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Capital Markets Will Power the Energy Evolution

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The world is embarking on what may be one of the greatest transformations since the Industrial Revolution. Over the next three decades, countries and companies could spend tens of trillions of dollars to build a low-carbon global economy. While governments, especially in the U.S. and Europe, are leading the way with bold policy initiatives, most of the work and the vast majority of the money will have to come from the private sector. The need for capital will challenge the financial markets, but at the same time it will open up enormous opportunities for innovators who can find profitable paths to a greener economy.

The work has already begun. Over the past year, dozens of new public companies, most of them small, have been created, either through traditional IPOs or through SPACs that acquired nascent clean energy companies. Although the numbers are impressive, they represent a tiny fraction of what is to come. In effect, we are just at the beginning of the beginning. Over time more new firms will emerge and established businesses will get into the act by reorganizing, divesting assets and sponsoring IPOs.

It is a good bet that Texas will have a role to play. Most people know that Texas pioneered the oil and gas business. Fewer are aware that it is the leader among the states in installed renewable energy capacity, thanks to its market-leading position in wind power. It is a key goal of the private and public sector in Texas to build upon existing expertise and infrastructure in the energy and chemical sectors to accelerate low-carbon solutions that position Texas as a leader in the energy transition and clean tech innovation. The state has both an energy past and an ambition to be part of the energy future.

The Scale of the Undertaking

In a world used to big numbers, the projected outlays for the energy transformation are still stunning. Consider a few. In March, UBS estimated that meeting the goals laid out in the Paris accord on climate change – limiting the rise in global temperatures to less than 2 degrees Celsius above preindustrial levels in this century – would require worldwide expenditures of between $120 and $160 trillion over the next 30 years. The International Renewable Energy Agency put the number at $130 trillion. Credit Suisse estimated $100 trillion. To put those numbers in perspective, consider this: In early August, the total market value of global equities was $95 trillion.

The breadth of the spending is also impressive – and perhaps surprising. Everyone knows, for example, that investments will have to be ramped up in the production of electric vehicles, batteries and renewable energy. But other areas will be critical as well. Agriculture is a major producer of carbon emissions; so are industries like steel and cement. Technologies that can cut those emissions will be in demand, and money will have to be raised to make those transitions possible. Money will also be needed to pay for expanded transmission capacity to stitch the new systems together.

Governments will pick up part of the tab. On Nov. 15, President Biden signed the Infrastructure Investment and Jobs Act – better known as the "Bipartisan Infrastructure Bill" – into law. Both the Bipartisan Infrastructure Bill and the budget reconciliation legislation that is currently being considered by the Senate – the "Build Back Better Act" – have a heavy focus on clean energy investments. Similarly, the European Union has pledged to boost spending as part of its Green Deal. But those proposed outlays pale in comparison to the $100 trillion that will be needed. Private sector financing will need to grow exponentially to get the job done. And that financing will be available only if it can achieve reasonable returns for investors.

Private capital has and will continue to play a significant role in financing the energy

transition, as Vinson & Elkins makes clear in a new report: "Power Play: How Private Capital is Shaping the Energy Evolution." From 2010 to 2020 private equity fundraising for renewables reached $90 billion. On the venture capital side, the $24.1 billion invested in clean energy in 2021 is already a record. The private investor universe in energy transition is also expanding rapidly, with significant investment from traditional infrastructure funds and increased participation from institutions such as endowment plans and private wealth investors, as well as strategic corporate players looking to augment their own energy transition stories.

It is likely that many of the companies backed by private capital will eventually tap the public markets to pay for their next stage of growth.

Public Market Activity

Since the beginning of 2020, there was a flurry of new companies created in the clean energy space. Only six came to market through the traditional IPO route through that period, but even that was a significant increase from the number of energy transition IPOs in years prior and we expect that to increase further in future periods. A far larger number, 75, emerged through the SPAC process. That figure includes deals both completed and announced. Briefly, SPACs are vehicles which raise money solely for the purpose of making acquisitions. When they identify target companies, they de-SPAC, and the end result is a new public company. The SPAC market grew significantly over the last year, as many thought it a more attractive public entry than traditional IPO, particularly for earlier stage companies.

More recently the SPAC market has encountered some headwinds. SPAC IPOs have had to provide more favorable terms to investors (overfunded trust, shorter term, etc.), many SPACs are trading below their IPO prices post-IPO, more investors have chosen to redeem their shares in connection with de-SPAC business combinations, and there is increased regulatory focus on SPAC transactions and disclosure. It is uncertain how long the negative sentiment about SPACs will linger or if the SPAC market will ever again see the frothiness of early 2021, but we expect that SPAC mergers will continue to be a choice for companies to go public, including those hoping to play a role in the energy transition.

A look at the energy transition public companies created in the recent wave of de-SPACs shows that they are frequently companies in the early stages of development. Roughly three out of four were businesses with less than $50 million in revenue at the time of business combination. More than half were linked to the development of electric vehicles. The rest targeted a mix of solar generation, agriculture, minerals and building technology.

The Role of Government

Government spending can accelerate the pace of the energy transition. Government can also play a role by creating incentives for the private sector to invest more. Those incentives could come in the form of tax credits, new business structures or regulatory changes. The Bipartisan Infrastructure Bill, along with the Build Back Better Act, could potentially reshape the energy landscape. While it is currently impossible to handicap the chances of the Build Back Better Act passing the Senate, it is worth highlighting a few of the changes that have been made and are being considered.

- The Build Back Better Act includes tax credits designed to spur investments in a long list of green technologies: everything from wind and solar power to green manufacturing and electric vehicles. Historically most renewable energy projects have been financed in part using tax credits. But there is a catch: Companies that are developing renewable energy projects normally don't have enough taxable income to take advantage of the credits because of the capital intensive nature of the business. The Build Back Better Act would remedy that situation by changing the rules of the game to make such credits effectively refundable. This would mean even companies without taxable income could take advantage of the credits. The Build Back Better Act would also make it possible for renewable energy companies to organize as publicly traded partnerships. Such partnerships can reduce the overall effective tax rate on distributions to their investors – making them more attractive to certain retail investors. This change could give some renewable companies access to a new source of equity capital.

- The Federal Energy Regulatory Commission oversees the transmission of power across the U.S., a critical element in constructing a next generation energy system. Recently FERC issued orders and announced proposals that have the potential to both spur investment in transmission facilities and improve access to the power grid for generators of renewable power. Another piece of proposed legislation is intended to give FERC expanded authority to site transmission facilities. Currently that power rests with states, who at times have used that authority to block projects. Again, it is difficult to assess how quickly or how likely it is these plans will become law or whether they ultimately will have the full incentivizing effect intended.

The future is always hard to see, and attempting to look ahead 30 years to imagine the energy future is especially difficult. Will politicians in this country and globally stay committed to the goal of a lower-carbon economy? How quickly will key technological developments, such as the building of next generation battery storage, become a reality? What role will private equity and venture capital play in underwriting innovation? What new entities will be created and which will dominate their industries? And will financial markets remain receptive to entrepreneurs with new ideas and new companies?

There are reasons to think the answers will be yes. Powerful forces – including investor appetite, government action and pressing societal demand – are driving the process forward. Progress is likely to beget progress as momentum builds. The money raised so far is small compared to what will ultimately be required, but consider this: We have come a long way in the last five years, which should give us confidence that the next five years and the five after that will be better still.

The economics of realizing the goal may ultimately make the industrial revolution seem not so big after all. And therein lies the opportunity.

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