



U.S. RENEWABLE ENERGY BRIEF

THE TAX EQUITY INVESTMENT LANDSCAPE
SUMMER 2017

INSIDE NORTH AMERICA RENEWABLE ENERGY BRIEF – SUMMER 2017

Topics Discussed:

- Review of tax equity finance in 2016
- Identifying the supply shortage
- The impact of regulatory changes
- Developments in yields and structures

Welcome to the fifth edition of US Renewable Energy Brief. As we begin to wrap up the summer, we are pleased to report that the renewables tax equity and debt market is in an extremely healthy state. There are now over 45 active providers of tax equity, and new investors continue to enter the market. Furthermore, those that have been in the market for some time are becoming increasingly comfortable with the evolving project risks. This improving competitive landscape is resulting in target tax equity yields declining and converging with debt spreads.

And while there was a decrease in tax equity investment volumes last year – J.P. Morgan estimates \$11bn was raised or committed in 2016 compared with around \$13bn in 2015 – investment was higher than the \$10bn invested in 2014 and significantly higher than the \$6.5bn raised or committed in 2013.

We are optimistic that the material influx of new investors will provide a better balance, such that the overall volume is not just 3-5 investors, which

will mitigate macroeconomic risks if we were to see another downturn like 2009.

We are also optimistic that more investors will partake in smaller DG and utility projects as well as portfolios, where there has historically been a shortfall of tax equity appetite.

Then, there is the situation in Washington. Increased investors will mitigate the impact of the tax rate reduction. The increasingly resilient tax equity market has been powering through tax reform uncertainty with only a select few on the side-line waiting for more clarity.

This report explores these themes through a series of interviews with senior market participants. It also provides an update on developments in tax equity structures and pricing.

We hope you find this newsletter thought provoking and insightful as we begin a busy 4th quarter. As always, we welcome your feedback.

Sincerely,



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THE TAX EQUITY INVESTMENT LANDSCAPE – WHERE IS THE SHORTAGE?

2016 was a robust year for tax equity investment. According to J.P. Morgan data, some \$11bn tax equity was raised or committed in 2016. This represents a decrease on the \$13bn invested in 2015, but is above the \$10bn invested in 2014 and the \$6.5bn invested in 2013.

The annual decrease was caused by a curtailment of solar deals from around \$7bn in 2015 to \$5bn in 2016. This was triggered by uncertainty during 2015 that tax credits might not be extended beyond the end of the year. Therefore, many projects that might have been financed in 2016 were, in fact, accelerated and financed in 2015 instead.

Despite these encouraging headline statistics, there is still a shortage of tax equity for any project that is not utility-scale and does not have an investment grade sponsor and offtaker. Tax equity appetite for the following types of projects therefore needs to continue to improve.



Distributed Generation

Distributed generation (DG) projects often struggle to secure tax equity because they are significantly smaller than utility-scale projects. This is the case even when DG projects have an investment grade sponsor and offtaker.

“The shortage is most acute for smaller transactions where the tax equity requirement is less than \$25m dollars. In the distributed

generation market, many transactions do require less than \$25m,” explains Joel Cohn, Partner at CohnReznick. “There are many strong sponsors at this end of the market, so this isn’t the issue. It’s more about the small check size that makes it inefficient.”

To overcome this challenge, some sponsors have tried to amalgamate smaller projects to increase deal size. But even this presents challenges. “Small and mid-sized facilities are difficult to

aggregate – not because the sponsors can't find a sufficient number of projects, but because tax equity investors are reticent to invest their efforts to underwrite transactions with a number of different underlying projects. Aggregating projects requires different offtakers, leases, and whatever other arrangements there might be," continues Cohn.

"The primary goal of developers of DG projects should be to obtain an offtaker with the best possible credit quality. You then must de-risk the projects as much you can. You need to prepare a deal to present to tax equity leaving as little doubt as possible in the evaluation process that the sponsor understands what they are doing and knows how to get things done. You need to take care of the concerns that the investor might have once it begins its analysis."

Despite the inherent challenges of securing tax equity for DG projects, there are signs that some new tax equity investors, especially regional banks and insurance companies, are targeting DG and smaller projects. There are also some examples of funds being pooled to invest in a series of DG projects. One example is the solar DG fund launched by Empower Energies and WGL Energy Systems in November 2016 in collaboration with an undisclosed global strategic tax equity investor.

Residential

The ability to raise tax equity for residential solar continues to depend on the market share of the sponsor. Large residential developers such as SolarCity, Vivint Solar, and Sunnova have secured hundreds of millions of tax equity finance dollars during the last five years. But smaller developers struggle to raise tax equity due to the small check size.

The outlook for the residential solar market is more uncertain than in previous years. According to the Solar Energy Industries Association and GTM Research, residential installations grew 19% in 2016, a significant decline compared to previous years. This was underpinned by a slowdown in new customer acquisitions in established solar markets. The long-term prospects for the industry will depend on a number of factors, including net metering regulation, the proliferation of combined storage and solar systems, and the impact of rising community solar installations.



For these reasons, as well as the different risk profile of residential projects, there is a sense that banks are pulling back from the residential tax equity market.

Merchant Projects

Projects in merchant markets, such as in the panhandle region of Texas, are notoriously difficult to finance. The lack of PPAs and basis risk means the cash flows and the date at which ownership of the project will "flip" from the tax equity investor to the sponsor can be difficult to predict.

That said, some tax equity investors have financed merchant projects, particularly if there is a hedge agreement in place that provides investors with some certainty on the project's cash flows. For example:

- In February 2016, BHE Renewables and HSBC committed to provide tax equity to the 230 MW Mariah North wind project. The project, which serves the ERCOT market, has a 13-year fixed price hedge for its power production.
- In May 2016, Allianz Capital Partners and State Street provided tax equity to the 200 MW Colbeck's Corner wind farm in Texas.
- In July 2016, Apex Clean Energy and Northleaf Capital Partners arranged \$330m of debt financing, \$300m of tax equity commitments and a \$50m back leverage loan for the Cotton Plains portfolio, located in Texas. JP Morgan, U.S. Bank and Tyr Energy provided the tax equity financing.

- In September 2016, GE Energy Financial Services and BNP Paribas each provided 50% of the long-term tax equity finance for the 163 MW Falvez Astra wind farm.

While some tax equity investors are active in merchant markets, the inherent risks mean that the number of market participants is significantly smaller. “The greatest shortage of tax equity for wind projects is in the Texas panhandle,” confirms Nick Knapp, Principal & Managing Director at CohnReznick Capital. “ERCOT is overexposed for the traditional guys right now. Perceived congestion and basis risk means investors are just hesitant to play there. That said, we are working on many projects there and making strong progress with traditional and new investors. But the number of investors is certainly more limited than for a standard project where you can go to 30-45 names. In the panhandle, it is more like 5-10 investors you can go to.”

“Tax equity investors are taking limited merchant exposure through traditional hedge products, however I don’t foresee them assuming pure merchant exposure,” explains Dave Hancock, VP of M&A and Finance, Novatus Energy. “Merchant projects are inherently challenging for tax equity investors due to the uncertainty they create related to investment tenor and return profiles. There is however significant opportunity for tax equity investors to be market differentiators if they are willing to assume incremental merchant risk.”

In some states, securing tax equity for merchant projects could be possible by utilizing solar renewable energy certificates (SRECs). These are provided to projects in certain states, like Maryland and New Jersey, based on the volume of megawatt hours produced. They provide an additional revenue stream to power sales.

“Generally speaking, it is not attractive to invest in projects in merchant markets where you can’t control dispatch and there is minimal scarcity pricing. This is pretty much the case in every power market in the U.S.,” explains Tim Short, Director, Clean Energy Infrastructure at Capital Dynamics. “There are some hedge solar projects in ERCOT, but I don’t think we will see any pure merchant solar in any market. The interesting exception is the SREC markets where you can underwrite a project on the back of

SREC revenues, get a contract for this, and view the merchant power as upside. Your financing is based on your SRECS and not your power.”

Corporate PPAs

The number of projects with corporate PPAs, where a corporate entity is the power offtaker rather than a traditional utility, is increasing significantly. Roughly 1.56 GW of renewables power was contracted under corporate PPAs in the U.S. and Mexico in 2016, according to the Business Renewables Center of The Rocky Mountain Institute (BRC). This amounted to less than half of the 3.25 GW contracted in 2015, but was significantly higher than the 1.18 GW contracted in 2014 and the 0.77 GW contracted in 2013.

A number of corporate PPA projects are being financed with tax equity. For example, Enel Green Power’s 400 MW Cimarron Bend wind project secured \$500m of tax equity in September 2016. Google is the offtaker for half of the power. A month later, the 253 MW Amazon Wind Farm secured tax equity from Bank of America Merrill Lynch and GE Energy Financial Services. Amazon is purchasing 90% of the power output.

These examples demonstrate that tax equity investors are perfectly willing to finance corporate PPA projects. That said, there are a number of important considerations for sponsors, offtakers, and investors to ensure efficient financial close. Some of the main considerations are summarized below:

1. **Offtaker Rating:** Investors will likely only finance corporate PPAs if the offtaker can demonstrate a steady long-term demand for power and has an investment grade rating. These characteristics are possessed by nearly all regulated utilities. But most of the largest corporates will struggle to commit to purchasing a certain volume of power at a certain price for the next 10 to 15 years, let alone for the 20-year term of most standard utility PPAs. Many potential corporate offtakers are not publicly traded, so securing a credit rating can be difficult. Some corporates will also prefer that the offtaker is a division of the parent company with a sub-standard rating. For these reasons, it will be difficult to finance corporate PPAs where the offtaker is anyone



but a huge corporation like Google, Amazon, or Iron Mountain. Corporates with anything less than an investment grade rating could consider obtaining a letter of credit from a more creditworthy affiliate. Investors should also consider protecting themselves from investment rating downgrades by inserting language in the investment documentation that further credit security needs to be provided in the event of a rating downgrade.

2. **Basis Differential Risk:** There can be a difference in electricity price at the point where electricity is injected into the grid (the bus bar) and the point where it is extracted from the grid (the local hub). In utility PPAs, the utility takes this risk and pays for electricity at the price it is produced at the bus bar. But with corporate PPAs, the sponsor is required to take this risk. Consequently, cash flows are more difficult to predict.

“If a corporate PPA looks like a utility PPA, there is plenty of appetite to invest in it. But, as they drift further away, the appetite narrows,” explains John Eber, Managing Director, Energy Investments, at J.P. Morgan. “One particular issue is that corporate PPAs want the power priced at the local hub where they take it instead of at the bus bar where it is delivered. This creates basis differential risk. There is greater basis differential risk in areas such as Texas and Oklahoma where there has been significant build.”

“Many of us tax equity investors bank and do other business with these large corporates, so are happy to work and do business with them,” says Eber. “But the forms of these PPAs vary

significantly and some are a lot more attractive than others. The pool of investors in corporate PPA projects is narrower and people are less likely to invest than if it were a standard PPA project.”

3. **Rights to Project Collateral:** There are also some more technical challenges. Corporate offtakers will often seek first lien on project collateral should the owner enter bankruptcy and not be able to meet payments due under a hedge PPA agreement. However, investors – especially debt providers – will also often seek first lien on this collateral. This challenge is certainly not insurmountable, but it is crucial to think through this issue early to avoid potential problems near financial close.

“We’ve been able to get two corporate PPA proxy revenue swap projects done. While tax equity investors are happy financing these projects, it’s really important that the structure and contract language are attractive,” explains Conor McKenna, Principal & Managing Director at CohnReznick Capital. “It’s a matter of using financeable language. Sometimes PPAs get brokered by people that don’t know about tax equity financing. What is needed for standard tax equity is not much different than what is needed by lenders.”

CAN NEW INVESTORS PLUG THE GAP?

From regional banks and insurance companies to major tech companies, new classes of tax equity investors are entering the market and, in some cases, competing with the established providers. This section of the report explores who these

new investors are and whether they can make up the tax equity shortfall highlighted earlier.

Regional Banks & Insurance Companies

Every market participant interviewed for this report stated that regional banks and insurance companies are ramping up their interest in tax equity investments. One of the most active newer insurance company tax equity investors is Allianz. In February 2017, the insurer invested an undisclosed sum of tax equity alongside Mitsubishi UFJ Financial Group in the 225 MW Great Western wind farm in Oklahoma. It had previously invested alongside BoA Merrill Lynch in two wind farms located in New Mexico.

This new class of investor is coming to the market for two reasons. First, tax credits were extended at the end of 2015. This provided investors with comfort that investing in human resources to understand the tax equity investment landscape was worthwhile as it is now likely there will be a robust pipeline of future projects. Second, many insurance companies or regional banks are now comfortable with directly investing in tax equity after investing in syndicated transactions in the past few years.

“Regional banks and insurance companies are coming to the market,” confirms Cohn. “This was largely triggered by the extension of tax credits under U.S. tax law. They now see an opportunity and a runway so it makes sense to invest their knowledge and resources and build some internal capacities and overhead to make a serious effort to invest in the industry. The smaller transactions are a natural entry point because they can mitigate their risk by investing smaller amounts initially. Also, because it is an underserved market, they can price a little differently and can theoretically earn a higher return because of the misalignment of supply and demand.”

While Allianz has primarily invested in wind projects, new tax equity investors will likely plug the gap of financing for small solar assets. This is partly because solar projects have a small check size, but also because the tax benefits for ITC investments can be realized in one year. The tax benefits for PTC investments can only be realized in a longer timeframe.

“Insurance companies are the next group of investors to provide tax equity, and I expect five to ten new material names to come to the market,” explains Knapp. “Some have already closed deals and more are exploring deals. These new investors will plug gaps on the solar side. New investors like the nature of the ITC because it is more of a fixed return profile and they know what they are getting and this is not going to change.”

CohnReznick Capital has closed several large tax equity financings for ITC deals with insurance companies that are new to the renewable energy market and remain undisclosed. These new investors will provide immediate relief to solar, especially DG and maybe residential, and we are optimistic this will eventually move into PTC deals to help the constrained area of the wind market.

“Some regional banks are providing tax equity to previously underserved local markets,” confirms Hancock. “Local developers have traditionally struggled to raise tax equity from bulge bracket tax equity investors, and as a result regional banks have become more active in providing this type of capital in the regions which they serve.”

Corporates

Just as regional banks and insurance companies are entering the tax equity market, corporates appear to be pulling away. This is certainly not a sign that they are going cold on renewables. Instead, many corporates now favor being the renewables power offtaker rather than a tax equity investor.

“Some corporates have entered the tax equity market but others have exited,” confirms Hancock. “Many corporates prefer the risk-adjusted return profile of being an offtaker to that of being a tax equity investor. By assuming the role of an offtaker, they avoid the potential reputational risks associated with benefiting from tax credits whilst maintaining their environmental responsibility goals through the acquisition of renewable energy credits.”

The case of Google illustrates this trend. It invested tax equity in eight transactions totalling an estimated \$1.9bn between 2013 and 2015. But Google hasn't invested any tax equity since late 2015, according to Clean Energy Pipeline data. Meanwhile, it has entered into four renewables

PPAs for an approximate combined 700 MW in 2015 and 2016, according to the Business Renewables Centre.

TAX EQUITY AND THE REGULATORY LANDSCAPE

The demand and supply of tax equity is significantly determined by the regulatory landscape. The three most important factors are the level of certainty regarding the PTC and ITC, state-level renewables incentives, and the mooted proposals to reduce corporate tax.

There is currently a relative level of certainty regarding the PTC and ITC. The PTC was extended in December 2015 through to 2020, though the level of tax benefits will be gradually reduced. The solar ITC, worth 30% of the investment value, was extended to projects that commence construction by the end of 2019, as long as they are placed in service by 2024. Projects that start construction in 2020 will receive a 26% credit, those starting construction in 2021 will obtain a 22% credit, and those starting construction in 2022 will get a 10% credit.

While President Trump has promised to slash spending on renewables, it is not expected that the PTC and the ITC will be affected. Instead, as outlined in an executive order in March 2017, initiatives such as the Clean Power Plan will be rolled back, while the Environmental Protection Agency's budget will be slashed. Withdrawal from the Paris Climate Agreement will also not directly impact the PTC or ITC.

Importantly, a number of states have stated they will individually uphold the standards of the Paris Accord. In addition, many state-level incentives for renewables remain robust and, in many cases, are being bolstered in counter to Federal initiatives.

For example, New York state announced in July that it will invest \$440m in a transmission network that will support renewables development and assist the state in achieving its Clean Energy Standard goal of 50% renewables generation by 2030. This announcement came a month after the state announced up to \$1.5bn in renewable energy projects. Meanwhile, California passed legislation in May 2017 to generate 100% of its electricity from renewables by 2045.

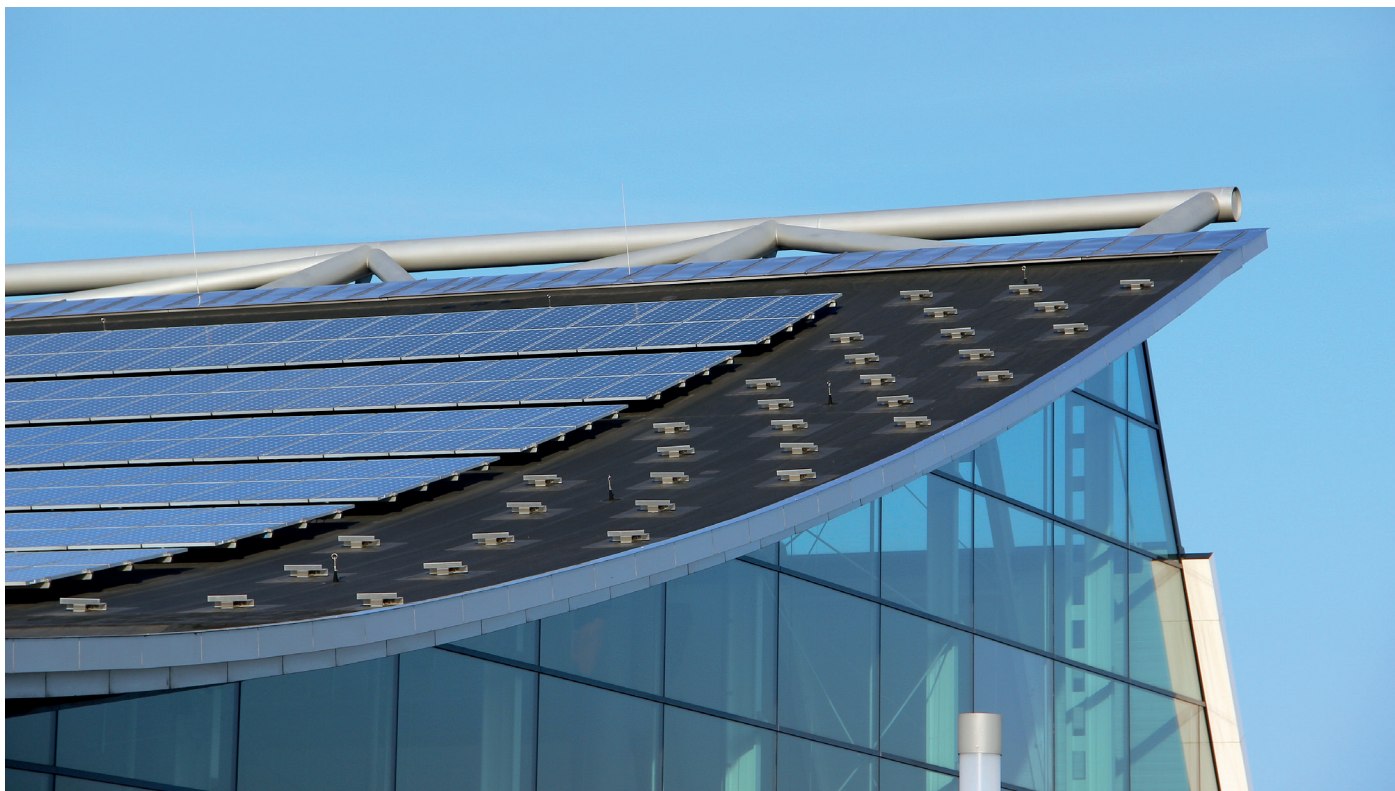
However, mooted plans to lower corporate tax rates could also have a significant impact on the appetite for tax equity investment. President Trump has repeatedly expressed a desire to reduce corporate tax rates from 35% to 15%. Less dramatic reductions have also been discussed. Should this happen, companies will have less of a need to write off tax through tax equity investing, hence reducing their capacity for tax equity investments.

So, to what extent are investors taking a corporate tax rate reduction into account when underwriting deals? And if they are, how is this impacting financing terms? Hancock notes, "Most tax equity investors are factoring in a marginal tax rate reduction, however it is the timing and magnitude thereof which varies," he says. "The risks associated with changes or proposed changes to tax law are mostly being borne by the sponsors through various credit enhancements benefitting the tax equity investor. In many cases this results in less tax equity quantum being invested upfront and modified transaction mechanics which allow for capital contributions to the sponsor at a later stage should the tax law changes not materialize."

The staggered PTC reduction combined with potential tax reform has made utility-scale wind projects relatively less attractive than solar for tax equity investors. This in no way means that tax equity will stop targeting wind investments. But they have certainly become more challenging from a risk perspective.

"It is just easier to do a solar project than a wind project right now because the PTC is earned over ten years, whereas the vast majority of solar ITC credits and MACRS depreciation are generated in one year," explains Short. "In a world of tax uncertainty, the impact of tax reform can be net positive for solar projects because you might only have a small amount of MACRS left to be impacted by the change to the tax rates. Then, you have the back end to the project that benefits from the lower corporate rate if you are a tactical investor, which a lot of us are."

"The PTC stepdown is also at play and is meaningful. Developers' expectations for their returns on projects is not necessarily in line with the reduced PTC rates that one can expect. That's not to say that there aren't wind projects out there that make plenty of sense. But it's an added factor and is another challenge versus solar today.



So we are seeing more appetite and easier execution for solar tax equity instead of wind at the moment.”

STRUCTURES AND PRICING UPDATE

Tax equity yields depend on a number of factors. These include the technology, project size, and financing structure, as well as the credit quality of the offtaker and sponsor. That said, the series of market participants interviewed for this report identified some common trends.

First, after-tax flip yields for utility scale solar projects are in the range of 6.5%-7.75%. After-tax flip yields for utility scale wind projects are slightly higher, generally between 6.75% and 8%. These returns have declined in the past 12 months as more investors have come to market and become comfortable with the technology and financing arrangements. There is also a yield premium on hedge deals compared with standard PPA deals of 25-50 bps.

On the flipside, yields for many DG portfolios remain high compared with utility-scale projects. Knapp explains why.

“In the smaller check size and DG space, there is some difference and it's driven by supply and demand. Some investors realized they were the only players in this space, and were

spearheading it, so they have maintained their pricing, and in some cases slightly increased.” Knapp adds, “They also want to syndicate and want a liquid market so need to be able to do this at economics that incentivize other investors to come in.”

The consensus regarding tax equity structures is that there have been some minor changes although the core structures have remained very much the same during the last two years. One notable trend is that tax equity investors are increasingly willing to be less conservative and take a smaller proportion of their overall returns as cash benefits.

“We have noticed a trend of tax equity investors being willing to take a smaller proportion of their total return in the form of cash distributions,” confirms Hancock. “In the past, there was certainly a preference for a higher percentage of total return being sourced from cash. This preference has gradually subsided as tax equity investors have become less cash sensitive. Otherwise, financing structures have remained fairly consistent.”

There is also a discernible trend for tax equity investors being more accommodating with regards to cash allocations to sponsors. Investors are increasingly enabling cash to be provided to sponsors early in the deal to accommodate back leverage structures.

“The cash allocation mechanisms we have been employing have constantly upgraded to the extent that they can accommodate various forms of back leverage in the deals,” explains Eber. “They have been improving so much that back leverage in the deals is pricing at the same level as if it was project level debt. This is the result of an acknowledgement of tax equity investors that back leverage is very important to our partners. We need to help accommodate this as much as we can because we really aren’t in a

position to bring this in as project level debt. Eber adds, “Many of us have been accommodating back leverage by cash allocation mechanisms, allowing them to have a stream of cash out of the deal without us necessarily having any rights towards it during the primary term loan agreement.”

For more information on this and other topics, please visit: <https://www.cohnreznick.com/industries/renewable-energy> and <https://www.cohnreznickcapital.com/press-center-2>.

About CohnReznick LLP

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Today’s renewable energy industry is a complex and evolving landscape of change, growth, and opportunity. Companies active in this sector face a range of financial, tax, and audit issues that can be best addressed by an audit and advisory firm with dedicated expertise in renewables. Our knowledge of this dynamic and evolving sector allows CohnReznick to proactively address our clients’ issues and needs. Our integrated team is fully engaged in the industry across all major energy segments, delivering holistic solutions to complex problems facing renewable energy companies. Our many clients across the renewable energy spectrum are comprised of independent power producers, developers, EPCs, utilities, tax equity investors,

and infrastructure and private equity funds. Working with CohnReznick Capital, we make up the largest renewable energy advisory team in North America.

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About CohnReznick Capital

At CohnReznick Capital our team creates unprecedented firsts, providing investment banking services to the sustainability sector. Since 2010, CohnReznick Capital has executed more than 90 project and corporate financings for renewable energy assets, valuing more than \$11 billion in aggregate. As the #1 ranked Renewable Energy Financial Advisor by IJ Global Magazine, we deliver exceptional service for financial institutions, infrastructure funds, strategic participants (IPPs and utilities), and leading global clean energy developers. Our team of experts help our clients breakthrough the dynamic and evolving sustainability sector by simplifying project finance, M&A, capital raising and special situations. To learn more visit, www.cohnreznickcapital.com, follow @CR_Capital on twitter, and connect with us on LinkedIn, Facebook & Instagram.

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