



Renewable Energy Financing in the United States: The Year Ahead

A whitepaper in conjunction with:



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FOREWORD



This report on the U.S. renewables market arrives at an inflection point not just for the industry but for society in general. As we look to revitalize the U.S. economy following the damage wrought by COVID-19, there is a clear sense that this is a unique opportunity to develop a more sustainable future. 2021 proved that clean energy can withstand societal and economic shocks and now renewable generation can beat fossil fuels on both cost and speed of deployment.

Like the renewable energy sector, CohnReznick LLP (“CohnReznick”) has risen to the challenge of creating solutions to enable the transition to a low-carbon system and assist our clients in effectively navigating the renewable energy industry’s complex and evolving financial, tax and regulatory landscape. As we look ahead to 2022 and beyond, we are excited about the tremendous tailwinds propelling the clean energy transition, collectively driven by numerous stakeholders including independent power producers, investors and corporations. The commitment to environmental, social and governance (ESG) in the current business and political environment, coupled with the growth of conventional renewable energy and new clean technologies, has us more optimistic than ever.

<https://www.cohnreznick.com>

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If one trend determined the fate of renewables in 2021, it was probably the global shift towards greater ESG investing.

At CohnReznick Capital Markets Securities, LLC (“CohnReznick Capital”), this is a shift that we have been primed for since inception.

As one of the very few dedicated renewable energy advisors with a female equity owner, we have been driven by our passion for ESG and sustainability since day one.

This passion shines through in our relationship with clients, whether we are helping developers raise capital for projects, figuring out the tax structure for carbon-capture projects or helping investors navigate their way through the cleantech sector.

These traditional client groups were joined in 2021 by a rush of companies from sectors as diverse as insurance, technology and financial services, looking to renewables as a way of improving their ESG exposure and impact. With so many investors looking to enter this space, we have our work cut out to get all projects financed. But we are not daunted by the challenge. On the contrary, we are delighted to be involved in every deal that brings the energy transition closer.

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INTRODUCTION

Last year was one of rapid progress on multiple fronts, with the renewable energy industry sprinting forward in the wake of COVID-19. Renewables have surged and remain poised to grow. On November 15, President Biden signed the Infrastructure Investment and Jobs Act, a \$1.2 trillion bipartisan infrastructure bill, which includes upgrades to power infrastructure and plans for a national network of electric vehicle chargers. However, many hope that this is only a prelude to a much more wide-ranging legislative package, the Build Back Better (BBB) bill, which was stalled in the U.S. Senate as this report went to press. While it appears that the version of the BBB bill that passed the U.S. House may not survive in its original form, it is believed that many of the climate-related provisions agreed to by the House may ultimately become law, even if in a different form. Regardless, both pieces of legislation are notable not only for their scale, but also because of the economic support they provide to the energy transition.

“It must rightly be said that to date U.S. federal clean energy policy has essentially been federal tax policy,” says Lee Peterson, Senior Manager for project finance and consulting at CohnReznick. “The federal infrastructure legislation appears poised to create policy for the first time that could tip the scale toward a truly modern 21st century energy future. And it would do so without primarily relying on federal tax policy.ⁱ The passing of this first infrastructure bill was truly remarkable.”

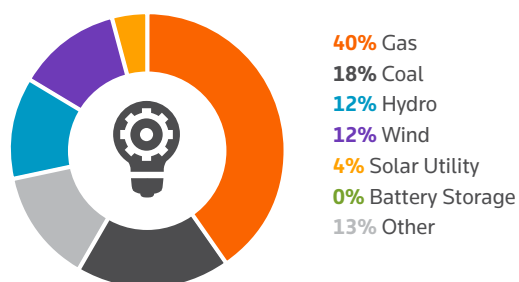
However, there is still work to do, says Britta von Oesen, Managing Director at CohnReznick Capital. “I don’t think we’re on track,” she says. “I think there are some fundamental components of the industry that make this extremely difficult, namely upgrades to the grid, storage mandates and transmission lines.”

While some of the policies currently under consideration will help, she says it remains to be seen what will be passed and implemented.

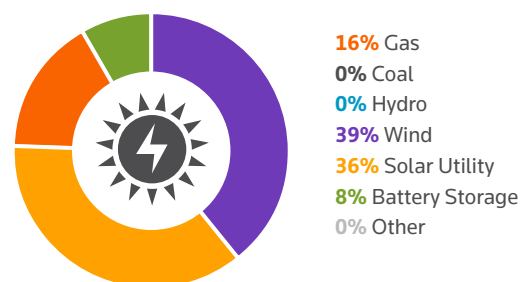
Now the country waits to see if the Senate will pass either the BBB bill or a meaningful substitute to further bolster the growth of renewables, which could be a windfall for new renewable technologies. However, it is likely that solar, wind and other kinds of commercially viable clean energy technology will continue to see year-on-year growth regardless of its passage, although the issue of extending the production tax credit (PTC) is still an open item at the beginning of 2022.

Another significant trend is the extent to which renewable energy is increasingly becoming a proxy for all energy in the U.S. electricity system, as evidenced by the complete lack of coal and minor contribution of gas to new generation capacity in 2021.

Electricity production by source, 2021



New power plant capacity additions 2021 YTD



Wind and solar represented 75 percent of new capacity additions in 2021. Left: 2021 electricity production by source. Right: 2021 power plant capacity additions by source, in megawatts. Source: Energy Information Association, Net U.S. Electricity Generation, December 2021; Wood Mackenzie 2021 base case.

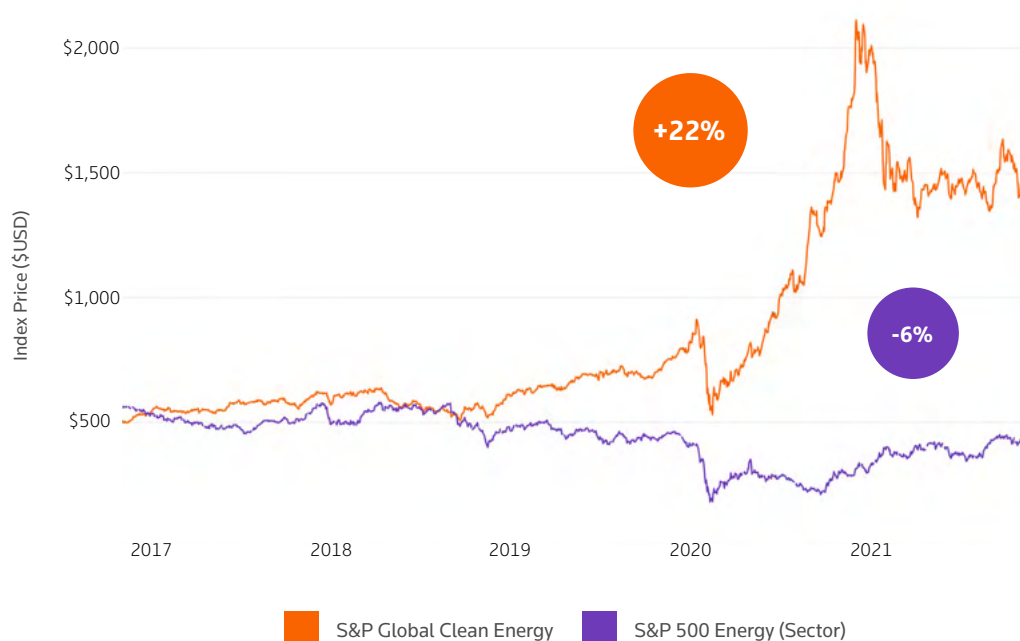
This report, produced in association with U.S. professional services firm CohnReznick and renewable energy investment banking leader CohnReznick Capital, reviews the key trends and developments across the industry in the United States, and the outlook in 2022 and beyond.

It also includes exclusive research carried out by Reuters Events at the close of 2021. The Reuters Events poll was sent out to 24,000 industry professionals, including developers and independent power producers (IPPs), from the Reuters Events renewable energy database.

CohnReznick and CohnReznick Capital forecast

While the final details of the BBB bill had yet to be determined at the time of going to press, the bulk of the climate portion of the legislation looks set to go ahead in some form—and if so, it will be sufficient to change the outlook for U.S. renewables for the foreseeable future.

MERGERS AND ACQUISITIONS



Investor returns on clean energy stocks, to December 2021. Source: S&P Global, December 2021.

The U.S. renewable energy mergers and acquisitions (M&A) market is booming, as investors target renewables as an effective way to fulfill growing mandates for ESG investment.

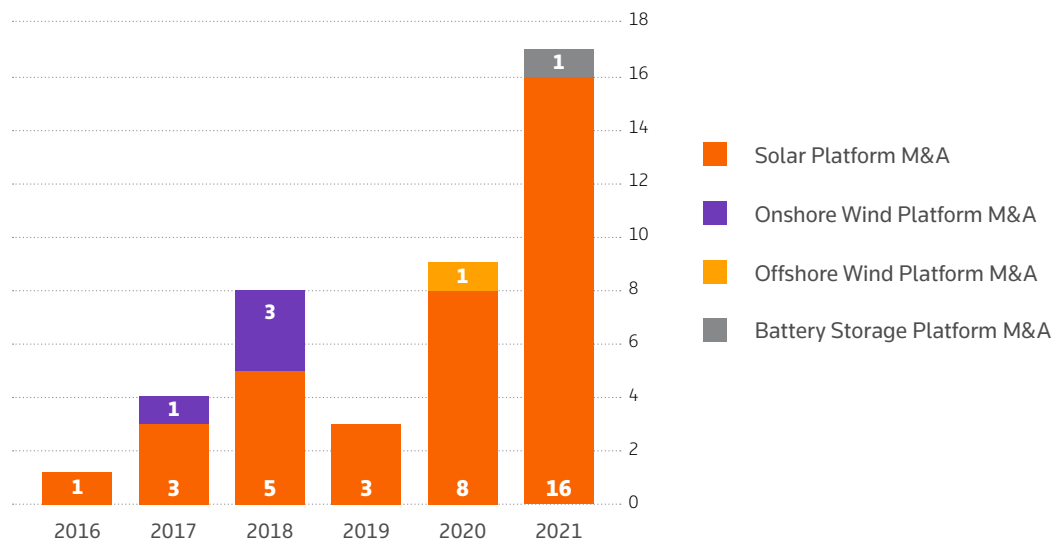
The current rush builds on an already strong market for project M&A, where competition for investment-grade assets remains fierce. What has changed in project M&A, however, is that investors are taking a more programmatic approach to their partnerships with developers. Rather than buying projects one at a time, backers are instead looking to provide stronger commitments to gain access to entire project pipelines.

“A really noteworthy trend on the project side continues to be a strong story of selling down: 50 percent to 80 percent of the sponsor equity is selling to passive investors,” says Nick Knapp, Senior Managing Director at CohnReznick Capital.

“We continue to hear a similar refrain from our clients, along the lines of: ‘We can optimize our returns by bringing in a pension fund or infrastructure fund to balance out the cost of capital for the project.’”

It is not unusual for large investors to proactively source gigawatt-scale portfolios, which helps create pricing certainty. This, however, is just an evolution of existing trends. What is more interesting is that platform M&A doubled between 2020 and 2021. Up until around 2020, acquirers would value a developer based solely on its confirmed pipeline of projects, which might stretch out over two or three years.

Completed transactions of U.S. renewable energy development platforms



Source: Sparksread.com, Renewablesnow.com, available press releases.

This valuation approach of focusing on near-term pipeline ignored the fact that developers could, in theory, build projects for decades. However, rising competition for developers has changed the picture. In the last 12 to 18 months, these companies have come to be seen as development platforms that could continue to deliver profits for the foreseeable future, and valuations are being based on potential for future development.

The impact on valuations has been significant, with average acquisition values at anywhere between three and five times the level they were closing at just 12 to 18 months ago, according to Knapp. “I don’t think it’s a bubble,” he says. “It’s just the appropriate valuations when you factor in the certainty that renewables are here to stay. [Buyers] say, ‘We can look at your track record over the last five years and believe you have a reliable and repeatable model for the next 10 years.’”

“Buyers are willing to pay prices of up to 15 times core earnings for platform investments.”

Nick Knapp, Senior Managing Director at CohnReznick Capital

Underlying this dynamic is heightened demand for ESG investments. “The only way to achieve scale is to acquire a platform because of how hyper-competitive the project acquisition market is,” Knapp observes.

Deal watch: dwindling platform supply drives up competition, prices

Competition for renewable energy development platforms is driving up valuations. Meanwhile, competition is intensifying as bigger platforms are snapped up. Four key 2021 CohnReznick Capital led platform sales include:

- Sale of Community Energy's 10GW solar development platform to AES in December 2021.ⁱⁱ
- Sale of Apex Clean Energy's 30GW development platform to Ares Management Corporation in October 2021.ⁱⁱⁱ
- Sale of 7X Energy's 9GW solar development platform in June 2021.^{iv}
- Sale of First Solar's 10GW solar development platform to Leeward in March 2021.^v

CohnReznick and CohnReznick Capital forecast

Platform plays will continue to be big news for the next 18 months to two years. And we expect valuations going forward to include a premium for platform quality. Yet headwinds prevail, even in leading states like California. The state has been struggling with climate impacts such as extreme droughts and fires, while on the supply side its mix of renewables has made grid reliability a challenge. In addition, given the uncertain impact of recent California regulatory proposals, the market will continue to monitor the impacts that any California Public Utilities Commission (CPUC) decisions may have on projects in that state.

Optimism must also be tempered by the slow progress in introducing financing instruments to promote the use of third-party solar power purchase agreements, with only 28 states^{vi} so far having introduced the necessary legislation. Another challenge is that "distributed generation systems are subject to a different mix of local, state and federal policies, regulations and markets compared with centralized generation," as the U.S. Environmental Protection Agency states.^{vii} "As policies and incentives vary widely from one place to another, the financial attractiveness of a distributed generation project also varies."

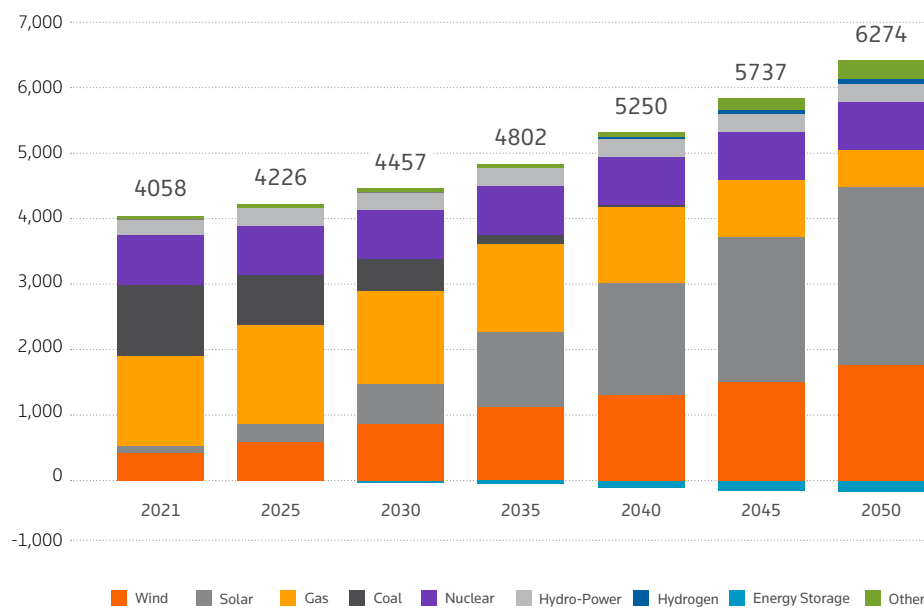
Against this backdrop, the perpetual effort to align state, local and public electric utility monopoly protection laws with federal or global climate change objectives will most likely be slow to achieve its goals. And that is assuming consistent and persistent pro-climate federal efforts. Changes post-election or swings in federal political control would likely continue to render long-term efforts susceptible to short-term economic or political winds.

TAX EQUITY

Tax equity, the motor of growth in the U.S. renewables market, rebounded in 2021 and is set to be “really strong” in 2022 with the addition of many new market participants, according to Conor McKenna, Senior Managing Director at CohnReznick Capital.

Per Britta von Oesen, Managing Director at CohnReznick Capital, “companies in sectors such as insurance, technology and financial services that really want to make an impact on their ESG exposure often consider tax equity investment in renewables.”

U.S. electricity generation (TWh)



U.S. Electricity Generation (TWh). Source: Wood Mackenzie 2021 base case.

This observation should help allay fears that U.S. developers might run short of tax equity with which to fuel new projects. Instead, the market is maturing, with banks sometimes taking the lead and syndicating tax equity deals down to third parties. Yet while the short-term outlook for tax equity is rosy, it remains unclear whether this form of financing will be enough to take the United States through to net zero, given the massive amounts of capital required for the task.

“If we need to do \$200 billion of projects [in a year], there’s not enough tax equity. If you spread that out over 10 years, then we’re doing that already.”

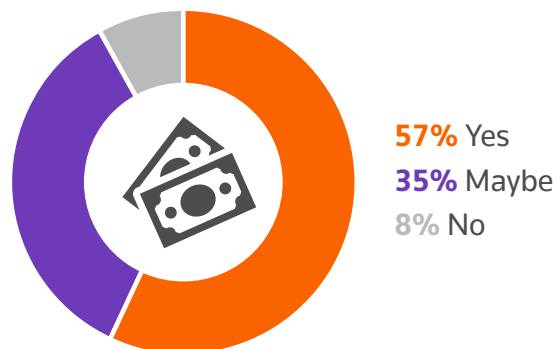
Conor McKenna, Senior Managing Director at CohnReznick Capital

As renewables development ramps up, the market will clearly have to increase the supply of tax equity, which is to some degree dependent on the wider economy. Alternatively, it could introduce new financing measures, such as the direct pay mechanisms proposed as part of the BBB bill, which would allow renewables investors to treat a credit as a payment against tax (provided that certain requirements were met). One simple way to increase the flow of money is to make it easier for companies to take advantage of PTCs and investment tax credits (ITCs).

A seemingly bigger hurdle is when companies must integrate tax equity benefits into income statements based on U.S. Generally Accepted Accounting Principles or International Financial Reporting Standards. “It takes more than a few slides to understand the accounting and reporting for tax equity investments,” says Mark Hooley, Managing Partner at CohnReznick, who acknowledges that tax equity financings are not without complexity.

This could in part explain why the respondents to the Reuters Events survey were overwhelmingly in favor of direct pay instead of tax equity. In the poll, 57 percent said they would consider direct pay instead of tax equity for future project finance needs, and another 35 percent said they might consider it, as opposed to 8 percent saying they would not.

Would you consider direct pay instead of tax equity for anticipated project finance needs?



Answers to the question: ‘Would you consider direct pay instead of tax equity for anticipated project finance needs?’
Source: Reuters Events research responses from developers and IPPs.

According to Hooley, however, the environmental and social benefits of renewable energy tax credit investing are far too significant for complexity to be a gating factor. Of course, numerous tax and financial accounting elections are required and are important as these elections can have varying degrees of impact on pre-tax and after-tax earnings. However, if sufficient time is invested upfront, it can be leveraged to inform subsequent investments and create a repeatable process for internal accounting teams.

In addition, says CohnReznick Capital’s von Oesen, “project finance expertise, particularly for tax equity, can be the delta between whether projects get built or not.”

“Retaining knowledgeable tax and financial accounting advisors is the key to mitigating risks and unlocking the benefits of tax credit investing.”

Mark Hooley, Managing Partner, CohnReznick

If investment size and financing partner weren't an issue, which tax equity structure would you choose for your project?



39% Yield based flip partnership
23% Sale Leaseback
19% Calendar date flip partnership
19% Inverted Lease

Answers to the question: 'If investment size and financing partner weren't an issue, which tax equity structure would you choose for your project?' Source: Reuters Events research responses from developers and IPPs.

This need is underscored by the fact that developers are embracing a wide range of tax structures. Reuters Events asked developers and IPPs which tax equity structure would they choose for their projects if investment size and financing partners weren't an issue. The responses showed a broad range of preferences, with no predominant model.

CohnReznick and CohnReznick Capital forecast

The total number of tax equity investors has risen to more than 70, according to CohnReznick Capital internal data. However, there is still likely to be insufficient tax equity supply for the next two to three years, due to demand growth outpacing supply growth. Despite an influx of new investors, the offshore wind, battery storage and carbon capture, utilization and storage (CCUS) markets will continue growing at a rapid pace.

Strong interest in these technologies will pull tax equity supply away from solar and wind, creating an imbalance. It will take several years for new investors, especially corporations, to start investing sufficient tax equity volume to meet demand.

But there is little doubt more corporations will be entering the market. In the Reuters survey, almost 46 percent of respondents believed that more than 30 new large corporates were likely to become tax equity players over time.

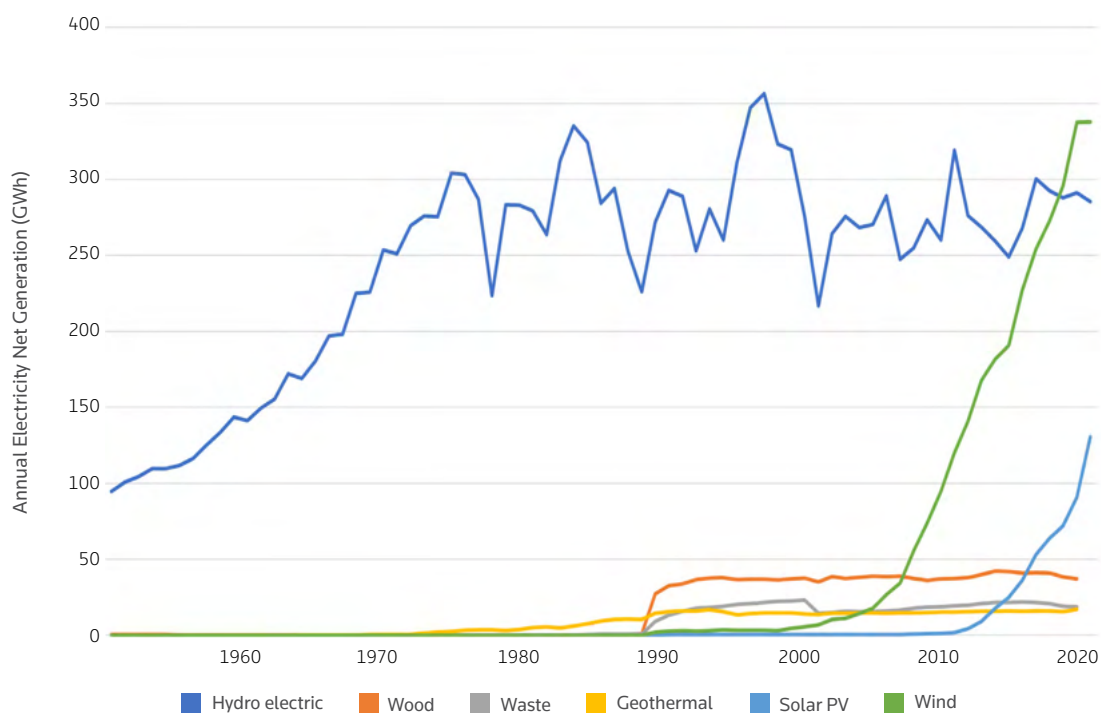
TECHNOLOGY SECTORS

All U.S. clean technology sectors saw growth in 2021—not a surprising fact after COVID-19 dampened development in 2020, but nevertheless a welcome trend for investors. This review summarizes the main sector trends.

WIND

Wind power remains the top contributor to new clean power generation in the United States. Even though annual solar capacity additions have outpaced new wind capacity in each year since 2016, wind power output remains more than two and a half times that of solar. With record levels of new solar capacity expected in the coming decade, this dynamic is likely to switch by the end of 2030.

Annual U.S. net electricity generation

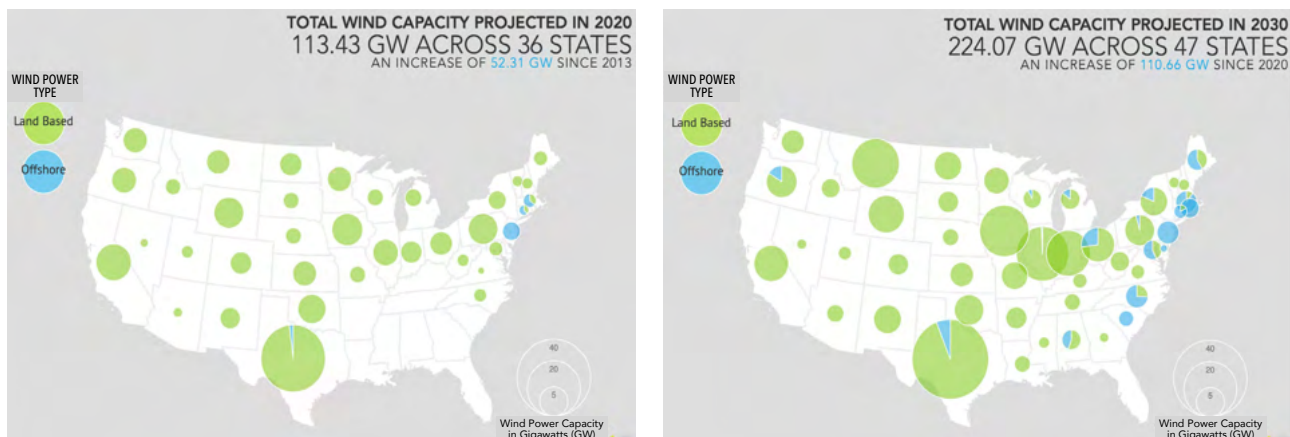


Annual U.S. net electricity generation. Source: U.S. Energy Information Administration January 2021 ^{viii}

If the PTC is retired, as provided for under current law, it is likely that new, tax-motivated onshore wind development will continue to slow, allowing tax-motivated solar to gain ground.

However, if a version of the BBB bill that includes a PTC extension at 100 percent value is passed, new tax-motivated wind project development, as well as the repowering of existing projects, will likely increase over current rates through the extended PTC period.

Projected U.S. wind capacity growth, 2020-2030



Projected U.S. wind capacity growth from 2020 (left) to 2030 (right). Source: U.S. Department of Energy.^{ix}

CohnReznick and CohnReznick Capital forecast

While annual utility solar capacity additions will ultimately exceed that of onshore wind, new wind development will remain a consistent part of U.S. renewable energy development for the next several decades, with or without support from a PTC incentive. Offshore development will be a key driver of wind projects in the United States through 2030 due to a favorable regulatory environment and tax credits that are available specifically for offshore wind projects.

SOLAR

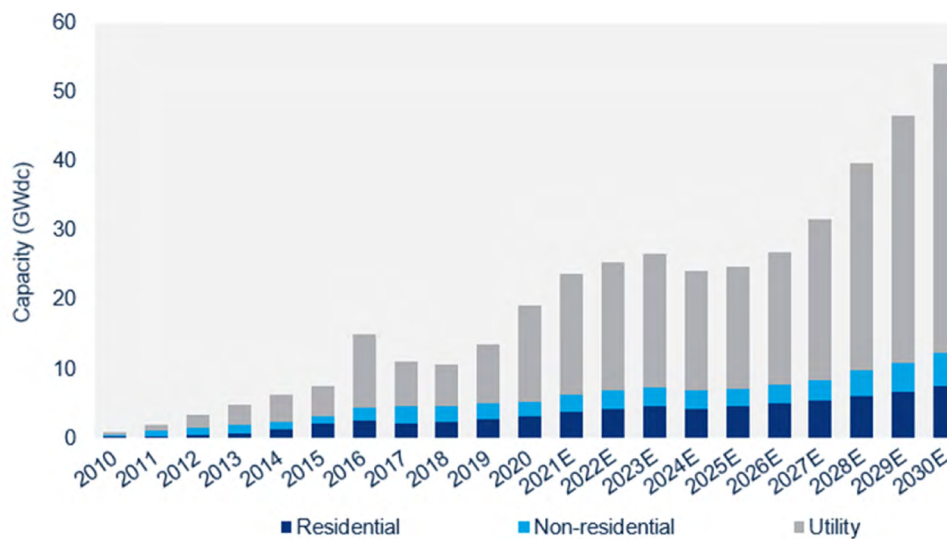
U.S. solar companies have trended towards platform acquisitions, with businesses being valued for their long-term outlook rather than their immediate pipeline. Driven by ESG agendas, the appetite for solar company investments has grown and valuations have soared, which is essential to reach a largely decarbonized electricity sector by 2035.

Over the last decade, solar capacity has grown 50 times, from 2 GW to more than 100 GW in the first quarter of 2021.^x As competition among knowledgeable buyers and investors increases, some backers have been prepared to take risks on companies with less proven track records, resulting in a rosy outlook for the solar industry.

U.S. industry trade organization American Clean Power states that solar technology accounted for 54 percent of the almost 110 GW of clean power under development at the end of September 2021.^{xi}

Looking to the future, CohnReznick and CohnReznick Capital expect solar to represent most of new capacity additions in the United States in the coming decade. This could grow further with the availability of new tax policy such as direct pay along with a 10-year extension to the solar ITC, and ITC for stand-alone storage, and other innovative federal tax policy that might make it through Congress. Such changes would open up cleantech investments to energy users and investors as well as to tax-exempt and loss-making and non-federal government entities.^{xii}

U.S. solar PV installations and forecast, 2010-2030



U.S. solar PV installations and forecast, 2010-2030. Source: Wood Mackenzie^{xiii}

CohnReznick and CohnReznick Capital forecast

Solar capacity will continue to grow. By 2035, decarbonization scenarios show solar deployment in the range of 760 GW to 1 TW, serving between 37 percent and 42 percent of electricity demand, per a Department of Energy study. By 2050, solar could meet up to 45 percent of the demand.^{xiv}

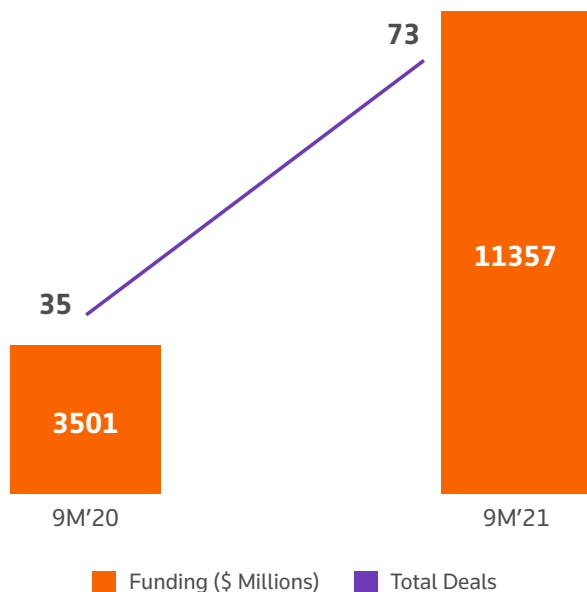
ENERGY STORAGE

Energy storage—predominantly in the form of lithium-ion battery projects—is on the rise. Deals are being done, both for standalone battery and solar-plus-storage projects. “The technology is pretty well proven,” says Conor McKenna, Senior Managing Director at CohnReznick Capital. “After all, it has been in your cellphone for the last 20 years. The cash flows are proven too because we’ve had peaker plants in the U.S. forever.”

McKenna points out that the difference between a peaking power plant and a battery plant is essentially one of variability. “Peakers only work when prices are high,” he explains. “Storage works when prices are high or low, adding to demand response as well as generation. And as long as you’re doing this, you can achieve a positive return on investment.”

Smart investors may even see battery storage as a safer bet than solar or wind because of the nature of the technology. Unlike solar and wind, battery performance is not dependent on weather patterns. And unlike wind turbines, batteries have no moving parts that can break. The key challenge for investors going forward will be to locate sites where storage can offer the greatest value. In the future, says McKenna, “storage becomes a lot like real estate: are you in a good part of town with a manageable commute?”

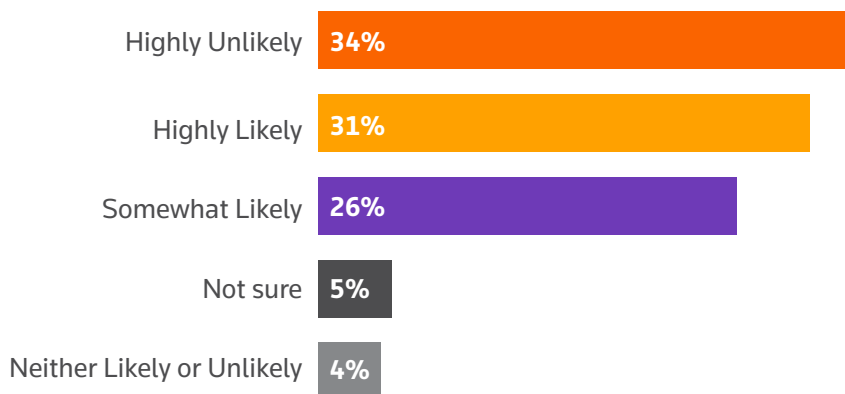
Battery storage corporate funding, first nine months 2020 vs. first nine months 2021



Battery storage corporate funding, first nine months of 2020 versus same period, 2021. Source: Mercom Capital October 18, 2021.^{xv}

The BBB bill envisaged a 30 percent ITC for standalone storage systems—those not required to be incorporated into a wider energy facility. In the Reuters Events poll, almost 58 percent of respondents said they were somewhat or highly likely to invest in or develop standalone storage projects within the next three years if the credit gets passed as part of the BBB bill.

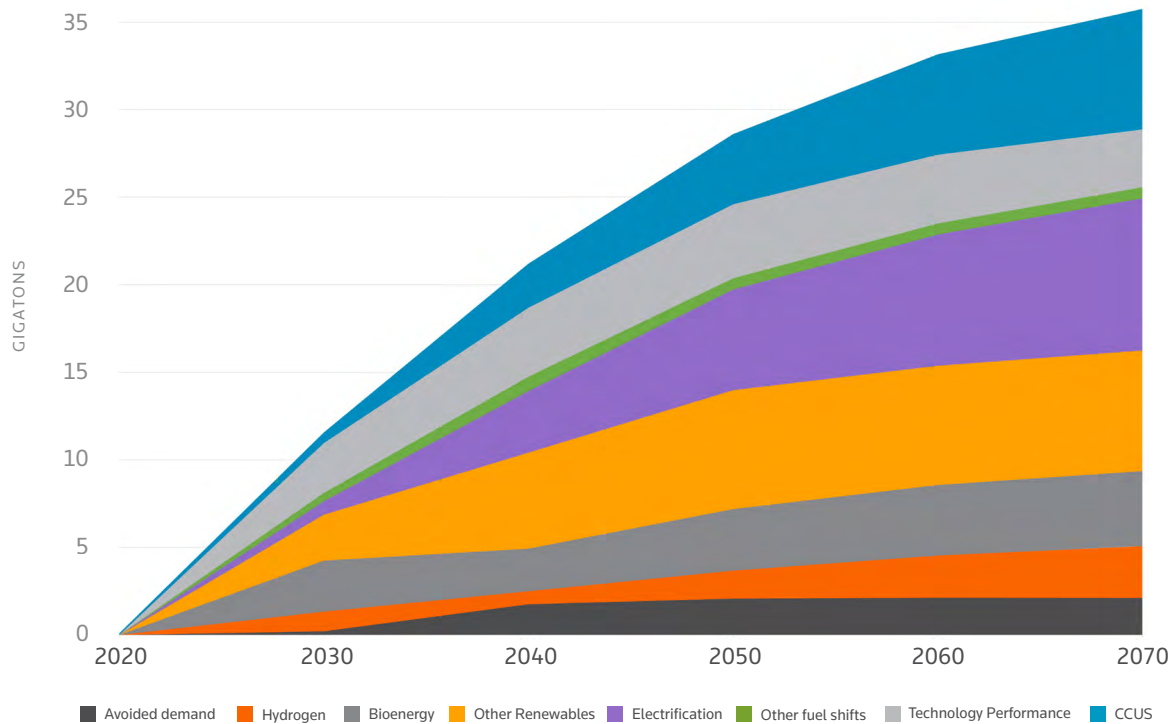
How likely are you to develop/invest in a standalone ITC storage project in the next three years if the credit gets passed as part of the proposed BBB bill?



Answers to the question: ‘How likely are you to develop/invest in a standalone ITC storage project in the next three years if the credit gets passed as part of the proposed BBB bill?’ Source: Reuters Events research responses from developers and IPPs.

CARBON CAPTURE, UTILIZATION AND STORAGE (CCUS)

Gigatons of CO2 emissions reductions in the energy sector under IEA Sustainable Development Scenario



Gigatons of CO2 emissions reductions in the energy sector under the IEA's Sustainable Development Scenario.

Source: IEA, 2020: CCUS in Clean Energy Transitions.^{xvi}

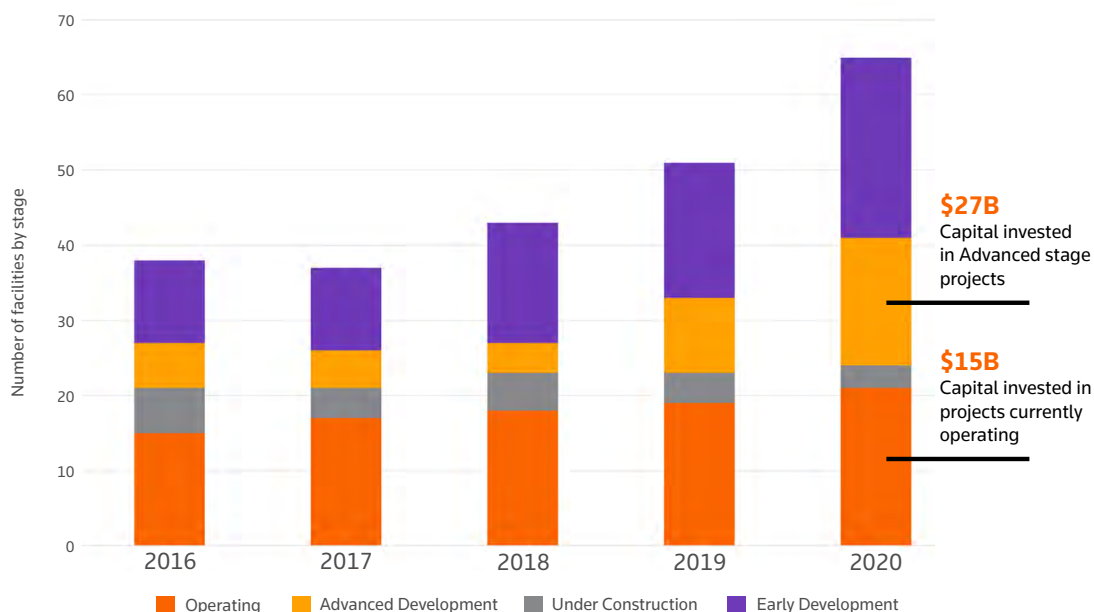
CCUS is increasingly seen as key to achieving net-zero carbon goals around the world. In the United States, the technology is set to benefit from recent changes to the U.S. carbon capture and storage credit. Early market movers are expected to gain advantages as the market grows and diversifies.

Expanding the range of financing options for CCUS is “essential” to the achievement of the United States’ climate goals, says Nick Knapp, Senior Managing Director at CohnReznick Capital.

Nonetheless, achieving the Paris Climate Agreement’s goal of limiting global warming to well below 2 degrees Celsius requires a global effort. Right now, there are roughly 19 carbon capture facilities operating in the United States^{xvii}, which could expand to hundreds within the next decades and thousands globally.

The BBB bill would see the extension of the 45Q tax credit construction window through to 2031.

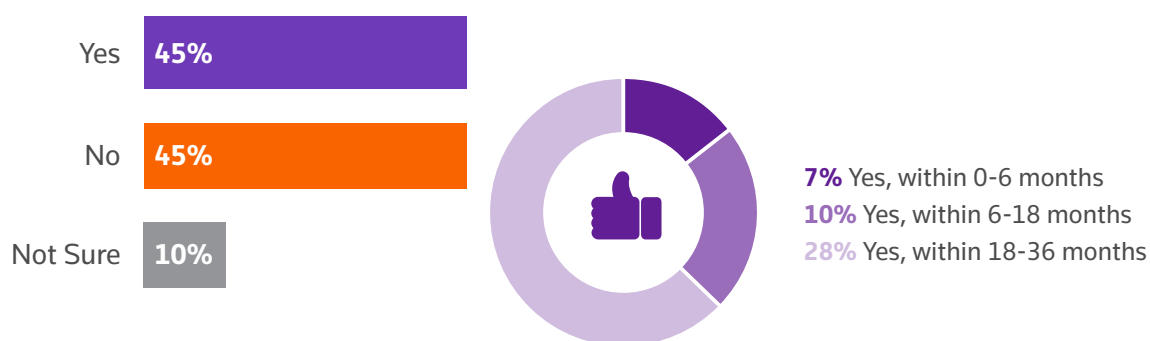
Global large-scale CCUS facilities by development status, 2016-2020



Global large-scale CCUS facilities by development status, 2016 to 2020. Source: International Energy Agency (IEA), 2020: CCUS in Clean Energy Transitions.

In the Reuters Events survey, more than 45 percent of developers and IPPs said they were planning to broaden their sustainability focus by moving into the CCUS space within the next 36 months, with more than 28 percent expecting to do so within 18 to 36 months. The results also showed almost 55 percent either were not sure or had no plans to move into the CCUS space.

Does your company plan to broaden its sustainability focus by moving into the CCUS space?



Answers to the question: 'Does your company plan to broaden its sustainability focus by moving into the CCUS space?' Source: Reuters Events research responses from developers and IPPs.

HYDROGEN

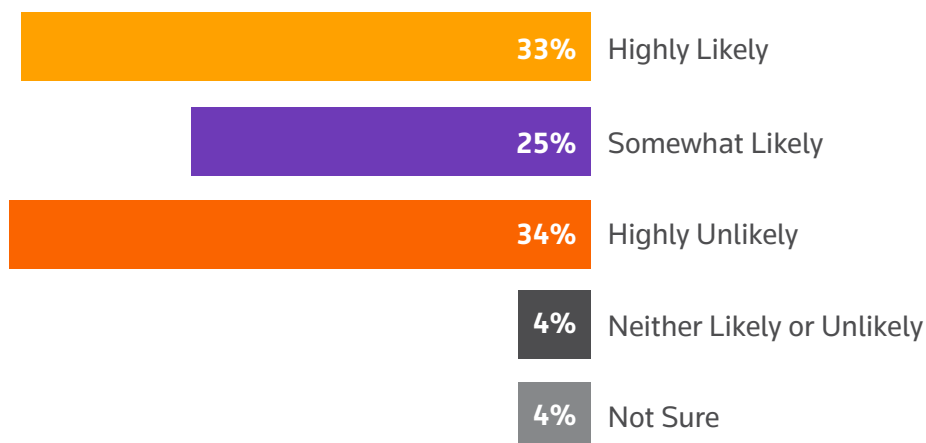
Low-carbon hydrogen—either produced via steam methane reform coupled with carbon capture and storage or via electrolysis of water using renewable energy—is increasingly seen as key to the decarbonization of sectors such as aviation and heavy industry. While these sectors cannot rely on electrification for their heating, power and feedstock requirements, low-carbon hydrogen could be used as a replacement for oil and gas, helping to reduce emissions, either on its own or as a precursor for other fuels.

This prospect has fired interest in the development of hydrogen clusters. For the time being, the market is still nascent and offers few opportunities for investors. One early mover in the sector is New York-based Plug Power, which in October 2021 announced renewable power-sourced hydrogen studies with French aircraft manufacturer Airbus and Houston-based Phillips 66, to decarbonize the aviation and industrial sectors.^{xviii}

The BBB bill would see the introduction of clean hydrogen production tax credits equivalent to a 30 percent ITC or up to \$3 per kilogram of product.

Corporate interest in hydrogen was echoed in the Reuters Events survey, where 58 percent of respondents indicated they are likely to invest in a green hydrogen project in the next three years if the credit gets passed as part of the BBB bill.

How likely are you to develop/invest in a green hydrogen project in the next three years if the credit gets passed as part of the proposed BBB bill?



Answers to the question: 'How likely are you to develop/invest in a green hydrogen project in the next three years if the credit gets passed as part of the proposed BBB bill?' Source: Reuters Events research responses from developers and IPPs.

ELECTRIC VEHICLES

The electric vehicle (EV) transformation in the United States appears to be solidifying and is driving toward an ultimate pivot point. In addition to Tesla, Ford and GM have made major investments not only in research but also in plant and equipment, as have several other automotive makers.

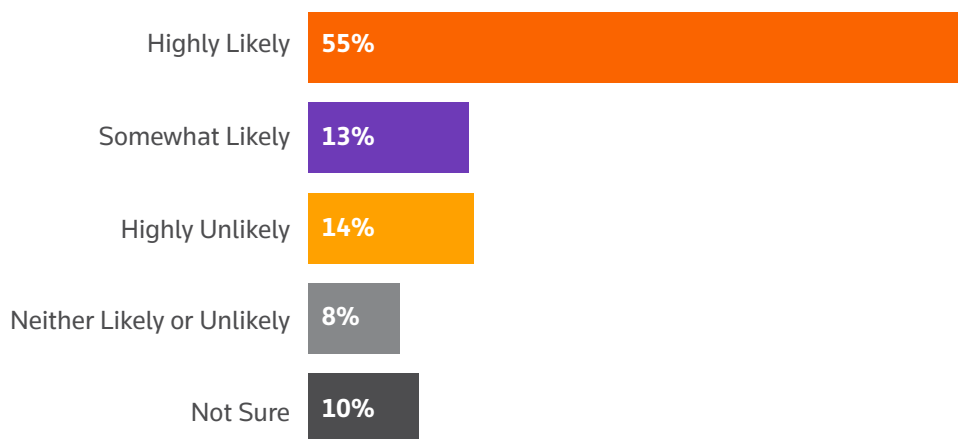
In addition, electric utilities across the United States are generally far more accepting of EV technology than they have been of distributed generation. This issue of public utility acceptance should not be dismissed, as its impact on the political and economic prospects of EV technology stands in stark contrast with the clean energy movement.

With utilities actively supporting EV technology, federal, state and local infrastructure installation and use, as well as policy and incentive support, also should not be underestimated. Federal support for EV charging, and the prospect of vehicle and charging policy support via tax credits, will alone likely accelerate the utilization of EV technology and increase the growth of businesses that serve the sector, including energy storage.

Further out, the prospect of bi-directional charging, either from EVs or stationary residential, commercial and industrial applications, presents a massive market opportunity from an investment and business growth perspective. Should some form of the BBB bill come into law with a strong EV and supporting infrastructure component, we expect even further synergies with cleantech, ESG and domestic manufacturing policies.

Already there is a widespread expectation of increased deal activity in the EV charging space. About 68 percent of the respondents to the Reuters Events survey said EV charging tax equity deals would be somewhat or highly likely in the next three years, on the back of funding from the bipartisan infrastructure and (potentially) BBB bills.

How likely will EV charging tax equity deals be in the next three years?



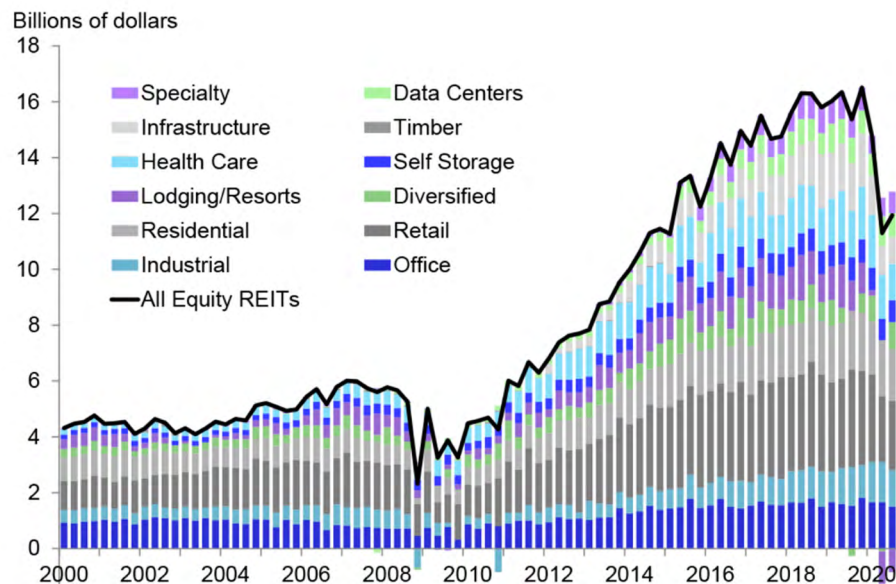
Answers to the question: 'How likely will EV charging tax equity deals be in the next three years?' Source: Reuters Events research.

LEGISLATIVE REVIEW

The most significant development in U.S. renewable energy legislation, not just in 2021 but arguably in a generation, is the combination of the Infrastructure Investment and Jobs Act and the proposed BBB bill.

The Infrastructure Investment and Jobs Act is set to release \$1.2 trillion in funding for infrastructure projects as diverse as broadband networks and public transit systems^{xix}. From a clean energy perspective, there is also a \$65 billion allocation for power infrastructure—not just renewables—and a budget of \$15 billion for EVs.

For developers, perhaps the biggest potential development is within the now-stalled BBB bill: an addition to the newly proposed tax credit alternative system called ‘direct pay,’ which would allow a PTC or ITC to be converted into a refundable federal income tax credit, assuming certain domestic content or other tax requirements are satisfied. “That simple change of allowing it to be remunerated by the Treasury with a mechanism other than a credit, from a tax accounting perspective, is huge,” says Lee Peterson, Senior Manager for project finance and consulting at CohnReznick.



Funds from operations of all listed REITs. Source: S&P Global Market Intelligence, Nareit T-Tracker.^{xx}

Beyond opening tax equity markets to companies that might not have the financial muscle to be interested in PTCs or ITCs, as proposed, direct pay would be available to entities that were economically banned from participating, such as tax-exempt and state or local government bodies. One group that looks set to benefit from direct pay if it becomes law is the real estate investment trust (REIT) market. REITs have historically eschewed investments in clean energy because of complications with the tax accounting rules for tax credits.

“The direct pay proposal changes all that because a REIT can get the cash—and the Build Back Better Act specifically makes a change that allows that,” Peterson says. “Now you have the prospect of opening up one of the largest holders of real estate assets to doing solar.”

There is hope that proposed tax changes originally articulated in the BBB bill will increase REIT interest. For some time, REITs have seen the business case for renewable energy and have been “bringing renewable energy sources into real estate with both onsite and off-site solutions,” according to the National Association of Real Estate Investment Trusts (Nareit).^{xxi}

It is clear that the class of assets that qualify as “real property” has greatly evolved since the inception of REITs, with final regulations issued in 2016 even including certain solar assets. “The broader scope of assets qualifying as real property for REIT purposes, coupled with the direct pay proposal, means that some of the hurdles that kept REITs from investing in renewable energy would be alleviated,” says Sasibeh Beyene, Tax Partner at CohnReznick.

Even if individual REITs may have a limited appetite for renewable energy investment, the aggregate effect of direct pay is “a fairly notable increase in market opportunity and market penetration,” he says.

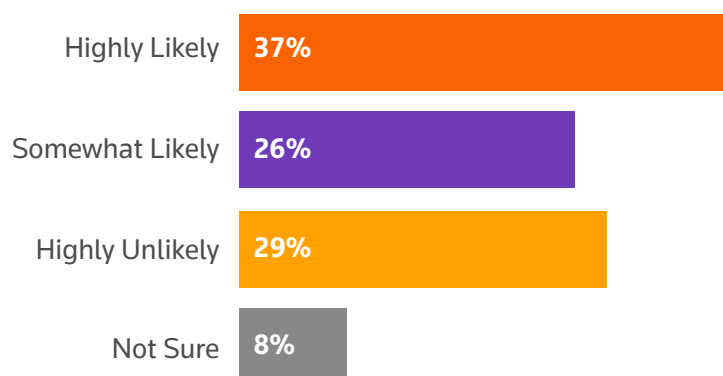
Tax-exempt entities could have a similarly large impact, says Peterson. Direct pay would mean that any entity from a state government to a local fire station could now invest in renewables. “If you look at the total amount of opportunity for clean energy, it’s mind-blowing,” he adds.

One other potentially material development is the synergy between the social equity policy aims of the BBB bill and the market of low-to-moderate income (LMI) communities. Combined with relatively recent clarifications to the Community Reinvestment Act regulations favoring clean energy finance by regulated financial institutions and the ESG compliance requirements of those same institutions, there could be triple impact in LMI investing. For example, an overlap between Opportunity Zones or New Markets Tax Credit census tracts, when combined with the special LMI tax incentives in the BBB bill (or its successor), would provide some very compelling investment opportunities. Ultimately, much will still depend on the final tax law.

Regardless of whether or how the BBB bill’s climate and clean energy provisions play out, the focus on affordable housing and LMI communities is likely to remain a key policy concern of the Biden administration and Congress.

The Reuters Events survey highlighted that 63 percent of developers and IPPs were somewhat or highly likely to develop or invest in renewable energy projects located in LMI communities over the next three years.

How likely are you to develop/invest in renewable energy projects located in LMI communities in the next three years?



Answers to the question: ‘How likely are you to develop/invest in renewable energy projects located in LMI communities in the next three years?’ Source: Reuters Events research responses from developers and IPPs.

One final, significant provision in the proposed BBB legislative package is an allowance for publicly traded master limited partnerships (MLPs) to own clean energy assets. The proposed language in the BBB bill expands the definition of “qualified income” for publicly traded partnership purposes. This would allow MLPs to capture income from (and thus enable MLP ownership of) various clean energy assets, creating some tantalizing prospects. One is that MLPs could become clean energy developers and owners and pass the tax credits and depreciation deductions on to their retail investor owners. The other is that MLPs could assume the role of yieldcos.

The issue of tariffs on clean energy-related imports remains politically complex, insofar as Chinese product tariffs are concerned. However, it would appear the Biden administration’s position on Chinese products will likely keep existing tariffs in place and on their current schedule. Accordingly, while the recent lifting of bifacial solar tariffs is encouraging, the otherwise scheduled phasedown of existing tariffs remains generally inconsequential. The result is that clean energy-related tariffs continue to remain priced into most transactions in the near and mid-term.

As an aside, the inherent production inefficiency of using bifacial solar panels simply to avoid tariffs, rather than for maximum electrical output, is another factor to consider. Nonetheless, provided that project/deal economics and yields satisfy investors, lenders and sponsors, such seemingly odd conditions due to tariffs should remain acceptable to capital markets.

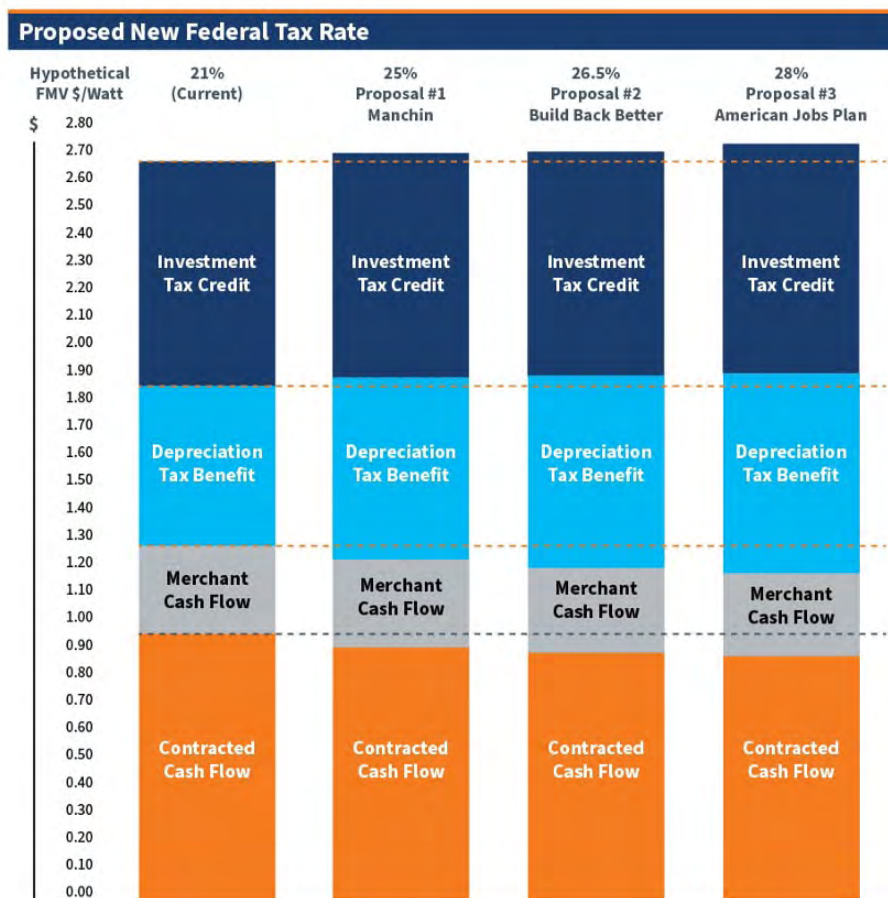
CohnReznick and CohnReznick Capital forecast

The legislative changes introduced in 2021 could have a profound impact on the U.S. renewables market in 2022, leading to increased finance and potentially higher demand for projects and increased supply chain stress.

TAX OUTLOOK

After several tax proposals were circulated in 2021, and as discussions continue, U.S. renewable developers should be analyzing changes in corporate rates to prevent being caught unaware. Any change could shift the composition of value in projects.

That’s the message from a study by CohnReznick in October 2021^{xxii} of three new rates that had been proposed as part of the American Jobs Plan, the draft Build Back Better reconciliation bill and a proposal by Democratic Senator Joe Manchin. Under a higher corporate tax rate, “if all else holds equal the overall value may not change much,” says Anton Cohen, renewable energy industry leader at CohnReznick. “But the composition of what makes up the value would shift a bit.”



Comparison of federal tax rate proposals. Source: CohnReznick.

An increase in corporate tax would hit contracted and merchant cash flows, the study argues, but at the same time would increase the benefits accruing from depreciation. This trend becomes more pronounced if a buyer expects to monetize the tax benefits of bonus depreciation.

The CohnReznick study also shows that the effects on calculated weighted average cost of capital (WACC) discount rates, using the capital asset pricing model (CAPM) from an increasing tax rate would be lower after-tax cost of debt and lower re-levered equity betas. These factors both serve to reduce the WACC as calculated per CAPM and thus would increase project valuations if nothing else changes.

These variables could have a range of impacts based on the appropriate capital structure for the subject asset, so it will be important for developers to consult experienced tax specialists once a change in corporate tax is confirmed.

Beyond this potentially significant development, the taxation landscape is increasingly dominated by a shift in motivation on the part of tax equity providers. Previously, these corporates had mainly invested in renewables as a way of reducing their tax liabilities.

Now, however, there is a growing trend towards backing tax equity deals to fulfill ESG investment mandates.

“These corporates are making a tax equity investment, powering their stores and giving back to the community.”

Anton Cohen, renewable energy industry leader at CohnReznick

This may lead to rising interest in low-income housing projects, where yields have traditionally been lower than those of energy projects, because investors may now benefit from the synergies with affordable clean power programs, including the “S” from ESG. Low-income housing and community solar programs are “symbiotic,” says Joel Cohn, Partner at CohnReznick.







“The original Build Back Better Act specifically has some tax provisions which would give you an additional investment tax credit bonus—like a 10 or 20 percent increase in some cases—if you have a low-income community installation of clean energy,” says Lee Peterson, Senior Manager for project finance and consulting at CohnReznick. “It does raise new options.”

CohnReznick and CohnReznick Capital forecast








The tax environment for renewables investing will be more diverse in 2022, but no easier to navigate. Accessing professional expertise will be key to developing tax-efficient structures.

COHNREZNICK CAPITAL – SELECT 2021 TRANSACTIONS










M&A

 <p>Sale of 10GW Solar Development Platform December 2021</p>	 <p>Acquisition of DG Solar Development Platform November 2021</p>	 <p>Sale of 30GW Solar, Wind & Storage Platform October 2021</p>	 <p>Sale of Distributed Energy Platform June 2021</p>	 <p>Sale of 9GW Solar Development Platform June 2021</p>
 <p>Sale of 10GW Solar Development Platform January 2021</p>				

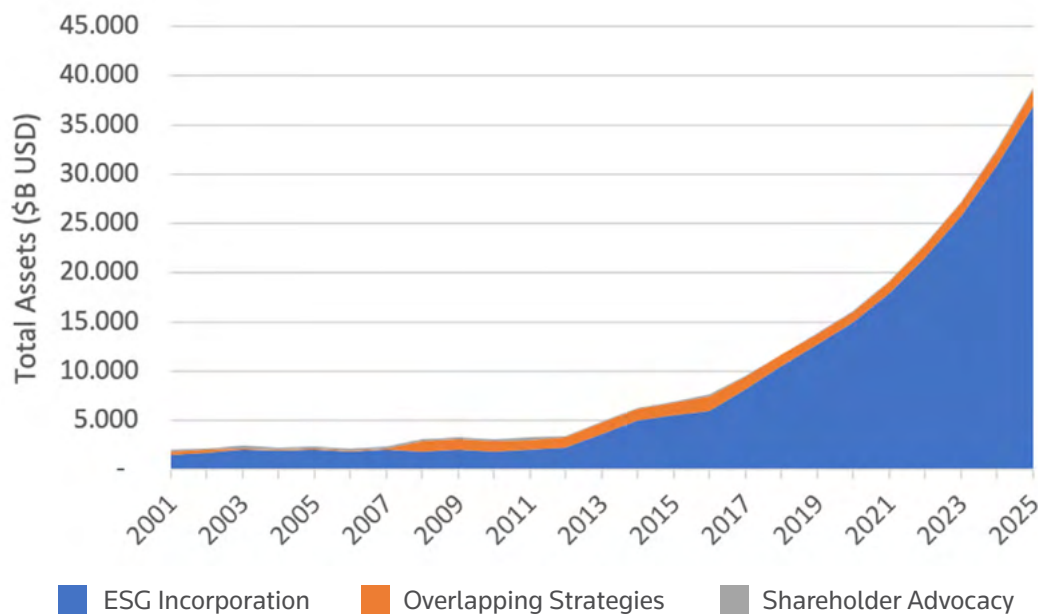
UTILITY SCALE

 <p>Warehouse Debt Facility for 2.3GW Solar & Storage Portfolio December 2021</p>	 <p>Tax Equity Financing for a 383MW Solar Project October 2021</p>	 <p>Tax Equity Financing for 232 MWdc Solar + 90MW / 360 MWh Battery Energy Storage System July 2021</p>	 <p>Sale of 130MW Solar Project June 2021</p>	 <p>Tax Equity & Back Leverage Raise for 250MW Solar Project May 2021</p>
 <p>Sale of Equity Interest in 100MW / 400MWh Standalone Storage Project May 2021</p>	 <p>Tax Equity Financing for 130MW Solar Project April 2021</p>			

DISTRIBUTED GENERATION

 <p>Tax Equity Financing for a DG Solar Portfolio December 2021</p>	 <p>Tax Equity Financing for a 24MW Solar Portfolio November 2021</p>	 <p>Tax Equity Financing for 17MW Community Solar Portfolio September 2021</p>	 <p>Tax Equity Financing for a 29MW DG Solar Portfolio August 2021</p>	 <p>Asset M&A JV for 120MW DG Solar Portfolio June 2021</p>
 <p>Tax Equity Financing for 90MW DG Solar + Storage Portfolio May 2021</p>	 <p>Tax Equity Financing for 20MW / 3.75 MWh DG Solar + Storage April 2021</p>	 <p>Tax Equity and Debt Financing for 37MW/121MWh NY CDG Solar + Storage April 2021</p>	 <p>Tax Equity Financing for 73MW Community Solar Portfolio April 2021</p>	

FINAL WORD: THE RISE OF ESG INVESTING



Sustainable investing in the United States, 2001 to 2025 (2021-2025 estimate assumes same compound annual growth rate as 1996-2020). Source: US SIF and CohnReznick Capital internal analysis.^{xxiii}

Much has changed in the U.S. renewables market over the last year. On its own, the growth of renewables has lured in many new investors.

Add in the Infrastructure Investment and Jobs Act, as well as the possibility of the BBB bill, and you get what might be a tipping point in capital flowing into renewable investment, where big banks no longer make up most of project financiers.

Beyond these major trends, perhaps the next biggest story of 2021 was the unstoppable rise of ESG investment. ESG motivations increasingly color every cleantech investment and are leading to a flight of cash away from fossil fuels and into renewables.

This trend extends to the renewables industry itself. In the Reuters Events survey, for example, 56 percent of developers and IPPs were planning to spend up to \$20 million more on ESG initiatives in 2022 compared to last year.

The remaining 44 percent of respondents said that their company planned to increase ESG investments by at least \$50 million.

On the scope for growth, at COP26, a coalition of some of the world's largest financial institutions and insurance companies, in control of \$130 trillion^{xxiv} in assets, pledged to achieve net-zero global emissions by 2050.

Compared to your company's ESG investment in the previous year, how much additional capital do you plan to invest in 2022?



56% Less than or equal to 20M

22% 50M

13% 100M

9% Equal to or more than 250M

Answers to the question: 'Compared to your company's ESG investment in the previous year, how much additional capital do you plan to invest in 2022?' Source: Reuters Events research responses from developers and IPPs.

Thus, CohnReznick and CohnReznick Capital predict that ESG mandates and pledges will be pushed into "actionable corporation operations" and the pace of investment will quicken as expanding corporate disclosure will "drive an even greater influx of corporate investors to renewables," CohnReznick Capital wrote in its Q4 2021 newsletter.

This trend is most notable because it is global in nature. Historically, says Nick Knapp, Senior Managing Director at CohnReznick Capital, corporates did not have a mandate to invest in cleantech. Hence, they would only pick projects that made plenty of sense from a financial perspective—and in that respect cleantech was often competing with other options. Today, "it feels a lot better, and ESG is the reason for that," says Knapp. "It's driven from management down and this is playing out broadly."

In the short term, the flood of capital into cleantech is only likely to be threatened by supply chain issues, many of which are related to the coronavirus and are thus expected to be temporary. ESG has an impact on this area, too: supply chain providers must be vetted for their care of workers as well as the environment. Once supply chain issues are resolved, says Knapp, "I think we're going to see a truly liquid market in the next two years, with ample supply. And that will be the first time in history you have had something like that in the renewable energy industry."

"It really does feel like the industry has incredible tailwinds and a lot of support. Overall, I feel very positive about the industry. I think we're going to continue to see incredible growth."

Britta von Oesen, Managing Director, CohnReznick Capital

CohnReznick and CohnReznick Capital forecast

The gains of 2021 have yet to really address two major energy transition bottlenecks: storage and transmission. These could become significant agenda items in 2022.

COHNREZNICK AND COHNREZNICK CAPITAL

About CohnReznick

As a leading advisory, assurance, and tax firm, CohnReznick helps forward-thinking organizations achieve their vision by optimizing performance, maximizing value, and managing risk. Clients benefit from the right team with the right capabilities; proven processes customized to their individual needs; and leaders with vital industry knowledge and relationships. Headquartered in New York, NY with offices nationwide, the firm serves organizations around the world through its global subsidiaries and membership in Nexia International.

Technical excellence and deep industry knowledge are the foundation of our Renewable Energy practice. Our team of over 100 professionals allows us to deliver holistic solutions to complex problems through our integrated service platform, which includes tax equity accounting and tax advisory; tax and accounting structuring and modeling; CFO and managed services offerings; federal, state, and local tax compliance; project finance; HLBV and IFRS modeling; transaction advisory for private and public liquidity events; valuation; financial audits; and technical accounting advisory. Our clients include some of the largest renewable energy independent power producers, developers, infrastructure funds in the U.S., and many of the Fortune 500 corporations.

For more information on CohnReznick, visit www.cohnreznick.com, and to learn more about our Renewable Energy Industry Practice, visit www.cohnreznick.com/industries/renewable-energy.

About CohnReznick Capital

CohnReznick Capital is a renewable energy investment bank providing superior advisory services to the sustainability sector. Since 2008, the firm has executed more than 220 project and corporate transactions for renewable energy assets, valued at over \$33 billion in aggregate. CohnReznick Capital is wholly committed to the clean energy transition and delivers exceptional services for financial institutions, infrastructure funds, strategic participants (IPPs and utilities), and global clean energy developers. CohnReznick Capital's team of experts helps clients break through the dynamic and evolving sustainability sector by simplifying project finance, M&A, capital raising, and special situations.

To learn more, please visit www.cohnreznickcapital.com, follow [@CR_Capital](https://twitter.com/CR_Capital) on Twitter, and connect with us on [LinkedIn](https://www.linkedin.com/company/cohnreznickcapital).

REFERENCES

- i Lee J. Peterson, Industry Today, August 10, 2021: Clean Energy Infrastructure Ready to Take Historic Step. Available at <https://industrytoday.com/clean-energy-infrastructure-ready-to-take-historic-step/>.
- ii Kokalova-Gray, Renewables Now, December 21, 2021: AES picks up 10-GW solar pipeline with Community Energy buy. Available at <https://renewablesnow.com/news/aes-picks-up-10-gw-solar-pipeline-with-community-energy-buy-766453/>.
- iii Apex Clean Energy, Press Release: Funds Managed by Ares Management to Acquire Majority Stake in Apex Clean Energy. Available at <https://www.apexcleanenergy.com/news/funds-managed-by-ares-management-to-acquire-majority-stake-in-apex-clean-energy/>.
- iv BP, Press Release, June 1, 2021: bp boosts its renewables business in the US with 9GW solar acquisition from 7X Energy. Available at https://www.bp.com/en_us/united-states/home/news/press-releases/bp-boosts-its-renewables-business-in-the-us-with-9gw-solar-acquisition-from-7x-energy.html.
- v First Solar Press Release, April 1, 2021: First Solar Completes Sale of US Development Platform to Leeward. Available at <https://www.globenewswire.com/news-release/2021/04/01/2203382/0/en/First-Solar-Completes-Sale-of-US-Development-Platform-to-Leeward.html>.
- vi United States Environmental Protection Agency: Understanding Third-Party Ownership Financing Structures for Renewable Energy. Available at <https://www.epa.gov/repowertoolbox/understanding-third-party-ownership-financing-structures-renewable-energy>.
- vii United States Environmental Protection Agency: Distributed Generation of Electricity and its Environmental Impacts. Available at <https://www.epa.gov/energy/distributed-generation-electricity-and-its-environmental-impacts>.
- viii U.S. Energy Information Administration. Net US Electricity Generation by Source: <https://www.eia.gov/totalenergy/data/monthly/> (see 7.2a for source)
- ix U.S. Department of Energy, Map: Projected Growth of the Wind Industry From Now Until 2050. Available at <https://www.energy.gov/maps/map-projected-growth-wind-industry-now-until-2050>.
- x Wood Mackenzie Power & Renewables and the Solar Energy Industries Association, September 22, 2021: U.S. Solar Market Insight: Q3 2021. Available at <https://www.woodmac.com/reports/power-markets-u-s-solar-market-insight-q3-2021-526090>.
- xi American Clean Power press release, October 25, 2021: American Clean Power 3Q market report shows record clean energy capacity growth in 2021. Available at <https://cleanpower.org/news/american-clean-power-3q-market-report-shows-record-clean-energy-capacity-growth-in-2021/>.
- xii Matt Donnelly, Michael Desmond, Roscoe Jones, Jr., Eric Sloan, Mike Cannon, Josiah Bethards and Laura Pond, Gibson, Dunn & Crutcher LLP, October 13, 2021: U.S. House Ways and Means Committee Proposes Substantial Extension and Expansion of Clean Energy Tax Incentives. Available at <https://www.gibsondunn.com/us-house-ways-and-means-committee-proposes-substantial-extension-and-expansion-of-clean-energy-tax-incentives/>.
- xiii Wood Mackenzie, U.S. solar industry sets records in 2020, on track to quadruple by 2030, 16 March 2021. Available at <https://www.woodmac.com/press-releases/u.s.-solar-industry-sets-records-in-2020-on-track-to-quadruple-by-2030>
- xiv U.S. Department of Energy, September 2021: Solar Futures Study. <https://www.energy.gov/sites/default/files/2021-09/Solar%20Futures%20Study.pdf>.
- xv Mercom Capital Group, 2021: 9M and Q3 2021 Funding and M&A Report for Storage, Grid & Efficiency. Available at <https://mercomcapital.com/product/9m-q3-2021-funding-ma-report-storage-grid-efficiency/>
- xvi International Energy Agency, Energy Technology Perspectives Report 2020. <https://www.iea.org/reports/energy-technology-perspectives-2020>.
- xvii Global CCS Institute, CCS/CCUS in the Americas. Available at <https://www.globalccsinstitute.com/archive/hub/publications/190128/fact-sheet-ccs-ccus-the-americas.pdf>
- xviii Amena Saiyid, IHS Markit, October 13, 2021: Plug Power inks green hydrogen deals with Airbus, Phillips 66. Available at <https://cleanenergynews.ihsmarkit.com/research-analysis/plug-power-inks-green-hydrogen-deals-with-airbus-phillips-66-.html>.
- xix Lee J. Peterson, CohnReznick, November 15, 2021: With bipartisan Congressional support, Biden signs \$1.2 billion infrastructure bill. Available at <https://www.cohnreznick.com/insights/house-passes-us-infrastructure-bill>.
- xx Nareit, 2021: 2021 Outlook for REITs and Commercial Real Estate: Risk and Resilience. Available at https://www.reit.com/sites/default/files/2020-12/2021_Nareit_Schnure_EconomicOutlook.pdf
- xxi Beth Mattson-Teig, National Association of Real Estate Investment Trusts, July 17, 2018: Increasing Renewable Energy in Real Estate. Available at <https://www.reit.com/news/reit-magazine/july-august-2018/increasing-renewable-energy-real-estate>.
- xxii Steven Munson, Donald Nimey, CohnReznick, October 25, 2021: What do federal tax proposals mean for solar valuations? Available at <https://www.cohnreznick.com/insights/what-do-federal-tax-proposals-mean-for-solar-valuations>.
- xxiii US SIF, Trends Report 2020 Executive Summary, with CohnReznick internal analysis. Available at: <https://www.ussif.org/files/Trends%20Report%202020%20Executive%20Summary.pdf>.
- xxiv Reuters: COP26 coalition worth \$130 trillion vows to put climate at heart of finance. Available at <https://www.reuters.com/business/cop/wrapup-politicians-exit-cop26-130tn-worth-financiers-take-stage-2021-11-03/>.