan wrote.

Harold Holloway, m.d. in TD’s global energy and power investment banking group, is leading on the deal. Holloway could not immediately be reached for comment.

TD is mandated on several Canadian asset sales, including a joint mandate with **Scotiabank** to sell three **Brookfield Renewable Partners** operational wind projects and a development-stage expansion project in Ontario (PFR, 7/14).

A spokesperson for Veresen in Calgary, Alberta, declined to comment. ■

Panda Portfolio Bids Due Next Month

First round bids on the **Panda Power Funds** portfolio of three gas-fired projects for sale are due next month, deal watchers tell *PFR* on the sidelines of the **Platts 18th Annual Financing U.S. Power** conference at the Crowne Plaza New York in Times Square.

Goldman Sachs is running the auction for the almost 2.5 GW portfolio of three facilities in **PJM Interconnection**.

The portfolio consists of the 829 MW Liberty project in Bradford County, Pa., the 778 MW Stonewall project in Loudoun County, Va., and the 829 MW Patriot project in Lycoming County, Pa. Liberty and Patriot are both operational and Stonewall is slated to be online next year.

The timing of the sale is aligned with Pan-

da’s plans to launch a new fund, a deal watcher told *PFR* in May. “My sense is that a strategic or a financial firm will get there,” he added when asked what type of buyer would win the auction (PFR, 5/10).

MATTAWOMAN FINANCING

Meanwhile, Panda is said to be considering launching financing for the 850 MW Mattawoman combined-cycle gas-fired project in Brandywine, Md., in the coming months once equity investment has been sealed, adds a second deal watcher.

Unlike the private equity shop’s last project, the Mattawoman project is likely to be financed with a more conservative 50/50 debt to equity ratio, he says, adding that the debt

financing is likely to be arranged solely in the commercial bank market.

Panda’s last deal was the construction financing for the 1 GW Hummel combined-cycle gas-fired project in Snyder County, Pa., which closed roughly a year ago. The Hummel financing, which won the conventional generation deal of the year title at the *PFR* awards for 2015, consisted of both commercial and institutional loans (PFR, 10/28).

CONNECTICUT PROJECT

Two weeks ago, Panda unveiled plans for a new 550 MW greenfield CCGT project in New Milford, Conn. The proposed project is roughly 20 miles from **Competitive Power Ventures’** 805 MW Towantic Energy Center in Oxford, Conn. (PFR, 8/18). The Towantic project is slated to be operational in 2018. ■

MERGERS & ACQUISITIONS ●

Eurus, ArcLight to Rejigger Ownership of Wind Project Duo

Eurus Energy America and a fund of **ArcLight Capital Partners** are rearranging the ownership structure of two jointly-owned wind projects so that they each hold just one of the projects.

The **Eurus Energy** subsidiary will take full ownership of the contracted 41 MW Combine Hills project in Umatilla County, Ore., while the ArcLight fund will become the sole owner of the managing interests in the merchant 54.5 MW Crescent Ridge project in Bureau County, Ill., under the terms of a deal outlined in a filing with the U.S. **Federal Energy Regulatory Commission**.

ArcLight Energy Partners Fund VI acquired its stakes in the two projects last year

from **Infigen Energy**, which had acquired them from Eurus in 2010 (PFR, 7/16/15, PFR, 2/5/10).

Eurus developed both of the projects, which have been online since 2003 and 2005, respectively, with a non-recourse loan from **RBC Capital Markets** (PFR, 6/2/03).

COMBINE HILLS

The deal will involve Eurus acquiring the ArcLight fund's 50% stake in the Combine Hills project. The interests in the project are split into managing Class B shares and passive Class A shares, with Eurus and the ArcLight fund holding 50% of each class.

The Combine Hills project has a power purchase agreement with **PacifiCorp** until Dec. 23, 2023.

CRESCENT RIDGE

The ArcLight fund will meanwhile become the sole owner of the managing interests in the Crescent Ridge project by buying 25% of the Class B shares from Eurus. The fund already

owns the remaining 75% of the Class B shares.

The ArcLight fund also indirectly co-owns **IJA Portfolio**, the entity that holds the Class A tax equity interests in the project, alongside **JP Morgan Capital Corp.** How the ownership of IJA Portfolio is divided between the fund and JPMCC was not disclosed in the filing.

The Crescent Ridge project sells its output into the **PJM Interconnection** market.

The terms of the deal and any cash consideration to be paid by either party for the stakes they are acquiring could not be established by press time. However, the purchase price for the ArcLight fund's acquisition of Eurus's stake in Crescent Ridge may be less than \$10 million, according to the filing.

Eurus Energy is 60% owned by **Toyota Tsusho Corp.** and 40% by **Tokyo Electric Power Company**.

Spokespeople for ArcLight in Boston and Eurus in San Diego did not respond to inquiries by press time. ■

Xcel to Acquire Midwest Wind Quartet

Xcel Energy is purchasing four early development-stage wind projects in the Upper Midwest totaling 750 MW from three different sponsors.

The utility company is buying the 200 MW Freeborn wind project in Freeborn County, Minn., from **Invenergy** and the 150 MW Fox-tail wind project in Dickey County, N.D., from **NextEra Energy Resources**.

The Blazing Star 1 and Blazing Star 2 projects in Lincoln County, Minn., each 200 MW in size, which Xcel is buying from **Geronimo Energy**, complete the portfolio.

Xcel will use its balance sheet to finance the acquisitions, the company's cfo **Robert Frenzel** told investors and analysts on the company's third quarter earnings call on Oct. 27.

"It's important to point out that our capital investment in renewable generation is offset by fuel savings," he said. "We don't plan to issue equity to fund this capital plan, due to our strong balance sheet and credit metrics."

The **Minnesota Public Utilities Commission** and the **North Dakota Public Service Commission** must approve the sales and provide the projects with permits before the deal can close, a spokesperson tells *PFR* from Minneapolis.

Xcel expects to apply for the regulatory approvals early next year and plans to close the acquisitions by mid-2017, adds the spokesperson. The projects are expected to be online by 2020.

Representatives of Geronimo Energy in Minneapolis, Invenergy in Chicago and NextEra Energy Resources in Juno Beach, Fla., did not immediately reply to inquiries. ■

FAST FACT

Dec. 23, 2023

The expiration date of Crescent Ridge's PPA with PacifiCorp.

Dominion Acquires North Carolina Solar Project

Dominion Resources has acquired a 60 MW solar project in North Carolina from solar developer **SunEnergy1**.

The Summit Farms project, which is situated on approximately 650 acres in Currituck County, N.C., is expected to be online in December. SunEnergy1, which is based in Mooresville, N.C., is constructing the project.

The project has 25-year

power purchase agreements with **Boston Medical Center**, the **Massachusetts Institute of Technology** and **Post Office Square Redevelopment Corporation**.

The acquisition of Summit Farms is part of Dominion's long-term goal of constructing 500 MW of solar capacity in North Carolina and Virginia, the Richmond, Va.-based company said in a statement.

Representatives of Dominion in Richmond and SunEnergy1 in Mooresville were not immediately available for comment. ■

FAST FACT

500 MW

Dominion's target for installed solar capacity in North Carolina and Virginia.

● INDUSTRY CURRENT

Navigating Corporate Green Energy Procurements—Wholesale PPAs and Green Tariffs

In this week's Industry Current, **Sutherland Asbill & Brennan's Ram Sunkara** and **Joshua Belcher** discuss the evolution of corporate renewable generation procurement in recent years, highlighting some of the risks that must be navigated by project owners and offtakers.



Ram Sunkara

Joshua Belcher

The last few years have seen a rapidly maturing market for direct energy purchases from renewable projects by increasingly sophisticated corporate buyers. These purchases have been from both new and existing projects through traditional and synthetic PPAs and a growing number of so-called “green tariffs”.

By successfully navigating the various risks and other considerations, including the few touched on below, these buyers have seized the opportunity to unlock extraordinary value from a market that is just beginning to take off.

Most companies purchase renewable generation as traditional retail customers. However, more and more of our commercial and industrial clientele—sophisticated companies with large, high-quality electric loads such as data centers and large corporate campuses—have begun to leverage the size of their aggregate electric consumption to further drive down costs by ‘cutting out the middleman’ and contracting directly with renewable generators. In doing so, these companies are able to rapidly green their portfolios and gain distinct cost and reputational advantages over competitors.

TRADITIONAL PPA

In states with deregulated energy markets, companies can engage renewable projects in one of two primary ways. Under a traditional wholesale power purchase agreement, a company can purchase physical generation for its operations directly from a renewable project.

The parties will need to “sleeve” certain scheduling and delivery functions through a captive or third-party licensed retail energy

provider, typically for a small fee. Companies still need to pay the rates and charges imposed by the distribution utility that owns and maintains the wires and other infrastructure that actually deliver their electricity, but they achieve an overall discount in the lower price for power.

SYNTHETIC PPA

Alternatively, companies can negotiate a “synthetic” or “virtual” PPA, structured as a contract for differences, which offers greater geographic flexibility. Under this arrangement, the corporate customer pays a fixed

“The best green tariffs will offer competitively reduced ‘economic development rates’ to attract new customers”

price for renewable generation from a project (including the renewable energy certificates). If the project sells power into the market at a price that is greater than the fixed price, the company receives a payment for the difference. If the market price is lower than the negotiated fixed price, the company must make the generator whole. The generator benefits by obtaining a guaranteed price for power. The company benefits by hedging its power expenditures while greening its energy portfolio.

In jurisdictions where electricity supply remains tightly regulated, however, power must be directly procured from the local utility. While many utilities have options for customers to buy renewable electricity,

very few have programs through which customers can directly purchase generation at wholesale prices, much less ensure that the corporate buyer's usage of that electricity can be directly attributed to supporting the development of a specific new solar or wind project.

GREEN TARIFFS

To that end, some large corporate buyers have begun to explore collaborative arrangements with utilities to allow direct purchases from specific renewable projects through what are being called “green tariffs.” Green tariffs essentially allow the corporate buyer to “sleeve” PPAs through the utility.

Many green tariff offerings involve a utility procurement of new renewable generation supply to which individual customers can subscribe; we've worked with our clients as well as industry groups to develop models allowing the customer to identify their own renewable counterparties, which are more attractive to larger users who want more control over pricing.

The best green tariffs will offer competitively reduced “economic development rates” to attract new customers and credit the customer with the value of any excess capacity and energy contributions to the utility's system from the renewable facilities.

Each of these approaches comes with a number of risks and other considerations that must be carefully navigated. Aside from price and quantity, key commercial issues to be negotiated include whether the generator will offer a guarantee on the production or availability of power from the project. Other issues include the buyer and seller credit support that will be required, how to deal with payment disputes, and changes in law

INDUSTRY CURRENT ●

that impact how renewable energy may be bought and sold.

OUTPUT GUARANTEE OR AVAILABILITY GUARANTEE?

An output guarantee establishes a minimum energy output for the project. If the project underperforms, the project owner will pay liquidated damages to the company in an amount that usually approximates the cost to cover the lost energy. Under this scenario, the project carries the “resource risk,” or the risk of how much the wind will blow or the sun will shine each year.

Due to derivative accounting issues, however, many corporate buyers prefer to use an availability guarantee. Availability guarantees are tied to the amount of time the facility is up and running and able to produce electricity. The project is guaranteeing only that it will be mechanically available for a certain percentage of the year, but in contrast to an output guarantee it offers no assurance that the wind will blow or the sun will shine.

Advances in technology and operator experience have enabled companies to obtain a higher level of guaranteed performance/availability over the last decade, though the levels differ between wind and solar technologies. In addition to the level of production or availability that is to be guaranteed, common points of negotiation include how much downtime is allowed every year for routine maintenance and whether certain events will excuse the project’s obligation to perform (e.g., emergency outages and extreme

weather events).

Project owners will often look to cap the amount of liquidated damages that they must pay each year. As a result, companies also want an exit ramp if they have contracted with a facility that consistently underperforms, fashioned as a termination right tied to a specific minimum level of performance.

FLOOR PRICE, CEILING PRICE

For a synthetic wind PPA, the customer may negotiate a “floor” price to protect against negative energy prices in the market. For example, a wind producer ordinarily would not bid power into the market when prices go negative. Negative pricing becomes an issue,

“In many cases, customers prefer that their generation procurements support the deployment of new renewable projects”

however, if the wind farm is receiving federal production tax benefits for each megawatt hour that it produces and thus has an economic incentive to keep generating. The floor price is set at the negative pre-tax value of the grossed up tax credit for the period it is available; thereafter it is set at zero.

The project may in return seek to impose a “ceiling” on the market price it must pay. The project also may request a make-whole payment to secure the revenue stream

required for financing. Although the Seller may curtail actual production, the payment will be based on deemed generation using the project’s power curve.

ADDITIONALITY

In many cases, customers prefer that their generation procurements support the deployment of new renewable projects. This concept is known as “additionality”. Rather than contract with existing generation facilities, they enter into agreements with project sponsors that are developing a new wind or solar facility.

The parties must consider the unique risks associated with permitting, financing and timing of construction, among others. PPAs that will underpin the financing of a new facility invariably contain target and guaranteed commercial operation dates and provide for delay damages if these and other interim milestones are not met. If delays are significant enough, a termination right may be merited. Credit support also becomes much more important, and may call for equity-to-debt ratios for the project company, financial covenants, securitization or other methods to mitigate any perceived risks.

Ram Sunkara is a partner and Joshua Belcher is an associate in the Houston office of Sutherland Asbill & Brennan. Sunkara and Belcher represent both large corporate buyers and project developers in renewable deals across the country, including in the negotiation and development of green tariffs, as well as negotiating physical and virtual PPAs. ■

STRATEGIES ●

Duke Carolinas Issues Renewable RFP

◀ FROM PAGE 12

2017.

Duke Energy companies, both regulated and commercial, have installed approximately 450 MW of solar generation in North Carolina, according to the company’s statement announcing the RFP on Oct. 24.

Earlier this year, **Duke Energy Renewables** agreed to several

acquisitions in North Carolina, including a 30 MW portfolio from **Community Energy** and two 5 MW projects from **ET Solar Group** (PFR 4/7, PFR 5/2).

But while Duke Energy Renewables owns 474 MW of solar assets—the bulk of which are in North Carolina—Duke Energy Carolinas owns a relativ-

ity small solar portfolio of only 4 MW of solar capacity, according to a recent report (PFR, 9/7).

The North Carolina renewable energy portfolio standard requires that the three investor-owned utilities in the state, Duke Energy Carolinas, **Progress Energy Carolinas** and **Dominion North Carolina Power**, generate 12.5% of their retail sales from renewable resources or energy efficiency measures by 2021.

In September, Duke Energy Carolinas stated its intention to integrate more renewable generation into its portfolio “through a combination of utility-owned assets and cooperation with third parties” (PFR, 9/7).

DEC also announced on Oct. 24 that it is seeking to buy RECs from existing facilities in its service territory. The RECs must be associated with facilities that will be operational by the end of this year. ■

● STRATEGIES

C&I Solar Growth Rises as Target Tops SEIA List

Target has knocked **Walmart** off its perch atop the **Solar Energy Industries Association's** ranking of commercial and industrial solar installers, published in the association's annual "Solar Means Business" report.

The 2016 ranking, issued in the third week of October, found an uptick in commercial and industrial solar installations among U.S. businesses.

Installations of C&I systems have increased 25%, according to the report. This is a welcome improvement on the stagnation in the sector since 2012, says **Justin Baca**, v.p. of markets and research at SEIA.

Target has added 68.8 MW to its installed solar capacity in 2016, more than any other U.S. business covered by the report and almost 50 MW more than Walmart.

Those installations have pushed Target's total installed capacity up to 147 MW, 2 MW more than Walmart, which previously held the top spot.

"That just shows you how quickly these companies can scale up," Baca tells *PFR*, noting however that only 16% of Target stores and 10% of Walmarts have solar installed, meaning that there is potential for much more.

Target is committed to installing solar panels on 500 stores and distribution centers by 2020, the company's v.p. of property management, **John Leisen**, said in a statement. Walmart has declared a commitment to install 200 MW by 2020.

"We are looking at new opportunities that are right for the business and the planet within the solar space," a Walmart spokesperson tells *PFR* from Bentonville, Ark.

Behind Walmart in the ranking for installed capacity are industrial real estate company **Prologis**, at 107.8 MW, **Apple**, with 93.9 MW, and **Costco**, with 50.7 MW.

"We see the prices continuing to come down and the fundamental economics continue to be attractive," says Baca, who adds that SEIA believes procurement is likely to grow as companies become familiar with the process.

"The first two projects are the most difficult," he says. "After that the companies gain some experience and then they become more cookie-cutter deals. They gain some comfort with it and then subsequent deals are even less expensive to execute, so the economics get more attractive on repeat business." ■

Duke Carolinas Issues Renewable RFP

Duke Energy Carolinas has issued a request for proposals for 400 MW from renewable projects.

The RFP calls for solar, wind, biomass, landfill gas and other projects that qualify as a renewable energy resource under the requirements of North Carolina's renewable energy and energy efficiency portfolio standard.

All projects must be located in DEC's service territory in North Carolina and be operational by Dec. 31, 2018.

Bidders for the RFP can pitch projects in the following three categories:

- ◆ a power purchase proposal of up to 15 years in duration,
- ◆ an engineering, procurement and construction turnkey proposal in which Duke Energy acquires the project, or
- ◆ a late-stage development proposal whereby Duke Energy acquires and builds the project.

Notices of intent to bid for EPC proposals are due by Oct. 28. All bids are due by Dec. 5 and the shortlist selection is due to take place in the first quarter of next year, with the final negotiations slated for the second quarter of

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● ALTERNATING CURRENT

Danish Coal-to-biomass Project Wins Architecture Award



Image: Gottlieb Paludan Architects

A biomass project in Copenhagen that aims to entice tourists to stroll amid a forest of hanging tree trunks won an international architecture award this month.

The visual appearance of the BIO4 cogeneration project, which will replace a 250 MW coal-fired unit at the Amager facility, was considered particularly important because of its location in the midst of the historic Danish capital. It will form part of the skyline, not far from the star-shaped Kastellet fortress and the Copenhagen Opera House.

The **Leading European Architecture Forum** presented **Gottlieb Paludan Architects** with the award for the wood pellet-fired project at an event in London on Oct. 19.

"The recurrent theme in our proposal is the forest as a place and a source of CO2-neutral biofuel," **Jesper Gottlieb**, one of the architects, explained in a statement after his firm won a competition to design the project for Copenhagen utility **HOFOR** last year. "We develop the forest theme in the design of the façade by hanging tree trunks, which create a surprising aesthetic and spatial experiences both from afar and close up."

Visitors will be able to make their way up a series of stairs to a small copse atop the facility, stopping along the way amid the hanging trunks to look through a window into the project's core, according to the plans.

The 150 MW and 400 megajoules per second of heat that will be produced by the project is intended to help Copenhagen to achieve its aim of becoming carbon neutral by 2025. ■