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With this report, we present the results of ACORE’s annual assessment of U.S. renewable energy finance and evaluate progress toward the goals of the $1T 2030 campaign, an initiative that was launched in 2018 to help secure $1 trillion in U.S. private sector investment in renewable energy and enabling grid technologies by 2030. As we explain in the ensuing pages, the sector faces new challenges driving growth in the third year of this campaign due to the historic economic uncertainty associated with the COVID-19 pandemic.

For the annual survey, ACORE polled senior executives in the sector’s most active financial institutions – tax equity investors, lenders, asset managers and others – with queries concerning the sector’s attractiveness as an asset class over the coming three years. For the first time this year, we also polled major renewable energy developers with questions concerning their experiences attracting project financing. The results reflect a near unanimous sense of optimism, with expectations of strong long-term growth in the renewable sector, despite near-term concern about headwinds posed by supply chain disruptions and other pandemic-related delays.

The $1T 2030 campaign has made important headway. In particular, direct investment in wind and solar power reached record levels in 2019 and is not too far behind the 2030 trajectory. However, investment in grid technologies that enable the integration of renewable energy, such as energy storage, is well below the rate needed to meet our campaign target. Additional scaling up of annual investment will be essential to achieve our $1T 2030 objective and to stay within shouting distance of the greenhouse gas emission reductions scientists tell us are needed to avoid the worst impacts of climate change.

ACORE is strategically pursuing opportunities to secure the market and policy changes needed to facilitate the $1T 2030 goal. In the near term, we are promoting policy solutions to help the sector access currently available tax incentives. To respond to the challenges impacting renewable development this year, we need commonsense measures like temporary refundability that will allow for the monetization of renewable tax credits despite constraints on tax equity, along with delays in the credits’ phasedowns.

In the long term, we look to the policies, electricity market refinements and technologies needed to decarbonize the power sector. The suite of relevant policies, including a national renewable or clean energy standard, carbon pricing, a technology-neutral tax credit, and an expansion and upgrading of the nation’s electrical grid, are explored in the January 2020 ACORE report, Advancing America’s Climate Leadership. With particular focus on grid infrastructure, ACORE recently joined allied organizations in launching the new Macro Grid Initiative to advocate for cost-effective investment in an upgraded transmission network that better connects areas rich in renewable resources with the nation’s population centers. We also continue to engage with the Environmental, Social and Governance (ESG) community to promote corporate disclosure and scoring methodologies that better reflect renewable energy use and investment as described in our September 2019 ESG 2.0 report.

Despite the sector’s impressive progress, we clearly have a lot to do. We look forward to working with our members, our many allies, and policymakers across the political spectrum to support renewable energy growth that can drive our national economic recovery, as it did in 2009, and play a key role in addressing the climate crisis.

Gregory Wetstone
President & CEO
American Council on Renewable Energy
ACORE launched its $1T 2030 campaign in 2018 to achieve $1 trillion in private sector investment in U.S. renewable energy and enabling grid technologies by 2030, while advocating for policy reforms and market drivers to help meet this goal. This report assesses progress on the campaign and presents the results of new surveys of prominent financial institutions and renewable energy development companies. The surveys assess near and mid-term confidence in the sector and speak to the impact of the COVID-19 pandemic on business and investment strategies.

The U.S. has cumulatively attracted $125.1 billion in private sector investment in renewable energy and enabling grid technologies since the launch of the $1T 2030 campaign in 2018, reaching one-eighth of the total $1 trillion campaign goal. To achieve the 2030 objective will now require an average of $87.5 billion in annual private sector investment through 2029 – an annual increase of 28% over the 2019 investment level.

Private sector investment in the U.S. renewable energy and enabling grid technology sectors reached its highest level to date in 2019 at $68.4 billion. The 21% increase over 2018 investment was driven by phasedown schedules for the federal tax credits, expanded state renewable energy standards, growing cost competitiveness, and increased demand from corporate buyers, residential consumers, electric utilities and investors focused on sustainability.

However, the pandemic has presented new challenges for renewable energy and energy storage investment. COVID-19 has led to the loss of almost 100,000 jobs in the renewable energy sector as of June 2020, strained renewable energy project financing and caused innumerable project delays, reducing renewable energy capacity expected to come on line in 2020 by 21%.
ACORE surveyed prominent companies engaged in the utility-scale renewable energy sector to determine the extent of COVID-19's impact on renewable energy finance and investment. While companies are experiencing significant headwinds in 2020, surveyed renewable energy investors remain as confident in renewable energy growth over the next three years, on average, as they were in 2018-2019. They are similarly confident in expectations of rapid energy storage growth. In both sectors, the strong investor confidence is mirrored in high confidence levels from renewable energy developers.

Over half of surveyed financial institutions plan to increase their investment in renewables by more than 10% in 2020 compared to 2019. Surveyed developers report plans to either maintain or increase their level of development of renewable energy projects in 2020 compared to 2019.

Investors consider the U.S. to be an attractive venue for investment compared to leading countries like China over the next three years. The U.S. has been slowly catching up to China by steadily increasing its private sector investment in renewables, while investment in China has been decreasing since 2017.
Investors expect the attractiveness of renewable energy to be maintained or increase compared to other asset classes in their portfolios in 2020-2023.

Energy storage and utility-scale solar rank as the most popular preferences for investment among surveyed investors over the next three years.
Most surveyed investors and developers do not expect the COVID-19 pandemic to have a long-term impact on their business plans, but some are experiencing short-term difficulties with financing and project delays.

79% of investors and 50% of developers do not expect their business plans to change significantly because of COVID-19. Over the next three years, the majority of respondents expect no quantifiable change or report it is too soon to tell.

However, two-thirds of surveyed developers report difficulty in securing financing or offtakers for projects, and some cite project delays of up to 12 months.

Half of the investor respondents report that they have become more flexible with project sponsors to help ensure projects can be completed.

Both investors and developers expect a decrease in tax equity financing because of COVID-19, which could have short- and long-term impacts on renewable energy projects. Notably, three-quarters of the surveyed tax equity investors predict a decline in tax equity investment.

To support achievement of the $1 trillion by 2030 objective, ACORE is strategically deploying its resources to promote key policy reforms and market drivers. We are pursuing the following priorities in 2020:

**COVID-19 Response:** ACORE advocates for policy solutions to help the sector recover from the COVID-19 pandemic, including measures to facilitate the monetization of renewable energy tax credits and a delay in their phasedown schedules.

**Climate Policy:** ACORE focuses on identifying the most viable suite of climate policies and analyzes their impact on renewable energy growth and investment, including a federal high-penetration renewable or clean energy standard, a technology-neutral tax credit, and carbon pricing.

**Grid Advocacy:** ACORE advocates for cost-effective investment in transmission and distribution infrastructure, including a new Macro Grid that better connects population centers with areas richest in regional resources, and a less balkanized and fairer electricity marketplace to promote greater access to and delivery of renewable power.

**Energy Storage:** Energy storage and other grid-enabling technologies have the potential to transform the electricity system and fundamentally change the way we think about energy. ACORE promotes their growth through advocacy for a standalone energy storage tax credit and other supportive policies, market reforms and financing solutions.

**Environmental, Social and Governance (ESG) Scoring:** ACORE works with its members to increase standardization, transparency and use of material indicators in ESG disclosure and scoring processes through specific recommendations and regular outreach to the ESG community.

Disclaimer: The results of ACORE’s survey reflect the perceptions of respondents who focus their sector development and investment activities in the utility-scale renewable energy market, and should not be used to extrapolate the opinions of all companies in the sector.
ACORE launched its $1T 2030 campaign in 2018 to achieve $1 trillion in private sector investment in U.S. renewable energy and enabling grid technologies by 2030, while advocating for the policy reforms and market drivers to help meet this goal. One trillion dollars of investment over these 12 years would represent more than two times the historic investment in the U.S. renewable sector before the campaign\(^1\) and more than double our existing renewable capacity\(^2\) while bringing us closer to meeting our climate goals.

**PROGRESS ON ACORE’S $1T 2030 CAMPAIGN**

**Investment in 2019**

Investment progress accelerated in 2019, driven by the phasedown of federal tax credits, expanded state renewable energy standards, growing cost competitiveness, and increased demand from corporate buyers, electric utilities and sustainable investors.

Total private sector investment in renewable energy and enabling grid technologies increased by 21% from 2018.

The U.S. attracted $68.4 billion of private sector investment in renewable energy and enabling grid technologies in 2019,\(^3\) a 21% year-over-year increase compared with 2018 (see Figure 1).

Renewable energy investment experienced a record year.

U.S. private sector investment in renewable energy experienced a record year in 2019 with $57.3 billion, an increase of about 18% from 2018.\(^4\) Wind investment increased significantly from 2018, by about 30%, and solar investment increased by 12%.

Investment in enabling grid technologies increased by 35% from 2018 but has not achieved its potential.

Private sector investment in enabling grid technologies increased by 35% to $11.1 billion in 2019. Energy storage presents a substantial investment opportunity within this sector, yet it only represented about 1% of the campaign's 2019 total.

The U.S. ranked second in global investment in the renewable sector.

Internationally, the U.S. continues to rank second to China in attracting private sector investment to the renewable energy sector, representing 20% of total global investment. China’s investment in renewable energy has decreased annually since 2017, but remained roughly 1.5 times that of the U.S. in 2019 at $90.4 billion.\(^7\)

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\(^1\) Non-hydro U.S. private-sector renewable energy investment 2004-2017 was $459.8 billion. Source: BloombergNEF.

\(^2\) The ratio of investment to deployment in 2019 ($57.3bn/21 GW) would net 275.7 GW if $750bn were invested in renewable energy in 2018-2030 (assuming $250bn in enabling grid technologies), and $500bn invested in renewable energy would result in 183.8 GW (assuming $500bn in enabling grid technologies). This projection assumes renewable energy costs will remain relatively level over the next 12 years. Total renewable energy capacity in 2017 was 239 GW and non-hydro capacity was 159 GW. Sources: BloombergNEF, Investment and Valuation Database, accessed June 2020, and the Business Council for Sustainable Energy, 2018 Sustainable Energy in America Factbook, p. 25.

\(^3\) Private-sector investment classes include asset finance, public markets, small-scale solar, venture capital and private equity.

\(^4\) Renewable energy technologies include wind, solar, bioenergy, waste energy, small hydropower, geothermal and marine hydrokinetic technologies.

\(^5\) Enabling grid technologies include energy storage, smart grid technologies, demand response, fuel cells, smart meters, hardware and software solutions, electric vehicles and associated infrastructure, and energy access improvements.

\(^6\) BloombergNEF data request, received March 2020.

Where We Stand

Annual investment still falls short of levels needed to achieve the $1T 2030 objective.

The U.S. has now attracted $125.1 billion in private sector investment in renewable energy and enabling grid technologies since the launch of the $1T 2030 campaign in 2018, reaching 12.5% of the $1 trillion campaign goal (see Figure 2). To achieve the remaining goal by 2030, the U.S. will need an average of $87.5 billion of private sector investment per year in 2020-2029, an annual increase of 28% above the 2019 investment level.

Figure 1: 2019 U.S. Private-Sector Investment in Renewable Energy and Enabling Grid Technologies, by Sub-Sector

Source: BloombergNEF

Solar private sector investment: **$24.4 billion**.

Wind private sector investment: **$31.9 billion**

Other enabling grid technologies investment: **$10.1 billion**

Energy storage investment: **$1 billion**

Other renewables investment: **$0.9 billion**

Figure 2: Cumulative Progress on $1T 2030 Campaign (2018-2019), in Billion USD

Source: BloombergNEF
Drivers for Growth

Investment growth in the renewable and enabling grid technology sectors can be attributed to a set of supportive policies and market trends that accelerated in 2019.

Driver 1: Federal Tax Credits and Phasedown Schedule
The rush to qualify for the federal solar and wind tax credits before their 2020-2021 deadlines contributed to an increase in development activity throughout 2019.

Driver 2: Expanding State Renewable Energy Standards/Clean Energy Standards
The number of U.S. states implementing high-penetration renewable and clean energy targets is on an upward trend. Fourteen states have now enacted clean energy laws mandating more than 50% renewable energy, while many more have similar non-binding commitments. On the local level, more than 100 cities and ten counties have adopted 100% clean energy goals.

Driver 3: Increasing Cost Competitiveness
Unsubsidized wind and solar are now cheaper than coal and at parity with natural gas combined-cycle generation on a levelized cost of electricity basis. According to Lazard, in 2019, the unsubsidized cost of wind energy had declined by more than 70% and the unsubsidized cost of solar power had declined by more than 89% since 2009. The growing deployment of lithium-ion batteries has led to greater economies of scale, with the price of batteries decreasing by 13% in the last year and by 87% over the past ten years. The cost of a fully installed four-hour, utility-scale energy storage system decreased by 9% in 2019 from 2018.

Driver 4: Growing Demand from Corporate Buyers, Utilities and Sustainable Investors
Corporate procurement of renewable energy increased in 2019.

Corporate renewable energy procurement increased by 60% in 2019 with 13.6 gigawatts (GW) of power purchase agreements (PPAs) signed for solar and wind contracts. The U.S. led the world by making up 73% of global corporate PPA capacity in 2019.

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10 Energy Storage Association data request, received February 2020.
Utilities have implemented new clean energy targets.
Twenty-five utilities in the U.S. now have carbon-free or net-zero emission goals, which should drive additional utility demand beyond state renewable energy standards.13

Sustainable investment continues to grow.
Institutional and individual investor interest in sustainable and Environmental, Social and Governance (ESG) investment has grown substantially over the last few years, with investment priorities focusing on societal benefits in addition to financial returns. According to Morningstar, sustainable funds saw $20.6 billion of inflows in 2019, which is four times the $5.5 billion seen in 2018, the previous record.14

New Headwinds in 2020
However, the COVID-19 pandemic, economic recession and recent policy developments have created headwinds for sector investment, slowing the pace of growth in 2020.

Social distancing measures implemented due to COVID-19 have led to job losses and lowered projections for renewable energy build.
As of June 2020, the renewable energy sector had already lost nearly 100,000 jobs since the start of the COVID-19 pandemic.15 Project delays combined with difficulties securing financing for projects have led to lower projections for solar and wind capacity additions in 2020. BloombergNEF has lowered estimates for new solar and wind build in 2020 by 21% compared to their pre-COVID-19 2020 estimates.16

New federal actions impose barriers on renewable energy development.
In December 2019, the Federal Energy Regulatory Commission (FERC) ordered an expanded administrative price floor for renewables in the Mid-Atlantic PJM Interconnection capacity market. The rule will effectively decrease the ability of renewable generation to compete in the PJM market, as FERC argued that some state renewable policies were out-of-market subsidies requiring mitigation. Additionally, the May 2020 Executive Order on Securing the U.S. Bulk-Power System and the Commerce Department Tariff Investigation into Electric Transformers could impose obstacles and additional cost to renewable energy development.

The next section presents the results of an ACORE survey on how renewable energy companies are planning to respond to these developments over the next three years.

16 BloombergNEF, 1H 2020 U.S. Renewable Energy Market Outlook, April 2020, Accessed June 19, 2020 at: https://www.bnef.com/core/insights/27245?query=eyJxdWVyeSI6IjFIIFUuUy4gUmVuZXdhYmxlIEVuZXJpZmUgVHJ1c3RyYXRlIENPVklEIiwicGFnZSI6MSwiZmlsdGVycyI6eyJvcmRlciI6WyJkYXRlIl0sImRhdGVzIjpbNV19fQ%3D%3D
ACORE surveyed the opinions of professionals who represent prominent financial institutions and renewable energy development companies in May 2020 to gain an understanding of the expected environment for sector finance over the next three years. These surveys assess confidence in the renewable energy and energy storage sectors and measure the impact of the COVID-19 pandemic, shining a light on the path forward for the $1T 2030 goal.\textsuperscript{17}

This year is the third year ACORE has surveyed financial institutions for the $1T 2030 campaign, and the first year ACORE has collected responses from developers. The companies who responded to the survey focus their sector investment and development activities in the utility-scale renewable energy market; therefore, the results in this section primarily reflect confidence in, and plans for, larger scale development. A full profile of survey respondents appears in the Appendix.

- More than half of the financial institutions represented in the Investor Survey invest more than $500 million each year in the U.S. renewable energy sector.
- Three-quarters of the developers represented in the Developer Survey operate U.S. renewable energy businesses with total revenues greater than $100 million (see Figure 3).
- A majority of respondents occupy senior positions at their companies, with nearly two-thirds serving as CEO, Managing Director or a comparable level.

Survey results show that the outlook for both renewable energy and energy storage sectors rates positively. This confident perception of both sectors is sustained even when faced with the near-term challenges of the COVID-19 crisis.

\textsuperscript{17} The results of this study reflect the perceptions of the respondents and should not be used to extrapolate the opinions of all companies in the sector.
Sector Confidence

*Investors and developers report continued confidence in renewable sector growth over the next three years.*

Both investors and developers report confidence in the growth of the renewable energy and energy storage sectors over the next three years. Investors maintain an equal level of confidence in renewable energy sector growth (77/100) in the 2020 survey compared to 2019, and developers share their sentiment (78/100). Notably, financial institutions that invest more than $500 million annually in renewable energy report an even higher level of confidence in the renewable sector (89/100) than average (see Figure 4).

Confidence among developers of different revenue ranges varies more than that of investors, with those in the $100 million to $1 billion range ranking at ‘Extremely Confident’ compared to other developers while those of the mid-lower range of under $100 million rank at ‘Somewhat Confident’ (see Figure 5).

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**Figure 4: Investor Confidence in Renewable Energy Growth in 2020-2023**

<table>
<thead>
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<tbody>
<tr>
<td>&lt;$100 million</td>
<td>Confident (70/100)</td>
</tr>
<tr>
<td>$100 million - $500 million</td>
<td>Confident (66/100)</td>
</tr>
<tr>
<td>&gt;$500 million</td>
<td>Extremely Confident (89/100)</td>
</tr>
</tbody>
</table>

Source: ACORE Investor Survey 2020

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**Figure 5: Developer Confidence in Renewable Energy Growth in 2020-2023**

<table>
<thead>
<tr>
<th>Total Revenue of U.S. Renewable Business</th>
<th>Confidence in U.S. Renewable Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$100 million</td>
<td>Somewhat Confident (58/100)</td>
</tr>
<tr>
<td>$100 million - $500 million</td>
<td>Extremely Confident (85/100)</td>
</tr>
<tr>
<td>$500 million - $1 billion</td>
<td>Extremely Confident (95/100)</td>
</tr>
<tr>
<td>&gt;$1 billion</td>
<td>Confident (70/100)</td>
</tr>
</tbody>
</table>

Source: ACORE Developer Survey 2020

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18 Based on average score out of 100

Investors and developers are confident in the growth of energy storage but still consider it a riskier investment than renewable energy. Confidence in energy storage sector growth falls within a similar range of confidence as renewable energy for both investors (74/100) and developers (79/100) (see Figures 6 and 7).

Investors of varying sizes are consistently confident in the growth of the sector, while the confidence across developer sizes varies more. The most confident developers fall within the $500 million to $1 billion range (see Figures 6 and 7).

Investors and developers consider energy storage an obvious solution to the intermittency of renewable energy, and thus a key component in the transition to clean energy. Many investors are taking the time to understand the technology and incorporate it into their portfolios.
However, survey respondents cite obstacles to energy storage investment due to insufficient policy support – namely the lack of a federal tax credit for standalone storage – and a short track record for financed energy storage projects. Combined with the inconsistency of electricity markets across the U.S., some investors find it difficult to predict the risks and benefits of energy storage projects.

“We have been looking at energy storage for a couple of years. We financed it in behind-the-meter projects and some small grid type projects as part of larger portfolios. We’re trying to understand the technology and build a track record with a couple of large manufacturers, integrators and developers and go slowly, so that five years in, we can say we’ve got five years of successful projects.”
– Anonymous Investor

“We’re all in - we’ve integrated storage into all our projects that are delivering 2021 and beyond, [but] there hasn’t been the market predictability that allows us to finalize these investment decisions, [for] either storage integrated solar, or standalone storage. The ancillary revenue structures and benefits change market by market.”
– Anonymous Developer

The U.S. remains an attractive venue for investment in renewable energy over the next three years compared to other leading countries. Nearly all investor respondents perceive the U.S. as just as, or more attractive, a venue for investment compared to other leading countries like China over the next three years (see Figure 8). One-third of respondents expect that U.S. attractiveness will increase compared to other leading countries.

Most investors plan to increase their investments in renewable energy in 2020. The majority of investor respondents plan to maintain or increase investment in the sector in 2020 compared to 2019. Over half of investors plan to increase investment in renewables by more than 10% this year compared to last year (see Figure 9).

Figure 8: Percentage of Investors That Perceive the U.S. as Attractive for Investment Compared to Other Leading Countries in 2020-2023

The U.S. remains an attractive venue for investment in renewable energy over the next three years compared to other leading countries.

Nearly all investor respondents perceive the U.S. as just as, or more attractive, a venue for investment compared to other leading countries like China over the next three years (see Figure 8). One-third of respondents expect that U.S. attractiveness will increase compared to other leading countries.

Most investors plan to increase their investments in renewable energy in 2020.
The majority of investor respondents plan to maintain or increase investment in the sector in 2020 compared to 2019. Over half of investors plan to increase investment in renewables by more than 10% this year compared to last year (see Figure 9).

Figure 9: How Investors Plan to Change Their Investment in Renewable Energy in 2020 Compared to 2019

<table>
<thead>
<tr>
<th>Change in Investment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase by more than 10%</td>
<td>53%</td>
</tr>
<tr>
<td>Maintain within 5%</td>
<td>10%</td>
</tr>
<tr>
<td>Decrease by 5-10%</td>
<td>11%</td>
</tr>
<tr>
<td>Decrease by more than 10%</td>
<td>5%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>21%</td>
</tr>
</tbody>
</table>

Source: ACORE Investor Survey 2020
In particular, financial institutions that invest more than $500 million annually report plans to either maintain or increase their investments. Sizable investors within the $100-500 million annual investment range vary more in their 2020 investment plans. Investors within this range are the only respondents to indicate plans to decrease their investment in renewable energy from 2019, amounting to 15% of total respondents (see Figure 10).

**Renewable energy will remain attractive compared to other asset classes.**

Over the next three years, 90% of investor respondents expect the attractiveness of renewable energy either to be maintained or increase compared to other asset classes in their portfolios, with 48% expecting an increase (see Figure 11).
Developers unanimously report plans to maintain or increase their development of renewable energy projects in 2020 compared to 2019. All developer survey respondents indicate a willingness to either maintain or increase their development of renewable energy projects this year, with none reporting plans to decrease development (see Figure 12).

Energy storage and utility-scale solar are investors’ most popular preferences for investment in 2020. Consistent with ACORE survey trends over the past two years, energy storage ranks as the most attractive sector for investment between 2020 and 2023, followed closely by utility-scale solar and residential/commercial solar (see Figure 13).
Impacts of the COVID-19 Crisis

The onset of the COVID-19 pandemic and economic recession have introduced new uncertainties to the renewable energy and energy storage markets. Investors and developers report the following impacts on their investment and development plans.

_The majority of surveyed investors do not expect significant long-term impacts from COVID-19, but developers see more varied impacts._

While survey respondents are experiencing the immediate effects of the pandemic, most do not expect a significant impact in the trajectory or volume of their renewable energy investments and development in the long term.

More than three-quarters (79%) of investors do not expect their immediate business plans to change significantly because of COVID-19. Over the next three years, the majority of investor respondents either expect no quantifiable change, or report it is too soon to tell. However, two investor respondents, including one who invests over $500 billion per year in renewables, expect they could decrease their investments by 10%-25% over the next three years (see Figure 14).

Meanwhile, half of the surveyed developers report that their immediate development plans have changed significantly. The pandemic has altered some responding developers’ project priorities. One-third of developers are more hesitant to develop certain project applications or technologies, and nearly half have become more reluctant to use balance-sheet financing for new projects (see Figure 15). At the same time, like the investor respondents, most developers either expect no quantifiable change to their development plans over the next three years, or report that it is too soon to tell.

_“[The pandemic] made us a little more cautious. It hasn’t changed the direction of travel, but it certainly has slowed us down for really just this immediate moment.”_ – Anonymous Investor

![Figure 14: Investors’ Decisions Impacted by COVID-19](image)

Source: ACORE Investor Survey 2020
Shelter-in-place and social distancing measures contribute to project delays. The reduced frequency of on-site work has slowed down construction, land acquisition, siting and permitting, and other development activities. Factory shutdowns in Asia and Europe at the beginning of the pandemic caused lags in the supply chain, which shifted back some project schedules.

Developers expect project delays of up to 12 months. One developer anticipates experiencing up to 750 megawatts in project delays over this year and next year.

Government officials being out of their physical offices has made local entities less accessible to those seeking permits for projects, delaying the approval process.

"We’ve experienced force majeure notices and delivery delays at our current (2020) construction projects. Two of three projects could be delayed until next year.”
– Anonymous Developer

"We’ve seen a fair amount of delay in the response of local entities as we seek permits from government agencies of various kinds. These entities just weren’t staffed and equipped in a way to be able to maintain any level of work process.”
– Anonymous Developer
Constrained tax equity and other financing sources concern both investors and developers. Both investors and developers expect a decrease in tax equity financing (see Figure 16) because of COVID-19. Notably, three-quarters of surveyed tax equity investors predict a decline in tax equity investment. One tax equity investor already reports reduced tax capacity for 2020.

"COVID-19 has affected the bank’s tax capacity for 2020. We’re not expecting to make as much money, [but] still expecting to turn a profit this year. That in turn affects our ability to invest tax equity in renewable transactions because we really can’t utilize the tax credits this year." – Anonymous Investor

One-third of investors also expect a decline in bank loans for project finance, and 20% expect a decline in financing sources for small-scale solar (see Figure 16). However, half of the investor respondents report they have become more flexible with project sponsors to help ensure projects under development can be completed (see Figure 14).

"Flexibility with project sponsors is geared around exhibiting patience given the slowdown in certain development activities; however, the structuring of the transactions have not changed." – Anonymous Investor

"We want to be part of the solution and consistently support the renewable sector." – Anonymous Investor

Two-thirds of surveyed developers report difficulty in securing financing or offtakers for projects (see Figure 15). One developer states that a tax equity partner pulled out of a project with a full offtake agreement scheduled to be completed next year.

"We’re in the middle of raising finance for a big project in Texas. I think we’ll get to the end at the end of the day, but it’s a much smaller array of potential investors. The lender community is still pretty strong. We’ve had good response as we’ve gone to market and received interest in the project." – Anonymous Developer

On May 27, 2020, the Treasury Department granted an extra year of safe harbor continuity for 2016 and 2017 renewable projects to be placed into service, which is likely to alleviate some of the concerns brought up in the survey responses.
Some investors and developers have reduced their risk appetites for new projects.

The majority of surveyed investors and developers report that the COVID-19 pandemic has not reduced their willingness to invest in or develop new projects. However, liquidity and other concerns have made some investors and developers more hesitant to expand their portfolios to certain types of new projects.

The decrease in tax capacity has made some tax equity providers less willing to take on new clients. Some investors and developers also report hesitancy to begin projects in unfamiliar markets or with more complex structures.

One surveyed developer reports a limited impact from COVID-19, but has become more cautious about their use of cash and credit facilities.

"We are advancing [our] existing portfolio. New opportunities are more difficult to initiate."
– Anonymous Developer

"We’ve been more hesitant to finance anything outside of what we would consider mainstream proven technologies, sponsors and markets. Our risk appetite is reduced a little bit."
– Anonymous Investor

"For projects that are near-term (6-12 months), it’s been full speed ahead. We believe that 12-24 months out will still be strong, but we’ve become more critical with the use of cash/credit facilities for this timeframe."
– Anonymous Developer
Evolving Capital Stacks and Financing Sources

Meanwhile, capital stacks and financing sources continue to evolve in response to COVID-19 and the ongoing phaseouts of federal tax credits.

Views on the value of tax equity are mixed among investors and developers.
While there is widespread consensus that federal renewable energy tax credits are the most feasible policy incentive for financing renewable energy, the perception that they are the best policy option varies among respondents.

On the one hand, extending the existing tax credits would be easier than trying to implement an entirely new policy incentive and compensate for the loss of previously existing policies such as the Clean Power Plan and participation in the Paris Climate Accord.

“The phasedown of the credits was predicated on an energy policy that doesn’t exist anymore for the U.S. The industry was expecting us to be part of the Paris Climate Accord, and we’re not a part of that [anymore].” – Anonymous Investor

On the other hand, some see tax equity as an inefficient financing tool because it introduces transactional costs. Refundability and transferability can eliminate some of these soft costs, but could also introduce new ones.

Overall, respondents are in favor of including deadline extensions for the federal tax credits as part of immediate emergency relief for the renewable sector to mitigate the impacts of the COVID-19 crisis.

Sustainable investment commitments are still going strong.
In the wake of COVID-19, investors report they will expand their attention to companies’ resiliency and the support they extend to their employees as attention to sustainable impact and ESG metrics continues to grow. In fact, analysts project that U.S. ESG-mandated assets could increase to half of all professionally managed investments by 2025.20

“In a vacuum, I think the renewables industry in the United States will be healthier when it gets off the large tax component to the capital structure. But from a relative perspective, it’s an accepted policy tool here in the U.S., and so if we’re going to implement, extend, or expand policy help for other technologies, then I would say that renewables need to stay in that mix, and tax credits are probably the easiest way to do that.” – Anonymous Investor


“It’s not just a PR component [anymore]. COVID-19 is shining a big light into resiliency. Companies are being rewarded by their employees in terms of loyalty and enthusiasm. The ability to do things that are less carbon intensive [will] be part of the front-end of the conversation, not throwaways at the back-end.” – Anonymous Investor
Corporate offtake agreements are improving in their mitigation of risk.
Surveyed investors believe that the structures of corporate offtake agreements are improving as more entities are willing to share the risk of corporate PPAs along with traditional project finance banks.

"[Corporate offtake agreements] have gotten a lot better. Offtakers now appreciate that they need to create a balanced risk-sharing with the projects to bring efficient financing and get to where they ultimately want to get to, which is the project gets built and financed." – Anonymous Investor

Corporate offtake agreements are still considered by some survey respondents to be riskier than those with utility or financial institution buyers. Still, corporate buyers play a significant role in driving renewable energy development, especially in areas that lack utility buyers.

"At this point, there are proven financing tools to mitigate the risks associated with corporate PPAs, whether it’s a hedge or congestion rights. I think it’s great that corporates are driving renewable development where utilities aren’t jumping in with two feet. The more standard state and federal policy there is, the easier it is to understand the risks in the transaction, but at this point the energy markets are what they are." – Anonymous Investor
ACORE'S $1T 2030 CAMPAIGN PRIORITIES

To support achievement of the $1 trillion by 2030 objective, ACORE is strategically deploying its resources to promote key policy reforms and market drivers. We are pursuing the following priorities in 2020.

- **COVID-19 Response:** ACORE advocates for policy solutions to help the sector recover from the COVID-19 pandemic, including measures to facilitate the monetization of federal tax credits and a delay in their phasedown schedules.

- **Climate Policy:** ACORE focuses on identifying the most viable suite of climate policies and analyzes their impact on renewable energy growth and investment, including a federal high-penetration renewable or clean energy standard, a technology-neutral tax credit, and carbon pricing.

- **Grid Advocacy:** ACORE advocates for cost-effective investment in transmission and distribution infrastructure, including a new Macro Grid that better connects population centers with areas richest in regional resources, and a less balkanized and fairer electricity marketplace to promote greater access to and delivery of renewable power.

- **Energy Storage:** Energy storage and other grid-enabling technologies have the potential to transform the electricity system and fundamentally change the way we think about energy. ACORE promotes their growth through advocacy for a standalone energy storage tax credit and other supportive policies, market reforms and financing solutions.

- **ESG Scoring:** ACORE works with its members to increase standardization, transparency and use of material indicators in ESG disclosure and scoring processes through specific recommendations and regular outreach to the ESG community.
APPENDIX

Survey Methodology

ACORE compiled the findings of this report via online surveys, phone interviews and secondary online research. ACORE conducted two online, anonymous surveys in May 2020 targeting select professionals from (1) prominent financial institutions that actively finance and invest in U.S. renewable energy projects, technologies and companies, and (2) large U.S. renewable energy development companies that actively develop utility-scale renewable energy projects that are financed by third parties. Surveyed professionals represent both ACORE member and non-member companies.

ACORE reached out to more than 100 financial institutions and 75 development companies, surveying 20 investors and 12 developers online. ACORE interviewed three investors and three developers via telephone.

Investor Survey: Profile of Respondents

- **Organization Type**
  - Banking Institution: 45%
  - Private equity firm: 25%
  - Tax credit syndicator: 10%
  - Asset manager: 10%
  - Other financial investor: 10%

- **Position of Respondent**
  - CEO, President, Managing Director, Partner or similar: 69%
  - VP, Director, Manager or similar: 26%
  - Other: 5%
Annual Investment Level in the U.S. Renewable Energy Sector

- <$50 million: 10%
- $50 - $100 million: 5%
- $100 - $500 million: 35%
- >$500 million: 50%

Financing Vehicles Used for Renewable Energy

- Tax equity: 45%
- Direct project debt: 45%
- Direct project equity: 35%
- Mergers & acquisitions: 25%
- Public debt: 15%
- Public equity: 5%
Developer Survey: Profile of Respondents

**Position of Respondent**

- CEO, President, Managing Director, Partner or similar: 58%
- VP, Director, Manager or similar: 42%

**Total Revenue of U.S. Renewable Energy Business**

- <$10 million: 8%
- $10 - $100 million: 17%
- $100 - $500 million: 33%
- $500 million - $1 billion: 25%
- >$1 billion: 17%
Total Capacity of Company’s Renewable Energy Installations over the Past Three Years

- 100 MW - 500 MW: 25%
- 500 MW - 1 GW: 42%
- Over 1 GW: 33%

Renewable Energy Technologies Developed by Each Company over the Past Three Years

- Utility-scale solar: 100%
- Energy storage: 67%
- Onshore wind: 58%
- Bioenergy: 17%
- Offshore wind: 17%
- Residential/commercial solar: 17%
- Hydropower: 8%
- Geothermal: 8%
About ACORE

The American Council on Renewable Energy is a national nonprofit organization that unites finance, policy and technology to accelerate the transition to a renewable energy economy.

For more information, please visit www.acore.org.

$1T 2030: The American Renewable Investment Goal

On June 19, 2018, ACORE and a coalition of its financial institution members announced the launch of a new campaign that aims to reach $1 trillion in U.S. private sector investment in renewable energy and enabling grid technologies by 2030.

Through $1T 2030: The American Renewable Investment Goal, leading energy financiers have now come together in a coordinated effort to accelerate the investment and deployment of renewable power. The campaign leverages the network of ACORE members and supporters, highlighting a combined set of commonsense policy reforms and distinct market drivers that are necessary to reach this ambitious goal.

For more information, please visit www.acore.org/1T2030.