

Power Finance & Risk

Exclusive Insight on Power M&A and Project Financing

● MERGERS & ACQUISITIONS

Developer auctions community solar portfolio

Delaware River Solar is selling a contracted community solar portfolio in New York state.

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● PROJECT FINANCE

Pricing on Linden term loan tightens

The term loan B refinancing of the Linden Cogen plant has priced inside initial price talk.

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● PEOPLE & FIRMS

New co-president for Starwood's infra lender

Starwood Property Trust has added a co-president to its infrastructure credit team.

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Investors sought for 2.2 GW US solar portfolio

Taryana Odayar

Boston-based renewables developer **Swift Current Energy** has launched an auction for a 2.2 GW development-stage solar portfolio sprawling across five US states.

The company has retained **Lazard** as lead adviser and **KeyBanc Capital Markets** as co-adviser on the sale process, which is codenamed Project Stagecoach.

The eight projects in the portfolio are located in Texas,

Maine, Kentucky, Illinois and Pennsylvania, and will sell their output in PJM Interconnection, ERCOT, MISO and ISO-New England (see table).

Earlier this year, Swift Current had retained Key to sell the Tres Bahias project along with a 185 MW wind project in Illinois called Glacier Sands, in a process codenamed Project Bering (PFR, 6/2). **Cordelio Power** bought the Glacier Sands wind project from Swift Current along with the 170 MW Moraine Sands wind project, also

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Swift Current solar portfolio for sale

Project	Size	State
Three Rivers Solar	100 MW	Maine
Saddlebred Solar	220 MW	Kentucky
Black Diamond	299 MW	Illinois
Double Black Diamond	593 MW	Illinois
Triple Black Diamond	250 MW	Illinois
Mineral Basin	402 MW	Pennsylvania
Moonlight Flats I	146 MW	Pennsylvania
Tres Bahias	195 MW	Texas

Source: Power Finance & Risk

Apex looks to ride green hydrogen wave with Plug Power deal

Taryana Odayar

Apex Clean Energy has partnered with hydrogen fuel cell manufacturer Plug Power to develop a network of green hydrogen production facilities that will leverage Apex's development pipeline of renewable projects.

The potential for green hydrogen – which is typically produced by

electrolyzing water using electricity from renewable resources – has come to the fore in recent weeks as a range of companies in the transportation and power sectors have announced initiatives to either produce the fuel, use it, or both.

Plug Power's hydrogen fuel cells are used by customers to power vehicle fleets or provide back-up power needs, PAGE 8 »

MUFG leads private placement for CCGT duo

Taryana Odayar

Argo Infrastructure Partners has mandated **MUFG** to lead a \$750 million private placement to refinance a pair of gas-fired combined-cycle plants in Louisiana and Oklahoma.

The assets are the 516 MW Carville Energy Center in St. Gabriel, Louisiana, and the 1,127 MW Oneta Energy Center in Coweta, Oklahoma, which Argo acquired toward the end

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CASE STUDY ●

Andes Renovables, Chile

Carmen Arroyo

Four years after winning power purchase agreements in the 2016 Chilean power auction, Irish developer **Mainstream Renewable Power** has closed the financing for the first and the second phase of its 1.3 GW Andes Renovables portfolio, leaving just one project still to finance.

In 2016, Mainstream was the biggest winner of the power auction, garnering 20-year

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



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● THE BUZZ

PPAs are passé – bring on the Bitcoin!

Take-or-pay busbar power purchase agreements with electric utilities are all well and good, but they're starting to look a bit old-fashioned. Bitcoin batteries and green hydrogen are where it's at these days.

Many readers of *Power Finance & Risk* will be old enough to remember when the main point of generating electricity was to keep the lights on. What a quaint idea that seems today.

In the future, most generation will be used to mine Bitcoin instead, while some will be turned into green hydrogen – at least that's what the kids tell me.

Bitcoin mining already uses more than 75 TWh per year and the higher the price of the cryptocurrency, the greater the demand for energy to mine it, according to a primer prepared by **Digital Power-Optimization**, a power-to-Bitcoin start-up that recently wrapped seed funding (see story, page 14).

DPO's plan is to help existing generators to use excess power to mine Bitcoin, which could be an appealing solution to owners of wind farms struggling with curtailment in West Texas.

Meanwhile, **Layer1 Technologies** – which

is backed by venture capital firms **Digital Currency Group** and **Shasta Ventures** as well as **PayPal** co-founder **Peter Thiel** – has combined energy storage technology, demand-response software and Bitcoin mining computers in containers called Bitcoin batteries to provide grid-stabilization services while also making money out of cryptocurrency.

Not a fan of cryptocurrency? No problem. Why not turn your excess power into the molecule of the moment, green hydrogen? That seems to be the plan of **Apex Clean Energy**, which recently signed a deal with hydrogen fuel-cell supplier **Plug Power** to develop a network of green hydrogen plants around its wind and solar development pipeline (see story, page 1).

Throw in electric vehicle charging infrastructure, and demand for renewable energy looks set to go from strength to strength.

Of course, there will have to be innovation on the financing side, too.

How long can it be before renewable energy project finance bankers are being asked to evaluate future Bitcoin revenues? Sharpen your pencils... ■

PFR Power Finance & Risk

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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
● 2C Power	2C Power	Colombia		Libra Group's Greenwood Energy is the buyer (see story page 10).
● Able Grid Energy Solutions	Madero Grid (200 MW Storage)	Texas	Guggenheim	The sponsor is preparing to launch the auction (see story, page 5).
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 (PFR, 8/31).
● Blackstone Energy Partners	GridLiance	US	Goldman Sachs, Wells Fargo Securities	NextEra has inked a deal to purchase the firm (see story, page 6).
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).
CarVal Investors	Portfolio (129.4 MW Solar)	US	Marathon Capital	The fund manager has launched the sale (PFR, 9/28).
● Casa dos Ventos	Portfolio (420 MW Wind)	Brazil		AES Tiete is the buyer (see story, page 10).
CleanCapital	Portfolio (129 MW Solar)	US	Javelin Capital	The sponsor is looking for an equity investor (PFR, 9/28).
Colbún	Colbún Transmisión	Chile	BTG Pactual, JP Morgan	Colbún launched the process on September 8 (PFR, 9/28).
● Delaware River Solar	Portfolio (59.5 MW [DC] Solar)	New York	Fifth Third	First round bids due the week of October 12 (see story, page 6).
	Sky High Solar (20 MW Solar)	New York	Rhynland	The developer began to market the asset in August (PFR, 9/28).
DIF Capital Partners	Lone Valley (30 MW Solar, 49%)	San Bernardino County, CA	Fifth Third	Sale process initiated by end July (PFR, 8/10).
● Diode Ventures	Fort Bend Solar (240 MW Solar)	Fort Bend County, Texas		Acciona has bought the asset (see story, page 6).
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 were due August (PFR, 8/10).
● LS Power	Portfolio (316 MW Solar)	US	Citi, BMO Capital Markets	Capital Dynamics has agreed to acquire the assets (see story, page 5).
Macquarie Capital	Candela Renewables	US	Nomura Greentech	The sponsor has launched the sale process (PFR, 7/20).
Marathon Energy	Marathon Energy	New York		The auction process has been launched (PFR, 9/14).
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		
New Energy Solar	Portfolio (281.1 MW Solar)	US	RBC Capital Markets	New Energy has begun a strategic review of the portfolio (PFR, 9/14).
Petrobras	Portfolio (578 MW Thermal)	Brazil	Goldman Sachs	Sale has entered binding phase (PFR, 8/31).
Point Reyes Energy	Jade Meadow (20 MW Solar)	Maryland	LevelTen	First round bids due Sept 25 (PFR, 8/31).
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).
SunRun	Vivint Solar	US	Credit Suisse, Morgan Stanley, BofA	The companies are moving forward with the merger (PFR, 9/28).
● Swift Current Energy	Portfolio (2.2 GW Solar)	US	Lazard, KeyBanc	The company has launched the auction (see story, page 5).

● 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
AP Solar Holdings, J-Power USA	Red-Tailed Hawk (350 MW Solar)	Wharton County, Texas	CohnReznick Capital	Tax equity	\$150M		The sponsors are looking for a tax equity investor (PFR, 9/28).
Argo Infrastructure Partners	Portfolio (1,643 MW Gas)	US	MUFG	Private placement	\$750M		The sponsor has mandated banks (see story, page 8).
Arroyo Energy	Portfolio (219 MW Solar, Wind)	Chile	SMBC, Credit Agricole	Term Loan	\$140M	7-yr	Financial close is penciled for October (see story, page 12).
Cypress Creek	Operating portfolio (1.6 GW Solar)	US	Investec	Holdco debt	\$200M	7-yr	Deal launching after Labor Day (PFR, 8/31).
Duke Energy	Portfolio (360 MW Solar)	US	SMBC	Private placement			The deal has been launched (PFR, 9/21).
EDF Renewables	Milligan 1 (300 MW Solar)	Nebraska	Bank of America	Tax equity			The sponsor has secured the tax equity (see story, page 7).
	Gunaa Sicarú (252 MW Wind)	Oaxaca, Mexico		Term loan			Term sheets received from banks (PFR, 7/13).
GenOn Energy	Portfolio (1,570 MW Gas)	California	CIT Bank, Investec, SocGen	Refinancing	\$265M		The sponsor has mandated banks (PFR, 8/24).
Invenergy	North Central (1,485 MW Wind)	Oklahoma	Rabobank, NordLB	Construction loan			The sponsor has received debt proposals (PFR, 9/28).
Jera Co, and others	Linden Cogen (974 MW Gas)	New Jersey	Jefferies	Term loan B	\$950M	7-yr	The term loan has been priced (see story, page 8).
				Ancillary Facilities	\$100M	5-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).
Langa International	Portfolio (140 MW [DC] Solar)	Chile	Natixis	Term loan	\$85M		The deal has closed (see story, page 12).
Lightsource BP	Bighorn Solar (240 MW Solar)	Pueblo, Colorado	Bank of America	Tax equity	\$285M		The sponsor has closed the debt (see story, page 8).
			SMBC, SocGen, Export Development Canada	Term Loan			
NextEra Energy	Portfolio (639.1 MW Wind)	US					Financing expected by year-end (PFR, 8/24).
OPDEnergy	Portfolio (154.3 MW Solar, Wind)	Chile	Banco Security	Ancillary Facilities	\$91M		The loan has been disbursed (see story, page 13).
			SMBC	Term loan	\$103M	7-yr	
Renova Energia	Alto Sertão III phase A (438 MW Wind)	Brazil	Quadra Gestão de Recursos	DIP facility			Renova has received the offer (PFR, 9/8)
Solarpack, Ardian	Portfolio (43.4 MW Solar)	Peru	SMBC, BNP Paribas	Refinancing			Sponsors have mandated banks (PFR, 8/24).
Summit Ridge Energy	Portfolio (23 MW [DC] Solar)	Illinois	1st Source	Construction debt, tax equity			The sponsor has secured debt (PFR, 9/14).
SunPower Corp	Residential Solar Business	US	BofA	Debt, tax equity			The sponsor has secured debt (see story, page 7).
SunRun	Portfolio (30 MW Solar)	US	Chanel	Tax equity	\$35M		The deal has been announced (see story, page 7).
WattBridge Energy	Braes Bayou (288 MW Gas)	Fort Bend County, Texas		Construction, term loan	\$83.6M	C+4yr	The sponsor has begun reaching out to lenders (PFR, 9/28).
				Ancillary Facilities	\$64.2M		

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

NORTH AMERICA MERGERS & ACQUISITIONS ●

CapDyn to acquire operational solar portfolio

Capital Dynamics has agreed to acquire a 316 MW portfolio of operational, contracted solar projects from **LS Power**.

The sale of the three-asset portfolio follows a sale process, codenamed Project Hornet, that was launched at the start of this year by **Citi** and **BMO Capital Markets**, as previously reported (PFR, 2/25).

The deal is expected to close in the fourth quarter of 2020, subject to regulatory approvals.

"The acquisition of this portfolio is consistent with our strategy of acquiring or developing clean energy infrastructure assets in attractive locations," said **Tim Short**, a managing director in CapDyn's clean ener-

gy infrastructure group in New York.

The portfolio comprises:

- ◆ the 170 MW Centinela Solar Energy project in Imperial County, California
 - ◆ a 30% stake (38 MW) in the 130 MW Arlington Valley Solar Energy II project in Maricopa County, Arizona
 - ◆ the 11 MW Dover Sun Park facility in Dover, Delaware
- The three projects were brought online between 2011 and 2014.

Capital Dynamics' legal advisers on the deal are:

- ◆ **King & Spalding** – led by **Jonathan Melmed**
 - ◆ **Amis, Patel & Brewer**
- The Arlington Valley II and

Centinela projects sell their output to **San Diego Gas & Electric**, while Dover Sun has

"The acquisition of this portfolio is consistent with our strategy of acquiring or developing clean energy infrastructure assets in attractive locations"

power purchase agreements for energy and SRECs with the **City of Dover, Delaware Municipal Electric Corp., Delmarva Power & Light** and **Delaware Sustainable Energy Utility**.

DEBT

LS Power financed Arlington Valley II in 2012 with \$400 million of debt split between a 22-year project bond led by **Prudential Capital Group** and a 12-year bank loan led by **Santander**.

The Centinela project was financed later the same year in a similar deal with Prudential and Santander. The \$450 million package again included a long-term project bond and a 12-year bank loan (PFR, 9/20/12).

Union Bank arranged the financing for the final project, Dover Sun.

At the time the sale was launched, the existing debt on the projects was said to be portable. ■

Texas battery storage project to hit auction block "soon"

A battery storage company based in Boulder, Colorado, is preparing to launch an auction to find an investor for a utility-scale project it is developing in Texas.

Able Grid Energy Solutions is developing the 200 MW Madero Grid project in the Lower Rio Grande Valley near McAllen. It is due to be online in 2021.

The company has retained **Guggenheim Securities** as its financial adviser for the sale process.

"This is a shovel-ready project that is fully permitted," says a source close to the situation, who adds that the auction will be launched "soon."

The Ercot power market is particularly suited to battery storage development because of the variability in power pricing and availability brought about by the rapid develop-

"This is a shovel-ready project that is fully permitted"

ment of renewables, the source notes.

Founded in 2017, Able Grid has a pipeline of more than 7 GW across the US and will start construction on its first two projects this fall.

The company recently reached full notice-

to-proceed on its 100 MW Chisholm Grid battery storage project in Fort Worth, Texas, which it touts as the largest standalone battery project under construction in the US outside of California.

The sponsor will build the Chisholm project with its development and operating partners **MAP Energy** and **Astral Electricity**. It is due online around mid-2021.

Able Grid was co-founded by **SunEdison** alumni **Barnaby Olson** and **David Cieminis**, who serve as CEO and chief commercial officer, respectively. Former MAP Energy staffer **Eric Stoutenburg** is the company's chief development officer. ■

Investors sought for 2.2 GW US solar portfolio

◀ FROM PAGE 1

in Illinois, over the summer.

The portfolio has a range of offtake arrangements and some of the projects could also support energy storage systems.

The Tres Bahias project has a

12-year unit-contingent PPA for 100 MW of its output, settled at the Ercot-Houston hub, with the option of adding a further 95 MW.

The Three Rivers project, which is touted as the largest

utility-scale solar project in New England, has a 20-year busbar PPA with **Versant Power** (formerly **Emera Maine**).

Black Diamond has a 12-year PPA with an investment-grade offtaker for 250 MW of its out-

put.

Moonlight Flats I, Saddlebred and the three Black Diamond projects also have energy storage optionality.

All the projects qualify for the 30% investment tax credit. ■

● NORTH AMERICA MERGERS & ACQUISITIONS

NextEra to buy Blackstone's GridLiance transmission biz

NextEra Energy Transmission has inked a deal to acquire transmission company **GridLiance** from **Blackstone Energy Partners**.

Founded in 2014 in Dallas, GridLiance owns and operates more than 700 miles of transmission lines and related substation infrastructure across Illinois, Kansas, Kentucky, Missouri, Nevada and Oklahoma.

NextEra is paying about \$660 million for the company, including the assumption of its existing debt.

"We are very excited to be joining NextEra Energy Transmission at a pivotal time in the company's development," said **Calvin Crowder**, president and CEO of GridLiance. "Our unique capabilities, proven track record, and tremendous growth prospects, coupled with NextEra's experience as a leading transmission owner, make this a great fit for both companies."

The acquisition is expected to close in 2021, subject to state and regulatory approvals.

Advisers on the deal are:

- ◆ **Goldman Sachs** – financial adviser to GridLiance
- ◆ **Kirkland & Ellis** – legal adviser to GridLiance
- ◆ **Wells Fargo Securities** – financial adviser to NextEra

◆ **Pillsbury** – legal adviser to NextEra

"We at Blackstone are proud to have supported GridLiance through its evolution from a start-up into a business that today is financially independent, has helped improve electric system reliability for communities around the U.S., and has furthered the growth in renewable energy," said **JP Munfa**, managing director at Blackstone.

GridLiance has expanded its asset base under Blackstone's ownership through a series of acquisitions, often from municipal utilities and co-operatives.

One of GridLiance's subsidiaries, **GridLiance High Plains**, recently acquired a 65% stake in the City of Winfield's 69 kV transmission system and related substation equipment. The deal marks GridLiance's first co-ownership of transmission assets with a municipal utility under a development agreement with **Kansas Power Pool**.

Through its partnerships with existing transmission asset owners, the company aims to facilitate renewable energy development while keeping upfront costs low.

To finance its assets in California, the company obtained revolving credit facilities last year in a holdco-opco structure with investment grade ratings, which was shortlisted for a *Power Finance & Risk* Transmission Deal of the Year Award. ■

Acciona acquires 240 MW Texas solar project

Acciona has purchased a 240 MW solar project in Texas from **Diode Ventures**, the development arm of EPC contractor **Black & Veatch**.

The Fort Bend Solar project is located in Fort Bend County, in the Houston zone of ERCOT, and is Acciona's first solar investment in Texas.

The company owns and operates more than 1 GW of solar and wind projects in the US and Canada, with more in development. It aims to deliver 1.6 GW of new solar generation across the US by 2023.

"The Fort Bend project will be a flagship of our US portfolio and a demonstration of our commitment to delivering value to our shareholders while advancing economic development and sustainability," said **Rafael Esteban**, CEO of Acciona's energy division in North America.

The developer of the project, Diode, was established by Black & Veatch in Overland Park, Kansas, in 2017. The company bought the Fort Bend project from Australian developer **Lendlease** the following year. It has since teamed up with **Enfinite Capital** as a co-developer to bring the project to notice-to-proceed.

Also in 2018, Diode made a notable hire with the addition of **Paul Ksiazek**, an ex-**Panda Power Funds** senior vice president, who joined the Diode team as senior project director.

Black & Veatch is among several service providers and developers pivoting from gas-fired projects to renewable energy as quasi-merchant solar projects in Texas reach financial close in ever greater numbers (*PFR*, 10/3/19).

"With solar power continuing to surge in demand as a cleaner, greener provider of electricity, we're pleased to see this ambitious project advance closer to becoming a reality," said **Brad Hardin**, Diode Ventures' president. ■

Developer looks to sell NY community solar portfolio

A solar developer is exploring the sale of a contracted community solar portfolio spread across two utility service territories in New York state.

The portfolio that **Delaware River Solar** (DRS) is looking to sell is made up of 12 community solar projects totaling 59.5 MW (DC) in the service areas of **New York State Electric & Gas** and **Rochester Gas & Electric**.

DRS has engaged **Fifth Third**

Securities as exclusive financial adviser on the sale process.

The portfolio is being offered without stapled tax equity or debt financing, according to a teaser seen by *PFR*.

DRS is aiming to sign a binding purchase and sale agreement in the fourth quarter of this year and to transfer the projects as they reach specific development milestones.

The auction timeline is as fol-

lows:

- ◆ Week of September 21 – CIMs, financial models distributed
- ◆ Week of October 12 – first round bid deadline
- ◆ Week of November 2 – second round bid deadline
- ◆ Week of December 14 – transaction close

The portfolio is forecasted to generate about \$7.7 million of Ebitda in 2022, its first full year of operations, from \$5.4 million of

energy revenues and \$3.9 million of incentive revenues.

The projects will benefit from **New York State Energy Research and Development Association** (NYSERDA) grants and 25-year revenue contracts through New York's Value of Distributed Energy Resources program.

Commercial customers are expected to anchor the projects, making up about 40% of each project's offtake, with the balance subscribed by residential and small commercial customers, according to the teaser. ■

NORTH AMERICA PROJECT FINANCE ●

Chanel sashays into renewables tax equity mart

French fashion house **Chanel** has made its debut as a renewable energy tax equity investor in the US, just in time for Paris Fashion Week.

The high-end label is investing \$35 million in a portfolio of low-income residential solar projects totaling about 30 MW.

The deal, a partnership with **SunRun**, will support a total investment of about \$75 million, says a source familiar with the situation.

A portion of the investment will also go toward job training for residents in disadvantaged communities.

Pillsbury helped design the deal for Chanel as the fashion company's legal adviser, while **Wilson Sonsini** represented SunRun.

"I've worked on over 100 tax equity deals in my career but this is the only one that has been featured in *Vogue*," wrote Pillsbury partner **Jorge Medina** on LinkedIn.

Renewable energy may not be one of Chanel's *éléments éternels*, but the fashion house is not a complete stranger to the industry either, having held a runway show at Paris Fashion Week in 2012 featuring models strutting down a catwalk dotted with 13 wind turbines and a floor made of solar pan-

els (PFR, 10/5/12).

This season's investment with SunRun is part of Chanel's global climate strategy, dubbed Mission 1.5°C, through which the



"Tax rules change, but style endures."

brand plans to reduce carbon emissions across its value chain, in line with the target set by the Paris Climate Agreement (COP 21).

"CHANEL strives for exemplarity in everything we create and the impact we have on our society and our world at large," said CHANEL's president and chief operating officer **John Galantic**. "This innovative partnership reflects the deep commitment of our House to reducing our impact on the environment, while also creating a positive social impact through an inclusive approach that will provide families with access to clean affordable power and the creation of jobs to support the installation of these solar energy systems."

The deal also fits into SunRun's broader plans of developing at least 100 MW of solar projects on low-income housing in California over the next decade.

"CHANEL's investment will help disadvantaged communities gain access to clean, reliable solar energy," said **Lynn Jurich**, SunRun's co-founder and CEO. "This innovative approach to corporate social responsibility will make an impact today and hopefully become a model for other companies to invest in our planet's future." ■

SunPower secures capital for resi solar biz

SunPower Corp has secured debt and tax equity financing commitments that it says will fund its residential solar lease business through 2021.

The company raised the financing through SunStrong, its joint venture with **Hannon Armstrong Sustainable Infrastructure Capital**, and the capital raise took the form of a levered tax equity partnership with a multi-party forward purchase commitment.

BofA Securities was the sole tax equity investor and also arranged the debt, acting as sole structuring and placement agent

on a multi-draw term loan.

The cash equity and debt came from a mixture of new and repeat investors.

"SunPower's wide array of financing options and our technologically superior solar energy solutions, allow us to continue meeting growing customer demand – and with ongoing revenue streams," said **Tom Werner**, SunPower's CEO and chairman of the board.

The funding will support SunPower's residential solar lease program as well as its new **SunPower Equinox** and **SunVault** storage offering. ■

EDF pins down tax equity for Nebraska wind farm

EDF Renewables has lined up a tax equity investor for its first wind project in Nebraska.

Bank of America will buy the tax equity in the 300 MW Milligan 1 project under the terms of an executed agreement.

EDF has requested approval of the deal from the US **Federal Energy Regulatory Commission** by November 30, 2020.

The company has also identified a cash equity investor to take a 50% stake in the project.

The **Abu Dhabi Future Energy Co**, also known as **Masdar**, agreed to acquire the one-half stake in Milligan 1 along with

similar stakes in seven other EDF renewable energy assets earlier this year (PFR, 8/13).

EDF acquired the Milligan 1 project in 2019 from **York Capital Management** and **Aksamit Resource Management** (PFR, 1/18/19).

Located in Saline County, it will sell its output wholesale in the Southwest Power Pool and is expected to be online by mid-December 2020.

EDF expects the project to require an investment of more than \$350 million. It is being fitted with a combination of **Siemens Gamesa** and **Vestas** turbines. ■

● NORTH AMERICA PROJECT FINANCE

Apex looks to ride green hydrogen wave with Plug Power deal

« FROM PAGE 1

among other applications. The company is aiming for 50% of the hydrogen it supplies to clients to be from renewable sources by 2024.

“We expect the levelized cost of hydrogen produced by renewables to continue to decline while providing active returns for our investors,” said **Andy Marsh**, CEO of Plug Power. “Green hydrogen represents a substantial growth opportunity for the broader renewable industry that accelerates decarbonizing the electric grid and producing clean hydrogen fuel to serve many industries.”

A MODISH MOLECULE

Regulated utilities and other power companies are also considering how to either use hydrogen as an alternative fuel for generation or, conversely, use excess generation to produce green hydrogen.

One of **NextEra Energy**'s utility subsidiaries, **Florida Power & Light**, is planning to do both at the same time. The company is developing a

\$65 million pilot project that will use a 20 MW electrolyzer to convert excess solar generation into green hydrogen that will be burned in its gas-fired 1,622 MW Okeechobee Clean Energy Center.

“Green hydrogen represents a substantial growth opportunity for the broader renewable industry that accelerates decarbonizing the electric grid and producing clean hydrogen fuel to serve many industries”

Dominion Energy is also exploring the possibility of blending more green hydrogen into its fuel supply mix, having already used a 10% hydrogen blend in gas-fired assets.

“We committed a couple of years ago to making sure our LDC [local distribution company] system is ready to accept up to 5% hydrogen

by 2030, so just in the next decade,” said **Diane Leopold**, president and co-chief operating officer, on the company's July 31 earnings call. “Our initial pilot is in advanced planning stages in Utah. So, high level, we think there's going to be a lot of activity in this area.”

Utilities are also working with turbine manufacturers on updates to technology that will enable greater use of hydrogen in power generation.

Entergy Corp and **Mitsubishi Power** recently signed an agreement to develop – among other things – hydrogen-capable combined-cycle machines and green hydrogen production, storage and transportation facilities.

Mitsubishi announced the sale of its first hydrogen-capable advanced class gas turbines in March. They will be fitted in **Intermountain Power Agency's** 1.8 GW Intermountain Power Plant in Utah, which the utility aims to convert from coal to a mixture of 30% hydrogen with natural gas by 2025, ramping up to 100% green hydrogen fuel by 2045. ■

Lightsource closes debt, tax equity for Bighorn Solar

Lightsource bp has landed a \$285 million debt and tax equity package to finance its 240 MW Bighorn Solar project in Pueblo, Colorado, which will supply a steel mill under an unusual off-take arrangement.

The debt-levered term debt is being provided by a club of three banks, while the tax equity commitment comes from **Bank of America**.

CohnReznick Capital advised the developer on the tax equity deal, which is Lightsource's second with BofA (the first was for the Impact Solar project in Texas).

The mandated lead arrangers for Bighorn Solar are:

- ◆ **SMBC**
 - ◆ **Société Générale**
 - ◆ **Export Development Canada**
- The project has an unusual

power purchase agreement that is the result of efforts by steel-maker **Evraz** to ensure that its Rocky Mountain mill in Pueblo is powered by renewable energy. The company even threatened to move its facility to another state if it wasn't able to obtain a fixed-rate power purchase structure, prompting utility company **Public Service Co of Colorado** (PSCo) to come up with a regulatory work-around involving a net-metering tariff.

“It's an interesting structure,” says **Kevin Smith**, Americas CEO of Lightsource. “It's a very competitive power price and secures those thousands of jobs at the Evraz mill.”

PSCo, whose parent company is **Xcel Energy**, had to run the procurement process for the solar project twice, after the

winning bidder in the first tender, **Coronal Energy**, withdrew from the PPA negotiations (PFR, 9/27/19).

“EVRAZ Pueblo will be the first steel mill in North America to rely on solar power as we proudly use renewable energy to turn recycled scrap metal into new, clean steel, including the most sustainable rail in the world”

The Bighorn project is located in the area around the mill and will begin supplying power under the PPA in 2021. Construction has already begun, with **McCarthy Building Com-**

panies as EPC contractor and **Canadian Solar** supplying bifacial panels.

After achieving its renewable energy aim, Evraz is now planning to expand its Pueblo facility with the addition of a new long rail mill.

“EVRAZ Pueblo will be the first steel mill in North America to rely on solar power as we proudly use renewable energy to turn recycled scrap metal into new, clean steel, including the most sustainable rail in the world,” said **Skip Herald**, president and CEO of Evraz North America, announcing the plan.

Lightsource's Smith tells PFR that the company has a “pretty robust pipeline” and expects to finance additional projects totaling some 300 MW by the end of the year. ■

NORTH AMERICA PROJECT FINANCE ●

Pricing on Linden term loan tightens in syndication

The term loan B to refinance the Linden Cogeneration plant in New Jersey was priced inside initial price talk on September 23 after generating strong demand.

The \$1 billion seven-year term loan was priced at 350 bp over Libor, compared with initial price talk of 375 bp. The pricing on the term loan comes with a 1% Libor floor, as expected.

The final original issue discount was also less generous to lenders than previously proposed, at 99.5 as opposed to 99.

"There are no other new infrastructure term loan Bs out there, so they have the demand to them-

selves," says a buy-side source.

The refinancing package also included a \$100 million five-year super senior revolving credit facility, which was priced at 325 bp over Libor with a 0.5% Libor floor.

The term loan, the proceeds of which will be used in part to pay a dividend to the sponsors, was originally marketed as a \$950 million deal but was increased by \$50 million in response to strong demand (PFR, 9/23/20).

The bookrunners were:

- ◆ **Jefferies** (left)
- ◆ **Barclays**
- ◆ **Citi**
- ◆ **MUFG**

◆ **BMO Capital Markets**

◆ **Investec**

Moody's Investors Service and **S&P Global Ratings** have assigned Ba3/BB- ratings to the term loan and Ba2/BB- ratings to the revolver. The one notch uplift in Moody's rating of the revolver is due to its priority in the event of bankruptcy.

The Linden facility is a 974 MW plant comprising six units. Five of them sell their output spot into Zone J of New York-ISO and the other unit is contracted with **Phillips 66 Co's** Bayway oil refinery until 2032 and sells excess output spot into PJM Interconnection.

The asset is owned by the follow-

ing investors:

- ◆ **JERA Co** (50%)
- ◆ **Ares Management Corp** (14%)
- ◆ **Oaktree Capital** (14%)
- ◆ **Development Bank of Japan** (12%)
- ◆ **HPJV1** (10%), which is a joint venture between South Korean independent power producer **GS EPS** and a fund managed by **Hana Alternative Asset Management** on behalf of **Mirae Asset Daewoo**

The term loan will be portable in the event the asset is sold, as long as the buyer already owns gas-fired generation facilities totaling at least 500 MW. ■

Gas-netback counterparty for Three Rivers revealed

One of the Canadian oil and gas producers providing a gas netback to support the financing of **Competitive Power Ventures'** 1,250 MW Three Rivers Energy Center in Illinois has been revealed.

Calgary-based **Advantage Oil & Gas** announced the 10-year contract – which involves the supply of 25,000 MMBtu per day of natural gas – on September 29.

Gas netbacks, which have recently grown in popularity as a way for gas-fired project developers to hedge power prices, are bespoke contracts whose negotiable terms often include

price floors or collars.

Advantage's deal with CPV is "based upon a spark-spread pricing formula" and is "back-stopped with a natural gas price collar," according to the announcement.

The gas producer says the deal will diversify its revenues by exposing it to **PJM Interconnection** power prices, while the gas price collar supports its development economics.

The contract is one of several gas netbacks CPV has negotiated with Canadian gas producers to hedge the output of the Three Rivers Project.

Earlier this year, project finance bankers expressed concern about the credit quality of the hedge counterparties, given the impact on gas producers of the Covid-19 pandemic and oil price slump, though credit supports were said to be in place (PFR, 4/30/20).

In any case, the project reached financial close on August 21 with an \$875 million construction-plus-five-year loan led by **BNP Paribas**, **Crédit Agricole** and **MUFG** (PFR, 8/24).

Construction began in early January 2020 and commercial operations are expected to begin in early 2023. ■

MUFG leads private placement for CCGT duo

◀ FROM PAGE 1

of last year from **LS Power** (PFR, 8/23/19).

The sale was the result of an auction run by **Barclays Capital** and **Goldman Sachs** (PFR, 3/27/19, 11/26/19).

The CCGTs had previously been project-financed separately with debt that was able to remain in place as part of the sale, according to marketing materials circu-

lated by the investment banks.

Carville was last refinanced in April 2018 with a \$265 million 10-year term loan, \$75 million seven-year letter of credit facility and \$25 million seven-year revolver from **ING Capital**, **CoBank** and **MUFG** (PFR, 4/26).

Oneta was refinanced in a \$737 million deal arranged by **BNP Paribas** in 2014, at the time LS Power acquired Oneta,

Carville and five other gas-fired assets from **Calpine Corp.** (PFR, 7/15/14).

Carville and Oneta have power purchase agreements expiring in 2032 and 2042, respectively. Carville's offtakers include a regulated utility and a steam customer while Oneta's are a regulated utility, a municipality and two electric cooperatives.

Most of Carville's output is

contracted with **Entergy Corp** through June 2032 under a 485 MW agreement signed in May 2011. Entergy sells half of its contracted capacity on to its subsidiary **Entergy Louisiana**.

Once that agreement expires, another 10-year agreement for the same amount of capacity kicks in with Entergy Louisiana, beginning in June 2022.

Carville and Oneta have both been online since 2003 and are fitted with **General Electric** 7FA turbines. ■

● LATIN AMERICA MERGERS & ACQUISITIONS

South Korean investors target Chilean solar

A group of South Korean investors led by **Korea Hydro & Nuclear Power** (KHNP) has lined up an investment in solar projects totaling 13 MW in Chile.

KHNP has signed the joint investment accord with solar module producer **S-Energy**, solar component maker **Hanyang Electric**, and state-owned **Korea Overseas Infrastructure & Urban Development Corp.**

KHNP will be in charge of project management, construction, and operations.

The assets are a 6.6 MW project in Guadalupe

and a 6.4 MW project in Maria Pinto, in Santiago's metropolitan region.

Construction is expected to begin this year with commercial operations penciled in for 2021.

KHNP also recently acquired a 49.9% stake in an 852 MW wind portfolio in the US along with other South Korean investors. The projects are majority-owned by **Brookfield Renewable** (PFR, 9/1).

KHNP is a subsidiary of **Korea Electric Power Corp** (KEPCO). ■

Libra enters Colombian renewables market

International conglomerate the **Libra Group** has broken into the Colombian renewable energy market with the purchase of a distributed generation developer.

The acquired company, **2C Power**, develops energy efficiency and solar power solutions for commercial and industrial clients through its Latin American subsidiary, **Greenwood Energy Latinoamérica**.

"This transaction provides Greenwood

Energy with a significantly expanded platform for its cleantech activities with Latin American hubs strategically located in Panama and Colombia," said Libra Group's CEO **George Logothetis** in a statement on September 28.

Greenwood has developed several small-scale solar assets in Panama, such as the 500 kW Los Molinos unit in Coclé, and is present in the Mexican market with a 250 MW solar pipeline (PFR, 8/22/14). ■

AES Tietê to purchase Brazilian wind

AES Corp's Brazilian subsidiary **AES Tietê** is moving forward with the acquisition of a 420 MW wind portfolio from developer **Casa dos Ventos**.

Brazil's **Administrative Council for Economic Defense** (Cade) approved the deal on September 24.

The asset being sold is the Ventos de Santa Tereza portfolio in the state of Ceara.

The seller, Casa dos Ventos, is a subsidiary of **Salus**, a **Grupo Mario Araripe** company.

The acquisition comes after AES announced plans to grow in the country by increasing its stake in AES Tietê and **BNDES**, through its investment arm **BNDESPar**, sold an 18.5% interest in the company to AES (PFR, 7/29).

AES also recently finalized the acquisition of **J.Malucelli Energia's** 187 MW operational Ventus wind portfolio for R\$650 million (\$122.2 million) in August (PFR, 8/11). ■

● LATIN AMERICA PROJECT FINANCE

Blackstone CCGT "vulnerable" amid Mexican power slump

The **Blackstone Group's** 526 MW Frontera combined-cycle gas-fired plant in Texas is "vulnerable to a covenant breach" in the next six months as a result of a shaky power market and currency depreciation in Mexico, according to an **S&P Global Ratings** report.

The plant – the only generation asset in the US to sell all of its power in Mexico – could require a capital contribution from its sponsor or another party to avoid a default, the rating agency noted as it lowered its rating of the project's term loan B from BB- to CCC.

Located in Hidalgo County, the project was refinanced in 2018 with a \$775 million seven-year term loan and a \$35 million revolving credit facility arranged by **MUFG** and **Morgan Stanley** (PFR, 10/9/18).

The revolving credit facility was fully drawn as of September 21, the date of the S&P report.

This in itself would be enough to trigger the term loan's 1.05 times debt service coverage ratio test, which kicks in when the revolver is just 25% drawn.

"We note however that the project has the ability to repay part of the revolver before Sept. 30 and draw funds again in October if needed"

"We note however that the project has the ability to repay part of the revolver before Sept. 30 and draw funds again in October if needed," write S&P analysts **Diego Weisvein** and **Kimberly Yarborough**.

The recent downgrade is the second for the project this year. S&P downgraded it from BB to BB- in May, predicting at the time that it would

be unable to collect any cash this year. In the second quarter of 2020, the plant sold its output at \$15.6/MWh, 70% less than the same period in 2019, according to the report.

Besides merchant power sales, Frontera's revenues come from a 15-year capacity contract with Mexican state-owned utility **Comision Federal de Electricidad** (CFE). This was originally expected to provide 10% of Frontera's total margin between 2019 and 2033 – \$12 million gross per year.

Other companies operating in Mexico have also undergone credit rating reviews in the past six months, as the value of the peso has dropped and power demand has decreased. **Sempre Energy** subsidiary **IEnova** was downgraded in April following the downgrade of Mexico's sovereign credit rating, which also impacted CFE (PFR, 4/23). ■

CASE STUDY ●

Andes Renovables, Chile

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power purchase agreements for a fleet of ten solar and wind projects, which it grouped together as Andes Renovables. The portfolio was subdivided into three phases – Condor (571 MW), Huemul (630 MM) and Copihue (100 MW).

The offtakers under the contracts are Chilean distribution companies (discos) including **CGE, Chilquinta Energia, Enel** and **Grupo Saesa**. As part of its risk mitigation strategy, Mainstream obtained \$40 million in guarantees for the supply contracts through insurer **CESCE Chile Aseguradora**, which is owned by Spain's **Grupo Cesce**. The deal was brokered for the sponsor by **Lilienfeld Corredores de Seguros**.

CONDOR

Mainstream started reaching out to lenders about two years after winning the contracts and considered options including miniperms as well as long-term debt. The debt package for the first phase – Condor – closed on November 4, 2019. This phase was made up of three wind farms and one solar project.

The financing for Condor got caught up in the financial problems of German wind turbine manufacturer **Senvion** and presented challenges to potential lenders as a result of the low pricing of the PPAs. The average PPA price in the 2016 auction was \$47.60/MWh, 40% less than the average price in the previous auction in Chile, which was held in October 2015.

Complicating matters further, in the run up to financial close, protests over economic and social inequality erupted in the country and the government responded in part by introducing a power price freeze until December 2020 (PFR, 11/6/19). Although the bill did not

impact the Mainstream contracts, the injection of instability into the power market worried some of lending institutions.

Nevertheless, a club of six banks chipped in to the \$580 million 19-year loan for Condor, including several that went on to finance the follow-up Huemul deal. The lenders for Condor were:

- ◆ **Caixabank**
- ◆ **DNB**
- ◆ **KfW IPEX-Bank**
- ◆ **Natixis**
- ◆ **Sumitomo Mitsui Banking Corp**
- ◆ **Société Générale**

Pricing on the debt package started at 230 bp over Libor with several step-ups, starting in year six (PFR, 8/11/19).

Banco Santander provided a VAT facility.

Two other banks – **ING Capital** and **MUFG** – had previously been in talks with Mainstream about participating in the deal but were not in the final line-up. Concerns about political instability were cited as a reason.

Given the delays to the Condor deal, the sponsor wasted no time before moving onto phase two. As soon as the Condor proceeds were disbursed, Mainstream and the banks returned to the table to structure the financing for the remaining projects. Huemul, comprising two solar projects and three wind assets, was next on the docket.

HUEMUL

By January 2020, the banks and the sponsor had tentatively penciled financial close in for April, though the sponsor had not yet decided whether to include the final portion of the portfolio – Copihue – in the same financing.

At the time, no fewer than nine

banks had expressed an interest in participating, including development finance institution **IDB Invest**. The commercial banks that engaged in the discussions were:

- ◆ **ABN Amro**
- ◆ **Caixabank**
- ◆ **Crédit Agricole**
- ◆ **DNB**
- ◆ **KfW IPEX-Bank**
- ◆ **SMBC**
- ◆ **Société Générale**
- ◆ **MUFG**

If the Mainstream team had been hoping for a smoother ride with phase two – a reasonable assumption given the similarity to the first deal – those hopes were dashed in March, when the Covid-19 pandemic arrived in Latin America, leading to delays in construction schedules. The financing timeline was lengthened when the sponsor had to renegotiate contracts and deal with supply chain issues, says a person familiar with the situation.

At the time, some bankers predicted defections from the transaction, noting that loan market liquidity had been reduced by the pandemic. “We are at a moment of crisis, so the loan may no longer work for some banks with the current market conditions,” said a banker close to the deal in March. Another noted that the potential size of IDB Invest’s ticket – up to \$200 million – had the commercial bankers worrying about their allocations (PFR, 3/18).

Mainstream responded by asking bankers to obtain approvals for a larger-than-needed ticket in case others dropped out, a tactic described as an n1 or n2 structure.

By August, when the deal was signed, Société Générale, Crédit Agricole, and ABN Amro were no longer part of the transaction. “Market conditions were restricted with Covid, so they had more difficulties to join,” says a source close

to the deal.

Five banks signed the \$620 million 19-year debt package on August 31.

They were:

- ◆ **IDB Invest**
- ◆ **MUFG**
- ◆ **KfW IPEX-Bank**
- ◆ **DNB**
- ◆ **Caixabank**

SMBC joined the financing three weeks later, on the week of September 21, as it had been waiting for internal approval to enter the deal. In the meantime, the other participants had agreed to provide larger tickets, which have since been reallocated (PFR, 9/28).

As in the Condor deal, Santander provided the VAT facility.

“Reaching financial close on the second phase of our Andes Renovables platform is a further positive step on Mainstream’s journey to delivering Latin America’s number one wind and solar PV power generation platform,” said Mainstream’s chief executive, **Mary Quaney**, in a statement.

The Huemul deal was structured in such a way to allow Mainstream to add the 100 MW Copihue wind project to the collateral package later on. Disbursement is expected to take place during the week beginning October 5.

Legal advisers included:

- ◆ **Milbank** – borrower’s counsel (international)
- ◆ **Carey** – borrower’s counsel (local)
- ◆ **Shearman & Sterling** – lenders’ counsel (international)
- ◆ **Morales y Besa** – lenders’ counsel (local)

Partners **Gregory Tan, Nathan Tasso, Azam Aziz** and **Paula Anderson** led the Shearman & Sterling team.

Construction for the ten-project portfolio is already underway, with the Condor projects having reached 30% completion in June. ■

● LATIN AMERICA PROJECT FINANCE

Natixis arranges fifth PMGD financing in Chile

France's **Langa International** has closed an \$85 million debt package from **Natixis** to fund the development of an up-to-140 MW (DC) 20-project portfolio of small-scale solar assets in Chile.

The initial portfolio comprises four PMGD (*Pequeños Medios de Generación Distribuida*) assets but the financing allows the sponsor to add solar facilities to the financing vehicle at a later stage.

"We are planning to secure in the coming years a 500 MW portfolio of renewable energy projects in Chile across technologies thanks to our team in Santiago, which covers the full scope from development to construction and operation services," said Langa's president **Gilles Lebreux** in a statement on September 22.

"This marks the fifth PMGD loan portfolio

term financing solely arranged by Natixis over the past 20 months representing more than \$400 mm in senior debt facilities", said

"This marks the fifth PMGD loan portfolio term financing solely arranged by Natixis over the past 20 months representing more than \$400 mm in senior debt facilities"

Aitor Alava, LatAm's head of infrastructure finance at Natixis.

The other four were:

- ◆ an \$87 million loan for an up-to 100 MW (DC) portfolio for **Sonnedit** (PFR, 6/15)
- ◆ a \$69.1 million debt financing for an up-to-

70 MW portfolio for **Arroyo Energy Partners** (PFR, 8/1/19).

- ◆ a \$96.4 million package for **Reden Solar's** 100 MW solar portfolio (PFR, 10/10/19)
- ◆ An \$87 million loan for **Cap Vert Energy** for an up-to-100 MW (DC) portfolio (PFR, 12/12/19)

The benefits of the PMGD scheme include stabilized prices and the avoidance of trunk transmission tolls. However, it only applies to projects up to 9 MW in size (PFR, 26/01/2018).

The benefits available under the PMGD scheme are expected to change this year, specifically how the price is calculated, which has produced a rush of financing activity as developers attempt to grandfather projects into the existing regime (PFR, 3/23). ■

Statkraft mulls debentures to finance Brazil wind

Statkraft's Brazilian subsidiary is considering issuing debentures locally to fund the construction of its recently-announced 519 MW Ventos de Santa Eugênia wind project.

The project, on which construction is slated to start in January 2021, will require investments totaling R\$2.5 billion (\$450 million).

To fund construction, Statkraft is aiming to put in place long-term financing, which could include debentures.

"We are studying the possibilities in the capital markets," said **Pablo Becker**, commercial vice-president. "The current scenario of low interest rates could be a favorable market to issue debt."

Becker says a proportion of the project's output is already contracted, guaranteeing a "comfortable" level of revenues. Most of the contracts are short-term and Statkraft is in negotiations for additional long-term contracts.

Statkraft was awarded long-

term contracts for the project in an auction held by the Brazilian government in October 2019, and the company has also closed bilateral power purchase agreements with private parties.

Located in the Brazilian state of Bahia, Ventos de Santa Eugênia is part of the first phase of a 1.1 GW wind complex called Ibipeba.

Statkraft acquired the project last year from **Salus**, which also controls the Brazilian renewables developer and producer **Casa**

dos Ventos, along with another wind project called Ventos de São Vitorino (PFR, 10/11/19).

With layout adjustments, technological advancements of turbines and the acquisition of additional land, the capacity of the two projects has since been increased by 450 MW, to a total of 1.1 GW (PFR, 9/29).

Statkraft is also evaluating investments in other types of generation in Brazil, such as solar, whether through greenfield development or acquisitions. ■

CAF raises financing for green LatAm projects

Latin American development bank **CAF** has secured a further €100 million (\$116.4 million) from the **French Development Agency** (AFD)'s line of credit for green projects in LatAm, bringing the total raised by CAF in this way to €250 million (\$291 million).

CAF initially secured €150 million (\$174.6 million) from AFD in March, earmarking the funds for projects in various sectors,

including energy efficiency. At the time, the agencies said they had selected projects in Bolivia, Brazil and Ecuador.

The line of credit is supported by €800,000 (\$93,275) in non-reimbursable AFD funds.

CAF has obtained financing from AFD before through three credit lines totaling \$640 million, \$760 million in co-financing, and €9 million (\$10.5 million) in other

resources, the bank said in a statement on September 23.

In the past six months, CAF has secured other funds for energy projects in Latin America from the **Japan Bank for International Cooperation** for a total of \$200 million (PFR, 4/24) and **Cassa di Risparmio di Roma** for €100 million (\$114.75 million) (PFR, 7/23). ■

LATIN AMERICA PROJECT FINANCE ●

Financial close in sight for Arroyo renewable pair in Chile

The refinancing of a pair of **Arroyo Energy** renewable projects in Chile is nearing financial close, after a six-month delay.

Sumitomo Mitsui Banking Corp and **Crédit Agricole** are the leads on the \$140 million seven-year mini-perm, which will refinance the 115 MW El Arrayán wind park in Coquimbo and the 104 MW Conejo solar park in the Atacama desert (PFR, 1/30).

The deal was initially expected

to close in April, but was pushed back first to May and then to August, as a result of the pandemic (PFR, 6/4). Financial close is now penciled for October, after syndication.

Astris Finance is working as Arroyo's financial adviser on the deal.

Arroyo acquired the two projects from **Pattern Energy** in September 2018, after Pattern decided to shut down its Chilean

business (PFR, 5/24/18).

Pattern's stake in the El Arrayán wind project was 70.5%, but Arroyo acquired the remaining 29.5% interest from co-investor **Antofagasta Minerals** simultaneously. Pattern received a cash consideration of \$70.5 million for its 81 MW, and Antofagasta was paid \$29 million.

The projects sell 70% of their output to mining company **Minera Los Pelambres**, which

is owned by Antofagasta Minerals, under 22-year power purchase agreements.

Pattern originally financed El Arrayán in 2012 with a \$220 million, 15-year loan arranged by **MUFG**, **Crédit Agricole**, and **SMBC** (PFR, 4/30/12), while **Crédit Agricole**, **SMBC** and **Société Générale** arranged the \$184 million 18-year term loan financing for Conejo in 2015 (PFR, 8/13/15) ■

Loan disbursed for OPDEnergy wind and solar duo

More than three months after reaching financial close on a pair of renewable projects in Chile, **OPDEnergy** has received the proceeds of the loan.

Sumitomo Mitsui Banking Corp disbursed the \$103 million seven-year term loan proceeds on September 24.

Banco Security has provided a \$9.1 million VAT facility.

The deal will finance the construction of the following two projects:

- ◆ Sol de los Andes – a 104.3 MW solar facility in Diego Almagro, Atacama
- ◆ La Estrella – a 50 MW wind farm in La Estrella, O'Higgins

Both projects have 20-year dollar-denominated power purchase agreements with Chile's **National Energy Commission**, awarded during the country's 2016 auction. They come into effect in January 2021.

SMBC won the mandate for the financing in November 2019 and wrapped the deal on

June 11 (PFR, 9/11).

Legal advisers included:

- ◆ **Milbank**
- ◆ **Barros & Errázuriz**
- ◆ **Cuatrecasas**
- ◆ **Carey & Cia**

Spain's **OHL** is the engineering, procurement, and construction contractor for La Estrella, with a €10 million (\$10.88 million) contract. **Siemens Gamesa** is supplying the wind turbines. The facility is expected to be brought online by late 2020.

OPDE will build the Sol de Los Andes facility itself. ■

GIP lends to Mexican power co as debt funds near final close

With two debt funds nearing final close, **Global Infrastructure Partners** has provided a \$325 million secured term loan for Mexican power producer **Saavi Energia**.

The loan, which is the latest of several Latin American credit investments by GIP, was made by the fund manager's GIP Spectrum Fund, along with its affiliates and co-investors.

Saavi, owned by **Actis**, is the fourth-largest independent power producer and the largest privately held standalone power generator in Mexico.

Saavi's 2.2GW portfolio consists of 10 energy assets:

- ◆ six CCGTs
- ◆ one wind farm
- ◆ three compression stations
- ◆ 65km of natural gas pipelines

Over the last two years, GIP Credit has committed \$550 million in Latin America through four investments.

GIP says its investment in Saavi is one of the largest recent holding company term loans in the Latin American infrastructure sector for a private sponsor. The deal is backed by contracts with investment-grade counterparties.

FUNDRAISING PROCESSES

GIP is meanwhile approaching final closings for two infrastruc-

ture debt funds. The vehicles – GIP Spectrum Fund and GIP Capital Solutions Fund II – are both on track to reach final close in the next few weeks, a source with knowledge of the fundraising processes said. Both funds were launched last year and have targets of \$1.5 billion.

GIP Spectrum Fund will target a 9% internal rate of return and provide various debt instruments, including senior, subordinated, unitranche and holdco debt. It will seek energy and transport investments in OECD countries with a focus on the US. Over the summer, the fund made two debt investments – for the

Whistler gas pipeline in Texas (PFR, 6/26/20) and a freight railway project in Uruguay.

Previously revealed LPs in the fund include:

- ◆ **Maine Public Employees' Retirement System** (\$100 million)
- ◆ New Mexico's **State Investment Council** (\$100 million as well as additional \$100 million for co-investments)
- ◆ **Texas Municipal Retirement System** (TMRS) (\$75 million)
- ◆ Korea's **NH Investments & Securities**
- ◆ Japan's **Mitsubishi Corporation Asset Management** ■

● PEOPLE & FIRMS

Power-to-bitcoin start-up gets seed money

A company established earlier this year with the aim of deploying cryptocurrency mining technology to solve power generators' excess capacity problems is working on pilot projects after wrapping its seed funding.

The company, **Digital Power-Optimization (DPO)**, was founded by former **Goldman Sachs** banker, hedge fund equity analyst and **Fortress Investment Group** credit investor **Andrew Webber**.

His plan is to install arrays of cryptocurrency mining rigs onsite at generation facilities – whether solar, wind or other – to produce free cash flow and make use of all the available excess electricity.

The seed funds, which were raised in a

“It’s similar to a battery, where you store power and sell it to the grid later at a higher price. You don’t store the electricity itself, but you capture its value.”

“friends and family” round, are coming from three individuals, two of whom are Wall Street professionals and the other an acquaintance from Webber’s days in the **US Marine Corps**. The funding documents were signed on September 25.

BITCOIN IS COMING

The idea of using excess generation to power bitcoin or other cryptocurrency mining rigs is not new. In 2018, for instance, the hedge fund **Mangrove Partners** recommended the idea to the management of **Atlantic**

Power Corp, in which it is an investor, although the discussions did not immediately bear fruit.

“The company would take a cautious view of counterparty credit risk for any such business,” Atlantic Power noted in a statement at the time.

And interest in using otherwise uneconomic generation assets to power bitcoin mining operations has continued to grow since then. In 2019, a secretive blockchain company with an interest in artificial intelligence signed a deal to acquire a struggling coal-fired plant in Montana (*PFR*, 1/9/19).

DPO is not even Webber’s first power-to-bitcoin venture. He was previously a co-owner and CFO of **searCH4power**, which looks to use flare gas from oil and natural gas infrastructure that would otherwise be wasted to generate electricity to mine cryptocurrency, producing an additional revenue stream for upstream energy producers.

This is similar to the approach that has been adopted by **Crusoe Energy**, which has secured backing from firms including **Bain Capital Ventures** and **Winklevoss Capital**.

With DPO, Webber has shifted his focus to existing generation assets – especially renewables – that are underused, such as wind farms in West Texas that suffer from curtailment on windy days when they are all generating at the same time.

“It’s similar to a battery, where you store power and sell it to the grid later at a higher price,” he tells *PFR*. “You don’t store the electricity itself, but you capture its value.”

NO CURTAILMENT

According to a DPO presentation seen by *PFR*, the company expects a 1 MW cryptocurrency mining array, requiring an up-front investment of \$730,000, to produce an internal rate of return of 38% – \$480,000 in net profit – over a three-year period. The IRR and profit would scale linearly with the size of the operation, according to the case study.

“Power producers never again need to accept a price below \$X for their power, nor ever again curtail the production of their already-funded and constructed assets”

“Power producers never again need to accept a price below \$X for their power, nor ever again curtail the production of their already-funded and constructed assets due to lack of electrical demand,” reads the presentation.

In the model proposed by DPO, the cryptocurrency mining equipment would be installed behind the meter and owned by the owner of the generating assets. DPO would handle procurement, optimization and management of the mining arrays for a fee.

The challenge of managing partial-day operations of the cryptocurrency mine, which usually need to be run 24 hours a day, is handled by DPO through a proprietary approach, according to the presentation.

The company intends to use its seed funding to deploy pilot projects to demonstrate the viability of the model and is reaching out to potential partners to host a mine. ■

TC Energy appoints successor to CEO Girling

TC Energy Corp has selected **François Poirier**, a senior official from within its own ranks, to take over as president and CEO following the retirement of **Russ Girling**.

Poirier is TC Energy’s chief operating officer and president of the company’s Mexican power and storage business. He is a former

investment banker, having held senior positions at **JP Morgan** and **Wells Fargo** before joining TC Energy in 2014.

He will take over the chief executive job when Girling retires the end of the year and Girling will assist him with the transition through February 28.

“Over the last decade, [Girling] has led TC Energy through a period of unprecedented growth and transformation, including the development of its Liquids pipelines footprint, expansion of its Mexican natural gas pipelines business, the successful US\$13 billion acquisition of Columbia Pipe-

line Group (CGGXP) and advancement of North American LNG,” said **Siim Vanaselja**, TC Energy’s chairman.

Poirier spent close to 25 years in investment banking, running JP Morgan’s North American power and pipeline investment banking business in New York for a time before going on to be founding president of **Wells Fargo Securities Canada**. ■

CEO of Mayflower Wind to retire

Mayflower Wind Energy, the offshore wind joint venture between **Shell New Energies US** and **EDPR Offshore North America**, has appointed a new CEO to take over from **John Hartnett**, who is retiring.

Hartnett's retirement is due to take effect the end of the month. He was with **Shell** for 16 years, focusing on power development, trading and marketing.

He is being succeeded by **Michael Brown**, who was previously the joint venture's CFO and also played a similar role for the Moray East Offshore Wind Farm in Scotland. He has previously worked at **STV Group**, **Morgan Stanley** and **Grant Thornton**.

Mayflower Wind is developing an 804 MW wind project off the coast of Massachusetts, having won a power purchase agree-

ment in a request for proposals in 2019.

The three utility companies that will be the offtakers under the PPA – **Eversource Energy**, **National Grid** and **Unitil** – filed for Massachusetts **Department of Public Utilities** approval of the 20-year contract earlier this year (*PFR*, 2/14).

The 408 MW first phase of the project is due to be online by

September 1, 2025, and the 396 MW second phase by December 15, 2025.

Mayflower beat two rival bidders in the race to secure the PPA, namely **Vineyard Wind**, the joint venture between **Avangrid Renewables** and **Copenhagen Infrastructure Partners**; and **BayState Wind**, a tie-up between **Ørsted** and **Eversource** (*PFR*, 10/30/19). ■

Just Energy refreshes C-suite team following restructuring

Energy retailer **Just Energy** has rearranged its leadership team following the completion of a recapitalization plan that has been in the works since July.

Scott Gahn, who has been the Canadian energy retailer's CEO since August 2019, remains in place, but he is joined by **Michael Carter** as CFO.

Carter has more than 20 years of industry experience, including over 10 years with **Visstra Corp** and its subsidiaries, including **TXU Energy**, where he was CFO. More recently, he was senior vice president for finance at **Hunt Power & Hunt Utility Services**, an affiliate of **Hunt Consolidated**.

Just Energy's previous CFO, **Jim Brown**, who has been with the company for over seven

years, is moving to the role of chief commercial officer. **Scott Fordham** has been promoted from chief accounting officer to chief operating officer.

"With the closing of our Recapitalization, Just Energy can confidently move forward with a solid financial position, focused on executing our strategy and serving our clients"

"By moving experienced leaders on the Just Energy team into new roles, we are able to retain important company and industry knowledge,

while also making room for fresh perspectives in our management team as we reposition Just Energy for the future," said Gahn.

The company's recently closed recapitalization involved the replacement of unsecured and convertible debt and preferred shares with new common stock as well as amendments to its senior secured term loan. The company has also added five new directors to its board.

"With the closing of our Recapitalization, Just Energy can confidently move forward with a solid financial position, focused on executing our strategy and serving our clients," said Gahn.

The five new board directors are **James Bell**, **Anthony Horton**, **Steven Murray**, **Stephen Schaefer** and **Marcie Zlotnik**. ■

Apex hires finance official

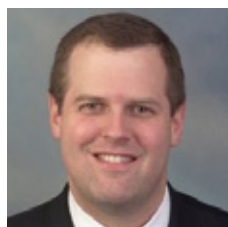
Apex Clean Energy has added to its finance team with a new vice president who has 25 years of experience in project development and capital raising.

The new hire, **Penn Cox**, joined the firm in September

His last job was director of business development at **Ferrovial Agroman**, where he plotted the Spanish construction company's entry into the US energy market.

Before that, he was president and CEO of biomass developer

Rollcast Energy, and he has also worked at **Duke Energy** (twice), **Merchant Energy Group of the Americas** and **American Electric Power**. ■



Penn Cox

Algonquin appoints new CFO

Algonquin Power & Utilities Corp's deputy CFO **Arthur Kacprzak** is set to take over from CFO **David Bronichesky** on the latter's retirement.

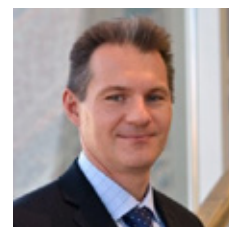
The appointment is part of a multi-year initiative undertaken by Algonquin's board of directors to support a smooth leadership transition.

Kacprzak joined Algonquin in 2012

and has led the company's treasury function since then. He has more than 20 years of experience in corporate finance, treasury, accounting, taxation and

management consulting.

"I am extremely pleased to welcome Arthur into the CFO role," said **Arun Banskota**, president and CEO of Algonquin. ■



Arthur Kacprzak

● PEOPLE & FIRMS

Savion sketches leadership handover

Solar and energy storage developer **Savion** has announced several appointments to its top management team, as the leadership duo that steered the business through its sale to **Macquarie Capital** in 2019 step back from their operational roles.

Rob Freeman and **Geoff Coventry**, who have been running the company as CEO and chief operations officer for the past year, plan to swap their C-suite titles for advisory roles and board seats on January 1, 2021.

In their place, the company has installed Macquarie officials **Nick Lincon** and **Tim Dobney** as president and deputy COO, respectively. Dobney will take over as COO in the new year.

Lincon has been with Macquarie since 2018, having previously worked at **Enel Green Power North America**, while Dobney is a former lawyer who moved to Macquarie in 2011.

Savion's own **Scott Zeimetz** has meanwhile been promoted to chief develop-

ment officer.

The appointments follow the hiring of **Diana Scholtes** from **Avangrid Renewables** as chief commercial officer in May (PFR, 5/4)

Lincon, Dobney, Zeimetz, and Scholtes will be joined by senior vice president of M&A and project finance **Russ Laplante** and senior VP of accounting and corporate finance **Mark Alexander** on a six-person management committee.

"This is an exciting new chapter for Savion as we transition into our next generation of leaders, who will make their mark on both the company and in the broader solar development and energy storage market," said Freeman. "This leadership expansion will help maintain Savion's organizational momentum and position it for continued success."

Savion was created when Macquarie's Green Investment Group acquired the solar and energy storage unit of **Tradewind Energy** last year (PFR, 11/25/19). ■

New co-president for Starwood's infra lender

Starwood Property Trust (SPT) has promoted a new co-president within its infrastructure lending team amid cuts to the business as the firm grapples with the fallout of the Covid-19 pandemic.

Sean Murdock – a former head of US credit trading first at **Merrill Lynch** and then at **Royal Bank of Scotland** – will run the Starwood Infrastructure Finance (SIF) group alongside existing co-president **Denise Tait**.

Murdock joined Starwood in January 2019 and retains his previous role of chief risk officer of SIF alongside his new co-president title. He is also a member of SIF's investment committee.

Last week, PFR reported that the group was being pared back, with three bankers being laid off at the end of the month (PFR, 9/23).

The departing officials are **Sudeep Awasthi**, who was head of syndications and capital markets; **Claudine DiSario**, who was head of originations; and invest-

ment associate **Ryan Carter**, PFR can reveal.

A person close to the situation explained that the eliminated roles were not being utilized due to market conditions and the firm's pivot away from term loan A business toward higher yielding term loan B-style loans.

SPT acquired the infrastructure credit team along with a \$2.5 billion project finance loan book from **GE Capital** in 2018 (PFR, 9/25/18). Until now, the group had continued to be led solely by Tait, who was global head of project finance at **GE Energy Financial Services**.

Aswathi had been with GE for 14 years before the business was acquired by Starwood in 2018, while DiSario had been with GE for 11 years.

The division's new co-president, Murdock, joined Starwood from **Panning Capital Management**, a distressed credit fund based in New York, where he was senior credit analyst. ■

● IN BRIEF

● SECURITIZATION

MOSAIC ADDS TO SOLAR SECURITIZATION PIPELINE

Solar Mosaic is readying a \$222 million securitization backed by residential consumer loans, its second this year, as solar ABS issuers say their investor base has multiplied even through the pandemic. The deal will push this year's non-PACE solar ABS volume close to that of last year.

● EQUITY CAPITAL MARKETS

ARCLIGHT JOINS SPAC BOOM WITH \$250M IPO

ArcLight Capital Partners has joined the recent rush to launch special purpose acquisition companies, raising \$250 million with **ArcLight Clean Transition Corp.** **Citi** and **Barclays** were the underwriters on the initial public offering, which was priced on September 22 at \$10 a unit.

● MIDSTREAM GAS

ATCO REPLACES NGTL AS PIONEER PIPELINE BUYER

TransAlta Corp and **Tidewater Midstream & Infrastructure** have agreed to sell the 120km Pioneer Pipeline in Alberta to **ATCO Gas and Pipelines** for C\$255 (\$192) million after ATCO bought the right to purchase the asset from **TC Energy** subsidiary **Nova Gas Transmission** (NGTL).

● LATIN AMERICA

TRANSELEC DEVELOPS LARGE TRANSMISSION PROJECT

Chilean firm **Grupo Traselec** has begun the permitting process for a large transmission project in Chile's Los Lagos region. The 59.6-mile (95.94 km) transmission line between the Nueva Puerto Montt and the Nueva Ancud substations will require an investment of \$107 million.

EPC CONTRACT AWARDED CHILEAN SOLAR TRIO

Trina Solar has picked EPC contractor **Ventus Energia** to build three small-scale solar assets totaling 15 MW in Chile. It is the Uruguayan contractor's first win in Chile. The company will build the projects simultaneously, bringing them online by December 2020.

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