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Power Finance & Risk

Exclusive Insight on Power M&A and Project Financing

PROJECT FINANCE

C$1 billion CCGT debt raise soon to close

A C$1 billion financing for the 900 MW Cascade combined-cycle gas-fired project in Canada is on the verge of closing. Page 19

POWER TRADING

PGE examines power trading losses

Portland General Electric is examining "ill conceived" power trading positions after realizing $104 million in losses. Page 23

PEOPLE & FIRMS

CIP's William Demas joins Stonepeak

Stonepeak Infrastructure Partners has hired William Demas from **Copenhagen Infrastructure Partners**. Page 24

CPV closes fixed- and floating-rate financing for Three Rivers

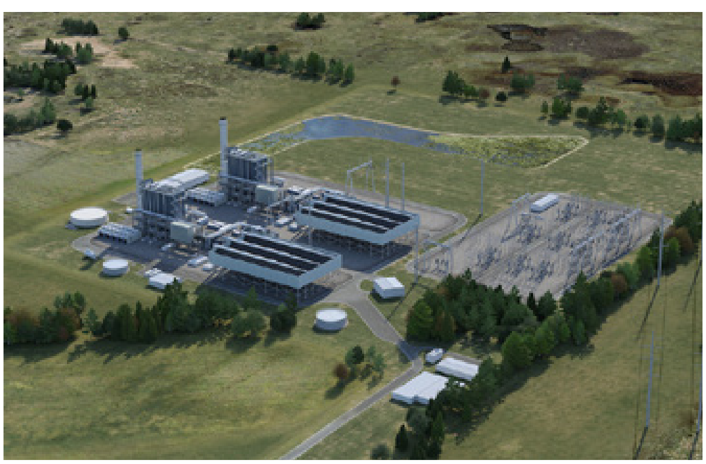
Shravan Bhat

Competitive Power Ventures has reached financial close on its 1,250 MW Three Rivers combined-cycle gas-fired project in Illinois with equity from four co-investors and a combination of floating- and fixed-rate debt.

The equity investors for the $1.3 billion project are **GE Energy Financial Services**, **Osaka Gas USA**, **Axium Infrastructure** and **Harrison Street**. **Whitehall & Co** advised CPV on the equity raise.

BNP Paribas, Crédit Agricole and **MUFG** led on the $875 million construction-plus-five year debt package, which closed on August 21.

The project was financed on the basis of several gas-netbacks with undisclosed Canadian gas producers, with tenors of up to 10 years PAGE 19 »



The site is near the confluence of the Kankatee River and Des Plaines River, which flow into the Illinois River.

Image: Competitive Power Ventures

PFR Private Placement Roundtable 2020

The Covid-19 pandemic upended financial markets earlier this year, and project bonds were no exception. But for private placement investors, the disruption created opportunities as well as headaches. To discuss this and other recent innovations and hot topics in private debt, Power Finance & Risk brought together investors, a recent issuer, a rating agency analyst, a banker and an attorney to share their perspectives ■

Sponsored by MUFG and Fitch Ratings PAGE 7-18 »

Cypress Creek to launch $200m holdco financing

Taryana Odayar

Cypress Creek Renewables is readying the launch of a $200 million holdco financing to support its 1.6 GW operating utility-scale solar portfolio.

The developer has mandated **Investec** as sole bookrunner on the seven-year senior secured loan.

The deal is expected to launch after Labor Day.

Cypress Creek's PAGE 20 »

X-Elio reaches close for Chilean solar

Carmen Arroyo

Spanish developer X-Elio has reached financial close on its second asset in Chile – a 58 MW (DC) solar park in the region of Antofagasta.

Norway's **DNB** arranged the $40 million debt package for the La Cruz solar plant, which is located in the commune of Maria Elena.

The non-recourse financing will have a tenor of 16 years, including the construction PAGE 22 »

IN THIS ISSUE

PPA PULSE

Can you hear me now?

Verizon Communications has signed virtual power purchase agreements with **Brookfield Renewable** and **First Solar** for a combined total of 450 MW of renewable energy.

The contracts with Brookfield, which are both 12 years in length, are for the output of two wind repowering projects in New York:

- Cohocton Wind Farm — 125 MW in Steuben County
- Steel Winds — 35 MW in Eerie County

The projects, which Brookfield owns as a result of its recent acquisition of **TerraForm Power** (PFR, 7/31), are expected to be operational in 2021.

The contracts with First Solar, meanwhile, are 15-year vPPAs for:

- the 196 MW Madison Solar Farm in London, Ohio
- the 100 MW Oak Trail Solar Project in Currituck, North Carolina.

CHARIOTS OF FIRE

174 Power Global has signed a PPA with **Chariot Energy**, an affiliate of the developer that sells energy to retail customers in Texas, for a 30 MW portion of the output of the 180 MW Oberon Solar project in Ector County.

TAKE YOUR MEDS

Iberdrola has signed a 15-year PPA with German pharmaceutical company **Bayer**'s Mexican subsidiary.

The Spanish developer will supply **Bayer de Mexico** with generation from a 105 MW wind farm called Santiago in San Felipe, Guanajuato.

ADD TO CART

ENGIE Energía Chile has secured a five-year power supply agreement with Chilean supermarket operator **Parque Arauco**.

Engie will supply up to 117 GWh/year of renewable generation starting in second half of this year.

CSP DEAL

Chilean distribution and transmission company **Grupo SAESA** has signed an eight-year power purchase agreement for a portion of the output of the 210 MW Cerro Dominador concentrated solar thermal project in Chile.

Under the terms of the contract, **Cerro Dominador**, through its subsidiary **Likana Solar**, will supply 600 GWh per year to SAESA, which will distribute the power among its large commercial and industrial customers known as 'free clients' – *clientes libres*. ■

Power Finance & Risk

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TELL US WHAT YOU THINK!

Do you have questions, comments or criticisms about a story that appeared in ***PFR***? Should we be covering more or less of a given area? The staff of ***PFR*** is committed as ever to evolving with the markets and we welcome your feedback.

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

GENERATION AUCTION & SALE CALENDAR

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

Generation Sale DATABASE

Seller	Assets	Location	Adviser	Status/Comment
Amasa Advisory Services	Portfolio (180 MW Solar)	Arizona		Portfolio in market (PFR, 8/17).
American Electric Power	Portfolio (70 MW Hydro)	US	Scotiabank	Sale expected to conclude by late 2020 (PFR, 8/24).
AltaGas	Blythe (507 MW Gas)	California	Scotiabank	The sale has been relaunched (PFR, 8/24).
● Avenue Capital, others	Coso (270 MW Geothermal)	California	Cantor, Houlihan	Auction underway (see story, page 6).
● BNRG	Portfolio (100 MW Solar)	Maine	Javelin	Carlyle is the buyer (see story, page 5).
Blackstone Group	Onyx Renewable Partners	US	BNP Paribas	Platform sale launched (PFR, 8/3).
Brookfield Infrastructure	Enwave Energy (District energy)	US, Canada	Scotia, TD	Auction to be launched this year (PFR, 8/10).
● Building Energy	BEHUS (62 MW Wind, Solar)	US		Falck, Eni are the buyers (see story online).
Calpine	Freeport (260 MW CHP)	Freeport, Texas	BofA, Guggenheim	Sale process initiated earlier this year (PFR, 7/27).
Constellation	C&I Solar platform	US	BofA Securities	Auction launched in June (PFR, 7/6)
Community Energy	St Martin (100 MW Solar)	St Martin Parish, Louisiana		The sponsor put out marketing materials in June (PFR, 7/6).
● Cypress Creek Renewables	Portfolio (148 MW Solar)	North Carolina		Sol Systems, Nationwide are the buyers (see story, page 5).
DIF Capital Partners	Lone Valley (30 MW Solar, 49%)	San Bernardino County, CA	Fifth Third	Sale process initiated by end July (PFR, 8/10).
● EDF Renewables	Ventos da Bahia (182.6 MW Wind)	Brazil		Omega Geração is the buyer (see story, page 21).
Energy Capital Partners	Alpine Portfolio (507 MW Cogen)	Canada	Credit Suisse	CIM sent to bidders in mid-July (PFR, 8/10).
First Solar	US Development Platform	US	BofA, CohnReznick	Bids due in August (PFR, 8/10).
Hecate Energy	Hecate Energy	US	Guggenheim	Teasers were circulated in June (PFR, 7/20).
Invenergy	Titan 1 (800 MW Solar)	Texas	Marathon Capital	Bids due July/August (PFR, 6/22).
● I Squared Capital	Orazul (Transmission)	Peru	Scotia (buyer)	Colombia's ISA is the buyer (see story, page 21).
Johnson Development Associates	Pinson (20 MW Solar)	South Carolina	EOS Capital Advisors	Marketing materials distributed in June (PFR, 6/29).
Macquarie Capital	Candela Renewables	US	Nomura Greentech	The sponsor has launched the sale process (PFR, 7/20).
NextEra Energy Resources	Project Gila (115 MW Solar)	Texas	Marathon Capital	The sale processes were launched in June (PFR, 7/13).
	Project Rocket City (150 MW Solar)	Alabama		
● NineDot Energy	Portfolio (7.5 MW Fuel Cell)	New York		Captona, SJI are the buyers (see story, page 6).
● Petrobras	Portfolio (578 MW Thermal)	Brazil	Goldman Sachs	Sale has entered binding phase (see story, page 21).
● Point Reyes Energy	Jade Meadow (20 MW Solar)	Maryland	LevelTen	First round bids due Sept 25 (see story, page 5).
PSEG	PSEG Fossil (6,750 MW Thermal)	NJ, CT, NY, MD	Goldman Sachs	PSEG has begun a strategic review of the portfolio (PFR, 8/10).
	PSEG Solar Source (467 MW Solar)	US		
Renova Energia	Alto Sertão III B (305 MW Wind)	Brazil		Prisma Capital made an offer (PFR, 8/17).
Solar Landscape	Portfolio (20 MW [DC] Solar)	New Jersey		Bids due September (PFR, 8/17).
SunEast Renewables	Portfolio (275 MW Solar)	New York	Nomura Greentech	The developer has launched the sale (PFR, 7/6).
US Wind	Maryland Offshore (270 MW Wind)	Maryland	PJ Solomon	Apollo has invested $265 million (PFR, 8/24).
Vision Ridge Partners	Key Capture Energy (Storage)	US	Onpeak	Auction penciled for August (PFR, 7/27).
● Voltalia	Unknown (28 MW Wind)	Brazil		TODA Corp bought the asset (see story, page 21).

● **New or updated listing**

The accuracy of the information, which is derived from many sources, is deemed reliable but cannot be guaranteed.
To report updates or provide additional information on the status of financings, please call Taryana Odayar at (212) 224 3258 or e-mail taryana.odayar@powerfinancerisk.com

● PROJECT FINANCE

Deal Book is a matrix of energy project finance deals that Power Finance & Risk is tracking in the energy sector.
A full listing of deals for the last several years is available at http://www.powerfinancerisk.com/Data.html

Live Deals: Americas

Sponsor	Project	Location	Lead(s)	Deal Type	Loan Amount	Tenor	Notes
● Alupar Investimento	TCE (Transmission)	Colombia	MUFG, Sabadell	Debt	$163.5M	7-yr	Closed August 11 (see story, page 18).
Arroyo Energy	El Arrayán (115 MW Wind)	Chile	SMBC, Crédit Agricole	Debt	$140M	7-yr	Closing delayed until August (PFR, 6/8).
	Pemcorp (131 MW Gas)	Chile	SMBC, Natixis	Refinancing	$170M	7-yr	Close expected in August (PFR, 8/3).
Atlas Renewable Energy	Pimienta (400 MW (DC) Solar)	Campeche, Mexico	DNB, IDB Invest, Bancomext	Private Placement	$200M		Closing was expected by early June (PFR, 5/18).
	Juazeiro (187 MW Solar)	Brazil	IDB Invest	Debt	$90M		Negotiations are underway (PFR, 5/26).
● Competitive Power Ventures	Three Rivers (1,250 MW Gas)	Grundy County, Illinois	BNP Paribas, Crédit Agricole, MUFG	Construction debt	$750M	C+5-yr	Deal closed August 21 (see story, page 1).
				Ancillary Facilities	$125M		
● Cypress Creek	Operating portfolio (1.6 GW Solar)	US	Investec	Holdco debt	$200M	7-yr	Deal launching after Labor Day (see story, page 1).
Duke Energy	Portfolio (75 MW Solar)	US	Goldman Sachs	Tax equity	$109.4M		Deal has closed (PFR, 8/24).
EDF Renewables	Gunaa Sicarú (252 MW Wind)	Oaxaca, Mexico		Term loan			Term sheets received from banks (PFR, 7/13).
Enel Green Power	Lily (146 MW Solar, storage)	Texas	CCA Group (adviser)	Tax equity			Project under construction (PFR, 7/27).
● Engie Brasil	Pampa Sul (345 MW Coal)	Brazil	BTG Pactual	Debentures			Notes issued in two tranches (see story, page 22).
Fisterra Energy	Tierra Mojada (875 MW Gas)	Jalisco, Mexico		Bond refinancing			Morgan Stanley understood to be pursuing mandate (PFR, 5/4).
GenOn Energy	Portfolio (1,570 MW Gas)	California	CIT Bank, Investec, SocGen	Refinancing	$265M		The sponsor has mandated banks (PFR, 8/24).
Grupo Ibereólica, GPG	Cabo Leones 2 (204 MW Wind)	Chile	Crédit Agricole	Construction Debt			Cred Ag has won the mandate (PFR, 5/26).
Interconexión Eléctrica (ISA)	Transmission portfolio	Colombia	BTG Pactual, Valores Bancolombia, Credicorp Capital Colombia	Bond	$42.56M	9-yr	Deal closed on August 13 (PFR, 8/24).
					$37.24M	20-yr	
Korea Electric Power Co, Sprott Korea	Portfolio (199 MW Solar)	Mexico	SMBC	Term loan	$140M		Deal expected to close in September (PFR, 7/20).
Key Capture Energy	Portfolio (1.5 GW Storage)	US		Capital Raise	$400M-$600M		The sponsor is in talks with investment banks (PFR, 5/4).
● Kineticor, Macquarie, OPTrust	Cascade (900 MW Gas)	Yellowhead County, Alberta	ATB, ING, MUFG, NBC, Nomura	Construction debt	C$1B		Deal was set to close August 27 (see story, page 19).
● Longroad Energy	Prospero 2 (331 MW [DC] Solar)	Andrews County, Texas	CIT Bank	Construction debt	$226M		Deal has closed (see story, page 20).
			US Bank	Tax equity			
Mainstream Renewable	Huemul, Copihue (730 MW Solar, Wind)	Chile	Caixabank, IDB Invest, SMBC, Credit Agricole, ABN Amro, KfW, SocGen	Term loan	$500M-$600M	19-yr	Deal expected to close in August (PFR, 8/24).
NextEra Energy	Portfolio (639.1 MW Wind)	US					Financing expected by year-end (PFR, 8/24).
OPDEnergy	Portfolio (154.3 MW Wind, Solar)	Chile	SMBC	Term loan	$103M	7-yr	Deal closed on August 13 (PFR, 8/24).
● Pattern Energy	Phoenix (82.5 MW Solar)	Fannin County, Texas	ING Capital	Debt			Deal has closed (see story, page 20).
			RBC	Tax equity			
Silicon Ranch Corp	Snipesville (86 MW Solar)	Georgia		Sale Leaseback	$65M	17-yr	Sale-leaseback financing with JDA (PFR, 8/24).
Solarpack, Ardian	Portfolio (43.4 MW Solar)	Peru	SMBC, BNP Paribas	Refinancing			Sponsors have mandated banks (PFR, 8/24).
Sunrun	Portfolio (Resi Solar)	US	Investec, SVB	Term loan	$270M	7-yr	Deal closed on August 13 (PFR, 8/24).
WhiteWater Midstream	Whistler (Gas pipeline)	Texas	Investec	Holdco debt	$133M	C+5-yr	Deal launched July 26 (PFR, 8/3).
● X-Elio	La Cruz (58 MW [DC] Solar)	Chile	DNB	Debt	$40M	16-yr	Closed week of August 10 (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 Shravan Bhat at (212) 224-3260 or e-mail shravan.bhat@powerfinancerisk.com

Carlyle scoops up BNRG solar projects in Maine

The Carlyle Group has bought a portfolio of under-construction solar projects in Maine from Irish developer **BNRG**, through its newly established affiliate **Acadia Renewable Energy**.

The portfolio comprises eight projects spread across southern Maine, all of which will sell their output to **Central Maine Power** and **Versant Power** (formerly known as **Emera Maine**) under 20-year power purchase agreements.

Carlyle has also executed construction and permanent debt financing for the portfolio.

HSBC Bank USA acted as lead arranger and administrative agent on the financing.

The equity has come from Carlyle's Renewable & Sustainable Energy Fund.

"We are excited to be at the forefront of solar development in the Northeast," said **Pooja Goyal**, managing director and co-head of Carlyle's Infrastructure Group, who led the investment. "We see significant value in renewable development in the region and the support for these projects has been tremendous. We look forward to partnering with BNRG to help further advance their pipeline of projects and continue contributing to the energy transition."

BNRG arranged financing for the projects earlier this year, and had retained **Javelin Capital** to advise on the sale process, as previously reported by *PFR* (PFR, 3/9).

The portfolio, which Carlyle touts as being the largest under construction in Maine, represents over $130 million of capital investment and is expected to generate more than 100 MW. Construction began in June and the projects are slated to come online in the third quarter of 2021.

BNRG and its local partner **Dirigo Solar** will share development and construction management duties with Carlyle. Portland-based Dirigo develops utility- and community-scale solar projects throughout Maine.

"Maine represents a tremendous opportunity for solar power generation, and we look forward to additional development activity in the state over the coming years," said **David Maguire**, co-founder of BNRG. ■

Developer seeks investor for PJM solar project

The developer of a 20 MW solar project in PJM Interconnection is looking for an equity partner to take the project through financing and construction.

Located near Frostburg in Allegany County, Maryland, the Jade Meadow I project is being developed by **Point Reyes Energy Partners**.

Point Reyes has appointed **LevelTen Energy** to market the project to potential investors. LevelTen is better known as a renewable energy procurement platform.

The Jade Meadow I project will be fitted with bi-facial solar panels and is expected to be online in the fourth quarter of 2021.

The timeline for the auction is as follows:

- September 9 – deadline to submit expressions of interest
- September 18 – deadline for questions and to request seller interview
- September 25 – deadline for first round bids

Point Reyes, which was founded by former **AES Corp** employees **Sarah Slusser**, **Kim Oster** and **Rebecca Cranna**, also offers advisory services.

The three Point Reyes founders all took up C-suite positions at **Cypress Creek Renewables** last year (PFR, 6/3/19), but Oster left Cypress Creek this month to join battery storage developer **Aypa Power** as chief development officer (PFR, 8/10). ■

Sol Systems, Nationwide complete NC solar acquisition

Helios Infrastructure Fund, which is owned by Sol Systems and **Nationwide Mutual Insurance**, has sealed its purchase of a 148 MW solar portfolio in North Carolina from **Cypress Creek Renewables**.

Sol had agreed to buy the 20-project fleet for the joint investment vehicle in September 2018 (PFR, 9/25/19). The acquisition took place in several chunks, the final 25 MW portion of which closed on on July 31.

Financing has come from:

- **Seminole Financial Services** – construction debt
- **Live Oak Bank** – term debt
- **US Bank** – tax equity

The largest asset in the portfolio is the 32 MW Ruff project in Rutherford County, which came online on July 27 (PFR, 1/16).

Nationwide agreed to provide cash equity for the Helios vehicle in early 2018 (PFR, 2/12/18).

"We value our partnership with Nationwide, as well as the opportunity to build on a long history of successful transactions with the Cypress Creek team, beginning with tax equity investments in 2015 and culminating in the completion of this master purchase," said **Jessica Robbins**, senior director, structured finance, at Sol Systems.

"The complexities inherent in a portfolio with this number of projects require a partner like Helios at the table"

The more-than-$200 million portfolio comprises 97 MW of operational assets and a further 51 MW under construction across 20 counties. The portfolio is set for completion by December 2020.

"The complexities inherent in a portfolio with this number of projects require a partner like Helios at the table," said **Cassidy DeLine**, vice president of project finance at Cypress Creek.

Cypress Creek is the engineering, procurement and construction contractor and will stay on as operations and maintenance provider. Construction firms include:

- **Pure Power Contractors**
- **CS Energy** ■

NORTH AMERICA MERGERS & ACQUISITIONS

Sale process for California geothermal asset underway

An auction is underway for a contracted geothermal asset in California that has been owned by a group of former creditors since a debt restructuring in 2017.

Under the hammer is the Coso Geothermal portfolio, a group of nine separate but linked geothermal plants located at the Naval Air Weapons Station at China Lake in Inyo County.

The plants are fully contracted at a capacity of 140 MW through 2037 and 50% contracted from then through 2042, says a person familiar with the sale process.

The offtakers include community choice aggregators **Monterey Bay Community Power** and **Silicon Valley Clean Energy**, which will buy portions of the portfolio's output for 15 years from 2022 (PFR, 4/16).

Monterey Bay will buy 67.5 MW for the first five years and 50 MW thereafter. The total value of its contract is capped at $496 million. Silicon Valley, meanwhile, will purchase 43 MW for the first five years and 28 MW thereafter. Its contract is capped at $331 million.

The former creditors that own the plant are led by **Avenue Capital Group**, with a 64.58% stake. The other owners are:

- **Bardin Hill Investment Partners**
- **Corre Partners Management**
- **Voya**

Cantor Fitzgerald and **Houlihan Lokey** are advising on the sale process, which was launched in mid-July. First round bids are expected to be received by the end of September and the timeline for second-round bids is still to be defined.

An investment banker said he expected the portfolio to appeal to "core infra-type investors who want long-term contracted cash flows," noting that it is able to command high prices because it is effectively a baseload renewable resource.

The Coso projects have been operational since 1987 and were originally owned by **Caithness Energy**, which sold them to **ArcLight Capital Partners** in 2007. ArcLight included the asset in the initial portfolio of **Terra-Gen**.

The plants were initially configured to produce a nameplate capacity of 270 MW but experienced production declines. By 2014, production had declined by 40%, according to a **Moody's Investors Service** report published that year. The plants struggled financially and went through a $665 million out-of-court restructuring in February 2017.

Until last year, the portfolio was contracted with **Southern California Edison** under a PPA that was due to run through 2030. However, the contract lapsed on January 31, 2019 after the utility decided to terminate it, citing high prices. The utility agreed to pay an early termination penalty and return deposits related to the PPA.

Since then, the owners of the plants have replaced the SoCalEd PPA with the new offtake arrangements to cover its output at a lower production level of 140 MW. ■

FAST FACT

140 MW

The portion of Coso's output that is contracted with Monterey Bay Community Power and Silicon Valley Clean Energy through 2037.

New JV targets fuel cells with debut acquisition

A new joint venture between **Captona** and **South Jersey Industries** (SJI) subsidiary **Marina Energy**, called **Catamaran Renewables**, has acquired a 7.5 MW fuel cell portfolio in New York.

"Captona is thrilled to partner with SJI and leverage our strengths to continue investing in renewables in North America"

The 50:50 JV will develop, own and operate solar, wind, fuel cell and other renewable energy projects. Its all-cash acquisition of two fuel cell projects totaling 7.5 MW from **NineDot Energy**, inclusive of tax equity, is its debut acquisition.

The under-construction projects are located along the southern portion of Staten Island and are due online in October. Marina will own 93% of the portfolio and receive 93% of the ITC, cash flows and net income associated with it.

The projects qualify under New York's **Value of Distributed Energy Resources** program. Three-quarters of the project revenues will be fixed.

The projects have secured permits and interconnection rights and are supported by long-term offtake agreements with two anchor customers.

"Captona is thrilled to partner with SJI and leverage our strengths to continue investing in renewables in North America," said **Izzet Bensusan**, managing partner and founder of Captona. "We are excited about our added competitive edge, now offering a full capital stack and technical know-how in house."

"We are excited about our added competitive edge, now offering a full capital stack and technical know-how in house"

Akin Gump was Captona's legal adviser on the transaction, with a team led by **Matthew Nesburn**, **John Marciano** and **Sharanyaa Kruti Vasan**.

The seller of the portfolio, **NineDot Energy**, was founded as **CertainSolar** in 2015. It is a renewables developer based at the **NYU Tandon School of Engineering Urban Future Lab** in Brooklyn, New York.

NineDot, whose new name is derived from the classic mathematical puzzle, is led by its co-founders:

- **David Arfin** – CEO
- **Adam Cohen** – chief technology officer
- **Nalin Kulatilaka** – adviser ■

Power Finance & Risk

PFR Private Placement Roundtable 2020

Sponsored by: Fitch Ratings MUFG

PFR PRIVATE PLACEMENT ROUNDTABLE 2020

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EDITOR'S NOTE

The Covid-19 pandemic upended financial markets earlier this year, and project bonds were no exception. But for private placement investors, the disruption created opportunities as well as headaches. For some, a bonanza of corporate debt issuance by investment grade utilities looking to bolster liquidity drew their attention away from project finance altogether. For those that remained active in projects, this meant bigger allocations.

But as the market returns to something approaching normalcy, there are plenty of non-pandemic-related issues to discuss. How do debt investors and rating agencies view portfolios of distributed energy projects? When will Pacific Gas & Electric be upgraded back to investment grade, if ever? What structures can be put in place to achieve a triple-B rating on a solar project with a merchant tail? What value can be assigned to future revenues from renewable energy credits, and how certain can we be about those revenues?

To discuss all of these issues and more, Power Finance & Risk brought together a diverse panel with a range of different perspectives. Three private placement investors gave their unique views on the market. MUFG's Matt Odette injected the institutional knowledge of the biggest project finance lender in North America, and also a very active private placement agent. The rating agencies were represented by Fitch Ratings' Andy Joynt. The perspective of the borrower was laid out by recent private placement issuer Hull Street Energy's Sarah Wright. Legal insights were provided by Skadden's David Armstrong. And a view into the mezzanine or sub-investment grade private debt market was made possible with the participation of Hadley Peer Marshall from Brookfield Asset Management.

I think that's all the bases covered!

Richard Metcalf
Editor

Cover image: Cropped version of photo by Marco Verch, licensed under CC BY 2.0.

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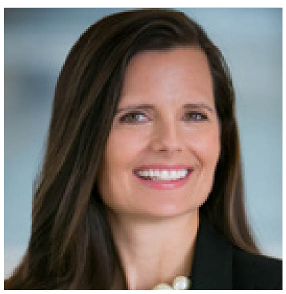
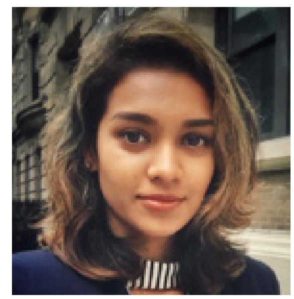


Hadley Peer Marshall, Managing Director, Brookfield Asset Management

Sarah Wright, Founder and Managing Partner, Hull Street Energy

David Armstrong, Partner, Skadden, Arps, Slate, Meagher & Flom



Taryana Odayar, Reporter, Power Finance & Risk (*moderator*)

PFR: If the global financial crisis of '08-'09 is considered to have been the making of the private debt market, the Covid-19 pandemic of 2020 is its first real trial. What did project finance activity look like at the start of the year and then when the first wave of the pandemic crested in March?

Matt Odette, MUFG: Like all markets heading into Covid, the project bond market was pretty robust. Early in the year, we led a wind deal that had a merchant element and that went very well. The expectation prior to Covid was that there would be another strong year.

When Covid hit, a lot of markets across project finance, including the bank market and the term loan B market, if they didn't shut down, they pulled back very far. And the private placement market was no exception. What we did see, though, was that the bank market came back pretty quickly, mostly due to the massive amounts of liquidity pumped into the system by the Fed. The public bond markets also came back pretty quickly once corporate issuers realized they could come out and obtain a ton of liquidity to tide them over during shutdown. We haven't seen as much of a resurgence in the private placement market. There are a variety of reasons for that. Part of it is just that there hasn't been a lot of M&A activity, which is a sweet spot for this type of product. There haven't been a lot of opportunities for refinancings, with spreads gapping out compared to the bank market. But most of the activity post-Covid, at least in the power sector, has been on greenfield renewables, which is a sweet spot for the commercial bank market in terms of their comfort with construction and their flexibility.

We're certainly starting to see things pick up and the pipeline is building for the fourth quarter. But in terms of what we've seen since March, issuance has been fairly light in the private placement market for project finance.

Bob Cantey, Nuveen: I agree with Matt that at the beginning of the year, things were quite tight and it looked like it was going to be a good year. When Covid hit, we stayed in the market. Actually, in March and April, we did a couple of deals where we got good yields, and we noticed that there were few other shops in them, so we got strong allocations. We had probably the best two months in quite some time. Issuers weren't quite sure if things were going to get better, so they were willing to pay up a little bit. Since then, as Matt mentioned, we've seen the market slow down a bit. We've been passing on some deals with coupons a bit too tight, since we did OK in March and April.

Paul Aronson, Voya Investment Management: Frankly, we did not participate in March and April in structured project debt. I don't disagree with the comments Bob made, but we made the determination that, since we were able to get a lot of pure utility paper and corporate paper with similar types of yields and spreads, we felt we were not necessarily being compensated for the potential lower credit quality on some of those project deals.

That said, if I look at some of the coupons and some of those deals today, I'd probably be ecstatic to be in them. You had 10-year A+ rated utilities trading at 275 bp, 300 bp over Treasurys back in March and April. They're now getting deals done in the private market 150 bp to 175 bp inside of that. It's pretty logical to conclude that there should be, and there always is, some premium for projects on top of that.

> *"I'm shocked there isn't more issuance, given the absolute level of yields and spreads. Risk is on again."*

I agree with Bob, but the challenge is: Do I want to be doing project finance deals for 20-odd years at 3% coupons? I'm shocked there isn't more issuance, given the absolute level of yields and spreads. Risk is on again. And a lot of these are great deals, contracted, good assets, etc. So I would expect that the next few months should be pretty robust. I'd be shocked if we don't see significantly more issuance into the long-term capital markets.

PFR: Sarah, from an issuer's perspective, when you're evaluating the best options for sourcing capital, what structures are you considering in the private debt market, and how do you see that evolving over the rest of the year?

Sarah Wright, Hull Street Energy: We are a middle-market, power-focused investor. As power decentralizes due to the addition of renewables, we expect to see more middle-market deal flow, and an important component of our plan is aggregating assets in order to access larger, more efficient capital markets. In most acquisitions, we tend to fund with conventional bank loans or, in some cases, all equity, so we're not looking to the private placement markets until we get a given portfolio to scale by aggregating with other investments or improving the cash flow profile. Once we have demonstrated improved earning capability, then we can go to the debt markets and/or rating agencies to evaluate refinancing options. We recently used a private placement in association with the acquisition of a larger, long-lived, well-established hydroelectric asset portfolio. And in that case, it made sense to use the private placement market. The duration of the debt facilities that are available in the US private placement market makes it a really nice fit for some our portfolio companies, given that we are a private, long-term infrastructure equity investor.

There are often advantages to using the private debt markets – which offer bespoke, customized terms – to provide permanent capital for our portfolio companies. We have found that, as the whole world has gotten better at dealing with big data problems, it has become easier to underwrite some of the risks inherent in power related credit facilities, particularly for power plants that are not contracted. We were pleasantly surprised by the degree of sophistication and rigorous analytical capability we saw on the part of investors, underwriters and rating agencies in that particular process.

PFR: Are issuers or investors using creative strategies to capitalize on or cope with market dislocations?

Charles-Henry Lecointe, Legal & General: There has been a flight to quality. I've seen quite a few transactions where there was pushback from debt investors because of Covid-19 uncertainty. It's probably the opposite to last year, when there was a lot of innovation. The appetite for BBB- is more limited, because you don't want to be in a situation where your transactions are downgraded to non-investment grade a few months after closing. I was happy to see pushback on some aggressive structures. For instance, there was a gas pipeline transaction whose structure was significantly strengthened during negotiations with lenders.

Matt Odette, MUFG: I agree that tighter structures are more necessary for execution now than they were nine or 12 months ago. One thing we are seeing a lot is issuers looking at pre-hedging. Project finance deals take some time to put together, between preparing all the diligence and getting them rated. Investors remain sensitive to all-in coupons, which causes spreads to widen when Treasurys rally abruptly. When Treasurys are at 50 bps, 60 bps, even a low coupon implies a wider spread than issuers might want to pay. Some issuers have taken the view that they'll hedge Treasurys and at least lock in that portion of the cost. If Treasurys do rise, spreads may come in and they can benefit.

David Armstrong, Skadden: Since March, more so in the bank market than the private placement market, we've been seeing greater focus on very clear diligence items, such as *force majeure* and schedule and the like in construction risk. Generally, we've been seeing heightened focus from credit committees. For example, structural matters and diligence points that might have flown through the bank market six months ago are now being scrutinized more closely and structured in ways that address issues that lenders might have lived with in the past because the market was so competitive.

We also witnessed this in a 144A bond deal we worked on in May. A seasoned issuer had its bonds fly through without any questions for a few years, and then in May, there was a lot more scrutiny. They had a successful deal — oversubscribed and priced well — but there was greater scrutiny.

PFR: What has been the impact of the pandemic on existing portfolios? Has there been any portfolio positioning to withstand potential downgrades?

Cantey, Nuveen: From Nuveen's perspective, we haven't made changes to holdings. But we have seen some downgrades as the power prices in PJM, compared to when we bought a lot of these deals, based on the original forecast, have just gotten weaker. We've had some issues there, for sure. I don't think there will be going-concern issues, but we've had some downgrades. We're working with the issuers on how we're going to rectify things going forward, as they ask for modifications and waivers. That gives us the ability to ask for things we may not have gotten in the past, but hopefully will stabilize the ratings going forward.

Andy Joynt, Fitch Ratings: In demand-based infrastructure, it's been ugly. It's been a bloodbath across toll roads, airports, seaports. But PPA-backed energy projects have been a port in a storm, and our ratings have mostly been stable because these are essential businesses. They're insulated from volume risk, and we haven't seen many operational hiccups. Maybe some spare parts or replacement parts are somewhat delayed in arriving, but for most of these projects, especially on the renewable side, you don't need that much staff on site to operate them. And the counterparties have held up quite well, since they're mostly utilities.

We've had some downgrades linked to a midstream counterparty or maybe a corporate. It's that counterparty linkage that can cause some issues. And then, as Bob mentioned, if you're exposed to merchant prices, there has been some downward pressure there, which is not necessarily just Covid-related. That goes back to the maneuvers of **OPEC** pre-Covid, that were already impacting gas and power prices.

Cantey, Nuveen: To clarify, I was talking about merchant hydro, mainly in PJM, with the lower prices you already had before. But Covid has made the prices drop more and that has caused rating issues.

Aronson, Voya: Andy, that was very helpful. When you look across the broad infrastructure space, you're absolutely right. Power, for the most part, has been insulated. Some of the offtakers will definitely see weaker credit profiles. That's true with respect to utilities, because we are seeing a drop on the demand side. That's, ultimately, what's flowing into pricing when we're talking about merchant stuff.

Most of the projects in the private market, in our portfolio anyway, do not have significant construction or merchant risk at this point. We have been asked, over the last few years, to do contracted deals where you're ending up taking merchant risk years down the road. But hopefully, that'll be relatively stable at that point in time.

Relative to other things, in the context of Covid, the demand for energy is stable. When I think about going into any recession, I would think energy might drop off 5% or 10%. But it had a period from March to April where it dropped off probably more than that, and you won't recover that. But over time, that will come back. Relative to some of the other assets that we view as infrastructure, it has been our port in the storm. So we feel pretty good about that.

PFR: Have there been any changes in the structures of project bonds or subordinated debt packages because of the pandemic?

Armstrong, Skadden: In the context of private placements, I have not seen a lot of language changing or pandemic-specific language. On the relatively mundane side, there are investors out there who cannot access their vaults, and they do not want physical notes. We have had to tinker with the delivery language that allows investors to take a PDF at closing and then demand physical notes when they have their vault up and running. That's a pretty uninteresting example, but the one documentation point we've seen in private placements. I haven't done a construction-related private placement since the pandemic began, but in bank transactions there is additional language being added specifically around notice requirements, building out the notice of *force majeure* to specifically say anything COVID-related has to go to the lenders. From January through March, construction contractors and suppliers sent out a quasi-*force majeure* notice that basically said, "Just letting you know there's a pandemic going on, in case you're not watching the news." This may at some point ripen into a *force majeure*. We've seen very few actual *force majeure* notices, but we have seen a lot of cover-your-butt future notices. We've tweaked language in bank loans that captures those types of notices, because they wouldn't necessarily be captured in a standard *force majeure* language.

PFR: Has the pandemic affected the relative attractiveness of the project bond market versus the bank market?

Odette, MUFG: Yes, I think it has. We saw a delayed impact where early in the pandemic, a lot of large corporates, to preserve liquidity, started drawing down on their revolving credit facilities, which really impacted bank liquidity costs, particularly for foreign banks. So bank capital got more expensive at the same time that all capital got more expensive.

But as the Fed intervened with their various programs supporting capital markets, and the public markets opened up, those revolver balances were paid down as companies accessed liquidity in the public bond markets. With liquidity costs having fallen, the bank market is probably back to where it was pricing-wise pre-Covid. We're back to seeing spreads in the mid-100s for clean, contracted transactions, and even tighter for construction-only deals, where the equivalent spread on a private placement is probably in the mid-200s. A lot of that is due to investor sensitivity to minimum coupons, since folks are putting money out for 15, 20 years. It's a very understandable impulse that has impacted the relative attractiveness.

The bank market does not offer the tenor and match of assets and liabilities that the bond market does. But ignoring those considerations, if you're putting them next to each other, spreads are significantly tighter in the bank market now than in the private placement market.

Lecointe, Legal & General: Matt, I've seen banks being very active in the renewables sector. Is this because banks really like the sector and are happy to offer competitive pricing because there's an ESG aspect?

Odette, MUFG: There's an element of that, particularly with European banks, some of which have more defined mandates to support the development of renewables. But frankly, the vast bulk of activity in the US

> *"If you're putting them next to each other, spreads are significantly tighter in the bank market now than in the private placement market."*

over the last couple years, particularly over the last 12 months, has been renewables. It's a matter of just chasing the deals that are there for the taking. Gas-fired deals, to the extent you can find one with a contract, will price very tightly too. Maybe there's somewhat of a premium over contracted renewables, but there's really not a big distinction.

● PFR PRIVATE PLACEMENT ROUNDTABLE 2020

Cantey, Nuveen: As Covid goes on, I would assume that throughout the rest of 2020 to 2021, we're going to have low growth throughout the world. From a banker's perspective, do you think there's going to be pressure as loans from other areas of the bank may have issues? Is that going to cause banks to be a bit more careful in these investments and demand more return, or is that separated somehow?

Odette, MUFG: It depends almost entirely on the path forward on the economy. Banks, particularly US-regulated banks, have already set aside quite a lot of reserves, which have already hit the earnings. It's just a matter of whether things deteriorate further. You could make the argument that because this sector is somewhat of a port in a storm, and there's a very strong ESG and policy bias towards the sector, that you'll continue to see banks be enthusiastic about funding renewables. But if a bank's balance sheet becomes significantly weaker because other parts of the economy suffer and that causes loan losses, I think that could impact activity in this sector.

PFR: Hadley, you focus on subordinated debt. How would you describe sponsors' appetite for subordinated debt right now?

Hadley Peer Marshall, Brookfield Asset Management: Leading up to Covid, the pace was normal. Covid obviously brought about some dislocation in the market, which created opportunities. During that time, we financed a residential solar portfolio and invested in some other asset classes as well. However, there was a short window before the Fed support brought back most liquidity. Currently, it does feel like most of the markets are pretty attractive from a borrower's perspective. From a sponsor's appetite perspective, it's really back to M&A-type financing to offset equity check sizes, or the accretion value, or funding capex needs.

"We were pleased to find that the rating agencies and our debt investors were pretty fluent in REC markets and able to think about how they might deliver under various scenarios and stresses."

On the bank market, there is a little bit more of a flight to quality in terms of the opportunities that the banks are looking to finance, and the types of sponsors and assets. That creates some opportunities for the other markets.

As a borrower, Brookfield used the private placement market back in May. We are accustomed to that type of long-term financing and find it quite attractive.

Subordinated private debt shouldn't ever compete with the private placement market or the bank market, because it's additive. If there's conservative underwriting, then subordinated debt can add a little bit more and fill in that gap, if the lender sees the value. The subordinated private debt market provides, similarly to the private placement and bank market, delayed draws. It can hold pricings. That's always competitive in the M&A environment. Our specific type of capital is more junior capital-like, but you see others that are more equity-like, and so borrowers can customize more so than you would typically see at the senior debt level.

PFR: Sarah, you touched previously on Hull Street's private placement financing of its acquisition of 31 hydro plants. Did Hull Street also obtain proposals for bank loans and compare the terms on offer?

Wright, Hull Street: Whenever we are looking at refinancing a portfolio company, we evaluate all of our options. Having said that, given the fact that many USPP investors are seeking long-term yield, the USPP market is a good fit for hydro as an asset class (a) because it is so long-lived and (b) because of the nature of the diverse portfolio of energy, reliability and renewable attribute products that it produces across the revenue stream. As equity investors, if we are looking to deploy capital in the US right now, given what might happen politically, we want to own assets that earn a variety of different revenue components so that we are protected from value migration across products. For example, we like assets that might earn incremental revenue if, for example, carbon starts to matter more. In terms of the experience we had underwriting that hydro portfolio, I think of capacity and energy revenues as the classic components. Those are the generation services that most people are familiar with. On the other hand, the market is less familiar with REC value and ancillary services. As we move forward in the grid transition, we expect to see less value in the energy market and more value in products like the ancillary services and RECs. So we were pleased to find that the rating agencies and our debt investors were pretty fluent in REC markets and able to think about how they might deliver under various scenarios and stresses. It is a very promising trend in the industry, that ability to tackle increasingly complex revenue profiles, given the ongoing evolution of the power industry, wherein long-term public utility QF contracts are getting replaced with shorter-term, more syndicated power purchase agreements from corporate and merchant electricity supply counterparties.

On the other hand, we also encountered some glitches. For example, if you're looking at weather data and you're saying, 'I want to understand what a P99 weather scenario is for the purposes of stress testing this prospective credit facility,' that, in any given year, is a valid test. But when you look at tests that make the assumption that a very low probability event occurs every year over the term of a very long-lived facility, that's an irrational assumption. There's still room to improve the analysis around the rating and pricing of these types of project financings. And, if the analytical capabilities of the buyers and the agencies and the underwriters does continue to improve, the market will probably grow. I think there are many issuers who would prefer the USPP market over some of the other shorter-term, and/or subordinate corporate debt markets, and the number of USPP issuances could increase, because there does seem to be an element of excessive conservatism in some of the underwriting, so investors are, perhaps, missing some attractive risk-adjusted return opportunities.

Odette, MUFG: The hydro market, really for the last several years, has been very well suited to the bond market. We haven't seen a lot of bank deals just because it is, as a quasi-perpetual asset, well suited to long-term liabilities. The biggest gap that we've encountered when we've gone out to structure a rate and market these deals is just what Sarah pointed to, which is RECs.

The renewable value of these assets over time is high. If you compare hydro to wind and solar, with the capacity factors, resource stability and asset life, they're phenomenal assets. But we've encountered resistance to giving a lot of credit to RECs and renewable values mainly because these tend to be small, state-based programs, without a lot of historical data. That's probably the next frontier, as you're looking at merchant renewables and merchant hydro in particular, of convincing the market of the value of the "green" element of the revenue stream.

Aronson, Voya: I do wonder what those REC payments will be like in seven and 10 and 12 years, and how much credit we are supposed to give them. What are your thoughts around the extent to which those revenues, which are perhaps a little less certain, end up being less than projected, or less than the consultants project they're going to be? Could traps and triggers be inserted into the transaction such that at that point, either equity is reducing distributions, reducing debt or kicking in more equity?

"If you find a point at which the rest of the market continues to exist, but your plant fails, that is a reasonable stress test."

Joynt, Fitch: We've historically dealt with RECs bundled into the PPA. Now that there are bilateral contracts and uncertainty beyond that particular contract, it introduces a market risk that is not too dissimilar from power price risk. On top of that, there's an element of political risk, in terms of what US policy is going to be on carbon. That starts to sound less like investing and more like gambling. Thinking about the whole premise of the REC market, why do they exist? Because they incentivize the development of renewables. And if pricing gets elevated, the idea is that it incentivizes development, which should then pull those prices back down.

Our stance has generally been, where we feel that there's visibility over the medium term as to what the pricing could be, we'll be a little more comfortable accepting it as quasi-contracted. Beyond that, there'd be a point in time where we have to treat this essentially as merchant and maybe even a little worse than merchant, where some level of coverage cushion is sufficient and can get you there. But we've been quite conservative on that point.

Wright, Hull Street: In evaluating power credit, the market customarily looks at the top of the cycle dynamic, where a given market gets constrained, prices rise temporarily, new entrants pile in and then prices come back down. What people are not sufficiently focused on yet is the other side of that coin, which is when the market gets long.

If you are evaluating downside for investors who are underwriting long-term debt, there is a resistance level across a basket of commodities that can be identified by looking at the market as a whole. Let's say you are looking at a scenario where energy prices are low and capacity prices are low and REC prices are low. This power plant is in trouble. But does the rest of the market exist in this scenario? If the answer is no, all plants are in distress, and NERC reliability standards are unable to be met, then that scenario is too extreme. If you find a point at which the rest of the market continues to exist, but your plant fails, that is a reasonable stress test. We see people do a better job of limiting the upside of the cycle than the downside. But as I have said before, debt market analytics are improving.

I would say to Paul that, as a borrower, of course, we don't like traps and triggers! But having said that, given the nature of these private placement processes and lenders who will consider bespoke customized structured transactions, we should, theoretically, be able to allocate risk between debt and equity holders in a manner that optimizes the credit for both parties. However, this only works if both parties price risk the same way, and when you have a rating agency or other underwriter at the table, it can be very difficult to get all parties to agree on risk pricing. So, in practice it is harder to achieve an optimal outcome. On the other hand, one of the other attractive characteristics of the USPP market is that if and when borrowers run into trouble, you often don't see foreclosure because they have an asset that's going to last 100 years. Borrowers seem to wind up renegotiating with their small group of sophisticated investors. Those negotiations sometimes create an opportunity for everybody to reallocate risk and carry on with some measure of success, enabling the investors to maintain their credit quality and the issuers to maintain their ownership interests.

Aronson, Voya: The vast majority of our clients are insurance company money, and they are very sensitive to ratings and capital charges. Sarah, I agree with you that these are 100-year assets, and we have run into difficulties in the past and, guess what, we've not lost money on them, because people are going to see the long-term value of those assets from an equity perspective. They might be short-term impaired, but over the next 30, 40 years, they're still there. The amount of debt that's on the assets is not a problem. The issue is that in the short term, we're faced with capital charge downgrades and a lot of our clients get very frustrated by that.

One of the things that's unique about project finance vis-à-vis corporate transactions is that usually, the project deals are structured to BBB-, and that's about as high as that credit quality will ever go. If something does get a little dicey, they get downgraded pretty quickly. With respect to corporate transactions, there are usually bells and whistles and triggers and covenants built in that allow the lender to ensure that it stays investment grade without having that same capital implication. That's one of the challenges. We're willing to do that. We get paid, frankly, an extra premium, in my opinion, for the structure and the lower liquidity relative to corporates, but the stability of that rating is very important to a lot of our lenders. There have been times that we end up passing if we feel that it's a good deal, but we're going to end up renegotiating the structure in two years.

We haven't talked about California yet. It's a little different, but those are examples of perfectly decent projects that were out there and all of a sudden, **PG&E**'s in bankruptcy, so everything that they're an offtaker on is immediately downgraded. Clearly it weakened the credit, but those contracts and coverages are still pretty good. That's why I asked the question about traps and triggers, because I think you could actually raise more capital if you were willing to put them in and take the equity risk and keep us at that BBB- threshold.

PFR: With PG&E emerging from bankruptcy on July 1, will that relieve pressure on some of the existing project finance private placements on insurance company books? Will we see any pent-up issuance coming down the pipeline?

Cantey, Nuveen: It hasn't yet. For our existing holdings with exposure to PG&E we have not been upgraded to reflect their emergence from bankruptcy. The rating agencies are saying they're not going to upgrade to the PG&E opco level until we get past the fire season. It's been very frustrating, from our point of view. They performed like they were supposed to and they're still performing, and we have credits where 14% to 20% of the revenue comes from PG&E and we are still deep in BB territory, and the agency's saying, 'No, we're not going to upgrade yet.' It makes me wary of PG&E and it makes me wary of what happens if other California utilities experience a bad fire season.

> *"When PPAs are more competitively priced, and then you run an analysis to see what happens if you lose that contract, the impact doesn't seem so great."*

Aronson, Voya: I understand that the agencies have their structures in place and I'm sensitive to that and we're thankful for it. On the other hand, for renewable assets in California, is it really PG&E who's the offtaker or is it the entire state of California? The contracts have been blessed by the Public Utilities Commission. They're going to be paid. To me, that does not seem like a below-investment-grade risk.

Joynt, Fitch: Our utilities team came to the view – and the other agencies did as well – that PG&E's track record is not good. The wildfire fund is there, a structure that was not in place previously, but there is some question as to whether or not that fund is sufficient if you get hit with another wildfire season. How long is it till you get comfortable that that wildfire fund is sufficient? Is it three, four wildfire seasons? What's to say that the fifth isn't then going to be the one that breaks the camel's back? That's a very tough prediction. There's a lot of headwinds to PG&E getting back to investment grade. And it raises the question: Are these ratings going to be held down permanently?

We try to take a thoughtful view on the projects that are being supported by PG&E. Say PG&E is your sole offtaker on a single project. It's hard for us to justify getting around the risk that PG&E falls back into bankruptcy and you're once again presented with this risk of contract rejection. That risk of rejection is going to be more prevalent. Even though they're baked into the rate base, it's going to be more prevalent for the projects that have the $150/MWh to $200/MWh PPAs. When PPAs are more competitively priced, and then you run an analysis to see what happens if you lose that contract, the impact doesn't seem so great, because you've already got a reasonably-priced PPA. In those cases, we have been able to rate above PG&E's rating.

PFR: In Texas, there are merchant solar projects that have been financed in the bank market on the basis of hedges. Can insulating mechanisms also be used to attract investment grade debt for these types of projects?

Odette, MUFG: This gets back to the question Paul was asking earlier about structural enhancements that can mitigate ratings pressure or credit quality with respect to merchant prices. Where we've seen it most prominently is not so much in merchant hydro, because there's already a pretty well-established structure there. Where we have seen some innovative structuring is what I'd characterize as merchant tail transactions. We were involved in a couple earlier this year, which a lot of the people in this discussion were involved in as well. One was a large portfolio with a number of PPAs rolling off, so that merchant exposure slowly increases. In another case, it was a single asset where the PPA expired prior to the bond maturity. In both cases, with a combination of structural enhancements and conservative assumptions around prices, they were successfully marketed and oversubscribed. The key structural is cash traps or reserves that are contingent, and come into place to the extent that power prices or RECs substantially underperform the original forecast. If so, then cash is trapped and it helps bolster liquidity to cover some of the debt that is no longer supported by the weaker merchant cash flows. These features have been necessary to get these kinds of deals done.

PFR: Has Fitch been asked to rate any merchant solar projects in Texas?

Joynt, Fitch: We've looked at a couple of those deals. There's a lot of Texas solar happening right now. The bells and whistles on top of not over-leveraging the merchant tail are always better than just coverage alone, because you don't know what the prices are going to be at the time when the merchant exposure is there. But the structural features differ, too, in how beneficial they are. You have to look at the terms. For example, if there's a forward-looking price trigger that will cause a cash sweep, is it based on a market consultant's view? Right then and there, you're maybe once again faced with the same consultant that you were doubting in the first place. What are they going to be saying 15 years from now? Are they even going to be around? Or is it based more on a forward-looking price or an index price that you can actually point to more firmly? Is the trigger a one time test, where you just have to pass it once and then that provision is gone? Or is it a test that you have to pass on a go-forward basis? That helps to ensure that the structure gets preserved. If you do have a sweep or feature that might get triggered, is there going to be enough cash to actually sweep down and then keep you whole?

PFR: Toward the end of last year, Goldman Sachs Renewable Power financed the largest commercial and industrial solar portfolio seen by bond buyers, clocking in at 600 MW. It was also the first to obtain a BBB rating. Is this an indication that private debt investors are looking into the residential solar and C&I solar subsectors with more interest?

Peer Marshall, Brookfield: On our end, for sure. For our type of capital, we have already been looking at C&I opportunities.

Global Perspective

Local Market Insight

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PFR ENERGY STORAGE ROUNDTABLE 2020

Odette, MUFG: The GSRP deal is certainly the biggest one that we have seen, and we were lucky enough to be involved in that. One thing that's really opened that market up is rating agencies and investors being more willing to look at offtakers from a portfolio perspective. The challenge has always been that if you have 50 offtakers and 50 projects, how do you evaluate each and every one of them? But the rating agencies have been pretty flexible in terms of looking at things on a portfolio basis, even including unrated counterparties to the extent that they're a small portion of the total. That makes it possible to take these very large portfolios and market them effectively. We'll continue to see a lot of this, because there is a lot of activity in distributed solar.

> *"One thing that's really opened that market up is rating agencies and investors being more willing to look at offtakers from a portfolio perspective."*

Cantey, Nuveen: I have to agree with that. We participated in the Goldman deal, although it had to have some changes. We thought they were too optimistic on the merchant side. But I don't think we'll see a lot of residential. All the residential deals I'm seeing are more in the asset-backed space. We have not done any at Nuveen on the residential side, except via the asset-backed securities. We would like to see more C&I. But the issue we'll continue to run into is people using consulting reports 20 years out and believing that power prices are really going to be that high. We're comfortable with putting the PPAs together, just not sizing debt based on long term forecasted power prices.

Lecointe, Legal & General: I did spend a lot of time looking at GSRP. Andy may remember that we spoke quite a bit about this transaction. The structure was interesting with this merchant period. We know that whether it's in Europe or in the US, additional merchant risk is where the renewables market is moving. We're seeing more and more transactions with merchant tail. As an investor keen to invest more in ESG, we're spending a lot of time trying to get more comfortable with this merchant risk. But it's not an easy one, especially if you want to keep your investment grade rating over time. There are less concerns about whether you are going to lose money. The question is really about whether your rating is going to remain at BBB- for 15, 20 years.

Joynt, Fitch: We're still trying to figure out what's the right way to assess and approach that risk. There's often a number of behind-the-meter assets, and there, you really are reliant on a single customer. You often don't have interconnection rights. You have to make an assumption around how much you would have to reduce the price to incentivize the customer to re-sign, or if there's going to be customer attrition because those sites end up vacant for some reason. What's an appropriate assumption for how many of those sites go away? You're less concerned if it's a rooftop installation on a school building. But if it's a warehouse, there's more concern that that might not be occupied. We feel that we can come up with a reasonable downside and that's what we try to rate to. The other difficult aspect of these distributed generation portfolios is that there is necessarily going to be some level of asset sales or additions that come into and out of the portfolio. It benefits the lenders, in some ways, to have a sponsor that is able to be proactive in getting rid of assets that are not serving the portfolio well and using the net proceeds to bring in new assets, but there have to be controls around that, at least on the agency side. We've got to be able to take a view that we know what this portfolio is going to look like 20 years from now. It can't just wholesale change. If so, then it's not really a project financing. We spend a lot of time looking at what kinds of permitted asset sales exist. Are there traps on that, or are there triggers to have a rating agency affirm the rating before those are executed?

"We did get paid more than we would on a lot of other BBB- type projects. But the sponsors benefited themselves by listening to the advice and putting the structure in place."

PFR: Gas-fired peakers are not usually seen in the US private placement market, but the bond market responded to Rockland Capital's refinancing of its Gridflex peaker portfolio with a twice oversubscribed book. The structure included a capacity reserve account to help sweeten the deal. Are these the kinds of features that private debt investors want to see for these assets?

Aronson, Voya: Yes.

Cantey, Nuveen: Yes!

Odette, MUFG: The capacity reserve has been around and utilized on a couple of different transactions going back a few years, and it is very much ratings-driven. While these deals have been well received and oversubscribed, they have priced relatively wide to what you would see on even a merchant hydro deal and certainly compared to a fully contracted transaction. So while they do have investment grade ratings, I think the market views them as more aggressive than some other investment grade transactions.

Cantey, Nuveen: Internally, we have been rating them as BB. The one that you mentioned, Gridflex, we thought that over that time period, given how PJM is evolving, there's a high probability you'd go to high yield. We went ahead and decided to rate at high yield to begin with.

Aronson, Voya: We participated in and co-led both Gridflex and Gridiron. We absolutely agree. When Gridflex first came, it did not have the capacity traps that we were talking about, and we refused to do the transaction. We only ended up participating once we got that structure in place. Ironically, the external rating did not change, which we were surprised by, because we felt that by putting in the appropriate protections, that made a significant difference for us.

We were approached on the Gridflex transaction, and the idea was: ' Do you think we could do this without a cash trap?' And our response was, 'No – but you can try if you want to.' The agents listened and ended up modeling Gridflex like Gridiron, and the transaction was smoothly executed. I agree with Bob. We did get paid more than we would on a lot of other BBB- type projects. But the sponsors benefited themselves by listening to the advice and putting the structure in place. It's a hybrid, but with those protections in place, the rating stability is going to be maintained.

PFR: One of the limitations of the US private placement market has been the size of the deals you can do. But we're seeing increasingly large deals, like the recent $3 billion Vanguard Group transaction, the largest ever recorded in the USPP market. This suggests greater depth, meaning more investors able to deploy more capital in each deal. What does that mean for project bonds? Does it, for instance, open the door to financings of larger portfolios of wind and solar projects in the USPP market?

Aronson, Voya: For several years, there have been a number of transactions financed in the private Reg D 4(a)(2) market that have been at or around or in excess of a billion dollars. $3 billion is not, in my opinion, doable. But doing a billion-dollar transaction for project finance assets would not be a problem. Charles and Bob and I can routinely write checks for nine digits, and there are a lot of other people out there who can do that as well. But a lot of the things that we're interested in, and it is a struggle, is when you have some of these more unique, special transactions that might only need $250 million or $300 million.

Lecointe, Legal & General: I agree. In terms of size, the appetite has increased. For instance, Legal & General was not investing in the US private placement market four or five years ago. We've come here. We've seen a lot of US investors being very active in Europe and we're just doing the opposite, crossing the Atlantic. But I would tend to agree. I think $3 billion is probably too much for the market. But more than a billion? Yes, definitely.

"$3 billion is not, in my opinion, doable. But doing a billion-dollar transaction for project finance assets would not be a problem."

PFR: Last year, Calpine was trying to refinance its Geysers geothermal portfolio in California. It initially started off as a $2 billion quadruple-tranche hybrid bank loan and bond offering. But after the Kincade fires, it was reduced to a $1 billion bank loan. What are the prospects for geothermal assets in the private debt market?

Cantey, Nuveen: In geothermal, we've had issues with the plants not working properly. In my opinion, and I'm sure this will differ, we're seeing some deals at BBB-. For the length they want to go to, I think we need a little bit more protection. Maybe a BBB rating with some major maintenance reserve accounts. But when we give that feedback, the possible borrower is not interested.

Odette, MUFG: The Geysers are a really unique geothermal asset in that they've been operating for 50 years and it's one of the most stable geothermal resources you're ever going to find. When we were marketing the Geysers transaction last fall, folks generally got comfortable with the resource. It's a very different story with greenfield or newer geothermal resources, where there's a lot more potential for variability or decline in the wellfield. But for big, stable geothermal assets, there's a lot of appetite. Geysers was a victim of bad timing, with a major wildfire starting in the vicinity as the deal was being marketed. But we successfully led a bank financing for the Geysers last spring, one of the first big post-Covid deals to be closed.

Cantey, Nuveen: I agree with Matt. It's more of a greenfield issue for us. That asset he speaks of is a good asset. But we were closed for California at the time, so we couldn't even look at it.

Joynt, Fitch: There's also a degree of recontracting risk baked into some of these deals which you have to wrap your head around. Right now, geothermal does price at a premium, typically, when you see these contracts come in, because there's a premium put on baseload renewables. Is that going to exist forever? That's a big question. And it depends on how pervasive and quickly storage develops as another way to get at baseload renewables. You have that tension there. And the more premium you assume that geothermal is going to command at the point of recontracting, it's essentially a bet against the rapid development of storage. I would say it's more likely going to be the opposite. Storage is probably going to develop more quickly than we expect. And when you're pairing geothermal resource risk with some recontracting risk, that becomes a hard argument at the investment grade.

PFR: Since the USPP market prefers proven operating projects with certainty of cash flows, are the technological risks associated with battery storage too big a hurdle right now from an investment grade financing perspective?

Cantey, Nuveen: Nobody showed us one yet. We have a project where there's a battery that doesn't flow into our cash flows, but we haven't had anybody approach us with a structure. We'd be interested to see. One of the issues would be how long these batteries last and how do we handle issues if the batteries don't perform as well as we think. And of course, they may perform better. What could be put out there? Do we put a wrap on it, or is there another way to do it, in case there are issues with the equipment? But I do believe it's the future. Battery storage will probably come quicker than we thought, especially in the western states, with all the solar being put out there.

Odette, MUFG: As Bob said, there isn't really a long-term track record as to how this equipment will perform over time. If you're putting 15-, 20-year financing on something, people are naturally going to be conservative. There haven't been a lot of standalone battery financings, but the ones that we have seen have gone to the bank market. The more prevalent form of batteries being introduced to the market is in combination with renewables: solar-plus-storage, wind-plus-storage. That has predominantly been in the bank market, but we're going to start to see it increasingly across all markets.

PFR: What are the latest issues that the NAIC is focusing on which could affect the market? Are there any points to note on their capital charge regime or private letter ratings? Or do we not want to talk about the NAIC – touchy subject?

Cantey, Nuveen: They rate the project finance sector more conservatively than most of the rating agencies. And it's a problem for a lot of deals because if you do not have a rating, then you risk getting a NAIC 3 designation. I'm not going to argue whether they're right or they're wrong, but they just differ, say, from a Fitch or a **Kroll** who might rate solar deal IG at 1.25x coverage and the NAIC would likely give it a 3. That's something we've always had to deal with, because the NAIC rating affects our capital charges.

Aronson, Voya: Almost a bigger concern is that the NAIC has been making a run at suggesting that transactions that only have one private letter rating will still be subject to their review and purview. That causes a bit of uncertainty in the market, which causes uncertainty in the ability to get a transaction completed because all of a sudden, we have an incremental wild card in the deal. I agree with Bob that they don't rightly or wrongly always rate the same way as some of the agencies. But it's causing uncertainty.

Lecointe, Legal & General: I'm investing mostly UK money, so I don't have to focus too much on NAIC but Solvency II regulation, which can also be challenging. We have the ability to rate transactions internally, which can be useful as well. It's one of the advantages of Solvency II compared to the NAIC. But we've had a US transaction that we rated internally and then the NAIC had a different view. So I can share the same concerns about the way they rate these transactions.

PFR: What does the pipeline look like for the rest of the year? Could it be impacted by the outcome of the US presidential elections?

Odette, MUFG: The pipeline definitely has been building, and we expect more activity in the third quarter and early fourth quarter. Given the inherent uncertainty introduced by the election and potential volatility as we get closer to it, there is a bias among sponsors to be in and out of the market by early October. I would expect to see a flurry of activity in the next six to eight weeks, and then, depending on what happens in the election and the market's reaction to it, there's a pretty good long-term pipeline after that.

Lecointe, Legal & General: I'm getting a lot more calls. It's going to get busier. With the elections, people will try not to price transactions too close to the big date to avoid any volatility. For transactions with construction risk, where we are being asked to hold spreads, it's going to be difficult around that time – for obvious reasons. It's going to be an interesting period. ■

Financial close imminent for Canadian CCGT

Kineticor Resources, **Macquarie Capital** and **OPTrust** were aiming to close a nearly C$1 billion financing with five banks for a combined-cycle gas-fired project in Alberta on August 27.

The asset is the 900 MW Cascade project. Macquarie is also serving as sole financial adviser.

The lenders are:

- **ATB Financial**
- **ING Capital**
- **MUFG**
- **National Bank Financial**
- **Nomura**

Crédit Agricole, which had previously been lined up as one of four initial coordinating lead arrangers (PFR, 6/13), is no longer among them.

Legal advisers are:

- **Torys** – sponsors' counsel
- **McCarthy Tétrault** – lenders' counsel

The deal is understood to be structured as a mini-perm.

The project has gas supply agreements with **Peyto Exploration and Development** as well as **Mitsubishi Corp** subsidiary **Cutbank Dawson Gas Resources** (PFR, 2/10).

CPV closes fixed- and floating-rate financing for Three Rivers

« FROM PAGE 1

(PFR, 4/30).

EQUITY CHECKS

The equity consortium includes two long-standing partners of CPV – namely GE EFS and Osaka Gas – as well as two relatively new investors in Axium and Harrison Street.

Three Rivers is Osaka Gas's fifth CPV deal, the others being Fairview, St Charles, Towantic and, most recently the 725 MW Woodbridge CCGT in New Jersey, in which the Japanese investor took a 20% stake in 2017 (PFR, 3/31/17).

CPV and GE EFS meanwhile, have collaborated on six projects totaling more than 4 GW in the past decade, according to **Susan Flanagan**, president and CEO of GE EFS.

Harrison Street has recently been deploying capital from its Social Infrastructure Fund in power and utility assets such as the Fort Detrick cogeneration plant in Maryland, which it bought from **BlackRock** in May (PFR, 5/27/20).

"CPV Three Rivers Energy Center is a cutting-edge energy facility that will provide reliable, highly efficient power to our hometown of Chicago," said **Christopher Merrill**, Harrison Street's co-founder, chairman and CEO.

Axium has also been active in US cogeneration of late, having acquired the Brooklyn Navy Yard plant from **Ares-EIF** in 2018 (PFR, 5/1/18).

JOIN THE CLUB

On the debt side, CPV initially took proposals from lenders in March 2019 for an underwritten financing (PFR, 3/27/19) but delays to the PJM Interconnection capacity auction, followed by the Covid-19 pandemic and oil price volatility, meant that the deal had to be postponed and reworked.

The debt financing was brought back to the market in early March 2020 with pricing at 300 bp over Libor, but was then postponed again when the Covid-19 pandemic hit. The transaction was relaunched on June 16 as a broader club deal in response to lenders' liquidity constraints (PFR, 6/16).

In its final form, the deal comprises a $750 million term loan and $125 million in ancillary facilities, priced at 350 bp over Libor.

The 50 bp bump-up in the pricing since March can be attributed to the pandemic, says a source close to the deal, who adds that this was the first successful debt and equity raise for a CCGT with the latest generation of gas turbines in the ComEd zone of PJM.

The term loan includes a fixed-rate tranche, as did the financing of CPV's 1,050 MW Fairview CCGT in Jackson Township, Pennsylvania, in 2017 (PFR, 3/27/17). Unlike the deal for Fairview, however, the Three Rivers loan did not include a separate fixed-rate tranche specifically for South Korean lenders.

> *"CPV Three Rivers Energy Center is a cutting-edge energy facility that will provide reliable, highly efficient power to our hometown of Chicago"*

The fixed-rate tranche for Three Rivers was more costly than the floating rate tranche and includes the standard pre-payment penalties expected by fixed-rate investors. However, it allowed CPV to expand and cement its relationships with debt investors and was oversubscribed, says a source.

The final club, including both floating-rate and fixed-rate lenders, comprised:

- BNP Paribas (syndication lead)
- MUFG (syndication lead)
- **Crédit Agricole** (lead and admin agent)
- **CIT Bank**
- **DNB**
- **ING Capital**
- **Migdal**
- **Mizuho**
- **Morgan Stanley**
- **National Bank of Canada**
- **Nomura**
- **Prudential Capital**
- **Shinhan Bank**
- **Wooribank**

"Achieving financial close for CPV Three Rivers during a global pandemic and with commitments from 14 international lenders is a testament to CPV's successful track record developing, financing, constructing, and operating safe, reliable, cost-effective and environmentally responsible power generation facilities," said **Paul Buckovich**, CPV's CFO, in an announcement on August 24.

Starwood Property Trust and **ICBC**, two of the eight coordinating lead arrangers originally appointed on the deal over a year ago, did not participate in the final version of the deal.

Legal advisers were:

- **Latham & Watkins** – sponsor's counsel
- **Milbank** – lenders' counsel

Kiewit Power Constructors will begin work on the plant in Grundy County shortly and commercial operations are expected in 2023. It is CPV's largest plant and is expected to operate with a 64% efficiency.

NORTH AMERICA PROJECT FINANCE

Longroad finances Prospero follow-up

Longroad Energy Holdings has closed a $266 million construction financing for the second phase of its Prospero solar park in Texas, having put in place a different off-take structure than it employed for the larger first phase.

Located in in Andrews County, the 331 MW (DC) Prospero 2 project has 15-year corporate power purchase agreements with **DaVita** and a subsidiary of **Zimmer Biomet Holdings**.

The DaVita PPA is the kidney dialysis center operator's second announced contract with Longroad, the first being a PPA with the 243 MW El Campo wind farm in Knox County, Texas (PFR, 6/10/19).

"DaVita is committed to using 100% renewable energy and our PPA with Longroad's Prospero 2 project will help make this happen," said **Peter Berkowitz**, DaVita's vice president of real estate and center development. "Our previous PPA with Longroad helped us reach the halfway mark on our goal, and we expect that Prospero 2's completion will carry us across the finish line."

The first phase of Prospero, which recently commenced commercial operations, was financed with tax equity from **Facebook** on the basis of a hedge with **Shell Energy North America** (PFR, 7/17). At 379 MW (DC), it is slightly larger than its sister project.

The financings were similar in at least one respect, however, with **CIT Bank** leading on both transactions.

The other lenders on Prospero 2 were:

- **Zions**
- **Rabobank**
- **HSBC**
- **Commerzbank**
- **Siemens Financial Services**
- **National Australia Bank**

US Bank has committed tax equity.

"We value our long-term partnership with Longroad and its founders – Prospero 2 is our seventh project with them – and we're excited to work together to increase solar capacity and create jobs in Texas," said **Adam Altenhofen**, senior vice president of renewable energy investments at US Bank in an announcement on August 26.

Legal advisers were:

- **Stoel Rives** – sponsor's counsel
- **Winston & Strawn** – lenders' counsel
- **Leverage Law** – counsel to tax equity

The $320 million Prospero 2 project is expected to come online in the second quarter of 2021.

Contractors include:

- **Swinerton Renewable Energy** – EPC
- **First Solar** – 6 series panel supplier
- **Power Electronics** – inverters
- **NEXTracker** – trackers ■

Pattern closes financing for Phoenix Solar

Pattern Energy Group has completed the financing of its 82.5 MW Phoenix Solar Project in Fannin County, Texas, and started construction.

ING Capital provided the construction and term loan financing, while **Royal Bank of Canada** subsidiary **RBC Community Investments** has committed to invest tax equity.

"The ability to close on the tax equity for Phoenix Solar during a global pandemic demonstrates the market's confidence in Pattern Energy and the strength of RBC's tax equity platform," said **Yonette Chung McLean**, managing director at RBC. "We look forward to the successful completion of the Phoenix Solar Project."

The project is slated to be operational in mid-2021.

Digital Realty has a 12-year power purchase agreement for 78% of its capacity (65 MW), which it will use to power its Greater Dallas data center portfolio.

The project will be fitted with **First Solar** Series 6 modules and **NEXTracker** NX Horizon trackers. **Mortenson Construction** is providing engineering and construction services.

Pattern acquired the development rights to the Phoenix Solar project in 2018 from **Alpin Sun**. ■

Cypress Creek to launch $200m holdco financing

« FROM PAGE 1

operational portfolio is mostly made up of small utility projects with 10 MW of capacity or less, though there are also some larger assets.

Paperwork filed with the US **Federal Energy Regulatory Commission** in 2018 – in relation to Cypress Creek's sale of the 53 MW Buckeberry Solar project to **John Laing** (PFR, 11/13/18) – lists 166 energy projects affliated with **Cypress Creek Holdings**, with an average nameplate capacity of 6.38 MW.

The largest among them is the 79 MW Innovative Solar 46 project in Cumberland County, North Carolina, which Cypress Creek came to own in 2017 when it acquired **FLS Energy**. It has a 10-year power purchase agreement with **Duke Energy Progress** (PFR, 1/12/17).

Cypress Creek hired **Barclays** to sell the 1.6 GW portfolio in 2018 but no transaction materialized at the time (PFR, 1/15/19). ■

Core Solar clinches financing for 600 MW portfolio

Core Solar has secured financing from **Leyline Renewable Capital** for a 600 MW portfolio of development-stage utility-scale solar projects.

The portfolio is part of Core Solar's larger 4 GW pipeline of projects that are under contract and being developed across the US.

"This investment will enable Core Solar to accelerate its already extensive development pipeline and ensure that these critical projects have the resources they need to move quickly to construction," said **Erik Lensch**, CEO of Leyline.

Based in Durham, North Carolina, Leyline provides pre-construction capital in the form of debt and equity for renewable energy and energy storage projects as well as anaerobic digesters that produce renewable natural gas. Leyline received a $150 million investment from **Newlight Partners** last year.

One project in which Leyline has previously invested equity is the 75 MW Wilkes solar project in Wilkes County, North Carolina. The investor, along with developer **Solterra Partners**, took bids earlier this year for the sale of the asset (PFR, 5/5). ■

Petrobras starts binding phase of power plants sale

Brazil's Petrobras has started the binding phase on the sale of four thermal power plants in the country.

With a total installed capacity of 578 MW, the assets are split between the states of Bahia and Rio Grande do Sul (PFR, 5/14).

Goldman Sachs is exclusive financial adviser on the sale.

Three of the plants are part of the UTEs Polo Camaçari portfolio, located in the city of Camaçari, in the state of Bahia. All use oil as fuel and could be converted to use natural gas.

UTE Camaçari comprises:
- 150 MW Arembepe
- 32 MW Bahia 1
- 147 MW Muricy

The power plants are operational and have power purchase agreements in place for over 60% of their output.

Arembepe's PPA is for 101 MW through December 2023. Bahia 1 has a PPA for 5 MW expiring December 2025, while Muricy's 101 MW energy contract lasts until December 2023.

The fourth power plant, the 249 MW UTA Canoas facility, is located in the city of Canoas, in Rio Grande do Sul. Though it can use natural gas or diesel, it operates solely on diesel due to logistical constraints in Brazil's natural gas pipeline network.

The plant receives diesel through a pipeline connected with the Alberto Pasqualini refinery (Refap), also owned by Petrobras. The company said that the asset has the potential to increase operational performance with the "expected expansion of the pipeline's network and/or new regasification terminals."

The sale is part of the state-controlled company's plan to focus on its core activities of exploration and production of oil and gas. Petrobras is selling a large portfolio of non-core assets, including five other power plants, wind farms, assets located in Colombia, its stake in gas distribution company Gaspetro and remaining stakes in pipeline network NTS. ■

Omega to buy 50% stake in EDF wind asset

Brazil's **Omega Geração** has signed a binding agreement to acquire 50% stakes in two wind assets totaling 182.6 MW from **EDF Renewables**.

The wind farms are:
- Ventos da Bahia 1 – 66 MW
- Ventos da Bahia 2 – 116.6 MW

The acquisition values the assets at R$661.7 million ($117.7 million), of which 55% is the purchase price in cash and the rest long-term debt that Omega will assume.

The acquisition is pending regulatory approval.

Ventos da Bahia 1 and 2 are located in the municipalities of Bonito and Mulungu do Morro in the state of Bahia. Phase 1 is fitted with 22 **Acciona** turbines and has been operational since 2017 while phase 2 has 53 **Vestas** machines and commenced commercial operations in 2018.

Both have long-term power purchase agreements awarded in government-run auctions.

Omega and EDF are already partners in the Pirapora solar project. The Ventos da Bahia deal will increase the size of their co-managed wind and solar portfolio to 504 MW.

Omega is also in negotiations to acquire a 260 MW wind portfolio from an undisclosed company. Omega is conducting due diligence pursuant to an exclusivity agreement that lasts until December 2020.

Meanwhile, Omega's development subsidiary, **Omega Desenvolvimento**, is working on a 200 MW greenfield wind project. ■

ISA closes purchase of Peruvian transmission assets

Colombia's **Interconexión Eléctrica**, through its subsidiary **ISA Peru**, has completed the acquisition of a Peruvian transmission company from **I Squared Capital**.

ISA paid $152 million for **Orazul Energy Group**, which owns transmission companies **Etenorte** and **Eteselva**. They operate 463.5 miles (746 km) of transmission lines in the country. The purchase does not include Orazul's generation assets in Peru.

Etenor and Eteselva had no outstanding debt and had a cash balance of $6.5 million when the acquisition closed, according to an ISA announcement on August 24. The deal was initially announced in March (PFR, 3/13).

"Peru is one of the key countries in our 2030 strategy, and this operation allows us to strengthen our position in its power transmission sector," said ISA's president **Bernardo Vargas**.

ISA's advisers included:
- **Scotiabank** – financial
- **Baker & McKenzie** – international legal counsel
- **Estudio Echecopar** – local legal counsel

Etenorte operates three transmission lines in the departments of Cajamarca and Ancash, while Eteselva owns four lines in Ucayali, Huánuco, Ancash and Lima. ■

Voltalia sells Brazilian wind asset

France's **Voltalia** has sold a 28 MW ready-to-build wind asset in Brazil to Japanese construction company **TODA Corp**.

The asset is part of Voltalia's 2.4 GW Serra Branca wind-and-solar cluster in the state of Rio Grande do Norte.

Voltalia will build the project under an engineering, procurement, and construction contract. The French company will also be in charge of operating and maintaining the asset and related transmission infrastructure for eight years.

Construction is expected to begin this year and commercial operations are penciled in for July 2021.

The wind farm will be fitted with **Nordex** turbines. TODA's Brazilian subsidiary, **TODA Energia do Brasil**, has ordered eight wind turbines from the German manufacturer.

Voltalia has been developing four other wind farms in the Serra Branca complex this year (PFR, 8/5) ■

LATIN AMERICA PROJECT FINANCE

Brazil's Alupar closes financing for Colombia transmission asset

Brazilian generation and transmission company **Alupar Investimento** has reached financial close on a debt package for a transmission project in Colombia, the first international project financing for a transmission line in the country.

MUFG arranged the $163.5 million seven-year financing for Alupar's subsidiary **Transmisora Colombiana de Energia** (TCE). MUFG acted as coordinating lead arranger, hedge provider and administrative and offshore collateral agent on the deal, which closed on August 11.

The loan will finance the construction of the 139.8 mile (125 km), 500 kV Nueva Esperanza-La Virginia transmission line, as well as the Nueva Esperanza and La Virginia substations. The project will connect Soacha in the Cundinamarca department to Pereira in the Risaralda department, crossing the departments of Tolima, Quindío, and Valle del Cauca.

TCE will build and operate the asset itself.

Alupar's local subsidiary Alupar Colombia won the contract to build the project in November 2016 following a tender organized by Colombia's **Mines and Energy Planning Unit** (UPME) with a bid of $182.7 million, as previously reported by *PFR* (PFR, 3/9).

Colombia's **Interconexión Eléctrica** (ISA) and **Empresa Energía de Bogotá**, owned by **Grupo Energía de Bogotá** (GEB), had also presented bids.

The project was expected to start commercial operations by the end of September, according to UPME.

Norton Rose Fulbright advised the sponsor on the deal, while **Holland & Knight** acted as the lender's counsel.

Alupar also owns generation company **Risaralda Energía** in Colombia, which operates the 19.9 MW Morro Azul hydro project. Morro Azul was brought online in September 2016. ■

Engie to issue debentures for Brazil coal-fired plant

Engie Brasil is preparing to issue up to R$780 million ($142 million) in debentures to finance its Pampa Sul coal-fired power plant in Candiota, Rio Grande do Sul.

BTG Pactual is the coordinating lead and has underwritten the issuance.

The Pampa Sul project secured a 25-year power purchase agreement in November 2014 and came online in July 2019 (PFR, 1/9/15).

The transaction comprises two tranches.

The first is an eight-year debenture, which is expected to be priced at a spread of between 3.5% and 3.65% over inflation-indexed government bonds or a fixed rate of between 6.25% and 6.4%, whichever is highest. The size of this tranche will depend on market demand.

The second tranche is a six-year debenture that will be at least R$468 million ($83 million) in size. This debenture will be priced at either 4% to 4.15% over govvies or at a fixed rate of between 7.25% and 7.4%, whichever is highest.

Investors will be able to place orders between September 22 and October 16, and bookbuilding is scheduled for October 23. ■

X-Elio reaches close for Chilean solar

« FROM PAGE 1

period, a source close to the deal tells *PFR*.

The project is partially contracted under a power purchase agreement with an undisclosed offtaker, but will sell a portion of its output on the spot market, the source adds.

The project is understood to have reached financial close the week of August 10. Construction has already begun.

Legal advisers on the deal included:

- **Mayer Brown** – sponsor (international)
- **Claro & Cia** – sponsor (local)
- **Milbank** – lender (international)
- **Morales y Besa** – lender (local)

"This new milestone highlights the ability and effort of the entire team of X-ELIO to continue promoting new projects at a national and international level in the current context of uncertainty," said X-Elio's CFO **David Díaz** in a statement on August 24.

The sponsor initially filed permits for the project to have a solar capacity of 90 MW and a 60 MWh lithium-ion battery storage system, which was approved by Chile's **Environmental Evaluation Service** (SEA) in January (PFR, 4/8).

X-Elio brought online its first solar project in Chile, the 56.7 MW Uribe Solar project, also in Antofagasta, in June 2017. ■

Solek grows Chilean solar pipeline

Solar developer **Solek** is adding a 10.65 MW (DC) small-scale solar asset to its solar portfolio in Chile, bringing its total capacity to 77.58 MW (DC).

According to filings with Chile's **Environmental Evaluation Service**, the Itihue facility, located in the San Carlos commune in the Ñuble region, will require an investment of $10.65 million.

Its output will be injected into the grid through **CGE's** distribution network. Construction is expected to begin in June of next year.

Solek's other assets are:

- Colina – 10.56 MW (DC) in the Metropolitan region
- Medialuna – 10.63 MW (DC) in the Metropolitan region
- Quilmo – 10.56 MW (DC) in the region of Ñuble
- Trupan – 7 MW (DC) in the Biobío region
- Villa Longaví – 10.52 MW (DC) in the region of Maule
- Aeropuerto – 7 MW (DC) in the region of Maule (PFR, 6/9)
- Parral – 10.66 MW (DC) in the region of Maule (PFR, 8/17)

The sponsor's small-scale projects will be eligible for regulatory benefits under Chile's PMGD (*Pequeños Medios de Generación Distribuida*) program. ■

POWER TRADING

PGE to investigate power trading in wake of losses

Portland General Electric has retained legal and other advisers as it reviews power trading after realizing $104 million in losses on "ill conceived" positions its power traders entered into this year.

Besides the realized losses of $104 million, the company has also announced mark-to-market losses of $23 million and expects the losses for the third quarter eventually to reach $155 million or more, depending on market conditions.

The company blamed the "significant losses" on wholesale power price spikes at market hubs during the recent power crisis in California, which resulted in the first rolling blackouts in the state in 19 years.

The utility's power portfolio was exposed to the market conditions because of energy trades "with increasing volume accumulating late in the second quarter and into the third quarter," according to a press release issued by the company on August 24.

"Simply put, these trades were ill conceived," said the company's CEO, **Maria Pope**, in an email sent to employees on the same day. The company has placed two employees on administrative leave while a review takes place.

PGE's board has established a committee to investigate the trading and review procedures and controls. The special committee comprises:

- **John Ballantine**
- **Jack Davis** (chair)
- **Kathryn Jackson**
- **Neil Nelson**
- **Charles Shivery**

The board has also hired **Simpson Thacher & Bartlett** as its independent legal adviser.

The company itself, meanwhile, has hired law firm **Skadden** and **JP Morgan**'s energy trading advisory team to advise it on the situation, and has brought in **Paymon Aliabadi**, the recently retired chief risk officer of **Exelon Corp**, as a third-party consultant to conduct a review of energy supply risk management policies, procedures and personnel.

In the meantime, reporting lines have been changed as follows:

- the power operations division led by **Dee Outama** reports directly to CFO **Jim Lobdell**
- controller and assistant treasurer **Jardon Jaramillo**, assisted by Aliabadi, reports directly to CEO **Maria Pope**
- vice president of utility operations **Brad Jenkins** and vice president of operations services **Kristin Stathis** report to vice president of grid architecture, integration and systems operations **Larry Bekkedahl** ■

PEOPLE & FIRMS

Former Bank of England Governor Carney joins Brookfield

Former **Bank of England** Governor **Mark Carney** has joined **Brookfield Asset Management** as a vice chair and head of ESG and impact fund investing.

Carney held the top job at the UK's central bank from 2013 until March 15, 2020 and is also a former governor of the **Bank of Canada**.

He was appointed as the **United Nations** special envoy for climate action and finance last year, and will continue in that role alongside his new duties at Brookfield.

At Brookfield, Carney will be in charge of developing a group of funds that will make ESG-focused investments combining positive social and environmental outcomes with strong risk-adjusted returns for investors, while also meeting specific impact goals.

"With an accelerated transition to a net zero economy imperative for climate sustainability and one of the greatest commercial opportunities of our time, I'm looking forward to building on Brookfield's leading positions in renewable energy and sustainability to the benefit of its investors and society," said Carney.

The central banker's return to the private sector comes almost two decades after he left **Goldman Sachs** in 2003. Carney had started his career at Goldman, spending 13 years at its offices in London, Tokyo, New York and Toronto.

> *"Mark will help accelerate our efforts to combine better long-term outcomes for society with strong risk-adjusted returns"*

He left the investment bank to take up the position of deputy governor of the Bank of Canada. The following year, he assumed the role of senior associate deputy minister of finance. He returned to the Bank of Canada in 2008, this time as its governor and chairman.

He remained at the Canadian central bank until the end of 2012, when **Queen Elizabeth II** formally appointed him governor of the Bank of England.

"Throughout his stellar career in both the private and public sectors, Mark has been a vocal proponent of the positive role that private capital can play in climate action," said **Bruce Flatt**, CEO of Brookfield. "Building on our track record in renewable investing, Mark will help accelerate our efforts to combine better long-term outcomes for society with strong risk-adjusted returns. Mark's insights and perspectives will add tremendous value to our global investing activities for the benefit of our investors."

Carney also served as first vice-chair of the **European Systemic Risk Board**, and remains a member of the **Group of Thirty** and the **Foundation Board of the World Economic Forum**. He was the chair of the **G20**'s financial stability board from 2011 to 2018, overseeing reform of the global financial system. ■

PEOPLE & FIRMS

Stonepeak hires renewables official from European fund manager

Stonepeak Infrastructure Partners has recruited a seasoned renewable energy executive from a European infrastructure fund in New York.

The official, **William Demas,** was until recently an associate partner at **Copenhagen Infrastructure Partners**.

The move to Stonepeak will reunite Demas with former **Macquarie Capital** colleagues **Michael Allison** and **Hajir Naghdy** – both of whom are now senior managing directors at Stonepeak.

Demas joined CIP as executive director in December 2017 after six years with Macquarie, where he was senior vice president and head of US renewables (PFR, 2/13/18).

Among the deals he worked on at Macquarie was the landmark Electrodes behind-the-meter battery storage portfolio in California (PFR, 7/11/16, 4/1/19).

During his tenure at CIP, the Danish fund manager became a major buyer of large-scale renewable assets in the Americas – notably without the use of term debt – and executed several wind and solar tax equity deals in Texas, including for projects with innovative energy hedge structures (PFR, 9/27/19).

The Danish infrastructure fund manager also invested in merchant solar in Alberta, pumped hydro in Montana and a $2.5 billion underground transmission line (PFR, 3/11/19, 7/8/19, 2/3).

Demas started his career in investment banking at **Lazard Frères & Co** and has also worked at **Good Energies** and **Ewing Bemiss & Co** (PFR, 7/10/09). ■

NY Green Bank's Whitcombe surfaces at C&I solar shop

Nicholas Whitcombe, who at the end of 2019 left the project finance team he had established at NY Green Bank, has joined community solar and commercial and industrial-scale solar-plus-storage developer **Source Renewables**.

He started at the company as a managing director in Greenwich, Connecticut, this month.

Source Renewables was formed in early 2017 by **Source Structured Finance** and Phoenix-based developer **ABA Clean Energy**.

The firm has approximately 120 MW of New York community solar projects in development and Whitcombe's role will involve arranging both back-levered debt and tax equity as well as working on acquisitions and development.

He will also work with Source's energy services affiliate **Source Power Company**, which provides mass market and C&I customer management on behalf of developers.

Whitcombe spent six years at NY Green Bank, during which time the group provided more than $900 million in financing (PFR, 1/22). ■

FTI adds power & renewables expert

Restructuring and financial advisory firm **FTI Consulting** has announced the hire of **Rupesh Shah** as a managing director for corporate finance and restructuring in the power and renewables practice.

He had previously been acting as a restructuring consultant, including to Northeast energy supplier **Abest Power**, where he served as chief restructuring officer. The business was sold to **Crius Energy** subsidiary **Public Power** after an out-of-court restructuring.

Shah previously held roles at commodities trader **Noble Americas** and **Sempra Energy** – both of which also underwent restructurings.

From 1996 to 2002 he worked at **CIBC Capital Markets**, rising to the rank of director in the leveraged finance group, focusing on power and utilities. He began his career with **PNC Bank**.

"We are fortunate to have such a seasoned power & renewables expert join our rapidly growing team," said **Chris LeWand**, FTI's global power & utilities head. ■

New CEO at Emera subsidiary Nova Scotia Power

Emera subsidiary **Nova Scotia Power**, which provides 95% of the generation, transmission and distribution of electricity to Nova Scotia, has named **Peter Gregg** as its new president and CEO.

Gregg, who is the president and CEO of the **Independent Electricity System Operator** (IESO) in Ontario, will officially join the Nova Scotia Power team in mid-November.

The appointment follows a "rigorous Canadian search" that included internal and external candidates, according to Emera.

"I was attracted to this exciting opportunity because NSPI is recognized as an innovative and customer-centric utility with an impressive track record and plan for the continued transition to cleaner energy – all at a pace that is affordable for customers," said Gregg.

Before his role at IESO, Gregg served as president and CEO of **Enersource** and as chief operating officer of **Hydro One Networks**, focusing on energy distribution in Ontario.

"Peter brings deep experience in the Canadian energy sector with a focus on energy efficiency, renewables and innovation," said **Scott Balfour**, president and CEO of Emera. ■

MORE ONLINE

Hedgies launch energy transition SPAC

Magentar Capital and **Triangle Peak Partners** have floated a $350 million special purpose acquisition company to buy energy efficiency firms.

Blackstone arranges resi solar debt

Blackstone Group's **GSO Capital Partners** has committed funding for residential solar loans originated and serviced on **Loanpal**'s platform.

EDF adds to trading and origination desk

EDF Energy North America hired several traders, originators and pricing managers to its commodities team in the month of July.