## **PER Power Finance & Risk**

**Exclusive Insight on Power M&A and Project Financing** 

## **Project finance**: Bigger and better in 2023...for some

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### TALK OF THE INDUSTRY

"Distributed generation has shown tremendous growth in past years. It went from virtually zero to 24GW in four or five years."

**Dina Storch**, managing director of renewable energy and transition at Brookfield

"I think people still want to do tax equity deals and do a transfer deal inside a tax equity deal. It's those hybrid deals I'm seeing, and then they're trying to build flexibility into the partnerships to allow for that."



Ellen Friedman, partner at law firm, Baker Botts



*"We're seeing renewable deals get bigger and bigger. And in fact, some of them are starting to resemble classic, international oil and gas mega-projects."* 

Erik Codrington, MUFG's head of structured finance

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Feel free to contact **Tom Duffell** Editor, at (212) 224 3196 or tom.duffell@powerfinancerisk.com. NORTH AMERICA

# Project Linance Bigger and better in 2023...for some

Over the course of the last year, there were many surprises for the renewable project finance sector. From the market's quick reaction to the June tax transferability guidelines to the deferred success of offshore wind projects, 2023 brought new financing structures and revealed weak points in the sector.

In the past year, the market has swung from being liquid with low pricing to lacking enough bank liquidity to go around to all the energy projects, especially energy transition projects, experts note. Many projects are being put on the back burner.

When **Silicon Valley Bank** dissolved and was purchased by **First Citizens Bank** in April, it brought to light such a trend: smaller renewable projects remain a challenge to finance, given rising interest rates and higher inflation affecting material costs (PFR, 4/2/23).

"We're seeing renewable deals get bigger and bigger. And in fact, some of them are starting to resemble classic, international oil and gas mega-projects," said Erik Codrington, managing director at **MUFG**.

In addition to inflation, the increase shows a clear trend for banks to prioritize big-ticket projects. As many in the market hoped, the solar and battery



storage industries were vital to this trend.

In October, **Plus Power** closed a \$1.8 billion financing on its standalone battery storage pipeline, including three 700MW ERCOT-based projects and one 250MW project in Arizona. Nearly a dozen banks participated in the financing, including several construction and term loans and tax equity (PFR, 10/17/23).

Private banks were not the only players in the large battery deals space in 2023. The **Department**  "We're seeing renewable deals get bigger and bigger. And in fact, some of them are starting to resemble classic, international oil and gas mega-projects."

Erik Codrington, managing director at MUFG

of Energy's (DOE) Loans Programs Office signed billion-dollar conditional agreements with EV and battery developers. The largest, a Ford Motor Company joint venture caked BlueOval SK, received \$9.2 billion, nearly \$7 billion more than Ford's other JV received in 2022 (PFR, <u>6/26/23</u>). Battery storage company KORE Power also received a sizeable conditional loan from the DOE, \$850 million, for its advanced battery cell manufacturing in Arizona (PFR, <u>6/12/23</u>).

Along with standalone energy storage, solar and solar-plus-storage projects continued to grow in number and size. According to Wood Mackenzie's December 2023 solar report, solar has remained the fastest-growing energy source in the US in 2023, hitting a record by reaching 6.5GW in new generation capacity and achieving a 55% growth rate. The research team noted that it's clear that the "solar industry has recovered significantly after a rough 2022."

While the research team noted that transmission bottle-necks and rising costs have and will affect the sector, the obstacles haven't stopped significant projects from being financed.

In November, **Longroad Energy** secured \$1 billion from a consortium of lenders led by **CIBC** for its 377MW solar PV and 300 MW/1200 MWh storage project — the company's largest solar and storage project to date (<u>PFR</u>,

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11/1/23). Excelsior Energy Capital followed later that month, securing \$1.3 billion from over 12 banks for its 628MW Faraday Solar Project in Utah, which has a PPA with tech giant **Meta** through utility **PacifiCorp** (PFR, 11/28/23). Less than a month later, **Copia Power** signed a \$1.2 billion contribution-to-term loan with several banks to fund its 450MW solar and 1200MWh battery projects Harquahala Sun 1 and 2 (PFR, 12/22/23).

To keep up with bigger and bigger solar projects and reap the domestic manufacturing tax benefits, solar manufacturing companies have been popping up nationwide since the start of 2023. Maxeon, Enel North America, CupicPV, Qcells, First Solar, and more have entered the US market or invested up to \$8 billion to grow domestic production capacity. Each solar manufacturer has credited the IRA incentives for the boom.

The 45X US Treasury Guidelines provided much-needed clarity, outlining each part of solar and other technologies that qualify for the domestic content bonus: inverters, modules, PV cells, PV wafers, solar grade polysilicon, torque tubes, structural fasteners, and polymeric back sheets.

"Overall, for the project finance business, including power, energy, and broader infrastructure, we're having our best year ever this year," said Codrington. "Despite fewer transactions, each one is significant."

The upward trend of project financing deals was not limited to solar and battery storage. In October, the DOE awarded over \$7 billion to seven hydrogen hubs across the US, which aim to produce over 3 million metric tons of clean hydrogen annually and generate over \$40 billion in private investment in hydrogen (<u>PFR, 10/13/23</u>). The DOE remains poised to provide billions more with several financing programs, including the Energy Infrastructure Reinvestment (EIR) loan Program and even new nuclear research funding opportunities.

Even offshore wind, which suffered half a dozen project and PPA terminations, saw the light at the end of the project finance tunnel. **Avangrid** and **Copenhagen Infrastructure Partners** 800MW Vineyard Wind farm received a \$1.2 billion firstof-its-kind tax equity package. Led by J.P. Morgan Chase, Bank of America, and Wells Fargo, it is the largest single asset tax equity financing and the first of said financing for a commercial-scale offshore wind project.

2024 began with the largest clean energy infrastructure project in US history; Pattern Energy's SunZia project inked \$11 billion in financing for its 500+ mile transmission line connecting more than 3,000MW of stranded wind resources. The largest wind project in the Western Hemisphere, SunZia, has created its delivery system connecting facilities across New Mexico and Arizona. A clear example of the mega-projects that launched in 2023, SunZia and others have set the stage for a year of bigger, and hopefully better, project financings in the next year. 🔳

# Power Finance & Risk Offshore wind special report

Explore the winds of change in our exclusive Offshore Wind Special Report. Understand the key factors impacting momentum and uncover the latest news and analysis on projects, investments, and financing models. From PPAs to political opposition, we dissect the complexities of this green revolution. Join us as we navigate the currents of progress in offshore winds murky waters.

This is your essential guide to the forefront of offshore wind and experts — from developers to bankers to political activists — share what they have learned and what comes next for this is burgeoning sector. Read on to find in-depth analyses, insightful interviews, and thoughtprovoking commentary on the state of the US offshore wind sector.

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**Offshore wind**:

sailing rough

seas

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**OFFSHORE WIND SPECIAL REPORT** 



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NORTH AMERICA | CARBON CAPTURE

### Carbon capture and green hydrogen: the renewables expansion continues

The US' traditional renewables sectors – wind, solar (and now even battery storage) – continue to be a mainstay, but the universe of investable renewables opportunities is expanding.

As we progress into 2024 with greater certainty in federal policy, continued support for ESG initiatives, and broader investor interest in the energy transition theme the trend for renewables is expected to kick up a notch.

Green hydrogen development took a giant stride towards bankability as the Department of Energy selected 7 green hydrogen hub winners across 16 states, handing out \$7 billion from the Bipartisan Infrastructure Law.

Together, the hubs aim to produce over 3 million metric tons of clean hydrogen annually and generate over \$40 billion in private investment in hydrogen.

Green hydrogen is not only a key component of the Biden-Harris administration's clean energy initiatives, but it's also a promising technology that companies, and other governments, are investing in.



Coupled with the 45V tax credit, which awards up to \$3 per kg of hydrogen produced, the DOE financing has moves hydrogen from science fiction to science reality much faster than most expected.

LS Power made a move in the sector in November when it announced future investment up to \$400 million into green hydrogen projects developed by Monarch Energy.

As part of the newly established Clean Hydrogen Fuels platform the investment will be used to advance Monarch's pipeline of projects, expand to new regions within the US, and "It's really hard to finance projects. People are developing them and there's work being done, but I don't think we're going to see any final investment decision soon."

HYDROGEN 100% GREEN

**Tom Holmberg**, partner at law firm Baker Botts

continue to add top talent to the Monarch team.

German-based energy giant RWE will continue its  $\in$ 55 billion (\$60.2 billion) Growing Green initiative – investing in renewable energy, batteries, flexible generation and hydrogen – with an estimated  $\in$ 20 billion (\$21.9 billion) to be allocated to future US investments by 2030.

The construction of at least 3GW of hydrogen-ready gasfired power plants and 2GW of electrolyser capacity is planned during this push.

Despite the positive talk project finance bankers tell PFR that it is still early stages for the space. "Those projects are really in their partnership phases, on a project finance basis you're not getting involved until there's contracts and things, right now they're pretty conceptual," said Greg Hutton, head of project finance and ET strategy in North America for Rabobank. "We're excited to see that market grow but right now we're double capacity on wind, solar and storage and solar and it is a luxury to be able to work on these things."

The biggest hurdle to overcome for the green hydrogen space is that the economics for these projects is currently based in large part on the 45V tax credit, for which the final rules have yet to be articulated by the Department of Treasury.

"It's really hard to finance projects. People are developing them and there's work being done, but I don't think we're going to see any final investment decision soon, maybe at the end of 2024, because we're still waiting to know exactly what the economics are going to look like for these projects," said Tom Holmberg, partner at law firm Baker Botts.

### NORTH AMERICA | CARBON CAPTURE

Adding to the challenges is that the market for green hydrogen does not yet exist at scale. Hydrogen is currently mostly used in refining petroleum and fertiliser production, but there are demand-based opportunities in other sectors as well, including transportation, power, and more. Compared to other incumbent technologies it is currently more expensive, while there is also a lack of hydrogen infrastructure, lack of manufacturing at scale, durability, reliability, and availability.

"Currently green ammonia and hydrogen are significantly more expensive to produce than hydrogen and ammonia made from natural gas," said Erik Codrington, MUFG's head of structured finance. "You have to find niche applications where maybe your offtaker is getting a special benefit from blending green feedstock into their mix, for instance blending green ammonia into their overall pool of ammonia or fuel to get tax benefits and reduce the carbon intensity of whatever the underlying product is."

But looking ahead, and outside of the US, the global market is expected to top the value of the liquid natural gas trade by 2030 and grow further to \$1.4 trillion per year by 2050, according to a Deloitte study.

The study added that interregional trade is key in unlocking the full potential of the green hydrogen market. Regions that are able to produce cost-competitive hydrogen in quantities that exceed domestic needs are already positioning themselves as future hydrogen exporters supplying other less-competitive regions and helping to smoothly facilitate the energy transition.

"I expect to see hydrogen from the US head to Asia," said Lin-



klaters' co-head of energy and infrastructure, Americas, Ron Erlichman. "The Japanese and Korean, and to certain extent other parts of the Asian market, view that as the most economic source of meeting reduction and emission requirements or goals. There's just not an ability to generate the renewable resources because of cost and scarcity of developable land in those regions."

#### CC-yes?

Another growing area for the clean energy sector is carbon sequestration. Carbon sequestration is the process of capturing and storing atmospheric carbon dioxide and is one method of reducing the amount of carbon dioxide in the atmosphere, aiding the goal of reducing global climate change.

Pushing into the sector has been oil majors who benefit from pumping CO2 into oil wells to make it easier to get crude out of the ground. ExxonMobil has closed on its November acquisition of Denbury, a carbon capture and sequestration (CCS) developer also specializing in oil recovery.

The \$4.9 billion all-stock transaction provides ExxonMobil access to its 1,300-mile US-owned and operated CO2 pipeline, including 925 miles of CO2 pipelines in Texas, Louisiana, and "You have to find niche applications where maybe your offtaker is getting a special benefit from blending green feedstock into their mix."

Erik Codrington, MUFG's head of structured finance

Mississippi, as well as 10 sequestration sites.

Again, the IRA is lending a helping hand to carbon capture with an update to the 45Q tax credit which incentivizes the use of carbon capture and storage.

The 45Q increases a tax credit for power plants and other polluters who capture and store their carbon from \$50 to \$80 a ton. Those incentives climb even higher for carbon stored from direct air capture, a nascent technology to grab CO2 from the ambient air. A tax credit that looks likely to benefit from the emergence of transferability tax credit deals.

"45Q is going to be a huge market for transfers. A lot of the major banks have not really gotten their arms around 45Q deals, as a result nobody wants to do those as a tax credit partnership," said Ellen Friedman, tax partner at law firm Baker Botts. "I think that the volume of 45Q credits is going to become just astronomic once a lot of the deals that I'm aware of come to fruition, but it might be three years, four years down the road."

Similarly to green hydrogen the current economics of carbon capture projects tend to be driven by these new tax credits making it difficult for banks to lend. Banks are factoring CCS into their medium-term green lending plans; however, most aren't providing nonrecourse debt finance currently. Most completed projects to date have been financed by their owners or by equity investors, including private equity firms and offtakers such as chemical and utility companies, rather than banks.

Whatever its societal benefits, carbon capture on its own doesn't produce any cash flow. Economic viability for these projects will rest, in my opinion, on the ability to sign up credit worthy customers who will pay for this service (and related tax credits) because it facilitates or lowers the carbon intensity of their business" said MUFG's Codrington.

"Lenders will likely shy away from deals that are only producing tax credits". He added, "Various clients have also flagged very long-tailed liability for recapture of tax benefits in the event of migration of stored CO2 as a significant obstacle to green-lighting new CCS projects."

Despite some movement in 2023 it was still a drop in the ocean to the \$3 trillion the IEA estimates will be needed if the world is to capture between four and eight gigatons of CO2 each year to achieve net-zero emissions by 2050.

The US is trying to help spur activity through the Bipartisan Infrastructure Law (BIL), which has \$12 billion in capital available for carbon capture project loans and grants, like the Carbon Capture Demonstration Projects Program which has so far put \$1.7 billion to work across six projects for commercial-scale carbon capture technologies.

Carbon capture and green hydrogen are certainly going to play a major part in the future of energy transition. But most financiers continue to wait until technology and policy improvements bring greater maturity to these markets. NORTH AMERICA | TAX

# Tax equity: dipping into the transfer market



The tax equity marketplace was forever changed in 2023 due to the emergence of transferability tax credit deals.

While written into law under the Inflation Reduction Act of 2022 (IRA), the power sector had been impatiently waiting for guidance on some of the fine print.

Succinctly, with transferability, instead of tax equity needing to invest in the actual renewables project — which is why it can be so complicated and only a limited number of investors are willing to do so — you can sell the IRA's tax credits.

In warmly received news by the market the US Treasury issued the highly anticipated proposed regulations for the transfer of certain income tax credits under Section



6418 of the tax code on June 14.

For novice tax credit investors, transferability allows them to reduce their taxes and align with their ESG goals without tangling with complicated financial accounting or becoming project finance experts. While some "I think people still want to do tax equity deals and do a transfer deal inside a tax equity deal. It's those hybrid deals I'm seeing, and then they're trying to build flexibility into the partnerships to allow for that."

### **Ellen Friedman**, partner at law firm Baker Botts

banks, that are veterans of tax equity transactions, like transferability as the purchase of tax credits, unlike a traditional tax equity investment, does not attract a capital weighting charge and requires less time from underwriting teams. In the wake of the guidance, transferability deals did ramp up, but maybe not in the way everyone anticipated.

"I think people still want to do tax equity deals and do a transfer deal inside a tax equity deal. It's those hybrid deals I'm seeing, and then they're trying to build flexibility into the partnerships to allow for that," said Ellen Friedman, partner at law firm Baker Botts.

This means that traditional tax equity investors are able to keep their options open and be able to sell credits at a later date.

"Nobody's straight up taking their credits— they are either signing up on day one that they have the ability to sell everything, or they're going to sell

### NORTH AMERICA | TAX

a set percentage," said Nicole Gambino, tax counsel at law firm Wilson Sonsini. "They at least want the flexibility even if they don't intend to sell today. They might want the flexibility down the road if they misjudge their tax capacity for instance."

In terms of pricing, the high watermark is 97 cents with low of 85 cents for transferability sales, according to multiple tax attorneys speaking to PFR. The highest publicly disclosed price was 96 cents, paid by Fiserv to First Solar at the end of December. The solar panel maker completed two Tax Credit Transfer Agreements (TCTAs) to sell \$500 and \$200 million in Advanced Manufacturing Production tax credits to the financial services company.

Yet, pure transferability deals seem to be the domain of newer market entrants and in deals where the tax credits have only recently been introduced by the IRA, technologies like renewable natural gas.

One flaw in the process is that the way the IRS wrote the guidance sellers of investment tax credits (ITC) are effectively blocked from selling their company, or selling equity in their company, for the next five years due to a recapture risk.

Under the recapture provisions, ITC can be recaptured if there is a "disposition" of the project within five years of its placement in service. The ITC vests incrementally over the course of five years. For example, if a project is sold, or experiences a casualty event in year two, then 80% of the tax credit amount that remains unvested must be repaid to the Treasury.

David Burton, a partner with Norton Rose Fulbright, explained that the proposed regulations confirmed that the buyer of the tax credit can be indemnified by the seller for recapture. Burton noted that tax credit buyers insist on an indemnity from a creditworthy seller or tax credit insurance, and that the market has yet to see an ITC transfer deal with project level debt as the ITC buyer does not want the risk of recapture from a foreclosure by the lender on the project.

"We've seen some interesting creative structuring around that, but it's not this kind of not consensus about that yet. Deals are getting done, but consensus is still kind of evolving," said Burton

### **Brokering deals**

And while traditional tax equity players are still active in the market investors of different sizes and sectors are now purchasing tax credits. Tax directors at some large corporations that have tax appetite have been early movers.

"I'm seeing a lot of transactions between big corporations with the tax departments driving it, which seems to work pretty well. They really understand the issues, they speak the same tax language," said Burton. "Some deals involve brokers, but a lot don't."

There are also syndicators or aggregators that are really active in trying to pick up some of the slack in the tax equity market and trying spoon feed deals to potential tax equity investors in exchange for a fee.

The big banks all want to be market makers in it too with many starting initiatives to originate and sell tax credits.

Also attempting to make life easier for would-be investors a number of other tax transfer platforms have emerged to connect buyers and sellers of renewable energy tax credits.

In September, Basis Climate launched its digital exchange, aimed to close transfer deals



quickly, and closed a \$100 million transfer of PTCs from a portfolio of wind projects (seller unnamed). Crux launched in April 2023, raising over \$8 million in venture capital funding, and brought its platform, which connects developers, buyers, and intermediaries, online in September. And Evergrow completed the funding of a clean energy tax credit transfer on its platform in October.

"I think that those platforms are already proving to be playing a role for new buyers. It's not just about creating a software platform that runs online that people can click through. The creators of these platform are very thoughtfully carefully thinking about what the buyers and the sellers need. I'm very excited to see how those companies will help the transferability market grow and evolve," said Scott Zimmermann, partner at Wilson Sonsini.

Others were more skeptical of the role these platforms will play in transferability deals. The scenario the cynics presented was that the tax director of a major corporation is not going to wire \$100 million through a platform and hope that they get a tax credit out the other side.

"I think they will probably evolve into more of an advisor with a tech enabled platform, but they ultimately are going to need to build out those advising

*"I'm seeing a lot of* transactions between big corporations with the tax departments driving it, which seems to work pretty well. They really understand the issues, they speak the same tax language."

David Burton, a partner with Norton **Rose Fulbright** 

capabilities to be able to walk these large groups through the process," said Bryen Alperin, managing director at tax equity investor Foss & Company.

However transferability deals are brokered the outlook for the market is strikingly positive even if some the path to efficient structuring is has not yet been trodden.

"I think we'll start to see more investors getting into the market in 2024. There's a number of investors that said,' yeah, we were interested in the transfer credits, but we don't want to be the first', they want to see how it plays out." said Alperin. "But I worry a little bit about the long term for the industry if some of these new buyers rush in a little too quickly and then they get they get burned on a deal. That might then ultimately lead to a pullback."

But, with transactions such as American Electric Power's (AEP) August sale of 1.365GW of wind and solar projects to a consortium of Invenergy, Blackstone, and CDPQ, Canada's second-largest pension fund, for \$1.5 billion, will go a long way to making the market more comfortable.

Within the transaction was the first large-scale tax transfer agreement with the consortium agreeing to sell \$580 million worth of tax credits to Bank of America.

NORTH AMERICA | DOMESTIC CONTENT

### Jumping the domestic content hurdle

Towards the end of 2023 SoftBank and Ares Management-backed SB Energy Global stole a march on renewable developers across the US when it secured \$2.4 billion in financing for solar projects that became the first to qualify for the federal domestic content tax credit bonus.

The financing will go toward a portfolio of four solar projects, Orion I, Eiffel, Orion II, and Orion III projects, totaling 1.3GW and located in Lamar and Milam Counties, Texas. While Eiffel began operations in 2022, the three Orion projects are under construction.

Under the IRA, projects can qualify for a 10% adder if (i) all of the structural steel and iron and (ii) 40% of the manufactured components come from US producers, and three out of four of SB Energy's projects qualify for this domestic content bonus.

SB Energy will be sourcing its 1.1 million solar modules from First Solar's factory in Ohio, steel from Texas and Georgia, and tracking technology from Nextracker's plants in Pennsylvania, Nevada, and Tennessee. The sand and soda ash used to create the glass for the panels come from Michigan and Wyoming, respectively.

SB Energy's use of domestic content reflects the growing interest in developing and using US-made solar panels since the IRA was passed and global supply chain issues revealed issues for the industry.

First Solar has been expanding its solar module manufacturing footprint in the US. In September, the company began construction on its \$1 billion solar factory in Louisianna, which is expected to triple its manufacturing capacity (PFR, 9/21). The company also allocated \$1.1 billion for a facility in Alabama and \$185 million to expand its Ohio factory (PFR, 7/18).

Yet, up until this transaction tax equity experts had expressed concerns in projects being eligible for the domestic content adder due to unclear tax guidelines. Many developers too had told PFR there were difficulties in determining that they qualify. However, solar projects with First Solar modules made in the US are the strongest case for eligibility for the domestic content adder.

The hurdle developers face in securing this adder is the onerous requirements in the guidelines that essentially ask for manufacturers to open their books and provide cost level details that so far have made many manufacturers baulk.

"There's a big ask in terms of transparency, all the way to the component manufacturers, and I think that's a lot to ask. This is optional, so not like, you have to do it. It's highly negotiated at this point and we're in the middle of those negotiations right now," said Baker Botts' Friedman.

SB Energy did not respond to requests to explain how they were able to satisfy the requirements, but tax experts speaking to PFR offered a hypothesis.

By employing a third-party intermediary, most likely an accounting firm, to receive the manufacturers information in a kind of escrow they may then be able to create reports for developers that get them comfortable without sharing any trade secrets or cost level data.

"I heard about it secondhand, but one deal that claimed the domestic content adder were able to get comfortable with a third-party engineer that basically reviewed it gave a rep that yes, it looks like it likely works," said Foss' Alperin.

"But it wasn't a very high threshold, and I don't think that that would have worked for all investors. Some of the big banks, especially, I expect will have a much higher hurdle to clear in terms of demonstrating that that domestic content."

Now that SB Energy has been able to clear the hurdle those speaking with PFR are bullish that it will not be long before a clear path is trodden for this adder. Then it will be up to onshore renewables manufacturers to keep up with the surge in demand. NORTH AMERICA | M&A

### **M&A: 'Gas renaissance'** sparked by renewables rewind

Despite renewables grabbing the headlines, emergency weather situations and the increased energy demand in cities with rapidly rising populations have been catalysts for a "gas renaissance" in the M&A power space.

Enbridge's \$14 billion September 2023 acquisition of three Dominion Energy assets was the merger to create North America's largest natural gas utility by volume showcasing the current multi-billion potential of gas asset valuation in the market (PFR, 9/06).

Several other gas deals also broke the billion-dollar threshold last year: Crescent Point Energy closed on its acquisition of Canadian Riverstone Holdings-owned oil and gas business Hammerhead Energy for CDN\$2.55 billion (US\$1.92 billion). NextEra's \$1.8 billion sale of its Texas-based STX Midstream closed with US infrastructure mega-firm Kinder Morgan in November (PFR, 11/07). And the sale of Florida

City Gas to Chesapeake sat just under the line at \$923 million.

Experts had not predicted such activity as the renewables takeover of the last few years eclipsed the prioritization of gas assets on the market. The amended 2023 Inflation Reduction Act incentivized increases in clean energy generation, with batteries and long-duration hydrogen storage, creating stiff competition for gas, creating the myth of its extinction from the market.

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"Two or three years ago...as batteries were coming up the curve, it seemed like [industry players] were getting bolder at saying, there is no place for gas, long term," Eli Katz, global vice chair of Latham & Watkins' energy & infrastructure industry group explained.

He cited the war in Ukraine and Russia, as well as "ESG backlash," as the primary culprit for pivoting market interest back into natural gas. "We're going to need this, and we're going to need this for a long time now," Katz said.

### The OG

Alexandra Wilde, partner at Clifford Chance, who focuses on complex domestic and cross-border transactions in the energy and infrastructure sectors, suggests in 2024 there'll be more activity in traditional oil and gas.

"We have started to hear the term 'energy addition' in lieu of energy transition at times," said Wilde. "We'll likely see more investments in traditional oil and gas more broadly and frankly less reluctance to invest within that space."

Fellow Clifford Chance partner **Enoch Varner**, who represents financial investors, private equity firms, and private and public companies on M&A transactions, added: "Investors are making money investing in oil again. This is a change from the losses many experienced in the sector not so long ago, which drove many away from oil. So...we have seen more investment dollars coming back to oil, and I think it's for two reasons: One, it's possible [for investors to make money by investing in oil again]; and two...[investors] recognize that... oil, natural gas are components that will be part of the energy mix for a while."

The standout deal in this space was the \$53 billion acquisition of Hess Energy by Chevron(<u>PFR</u>, <u>10/23</u>), which leaves the former with Hess's oil and gas assets in the Gulf of Mexico and Southeast Asia, as well as those in the Bakken shale, allowing expansion of Chevron's DJ and Permian basin operations.

"We're certainly going to continue to see investments in natural gas as well as renewable natural gas," **Adi Blum**, BlackRock's managing director and senior investment professional of the company's global infrastructure dealings, confirmed.

"There are a number of multi-billion-dollar LNG export

"There an multi-bill export fa US Gulf of been see funding. place wh number are well p gas to As Adi Blum, B

"There are a number of multi-billion-dollar LNG export facilities on the US Gulf Coast that have been seeking and getting funding. Mexico is another place where there are a number of projects that are well positioned to take gas to Asia."

Adi Blum, BlackRock's managing director and senior investment professional of the company's global energy & power infrastructure



"Two or three years ago...as batteries were coming up the curve, it seemed like [industry players] were getting bolder at saying, there is no place for gas, long term."

**Eli Katz**, global vice chair of Latham & Watkins

facilities on the US Gulf Coast that have been seeking and receiving funding. Mexico is another place where there are a number of projects that are vying to deliver gas to Asia. There's a transportation and geographic advantage."

And in certain areas in the US, despite the federal push for renewables, states are ensuring that gas is not left out when it comes to cheaper forms of capital.

Texan investment incentives for gas grew considerably at the close of 2023 via the Texas Energy Fund (TEF), lining up numerous opportunities in ERCOT and the surrounding areas to see considerable gas growth this year.

State lawmakers via a twothirds margin voted in a controversial constitutional amendment authorizing a \$10 billion Texas Energy Fund aimed at providing low-interest loans to build gas-fired power plants, develop microgrids and modernize portions of the state's electric grid (<u>PFR, 11/27</u>).

Charged with divvying up the gold is the Public Utilities Commission of Texas (PUCT) which has \$7.2 billion reserved for dispatchable power in the forms of gas, coal, and nuclear power – deployable throughout weather emergencies.

### **Opportunity to capture**

An additional avenue for gas asset valuation to blossom in the coming year is its pivotal role in the advancement of the carbon capture and sequestration sector. By either converting them to CCS sites, or adding a CCS site to a gas plant, reducing its greenhouse gas impact further drives up valuation potential of assets.

Private equity firm Grey Rock Investment Partners made a controlling capital commitment of \$100 million last October in CCS company CarbonCycle. The funds are allocated to siting sequestration projects on natural gas processing facilities and other industrial sites (PFR, 10/06).

The same month, Milestone Environmental Services (MES) subsidiary Milestone Carbon entered into an agreement with Texas Pacific Land Corporation to lease over 22,000 acres of land and pore space intended for permanent geologic sequestration of CO2 at industrial natural gas and power facilities in West Texas' Permian Basin (<u>PFR,</u> <u>10/20</u>).

Amid the eye-catching renewables platform deals that captured attention of late, gas is undergoing an M&A renaissance that is forcing the power sector to take note.

Adi Blum

#### **Power Finance & Risk**

### NORTH AMERICA | OFFSHORE WIND

## Following the currents: the ups and downs of offshore wind

On the evening of January 2, Vineyard 1 plugged into the Massachusetts grid, becoming the second and largest offshore utility-scale wind project to provide power. After a year of troubles and turbulence for offshore wind in the US, the development has started 2024 on a forward-looking path.

In 2023, four projects scrapped their power purchase agreements (PPAs) with state utilities, and two additional projects were terminated altogether. These projects account for nearly <sup>1</sup>/<sub>4</sub> of the Biden and Harris Administration's 30GW goal by 2030. In 2023, the market was not able to follow the previous year's trend of increasing the pipeline by 15%, according to the **Department of Energy** (DOE).

"We got caught up in a perfect storm, but I don't think we're turning back. I don't think there'll be a pullback on the side of the states, and overall, the ultimate consumers want their power sourced from renewables as well," said an energy-focused project finance banker at a large financial institution.

Despite the tailwinds hitting the offshore industry, 2023 also saw growth and progress. From the **Bureau of Ocean Management**'s approval of several offshore wind project proposals to the announcement of over 10GW of solicitations in 2024, both federal and state governments continued to prioritize their offshore wind projected goals. In the Offshore Wind Special Report: Sailing the Rough Seas, PFR dives into the obstacles and new realities the market faced in 2023.

Visit **PFR** to download the Offshore Wind Special Report



Full report click **HERE** 

January 19: Ørsted acquires a 25% stake in Ocean Wind 1 from **Public Service Enterprise Group** (PSEG), gaining complete ownership of the 1.1GW offshore wind farm <u>LINK</u>

**March 29:** The DOE releases its plan for reaching 30 gigawatts (GW) of offshore wind energy by 2030 and setting the nation on a pathway to 110 GW or more by 2050. It's called the *Strategy to Advance Offshore Wind Energy in the United States*. Four pillars:



**March 31: RWE** signs a MoU with **Entergy** to look into the potential for offshore wind generation in Texas and Louisiana for industrial customers <u>LINK</u>

#### .....

TIMELINE

**June 22: NYISO** selects \$3.26 billion winning transmission bid, Propel 5, from **New York Transco** to build 90 miles of new offshore wind underground cables and extensive 345kV transmission work in Long Island <u>LINK</u>

June 7: Several offshore wind developers file petitions with the **New York State Public Service Commission asking** for amendments to their PPAs as the projects might no longer be viable due to inflation and interconnection costs

**May 30:** Ørsted buys **Eversource Energy**'s 50% interest in uncontracted federal offshore wind lease area for \$625 million. Area 4GW of potential capacity and currently 3 projects in development: 704MW Revolution Wind, 880MW Sunrise Wind, and 130MW South Fork Wind <u>LINK</u> **July 6:** New Jersey Governor signs a bill that will expand federal tax credits to Ørsted's Ocean Winds projects, and BOEM approves the project's construction and operations plan LINK

**July 19: Rhode Island Energy** nixes PPA with Ørsted and Eversource for the developers' joint proposal of offshore project 884MW Revolution Wind 2 <u>LINK</u>

July 19: Three Massachusetts utilities axe their PPA agreements with **Avangrid**'s 1,232MW Commonwealth Wind project <u>LINK</u>

**July 21:** BOEM releases 30-day public comment period for proposed floating offshore wind research areas in the Gulf of Maine LINK

**July 31:** Avangrid & **CIP** completes the first substation for 800MW Vineyard 1 off of Marthaa's Vineyard, Massachusetts <u>LINK</u>

### NORTH AMERICA | OFFSHORE WIND

**August 8:** Three solicitors in New Jersey's third offshore wind auction have been identified. Winners will be announced in early 2024. <u>LINK</u>

- 1.3GW Community Offshore Wind -RWE & National Grid
- 1.5GW Atlantic Shores Offshore Wind - Shell New Energies & EDF-RE Offshore Development
- 1.4GW Leading Light Wind Offshore
   Project Invenergy & energyRE

**August 21:** BOEM approves 4<sup>th</sup> offshore wind project – 704MW Revolution Wind, owned by Eversource and Ørsted and located off Rhode Island <u>LINK</u>

August 24: Morgan Stanley Infrastructure Partners and Crowley launch JV to repurpose US port facilities for offshore wind developers and manufacturers, starting in Massachusetts LINK

**August 25:** Massachusetts reveals details of its fourth offshore wind tender in 2024. Previous PPA cancelations will be taken into account during review LINK

**August 30:** Gulf Coast offshore wind auction underwhelms with one bid – RWE Offshore US Gulf wins with a bid of \$5.6 million for a 1.24GW project off Louisianna. Dwarfs in comparison to 2022 \$4.3 billion New York auction LINK

**August 31:** Massachusetts utilities terminate their PPAs with 2.4GW SouthCoast Wind, a JV between **Shell North Amer**ica and **Ocean Winds North America**. The JV hopes to rebid in the 2024 auction <u>LINK</u>

**September 12:** New Jersey state republicans call for a moratorium on all offshore wind projects and denounce the June tax bill <u>LINK</u> **October 31:** BOEM approves the 5<sup>th</sup> and largest offshore wind project to date – 2.6GW Coastal Virginia Offshore Wind owned by state utility **Dominion Energy.** Construction is to begin in Spring 2024 and last three years LINK

**October 25:** Vineyard 1 closes \$1.2 billion first-of-its-kind tax equity financing with **JP Morgan**, **Bank of America**, and **Wells Fargo**. The project installs its first turbine off Martha's Vineyard LINK

**October 24: Rise Light & Power** and **Corio** purchase minority stakes in TotalEnergie's 3GW Attentive Energy project for \$420 million <u>LINK</u>

**October 24: NYSERDA** awards several project contracts, including 1.4GW Attentive Energy One, 1.3GW Community Offshore Wind, and 1.3GW Excelsior Wind as part of the state's 10-point plan LINK

**October 20:** New York Governor **Kathy Hochul** vetoes the Planned Offshore Wind Transmission Act, which intended to speed up construction in Long Island for offshore wind projects. Bill fails to address local concerns <u>LINK</u>

**October 12:** New York rejects petitions from offshore wind developers Ørsted, Eversource, BP, and Equinor to receive financial relief for four projects, saying it would cost customers over \$12 billion LINK

**October 4:** Massachusetts, Connecticut, and Rhode Island announce joint New England 6GW offshore wind solicitation in 2024. They hope to lower costs and reduce risks by combining auctions <u>LINK</u>

**October 3:** Connecticut utilities cancel 20-year PPAs with Avangrid's 804MW Park City wind offshore generation project. Becomes the fourth PPA termination for the industry in 2023 LINK

**November 1:** Ørsted cancels both Ocean Winds 1 and 2 wind farms off New Jersey after announcing over \$5.5 billion in impairments. Draws criticism from across New Jersey and the industry <u>LINK</u>

**November 2:** Ørsted is not alone – Equinor and BP declare impairments of \$300 and \$540 million after offshore challenges <u>LINK</u>

**November 13: Siemens Gamesa Renewable Energy** cancels \$200 million Virginia offshore wind blade manufacturing facility after industry turbulence <u>LINK</u>

**November 14:** Ørsted's CFO Daniel Lerup and COO Richard Hunter ousted after offshore wind struggles in New Jersey and high impairments. CEO calls for new leadership <u>LINK</u>

**November 21:** BOEM approves 6<sup>th</sup> utility-scale offshore wind project – 816MW Empire Wind I, owned by BP and Equinor, located off the New York coast <u>LINK</u>

**December 6:** Ørsted's 132MW South Fork project plugs into New York's power grid, becoming the first such project to power the grid <u>LINK</u>

**December 11:** BOEM proposes Central Atlantic offshore wind lease sale areas for the 2024 auction. Plots located off Delaware, Maryland, and Virginia can power 2.2 million homes LINK

**December 14:** Louisiana approves first-ever offshore wind farm projects located in state waters, signing contracts with **Vestas** and **Mitsubishi** subsidiaries using new, flexible pay structures <u>LINK</u>

**January 3:** Vineyard 1 connects to the Massachusetts grid

● LATIN AMERICA | DISTRIBUTED GENERATION

### Brazil's DG market continues to gather momentum

Distributed generation (DG) has grown exponentially in the past few years in Brazil and 2023 saw many players entering at every level of the market, while existing ones consolidated their pipelines.

DG presents many advantages – cheaper energy, reduced energy losses, less capex intensive – and has benefitted from incentives giving projects a competitive edge, but revisions to the regulatory framework passed this year might shake up the space moving forward.

Decentralized generation represents the lion's share of solar generation in Brazil and accounted for around 11% of to-



tal electricity generation in the country by the end of 2023. In the first two months of 2023 alone, distributed generation increased by almost 1GW and grew to a total 7.4GW by the end of the year making 2023 the second highest annual increase ever record"Distributed generation has shown tremendous growth in past years. It went from virtually zero to 24GW in four or five years."

**Dina Storch**, managing director of renewable energy and transition at Brookfield

ed according to the Ministry of Mines and Energy.

"Distributed generation has shown tremendous growth in past years. It went from virtually zero to 24GW in four or five years," said Dina Storch, managing director of renewable energy and transition at Brookfield in Brazil. "We can still expect to see a high growth within the next two years or so. But then I would expect this market to slow down and this has all to do with the regulation as new projects will increasingly have to pay for the distribution costs."

A net-metering policy for assets up to 1MW was first introduced in 2012 and amended to include projects up to 3MW in 2015. Investment skyrocketed last year as the revised regulatory framework, including net metering for projects up to 5MW and guaranteeing exemptions to certain distribution tariffs, took place.

### LATIN AMERICA

Approved by Brazil's energy regulator Aneel last February, law nº 14,300/2022 provides exemption from part of the Distribution System Usage Tariff (TUSD) until 2045 for DG projects that applied for connection grants before January 6, 2023. This provides a competitive edge to such projects over those that haven't which will gradually pay more for the distribution charges as they come online.

Brookfield is among the newcomers in the distributed generation segment in Brazil this past year taking advantage of the regulation while they can. The Canadian investment manager acquired solar developer Energea in June and has since rebranded it as Ivi Energia. The platform is solely dedicated to the development of distributed generation with a 300MW pipeline including 200MW under construction or ready to enter construction.

"We also see an opportunity of market consolidation. There are several players out there today that requested these connection grants by the deadline, but they do not necessarily have the capital to fund these projects and



go ahead with construction. We believe there's a good window of opportunity for M&A as well," said Storch as the firm is looking to add around 200MW through acquisitions to its portfolio in the near future.

Others have joined forces in order to get into the space. Iberdrola's Brazilian subsidiary Neoenergia created a joint venture with São Paulo-based renewables company Comerc Energia pouring almost \$100 million into distributed generation projects in Bahia, São Paulo, Rio Grande do Norte, Pernambuco and the Federal District. Renewable developer Serena - formerly Omega Energia - is partnering with São "You have big distribution companies that have longterm power purchase agreements with generators that supply large amounts of energy through kilometers-long transmission lines that are very expensive to run."

**Diogo Nebias**, partner at Mello Torres

Paulo-based fund manager Apolo with the goal of developing 140MW of DG assets across the country.

Some existing players in the space have intentionally put their focus on distributed generation, growing their solar pipelines. EDP Brasil increased the number of its distributed generation customers by 252% in 2022 compared to the previous year and had an additional 130MW under construction in 2023, effectively more than doubling the company's installed capacity in the sector. The company expects to reach R\$3.2 billion in investments in distributed generation by 2026.

But as distributed generation continues to grow in Brazil and more consumers migrate to the market, it could cause imbalances in the regulated market which still accounts for most of the energy sold.

"You have big distribution companies that have long-term power purchase agreements with generators that supply large amounts of energy through kilometers-long transmission lines that are very expensive to run," said Diogo Nebias, partner at Mello Torres based in São Paulo. "As incentives [for distributed generation] became effective, the government realized that the market is developing very fast, and that they have to find a balance between fostering distributed generation and not disrupting the regulated market."

Brazil's distributed generation sector witnessed significant growth again in 2023, showing no signs of winding down - at least as long as projects can reap the benefits sanctioned through the regulation. As the space attracts new players and consumers, it could even prove to be a threat to the regulated market.

### Power Finance & Risk

The recently relaunched weekly issues of Power Finance & Risk provides a comprehensive package of insightful news, analysis, proprietary data and informed perspectives on financing and M&A within the Americas power industry, including generation, transmission and midstream gas assets.

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### Chile's restructurings: good assets, bad PPAs

The renewable energy sector in Chile continued to feel market disruptions in 2023 forcing many financial reorganizations and restructurings throughout the year.

Yet, while many developers and projects suffer through much of the same issues, the market keeps powering through, actively questing for solutions in the fast-growing sector.

Due to the speed in which renewables projects are being built the sector has had to reckon with transmission bottlenecks and energy curtailment, marginal costs drawn to nil, and price decoupling in the spot market across the country in recent years – issues that in 2023 have sent even the biggest players into restructurings and even bankruptcy.

Generation companies with power purchase agreements (PPAs) with local distribution companies (DisCos) have been particularly exposed to those risks, making it hard to fulfill their contract obligations.

In 2022, Spanish developer Solarpack's subsidiary Maria Elena which owns and operates the 123MW Granja Solar project was among the first to declare itself unable to follow through with its 20-year supply agreements with DisCos mid-year. The asset was financed with a \$91 million loan from KfW IP-EX-Bank who forced the developer into bankruptcy in April 2023 after Maria Elena failed to service its debt on time.

"The bigger issue these past few years has been the Disco PPAs awarded as part of international public tenders. You have good underlying assets, but with these PPAs it has been hard for some to actually make money," said Juan Carlos Valdivieso, partner at Morales & Besa in Chile.

In a more fortunate turn of events, Mainstream Renewable Power completed a \$1 billion restructuring process for its Andes Renovables platform that still saw the company weather lawsuits across jurisdictions for months.

"We have seen some change in attitude from the regulators, as they realized that they needed to give some degree of flexibility to the companies to either terminate or push back the dates of those contracts," said Valdivieso, who worked on some of the reorganizations, including on the Mainstream Renewable Power restructuring advising senior lenders on the deal.

The company began negotiations with project finance lenders in March 2023 but entered troubled waters with its mezzanine lender consisting of funds managed by affiliates of Ares Management later that year after the fund manager claimed that the company engaged in "illegal theft of value" in the restructuring process.

By November however, the Irish developer's Huemul and Condor asset portfolios both saw their debt successfully renegotiated, roughly \$500 million for each portfolio. Terms renegotiated included deferral periods for interest and principal payments in addition to other concessions.

Ares Management also acquired a 10% equity stake in the renewable platform in the process and the developer landed an up to \$220 million financing facility at the corporate level from DNB.

"Big players such as Mainstream and large banks have been able to reach agreements so there's proof that there is room for getting these deals fixed. Sponsors and lenders alike have taken cooperative actions in order to get issues solved because the underlying assets are good quality assets with solid offtakers," Daniel Parodi, director of the banking & finance department at Philippi Prietocarrizosa Ferrero DU & Uría (PPU).

In late 2023, Chile's Latin America Power (LAP) filed for Chapter 11 in the US on common accord with its creditors in order



to restructure more than \$430 million of debt, a process the company is expecting to wrap up by the first quarter of 2024. The developer owns the 193MW San Juan wind project, operational since March 2017, and the 46MW Totoral wind project which has been operating since 2010.

Mainstream and LAP are not isolated cases. Several large utilities including Ibereolica and EDF Renewables continue to express concern for their Chilean assets if changes in regulation are not made, while other smaller private restructurings of individual assets occurred in 2023, sources said.

The wave of restructurings has not made lenders feel any more at ease, especially as the project financing market continues to deal with unusually high interest rates, but optimism remains. "The bigger issue these past few years has been the DisCos PPAs. You have good underlying assets, but with these PPAs it has been hard for some to actually make money."

**Juan Carlos Valdivieso**, partner at Morales & Besa

While new amendments to the legislation have yet to be completely approved, energy storage has proven to be an efficient temporary solution, so much so that lenders will not finance a new project without battery storage in certain parts of the country.

"A year ago when we started talking about what was going to happen with the developers that were facing issues regarding pricing, everybody was talking about a full scale catastrophe," said Parodi. "The market has proven to be a lot more resilient than what some people had envisioned before."

Market conditions could send assets into restructuring again this year, but as changes to regulation are made and solutions sought out, better outcomes for the renewable sector might also be in store for 2024.



For more information on *PFR* Rountables, please contact: Tom Duffell Editor - Power Finance & Risk • +1 (212) 224 3196 • tom.duffell@powerfinancerisk.com.