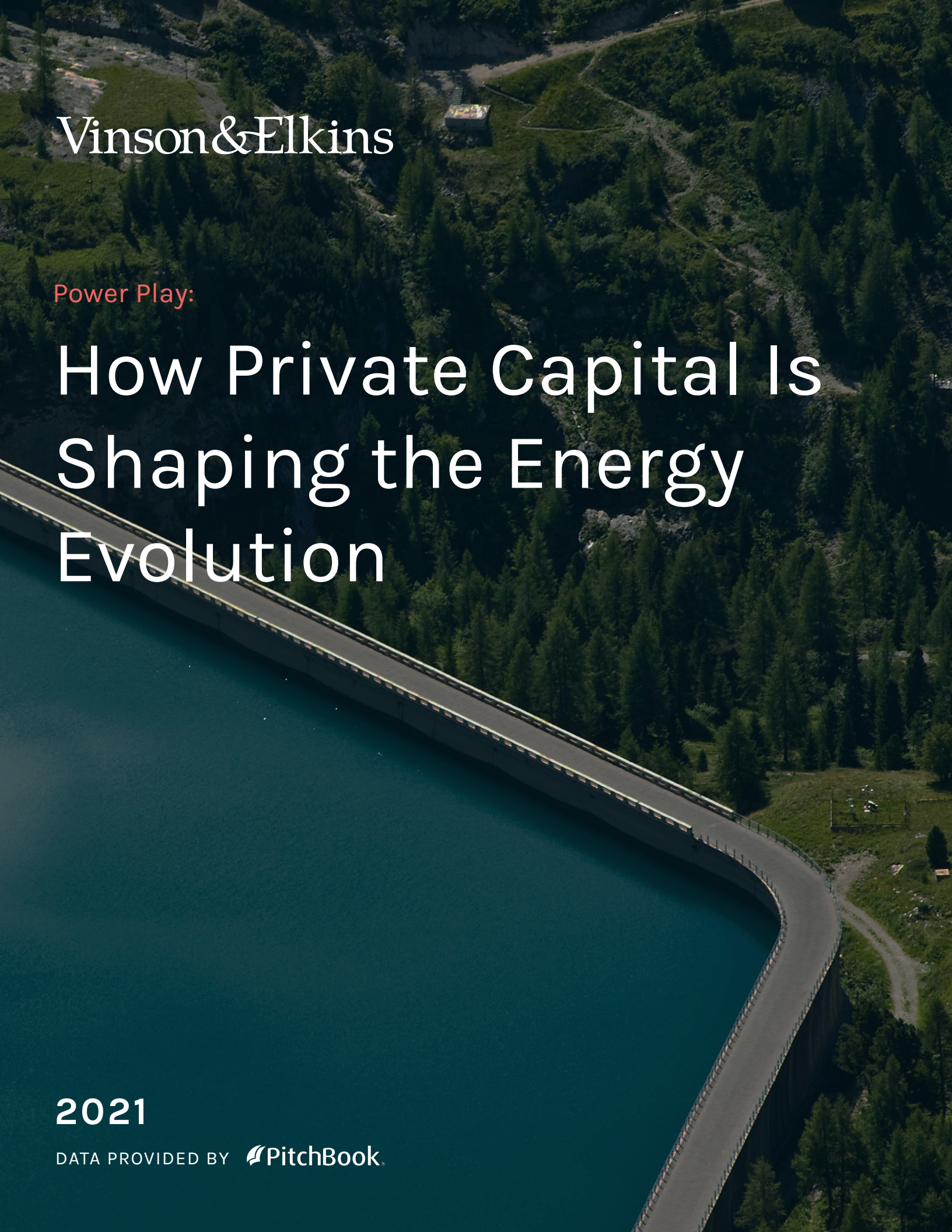


Vinson&Elkins

Power Play:

How Private Capital Is Shaping the Energy Evolution

2021

DATA PROVIDED BY PitchBook

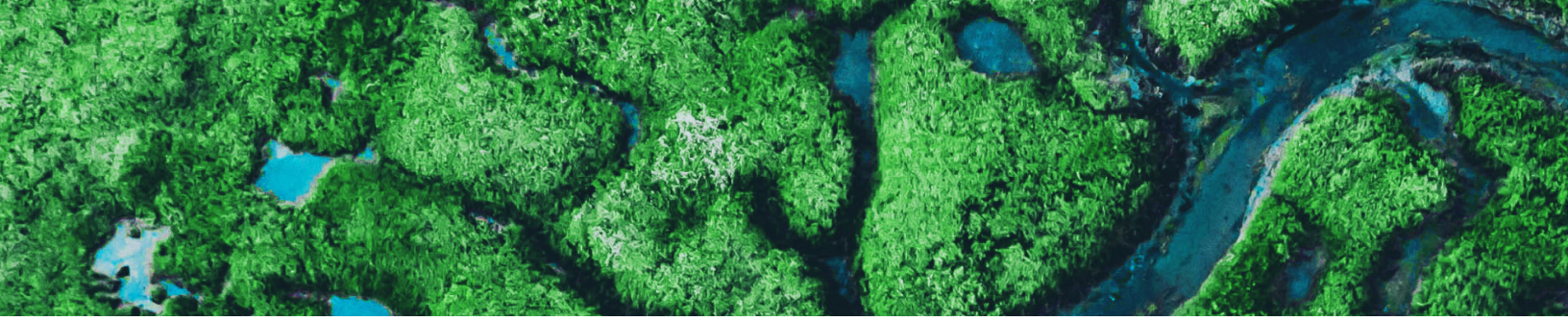


Table of Contents

Key Takeaways

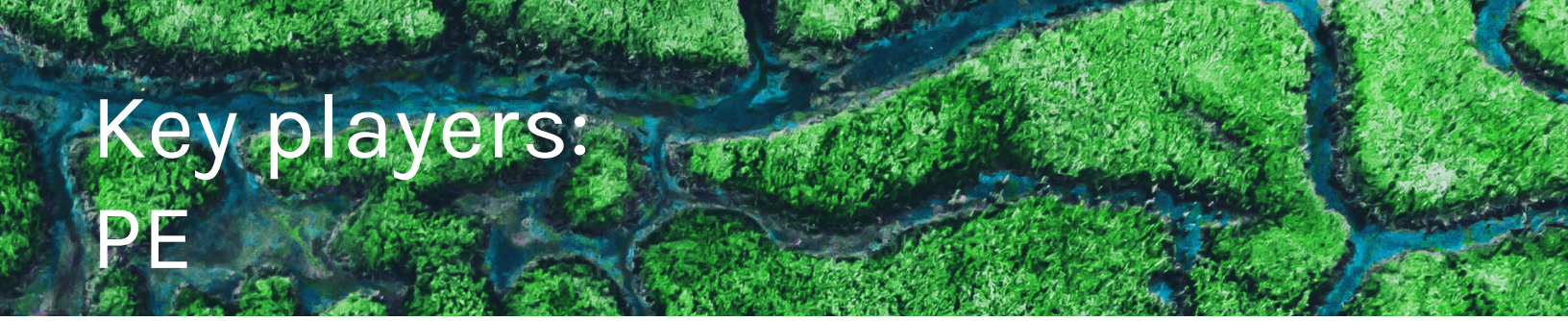
- The energy evolution will require enormous investment, most of it supplied by private capital.
- The opportunity has already attracted capital from a wide range of investors, pushing up prices for green assets and potentially cutting future returns.
- Government policy and technological breakthroughs will shape energy's future, potentially opening up new avenues for investment.

It is hard to imagine a bigger investment opportunity than the one presented by the emerging transition to a low-carbon future. In our September 2021 report, ***What's Driving Transition Energy IPOs and SPAC Combinations?***, we point out that forecasters such as UBS in its "Q Series: Energy Transition" and Credit Suisse in "CS Global ESG Research: Decarbonizing Themes and Stocks" have put the 30-year price tag for the global undertaking at or over $100 trillion. Some of the expenditures for this energy transition will come from governments; the majority will be raised and spent by the private sector.

Yet dollars are only one way of thinking about the scale and scope of this project. The investments will touch practically every industry. A few, such as energy and utilities, are obvious candidates, but sectors such as construction, real estate, and transportation will also have to increase spending.

The list of technologies that will need investment will be equally sweeping. As the world looks to expand its sources of energy, there will have to be improvements in the electric grid, batteries, storage, and carbon capture, among others. Nascent technologies such as green hydrogen are already attracting investment dollars, and they will certainly attract more if they are able to live up to the optimistic projections some have made for them.

So the opportunity set is enormous—as is the amount of competition vying for it. The potential rewards to be reaped from financing the energy future are not a secret. More money will flood into this space, which will accelerate dealmaking and spur innovation, perhaps at a seismic pace. All of this new money and competition will have important implications for investors and dealmakers, but first it is worth taking a minute to look at the players in the competition.



Key players: PE

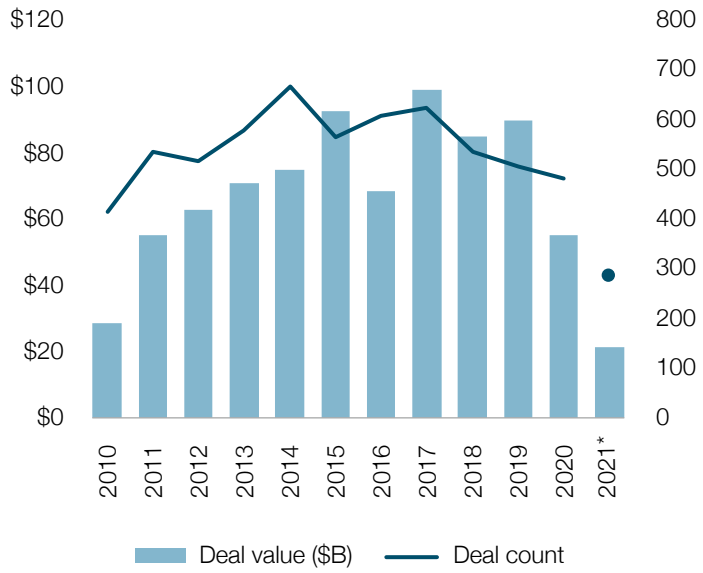
Private equity: Private equity (PE) invested $18.8 billion in renewables last year. That record amount was up from less than $5 billion 10 years earlier. PE fundraising for renewables reached $52 billion in 2020, also a record, far surpassing the total invested in fossil fuels. Many of the biggest PE firms, including the largest, Blackstone, have stepped up their spending in this space.

To cite one example, the Carlyle Group is investing as much as $700 million in a new venture called Copia Power, which will focus on developing large-scale solar generation projects and battery facilities for storage and generation. Another sign of the times: JOG Capital, a Canadian PE firm that has traditionally focused on oil and gas, this year rebranded itself as Carbon Infrastructure Partners. The firm will work on both traditional energy projects and projects aimed at rapidly reducing carbon emissions.

As a group, PE fund managers have grown more active in the renewables area, even as investment volume in the broader energy industry has declined somewhat in the past 20 months. Some of that dip may reflect the impact of COVID-19. As the pandemic recedes, investment—as well as merger and acquisition activity—should pick up again.

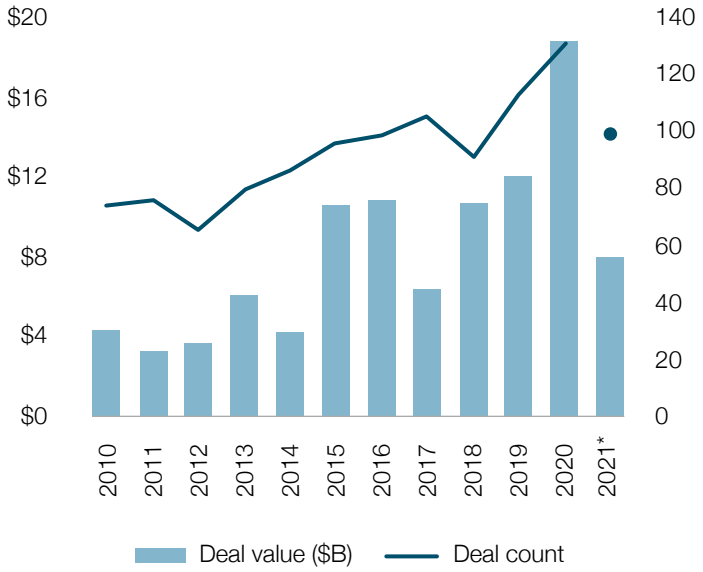
Going forward several key trends are likely to emerge. First, we anticipate there will be more funds dedicated exclusively to emissions reductions and decarbonization. More firms will launch these funds, and they will raise more capital than ever before. Second, we believe there will be consolidation among PE firms focusing on energy, given the strong interest in the field by investors. Both trends reflect a heightened focus on renewables by investors and a recognition that scale will be important to success. Look for more dealmaking.

Energy PE deal activity



Source: PitchBook | Geography: Global
*As of August 11, 2021

Renewables PE deal activity



Source: PitchBook | Geography: Global
*As of September 9, 2021

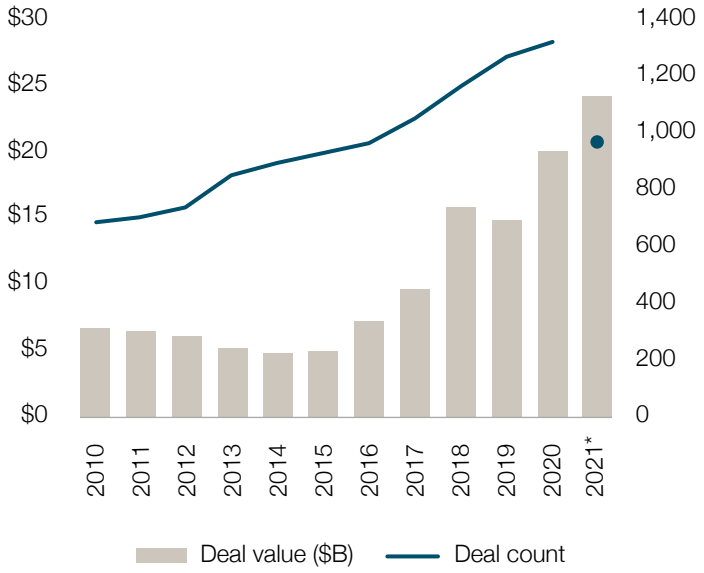
Key players: VC

Venture capital: Venture capital (VC) is flowing into the energy transition at an extraordinary pace. This year has shattered previous investment records, with $24.1 billion in VC invested in 957 financings by late summer 2021.

Such profuse funding has enabled longer roadmaps and timelines for private companies in clean tech to focus on technology and business development, as evidenced by the recent increase of median venture financing sizes and significant surge in the average late-stage deal size. It is worth noting that the boom in clean tech financing at the onset of the 2010s produced some higher median valuations on a yearly basis, but as many of those companies ultimately were unable to realize their full potential, the financing metrics observed today indicate a much more robust and healthy funding environment.

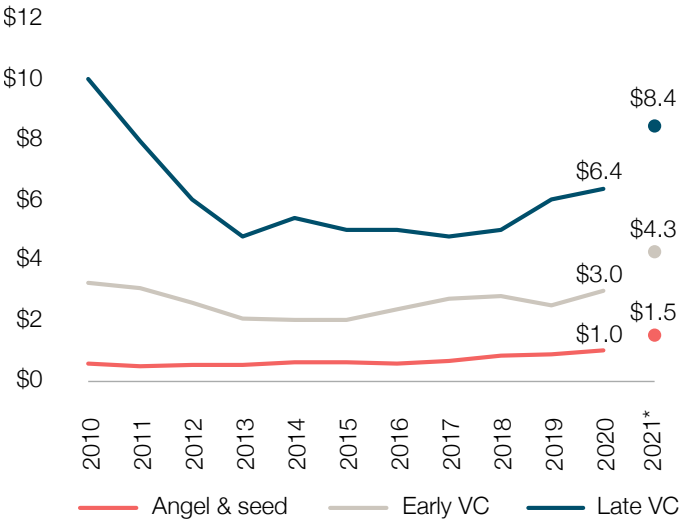
Indeed, one differentiator of the current boom in clean tech venture investment from previous hyped cycles is that realized exits across clean tech have never been so strong. Worldwide, venture-backed clean tech companies saw 109 completed

VC activity in clean tech by year



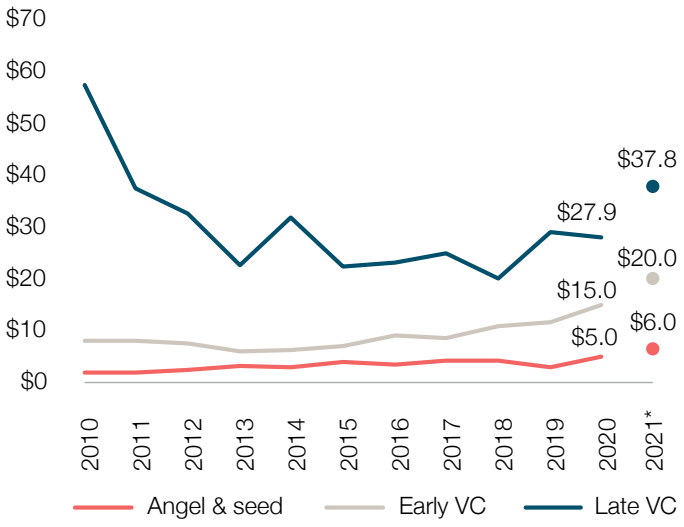
Source: PitchBook | Geography: Global
*As of August 11, 2021

Median clean tech VC deal size ($M) by type



Source: PitchBook | Geography: Global
*As of August 11, 2021

Median clean tech VC pre-money valuations ($M) by type



Source: PitchBook | Geography: Global
*As of August 11, 2021

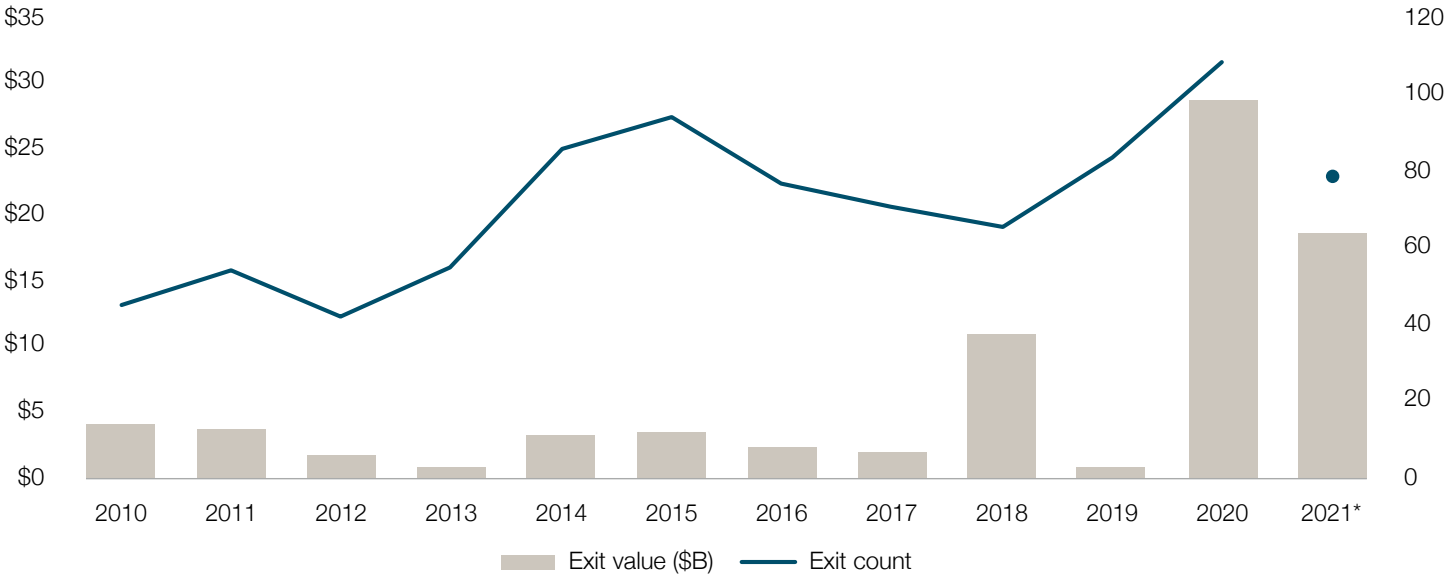
1: "Clean tech" in this report refers to emerging technologies concentrated in the startup ecosystem and not traditional renewables such as wind or solar assets.

exits for almost $30 billion in 2020, and 2021 has already recorded $18.8 billion across 78 exits.

Red-hot equities markets have aided considerably in achieving such totals, with approximately 90 percent of all 2020 exit value occurring via public listings—a trend that appears to be accelerating in 2021. However, outright acquisitions and buyouts by PE firms have also occurred at a healthy clip, signaling a broader and more diverse potential acquirer base.

The drivers of this massive influx of capital are numerous, but two primary themes stand out: First, after several years of steady, if small, advances, key technology underlying clean tech has now become effectively scalable. Second, increased adoption of cleaner technologies across various industries has helped expand the number of addressable market opportunities. In effect, progress is begetting more progress. The definitive example of this trend is the automotive industry's shift toward electric vehicles, which has driven some of the largest venture funding rounds and largest capital raises in the clean tech space—from battery plant producer Northvolt's recent $2.75 billion Series E financing, to ChargePoint's $2.4 billion SPAC combination, to Rivian's massive $12 billion IPO. However, although the automotive category has seen the largest infusions of capital, the diversity of technologies being developed by startups in clean tech has never been greater.

Clean tech VC exit activity



Source: PitchBook | Geography: Global
*As of August 11, 2021

Key players: Producers & institutional investors

Fossil fuel producers: Traditional energy producers, including the world's biggest oil and gas companies, have joined the ranks of those investing in renewables. The oil giants are trying to strike a delicate balance. On the one hand, they need to keep investing in fossil fuels to supply the world's needs. Some of that investment will go into finding fossil fuels that can be produced with less carbon intensity—such as offshore wells along the Gulf Coast. Oil and gas may be shrinking as a percentage of the energy mix, but they are not going away, especially in the emerging markets. At the same time, the major oil producers are putting money into renewables and energy transition technologies, betting that they will be a big piece of the energy future. The European oil companies have been the most aggressive on this front. In its report released last year, BP forecast a 40 percent reduction in oil and gas production in the coming decade and said it would ramp up spending on solar and wind power. The company has already formed a partnership to build wind power projects off the coast of New York and Massachusetts.

Institutional investors: Sovereign wealth funds invested $2.3 billion in 2020 in sectors related to climate change, including forestry, renewable energy, and agtech. That was double the amount committed the year before, according to the International Forum of Sovereign Wealth Funds. Earlier this year Norway's $1.3 trillion sovereign wealth fund made its first renewable investment, buying a piece of a large Dutch offshore wind farm. At roughly the same time, the chief executive officer of the Korea Investment Corp. said that over the next 10 years, the best investment opportunities will be in climate change and related technologies.

Public pension funds are also upping their spending. In October, New York City announced plans to double its investment in climate change solutions to more than $8 billion by 2025, with a goal of reaching $37 billion in 2035. Axa S.A., a global insurer, has pledged to double its green investments to €23 billion by 2023.

Competition for Capital Is Here

The competition for capital

Energy evolution's robust investment future has drawn quite a crowd. For a strong portfolio of wind assets, the list of bidders in an auction might include 10 insurance companies, 20 infrastructure funds, 27 sovereign wealth funds, and 20 strategic buyers. That is not an exaggeration.

If there is one immutable rule in finance it is this: When there is too much money chasing too few deals, prices for assets go up and expected returns go down. Data from PitchBook shows that the former is already happening. The multiples paid on PE energy deals rose steadily over the past decade, reaching a new high in 2021. The availability of low-cost debt helped fuel that ascent. The average deal size rose over most of the decade, but has declined somewhat more recently.

For potential buyers, the intense competition has ramifications. Bidders may have to move quickly when they spot an opportunity. They will also have to sharpen their pencils and consult with their advisors to ensure they are paying a reasonable price for assets. While some investors may be satisfied with putting green deals in their portfolios regardless of the economics, most will want to apply the same financial rigor they would apply to any other purchase. Sellers of renewable assets are in an enviable position because that same competition will make exits easier.

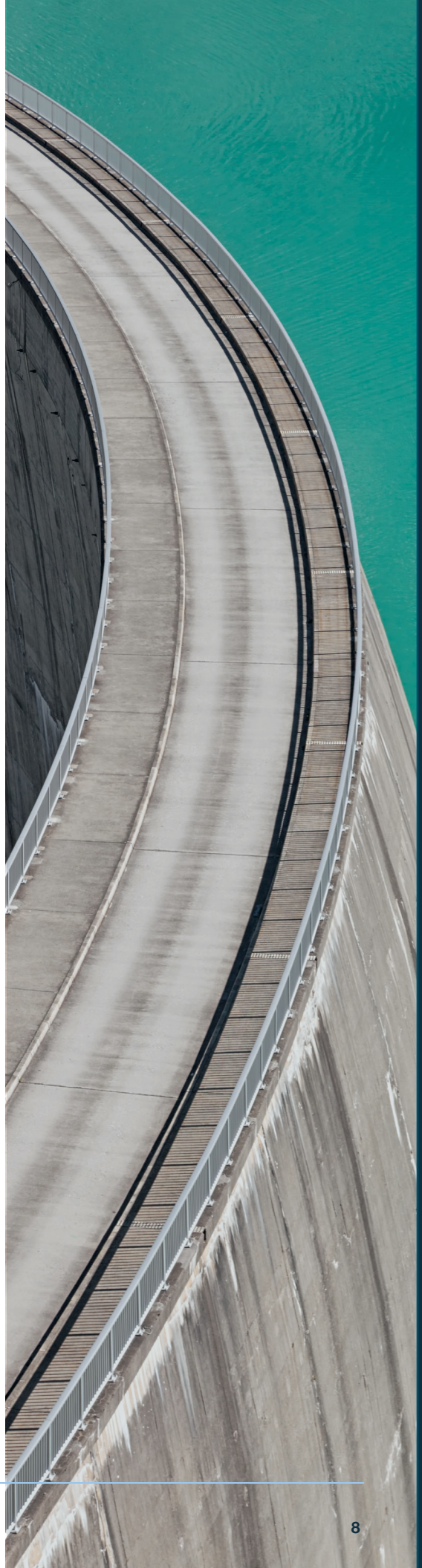
The path forward is hard to predict. Still, there are reasons for optimism. While the recent COP26 summit in Scotland was not an overwhelming success, it did include important agreements on limiting methane emissions and deforestation. For more progress to be made, countries, including the U.S., will have to live up to their pledges. President Biden's infrastructure bill made a down payment on climate action, but it will be up to Congress to decide what comes next. The truth is, as we transition to a cleaner, greener future, both the public and private sectors will play increasingly important roles.

Regardless of the pace and direction of public policy, the private sector is clearly committed to doing more and investing more. Over time that investment will lead to technological breakthroughs, which in turn, will create more investment opportunities.

Methodology

Clean tech was defined by the standard PitchBook vertical, and all companies with that vertical tag that had transactions meeting PitchBook's standard venture methodology were included, per the geography and timing noted. Energy was defined using PitchBook's standard primary industry code; all companies within the energy datasets had to have their primary industry code be energy. Renewables was defined by using a mix of all industry codes and keywords pertaining to renewable energy. All PE activity was defined per standard PitchBook methodology for PE transactions and exits. The full PitchBook methodologies page can be found here: https://pitchbook.com/news/articles/pitchbook-report-methodologies

All geographical breakouts were based on companies' primary headquarters.



About Us

For more than 100 years, Vinson & Elkins has provided deep experience in handling transactions, investments, projects and disputes worldwide. The firm is a trusted adviser to clients in the most important industrial and digital industries.

As one of the world's leading energy law firms, Vinson & Elkins has been guiding clients through the renewable and sustainable energy evolution since the beginning. Today, Vinson & Elkins counsels many of the pre-eminent and longest standing investors in clean and renewable energy on their most complex investments. The firm's multidisciplinary team regularly advises start-ups to Fortune 500 companies to venture capital and private equity sponsors on financing (including tax equity financings), development, tax, regulatory, dispute, environmental, real estate, labor, national security and intellectual property matters related to clean and renewable energy assets and projects.

The firm advises clients on challenging alternative and sustainable energy projects, including solar, wind, hydro, energy storage, renewable fuels, hydrogen, carbon capture and sequestration, fuel cells, electric vehicles, geothermal, smart grid applications, biofuels, biomass, waste-to-energy, and other state-of-the-art technologies. As global investments in clean energy sources grow, Vinson & Elkins will be there, as it has always been, empowering clients to achieve their missions. Learn more about the firm at www.velaw.com.

Vinson&Elkins