RENEWABLE ENERGY FINANCING TRENDS: THE YEAR AHEAD

MINI BRIEF 2021

CohnReznick
ADVISORY • ASSURANCE • TAX

CohnReznick Capital

ONE YEAR AGO, FEW PREDICTED THAT 2020 WOULD BE SO COMPLETELY DEFINED BY THE GLOBAL CORONAVIRUS PANDEMIC.

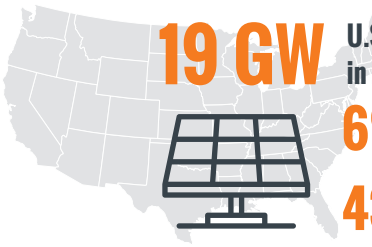
One year ago, few could have predicted that 2020 would be so completely defined by the global coronavirus pandemic.

Beyond the scope of illness and tragic loss of life, the pandemic also triggered a steep global recession and disrupted how people live, work and learn. Clean energy has not been immune, challenged by everything from sagging customer energy demand to constrained global supply chains, scarcer financing and a reprioritization of public policy.

Yet what is perhaps most striking is just how resilient clean energy has been in the face of these seismic disruptions.

With such resilience in mind, this paper will examine the outlook for clean energy in the U.S. over the short and long term. In particular, we will take a closer look at issues and trends, including:

- The impact of the 2020 U.S. election
- Corporate demand for clean energy
- The tax equity landscape
- Trends to look for in 2021



19 GW U.S. solar installations in 2020

6% lower than pre-COVID-19 forecast

43% U.S. energy storage installations Q3 2020

115 GW
Global solar installations 2020
Up **5%** from 2019

476 MW
U.S. energy storage installations Q3 2020
+373% over Q3 2019

20% Percentage global wind installations were down in March 2020

2 GW Record-setting Q3 2020 U.S. wind installations **+72%** over 2019

5% Lower global energy demand in 2020

90% New electricity generation capacity in 2020 from renewables

2025 Year that renewables will replace coal as the largest global power source

Sources: Wood Mackenzie Business/American Wind Energy Association/International Energy Agency

THE INCOMING BIDEN ADMINISTRATION HAS ELEVATED CABINET AND OTHER HIGH-LEVEL JOB CANDIDATES BASED ON HOW AMBITIOUS THEY ARE EXPECTED TO BE IN TACKLING CLIMATE.

ENERGY POLICY AFTER THE 2020 ELECTION

President-elect Joe Biden has outlined an ambitious clean energy and climate agenda. His proposal includes a pledge to spend $2 trillion on clean energy and infrastructure over the next four years and a commitment to achieve 100 percent clean electricity by 2035.

During his transition, Biden has emphasized climate change and clean energy as central priorities. The incoming Biden administration has elevated cabinet and other high-level job candidates based on how ambitious they are expected to be in tackling climate. His transition team has also created a new post of climate envoy and has nominated former Secretary of State John Kerry to the post. Additionally, Biden has chosen former Michigan Gov. Jennifer Granholm to lead the U.S. Department of Energy and former EPA chief administrator Gina McCarthy as domestic "climate czar," elevating two women with strong Democratic party credentials and records on combating climate change to play key roles in enacting the president-elect's climate change policy agenda.

No matter the U.S. Senate's appetite for ambitious climate legislation, numerous clean energy and climate-related executive actions are expected, including:

- Rejoining the Paris climate agreement
- Directing federal agencies to buy clean power, install solar and other clean energy and energy efficiency technology on government buildings and to transition to electric vehicles
- Opening public lands to increased clean energy development
- Reversing the Trump administration's weakening of automotive and appliance efficiency standards and decreasing general regulatory roadblocks to clean energy
- Streamlining permitting and leasing for offshore wind projects
- Appointing a new chair of the Federal Energy Regulatory Commission who could take up issues, such as interstate transmission, that have stymied state clean energy goals

There has already been some action. The last-minute spending bill passed in December includes $35 billion in energy research and development programs, including a two-year extension of the Investment Tax Credit for solar power, a one-year extension of the Production Tax Credit for onshore wind power projects, and an extension through 2025 for offshore wind to retain access to the 30 percent ITC. [For more on what renewable energy got in the spending bill, click here.] Additionally, the Office of the Comptroller of the Currency recently finalized updated Community Reinvestment Act rules that include guidance on investing in clean energy projects, which will make it easier for banks to make tax equity investments that qualify for CRA compliance.

Other initiatives are also signaling increased support for clean energy. A long-awaited infrastructure bill could include assistance for transmission upgrades that address constraints on delivering clean energy to customers. Some corporations have already signaled a reversal from the previous administration, such as in November when General Motors pulled out of President Trump's effort to end California's ability to set its own fuel economy standard. It's also important to recall that that all prior federal Investment Tax Credit and Production Tax Credit extensions came with some level of Republican congressional support, including the 2015 extension of the credits, the level of Republican support for which took many industry stakeholders by surprise.

While a standalone tax credit for energy storage is also a possibility, there still remains a general preference in Congress to extend what is already established.

THE INCREASING INFLUENCE OF CLEAN ENERGY IN TRADITIONALLY REPUBLICAN STATES SHOULD CONTINUE TO HELP OVERCOME THE LONGSTANDING PARTISANSHIP SEEN AT THE FEDERAL LEVEL.

No matter what happens at the federal level, which largely focuses on the provision of economic incentives, clean energy growth in the U.S. is primarily the result of state-level policymaking.

For example, the traditionally Republican state of Texas has become a clean energy heavyweight, leading the nation in wind power generation. Senator Chuck Grassley (R-IA), who chairs the Senate Finance committee in charge of tax policy, is from Iowa, a pro-wind state. Additionally, House Republican Minority Leader Kevin McCarthy (R-CA) represents a district in California with some of the highest percentages of solar deployment. The increasing influence of clean energy in traditionally Republican states should continue to help overcome the longstanding partisanship seen at the federal level.

CORPORATE DEMAND FOR CLEAN ENERGY ACCELERATES

Before COVID-19 emerged in the U.S. in early 2020, corporate clean energy power-purchase agreement (PPAs) picked up where they had left off in 2019. According to Wood Mackenzie corporate offtakers have more than 4 gigawatts of operational PPAs in 2019, a figure estimated to be more than 7 gigawatts for 2020.

In the U.S., technology giants such as Facebook and Google have continued to drive clean energy growth. According to S&P Global Market Intelligence, U.S. tech companies have signed clean energy deals totaling more than 16 gigawatts to run their data centers. Apple even took the step of including its sprawling supply chain in its commitment to achieve carbon-neutrality by 2030. That has pushed it supply chain to also invest in renewables. For example, in July, the Taiwanese microchip maker TSMC announced the world's largest corporate PPA with the Danish company Ørsted.

The fundamentals that have led corporations to aggressively procure clean energy for years are only getting stronger. Indeed, the economics of wind, solar and storage continue to improve as big companies face increased pressure from their customers and investors to rapidly decarbonize.

Given the strengthening corporate clean energy market, there were a few notable trends in 2020:

- **Green tariffs rising.** Corporations are becoming more active in pushing for options to invest in clean energy, such as green tariffs. For example, a report on corporate clean electricity procurement by the Retail Industry Leaders Association, which includes Walmart and Target, emphasized the role green tariffs can play in facilitating purchases of clean energy. At the time of the report, 17 states had approved or were considering green tariffs to support new renewable energy projects.
- **Wading into the regulatory fray.** Corporations are also working to influence wholesale markets. For example, the Renewable Energy Buyers Alliance is made up of 200 companies with a combined market cap of $3.8 trillion. In November, REBA introduced 10 buyers' principles to improve wholesale market design and scope, including expanding regional transmission organizations to all regions of the country and improving existing RTOs to make it easier and cheaper to integrate renewable energy.
- **O&G majors eye decarbonization.** After the COVID-19 pandemic caused oil prices to collapse, oil and gas majors slashed spending on exploration and cut dividends. Yet even in the midst of cost-cutting, companies including BP and Shell maintained their investments in clean energy. At the same time, some fossil fuel assets are becoming greater liabilities. ExxonMobil announced in November it would write down the value of its natural gas properties by up to $20 billion, its biggest impairment ever.

THERE IS STILL PLENTY OF REASON TO BELIEVE THAT OIL MAJORS WILL ONLY FULLY EMBRACE RENEWABLES WHEN MARKET AND STAKEHOLDER PRESSURES FORCE THEIR HAND, BUT THE PRESSURE TO DECARBONIZE IS INCREASING.

Despite continued investment in their core business, oil and gas majors made some notable public relations movement toward clean energy in 2020. For example, after unveiling a goal to achieve net-zero emissions by 2050, BP announced that it would build 50 gigawatts of renewables by 2030 and cut fossil fuel output by 40 percent. In November BP and Ørsted announced a partnership to build a 50-megawatt electrolyzer to produce green hydrogen.

There is still plenty of reason to believe that oil majors will only fully embrace renewables when market and stakeholder pressures force their hand, but the pressure to decarbonize is increasing. The asset manager BlackRock made headlines in January 2020 when it declared it would end support of thermal coal and redesign its investment approach to emphasize sustainability. The company's level of follow-through on that commitment has been criticized by some, although BlackRock has made its continued support of companies like Shell dependent on their climate progress.

- **Single sponsor equity disappears.** Clean energy projects have traditionally been financed by a single long-term owner. But the days of 100 percent single sponsor equity owners with no exit plan appear to be ending. In 2020, independent power producers, infrastructure funds and financial sponsors increasingly executed sell-downs for between 50 and 80 percent of sponsor equity. CohnReznick has seen that these sell-downs often went to more passive investors with a lower cost of capital that are attracted to clean energy projects once they begin construction or operation because they have been de-risked. This trend is likely to accelerate because there is now a large pool of institutional investors eager to invest in clean energy.

SHIFTING TAX EQUITY

When COVID-19 first emerged as a global threat, there was a concern that clean energy tax equity financing would dry up. The rationale behind those worries was understandable, if a bit of an overreaction. Because traditional investors like JPMorgan, Bank of America and Wells Fargo had less tax liability overall during the last recession, that translated into a decline in available tax equity financing. The concern in the current recession was that the same dynamic would be stacked on top of worries that the Tax Cut and Jobs Act, which lowered the corporate tax rate from 35 percent to 21 percent, would reduce the overall appetite for tax equity. However, the fear was largely unfounded, because unlike the last recession, which was triggered by weak and failing banks, this recession was not due to a weak financial industry but rather a global pandemic.

Accordingly, early on in the pandemic, big banks publicly declared they would remain committed to investing in decarbonization – and that is exactly what has happened. Competition for tax equity financing is intense, and although constraints remain, the tax equity market is expected to grow by $3 billion this year compared to 2019.

There are, however, some shifting tax equity dynamics worth noting, including:

- **A bifurcated market.** While it's true that large national banks have remained active, smaller banks and corporate and insurance investors with less investing history have seen their tax appetite shrink as a result of the economic downturn. The net result is that large, utility-scale projects that are part of established independent power producers' large portfolios are getting financed by the large banks.

WHAT IS REMARKABLE IS JUST HOW RESILIENT THE PROSPECTS FOR CLEAN ENERGY ARE AT A MACRO LEVEL.

Meanwhile, smaller utility-scale projects and distributed generation commercial and industrial deals, which have historically relied more heavily on tax equity provided by smaller banks, corporates and insurance companies, often languish.

- **Tax credit status.** Not long after the election, the Solar Energy Industries Association made it clear that its top priority was the extension of the federal Investment Tax Credit (ITC); the American Wind Energy Association issued a comprehensive list of policy and regulatory priorities, including investment tax credits for offshore wind, storage and transmission grid infrastructure. Both industry associations got at least one big win with the ITC and Production Tax Credit (PTC) extension in the spending bill passed late in December. However, before the 2020 election, the uncertain status of tax credits led to different approaches. For many project developers, the uncertainty of an ITC extension propelled activity to get projects qualified under the commence-construction safe-harbor provision for the 26 percent ITC before it would have stepped down to 22 percent in 2021. Others have slowed development spending in hopes that the ITC will return to 30 percent, although now they have surety it will remain at 26 percent through 2022.
- **Macro economy.** The condition of the overall economy is obviously important in determining the health of the tax equity market. If the economy and companies are doing well and have tax bills, there is more of an appetite for tax equity investing. Even though the big banks have had tax liabilities sufficient to continue robust tax equity investing, the downturn of the economy has limited overall market activity and is a question mark headed into 2021.

A LOOK AHEAD

You would be hard-pressed to find anybody who could have predicted 2020 would unfold as it has. Yet despite the huge human and economic toll of COVID-19, what is remarkable is just how resilient the prospects for clean energy are at a macro level, and if anything, how opportunities are accelerating as governments and corporations focus on decarbonizing the power and transportation sectors. As noted, there is substantial evidence of this resilience and the industry's prospects for continued growth, including:

- Despite supply chain disruptions and the economic recession prompted by COVID-19, overall installations of solar, wind and energy storage have continued to grow globally.
- Corporate appetite for renewable energy remains high, with demand expanding from tech giants to companies in virtually all industries in the economy.
- Big banks have remained committed to financing renewable energy projects.
- Policy and regulatory support for clean energy will be a main focus of the incoming Biden administration.

Given what unfolded in 2020, it's difficult to predict what 2021 may hold. But there are some trends that cannot be ignored across clean energy:

- **Green hydrogen expansion.** Major announcements about green hydrogen are near daily occurrences. From BP and Ørsted's partnership to utility investments, to the participation of chemical companies such as Ineos, it's clear that blue and green hydrogen will likely play an important and growing role in the future of energy.

- **COVID-19 economic fallout.** A big question going into 2021 is whether financial relief will be provided for state and local governments that have seen tax revenue dry up because of the pandemic. How that is resolved and the ultimate impact of COVID-19 on state budgets could be a factor in ongoing state support of renewable energy in the short term. The expected appointment of Janet Yellen as Treasury Secretary and the aggressive call for historic fiscal stimulus by current Federal Reserve Chair Jerome Powell could position the two leaders as among the most powerful public policy forces ever seen in the U.S.
- **Regulatory changes.** The current federal regulatory environment is an impediment to efforts to decarbonize the power grid. Both the Federal Energy Regulatory Commission and state regulators will need new approaches for incorporating large amounts of clean energy in a relatively short period of time. These emerging methods must allow utilities to innovate at the scale and speed that is needed while permitting an increasing amount of demand-side assets to play in energy markets. Expect a lot of activity and new participants in these proceedings. Another matter of critical importance will be Biden's choice to head the Office of Information and Regulatory Affairs. If the president-elect chooses someone with the technical expertise to ensure regulations can survive judicial review and to navigate competing agency political interests, Biden can achieve a powerful level of regulatory command and control.
- **Storage and offshore wind.** While the storage sector has been growing rapidly, large projects typically pair batteries with solar. We expect 2021 to include more standalone grid-scale storage projects, especially in the U.S. We also expect that offshore wind will finally gain momentum in the U.S., thanks to overall improved economics, including new ITC rules that allow offshore wind projects to retain access to a full 30 percent credit for projects that begin construction through 2025. Additionally, policy support and growing utility comfort with large wind projects will help deliver the estimated 28 gigawatts of offshore wind being planned on the U.S. East Coast through 2030.

To fully understand the risks and opportunities of a shifting renewable energy market, it's important to choose a team with deep advisory, financial, tax and audit expertise in this sector. CohnReznick LLP, a national advisory, assurance and tax firm, is a leading renewable energy service provider providing a vast array of advisory, tax and assurance services to the renewable energy industry including project developers, IPPs, infrastructure and private equity funds, tax equity investors and utilities. It's affiliated entity, CohnReznick Capital Markets Securities LLC, is a dedicated renewable energy advisor that delivers the full-suite of investment banking services, including M&A, project finance, capital raising and special situations, to leading financial institutions, strategics and clean energy developers within the sustainability sector. Together, we offer a wide variety of services and resources. To learn more, please visit: **www.cohnreznick.com/renewableenergy** and **www.cohnreznickcapital.com**

CohnReznick CohnReznick Capital

RENEWABLE ENERGY FINANCING TRENDS: THE YEAR AHEAD

MINI BRIEF 2021

General Disclaimer

While the information provided herein is believed to be accurate and reliable, neither CohnReznick or CohnReznick Capital ("CohnReznick"), nor any of their affiliates makes any representations or warranties, express or implied, as to the accuracy or completeness of such information. In particular, no representation or warranty is given as to the achievement or reasonableness of, and no reliance should be placed on, any projections, targets, estimates or forecasts contained herein. Delivery of this presentation shall not, under any circumstances, create any implication that the information contained herein is correct or complete.

CohnReznick has not independently verified any such information and assumes no responsibility for its accuracy or completeness.

CohnReznick
ADVISORY • ASSURANCE • TAX

CohnReznick Capital

gtm.

Wood Mackenzie
A Verisk Business