

Ashurst

# Powering Change

Technologies fuelling the future

Chapter 3 | Financing the transition

September 2024

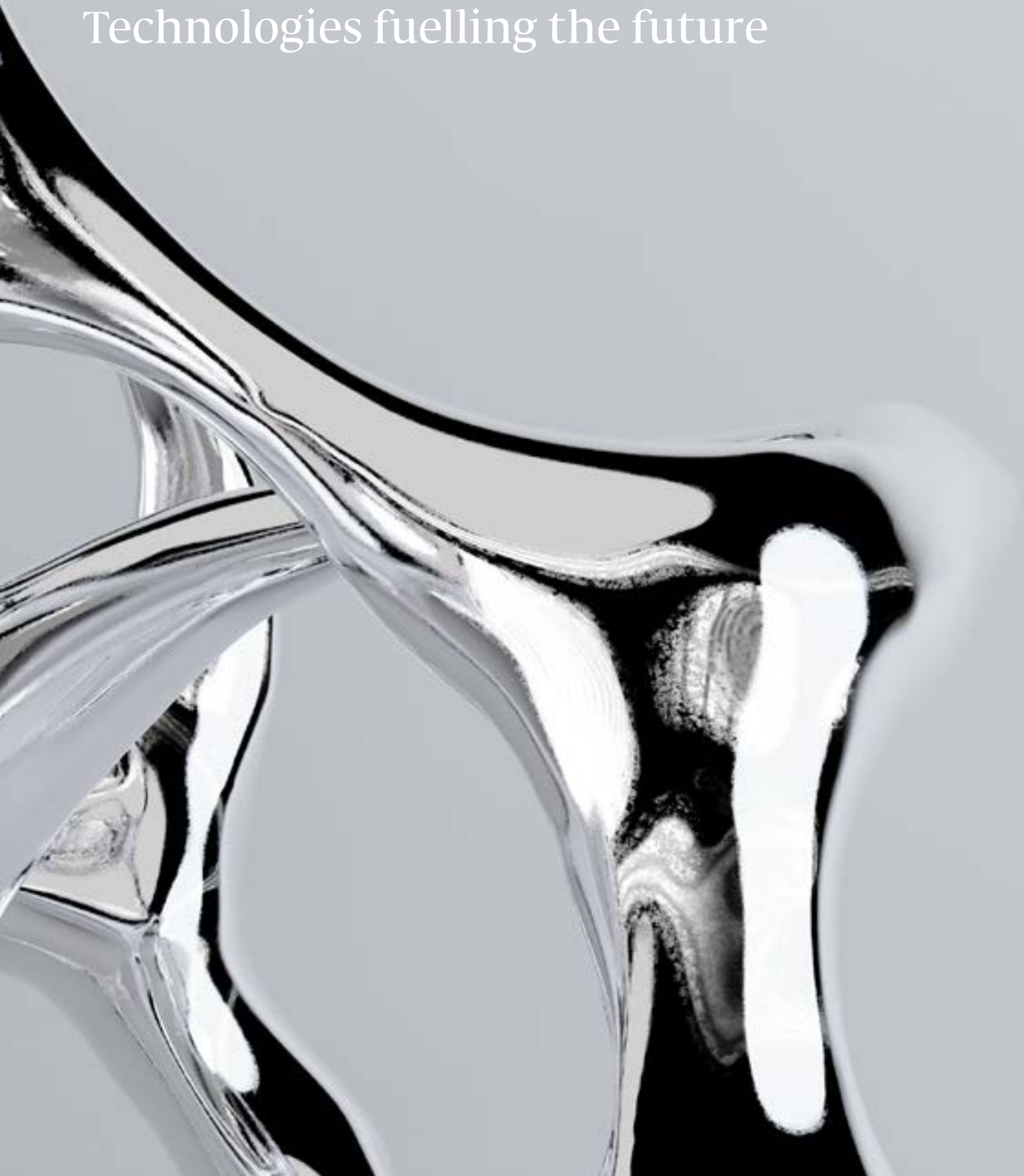


Outpacing change

Ashurst

## Powering Change

Technologies fuelling the future



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# Introduction

**If the energy transition is to succeed at the pace needed to meet the challenges posed by climate change, a wide range of stakeholders will need to work together.**

Governments will be required to set the right legislative framework, with an eye to incentivising corporates to drive the innovation that the new technologies will require if their full potential is to be harnessed. Meanwhile – and perhaps most crucially – the necessary capital must find the right investments.



## Case Study

### **Korea: Moving the grid from coal to renewable energy**

“Renewable projects in Korea have tended to be small scale solar and wind projects onshore. The geography of mainland Korea poses challenges for large renewable projects. However, the offshore wind sector has been growing for the past few years, and has attracted significant foreign investment as well as Korean domestic players. While Korea continues to be reliant on thermal power including coal, from the government down to the private sector, there is a definite push to decarbonise and increase the development and use of low carbon energy.”



**Anna Chung**  
Partner, Korea JV

## Case Study

### **The Middle East: A growing, government-driven focus on renewables**

“The investor base is substantially diverse now across the Middle East. It’s a combination not just of the interesting energy assets that exist here, but also the way the government has boosted capital market activity across the region. While oil is of course big in the region, there is a growing interest in renewable energy, and there is definitely encouragement to invest in the sector, with the region building itself up as a global player. Countries here are also focussed on innovation and technology, and are constantly looking at new areas that they can invest in. So it’s not just solar and wind: they have started looking into hydrogen and other technologies too. There is a lot of work still to be done, but they are very ambitious in terms of where they want to end up in the next few years.”



**Simon Rahimzada**  
Partner, Dubai



**Vasi Papadopoulos**  
Partner, Dubai



In [previous chapters](#) of this year's *Powering Change: Technologies fuelling the future*, we found a significant degree of optimism about the prospects for reducing carbon emissions among those corporates we surveyed, but we also heard about the regulatory barriers that were hampering a quicker uptake of the technologies involved. We examined ways in which different countries were seeking to overcome these hurdles, to help accelerate the process.

This chapter – the third and final for this year – looks at some of the other, non-regulatory obstacles preventing a faster transition. But it also looks at how – once those impediments are overcome – more sources of capital are available to be deployed into the clean energy sector, thanks to a wide range of new investors who are set to enter the industry.

What we have found is that, if the right landscape can be created, investors are as willing as ever to play their part. Different markets are coming up with different solutions to the barriers blocking progress. However, there are concerns about whether the technology is currently sufficiently mature to meet the transition's ambitious goals. And there are fears many governments have not yet provided the right legislative framework, nor concentrated their support in the most effective direction, for those goals to be met.

Nevertheless, there are also encouraging signs that the lessons learned in some countries and regions are being applied elsewhere, to try to make the transition as speedy and effective as possible. We hope you enjoy reading this chapter – as well as the previous ones – and find it informative and useful. If you have any questions, or want to know more about how we can support your own transition strategies, please get in touch with your local Ashurst team.







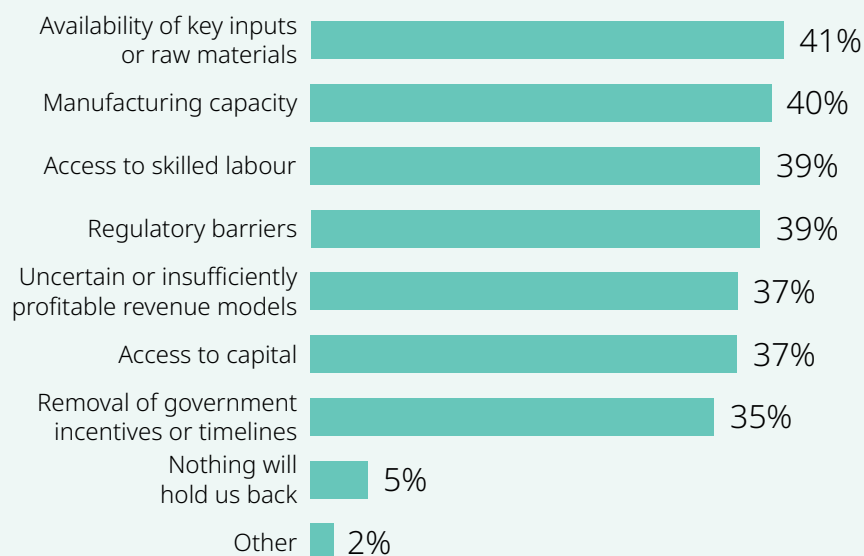
# The barriers to be overcome to make the most of this flow of capital

**There is a huge push at both governmental and intergovernmental levels for greater efforts to achieve net zero.**

Corporates are enthusiastic about the prospects for change, and are eager to play their part. To make the most of the opportunities from the transition however, the barriers which are preventing them scaling new energy technologies over the next five years will need to be overcome.

Chapter Two of Powering Change, which you can [read here](#), looked at how one of those barriers in particular – inappropriate regulation – was causing concerns. Corporates told us existing rules were often not fit for purpose, were designed for the traditional, fossil fuel-based energy market, did not promote greater market liberalisation, and failed to reflect the new structures which the decentralisation of energy will require. However, as well as the need for better regulation, our survey also found that other barriers will need to be overcome if the transition is to be successful.

## What do you believe could hold your organisation back when scaling new energy technologies over the next five years?



## Case Study

### Europe: The three technologies attracting growing interest across the region

“The three hot spots in energy and infrastructure we see across Europe are electric vehicles (EVs), batteries and floating offshore wind. EVs are obviously still a big focus for funds, driven largely by government initiatives across Europe to reduce the amount of combustion engine vehicles on the roads. Although there has already been significant investment in electric vehicle infrastructure, we see that as still having a funding gap and utilising technology that is still developing. A second big sector where we expect continued interest is battery storage – it’s an emerging technology that is yet to reach scale, but which many investors are focusing on as a key means of decentralising energy distribution and softening out energy demands on the distribution systems – something that has posed specific challenges to the UK and EU markets in recent months. It is also relevant in the context of the increasing focus on energy security in the region, this will obviously remain important. The other area I think we will see a lot of investment in over the next few years in the UK and EU is floating offshore wind. Offshore wind is a proven technology in the UK and EU, and we are starting to see floating projects that are being developed. And while infrastructure funds may currently struggle to deploy meaningful amounts of capital into floating offshore wind as the technology remains relatively unproven, we are seeing other players, like corporates and strategics looking at these sorts of projects.”



**Dallan Pitman**

Partner, London



The availability of key inputs or raw materials ranked top as the obstacle corporates believe could hold their organisation back when scaling new energy technologies over the next five years, with 41% naming it as a problem they faced. A number of constraints are currently impacting the supply of raw materials. For example, while demand for minerals such as lithium and nickel has been rising, the price of these commodities has been falling – due in part to an overcapacity across the battery value chain and, in the case of nickel, the impact of large, low cost supply from China – making it uneconomic to progress some mining projects. In addition, perceived doubts about whether governments will stick to their carbon emission goals and target dates – notably for electric vehicles – are also impacting investment in the sector. These issues suggest that the supply constraints affecting some of the raw materials that are most critical to the energy transition may persist for some time. This in turn creates uncertainty both for the industry and for investors.

Coming second behind availability of raw materials as a barrier to the transition was manufacturing capacity. Other regulatory obstacles ranked joint third. Corporates are facing a wide variety of issues in this regard. For example, the greater availability of data, increased demands for transparency, and the growth of sustainability reporting, means regulators, as well as activists, shareholders and consumers, are placing more scrutiny on issues such as greenwashing and ‘social’ washing – in fields such as human rights, employment conditions, impacts on communities, and health. In Australia and elsewhere, this also extends to other issues, such as Native Title. This impacts not just the businesses involved: it can also influence the decisions of investors, who want to know what material risks exist throughout the entire supply chain when deploying capital.

Also joint third alongside regulatory risk were skill shortages. These are becoming more complex, as a new generation of employees who place greater value on the need for the companies they work for to demonstrate their social purpose makes its voice heard.

## Viewpoint

### How governments are reacting to the turbulent market conditions for some raw materials

“In the face of a volatile market environment, around the world governments are rolling out policies to support the critical minerals sector. In Australia, for example, we have both federal and state level programs designed to support the role of critical minerals projects in the energy transition and to capture further value onshore. At the moment however, it’s not yet moving the dial, and there is more to be done across a range of policies and initiatives to ensure that companies, large and small, are sufficiently incentivised and supported to develop new and existing critical minerals projects, whether that be upstream, downstream or midstream. The government, and some corporates, are looking at creating hubs, so there can be a common use of infrastructure to share the costs and risks of projects. It is a step in the right direction, but a lot of detailed work needs to be done. Beyond that, governments around the world need to adapt to the new world of these projects. Approvals processes, for example, take longer than industry would like.”



**Ben Stewart**

Partner, Perth



## Viewpoint

### What a new generation of employee wants from their company

“For corporates, sustainability is increasingly a question of balancing commercial objectives with a need to protect your people and your assets for the longer term. And doing it in a way that continues to be acceptable to customers, communities, and consumers. We know for example that the generation coming through is far more influenced by – and places a greater importance on – their employer being aligned with their own personal values. And they think it is vital that boards manage the impacts of what they do not just on their company, but at a wider societal level. So how do businesses attract that talent? There’s a need to build a greater connection between what they do and how it drives what their employees want. They need to link their activities back to that the broader purpose of building a sustainable future.”



**Kate Wilson**  
Partner, Perth

## Case Study

### The Middle East: ‘If there is seen to be a barrier to foreign investment, governments will remove it’

“In the last few years, the GCC has shown a significant interest in foreign investment into the region. The UAE, for example, has actively taken steps recently to facilitate and encourage foreign capital into the region. What they have done is amend legislation to lift many of the foreign ownership restrictions across a number of industries – other than for what are viewed as strategically important sectors, such as security and banking for entities located on-shore. Generally speaking, governments in the GCC have taken positive strides towards encouraging foreign investment into the region, which has also contributed to substantial growth across all major sectors.”



**Simon Rahimzada**  
Partner, Dubai





# A new range of investors

**Access to capital was another impediment seen as a significant challenge. Indeed globally, more than a third told us it could be holding their organisation back when scaling new energy technologies over the next five years.**

The good news is that our survey suggests a wide range of fresh investors are keen to allocate more funds to renewable energy as their understanding of it grows – if the right landscape can be created for them.

A broad variety of motivations may lie behind the decision by players investing in renewable energy and other green technologies for the first time. Businesses need clean energy in their operations and are increasingly willing to invest in the development of renewable energy projects to supply that clean energy. Industrial businesses, mining operations and tech companies, such as data centre operators, are partnering up with renewable developers to build the facilities that will supply them. Some are being pushed by their investor base to move into greener sources of energy, in sharp contrast to the past, when those investors would not have supported the company in moving out of its core business.

This continued appetite for investment – in the UK and the rest of Europe at least – comes in spite of the United States' Inflation Reduction Act, which aims to attract investment into domestic power production there, while also promoting clean energy. While the Act has made investors who would typically look at European assets consider if there is a more attractive alternative market elsewhere, it does not appear to have significantly impacted investment in Europe. While some investment managers have established a presence in the US as a result of the legislation, it has – so far at least – failed to stop the inflow of finance into the UK and Europe.



## Viewpoint

### The growth of specialist funds targeting emerging technologies

“Energy investing in the UK and the rest of Europe has undergone a seismic shift over the past several years as the energy transition has gained pace. Historically, a lot of investment has come through government / government initiatives and from Private Finance Initiative (PFIs), but over time there has been an increasing move towards private pools of capital to bridge the funding gap required to meet expected investment required to deliver on energy transition goals and targets. However, even within the shift towards private capital, private capital itself is seeing evolution in their approach to investing in the energy transition. More and more infrastructure funds and private equity houses are raising more specific, next generation funds which look to specifically focus on investment in ‘core plus’ or emerging technologies in the infrastructure and energy space where their main / flagship funds would not traditionally have been able to house those sorts of investments. Though the main / flagship funds are also shifting their own parameters to reflect emerging technologies that have shifted to proven technologies, and to increase exposure to development and geographical risk. The investor base of nextgen / emerging technology funds tend to have a slightly higher risk profile, and the funds have a broader investment mandate that allows their managers to deploy capital in the ever increasing range of emerging technologies that are developing within the energy transition.”



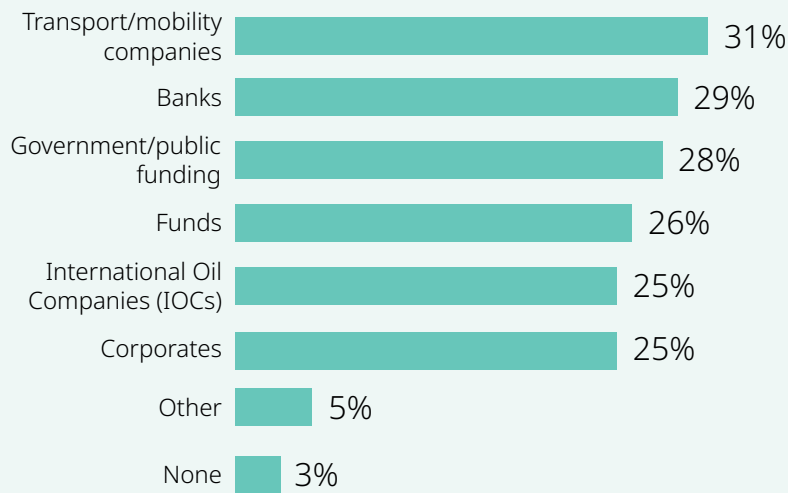
**Dallan Pitman**  
Partner, London

When it comes to renewable power generation, the three most significant new generation sources corporates said they were considering utilising or investing in over the next five years were offshore wind, hydro and geothermal. The new investors expected to drive this push into renewable power were led by transport and mobility companies, followed by banks and governments. However, funds, international oil companies and corporates were also seen as new entrants into the market.

For non-power generation technologies, a broader range of capital sources seems set to become critical in the future. Indeed, three in ten organisations say they expect new entrants to become investors in non-power generation technology in their country over the next five years.

The top three new non-power generation technologies being considered by corporates over this period were pumped hydro storage systems (PHSS), decentralised energy and smart meters. However, a number of other technologies were also expected to attract investment, including hydrogen and carbon capture, utilisation and storage (CCUS). Technologies like these are rapidly moving up corporate mindsets, and early lessons gleaned in first-mover markets are increasingly being shared elsewhere.

### Which new investors in renewable power generation sources do you expect to see in your country over the next five years?



## Viewpoint

### The investors set to drive the expansion of renewable power

“When it comes to the greenfield development of projects, while we are seeing increasing appetite from some funds to take development and construction risk and even in some cases new technology and new market risk, strategic investors continue to be key drivers in the energy transition and green technology sectors as their expertise is critical in getting these projects from the drawing board to full operation. Once proof of concept has been demonstrated, there is a wider universe of funds willing to invest in operating assets with a proven revenue stream.

International Oil Companies are investing huge resources into developing renewable and energy transition projects but finding that the returns on these investments are significantly lower than the returns they can make on their traditional core businesses. One reason for this is the competitive investment environment for such projects. We often hear that there is no shortage of funds for such investments, rather there is a scarcity of properly structured projects in markets with predictable regulatory environments.

Leveraging projects using project financing techniques can improve rates of return for equity investors and this is often critical where competition has driven margins down. It can also provide key risk mitigation in emerging markets where financing is offered by development finance institutions and export credit agencies that have quasi-government to government relationships with host states and where their participation can provide a level of political risk cover for all investors.”



**Sonny Udovicic**  
Partner, London

## Viewpoint

### How the lessons of carbon capture are influencing new projects around the world

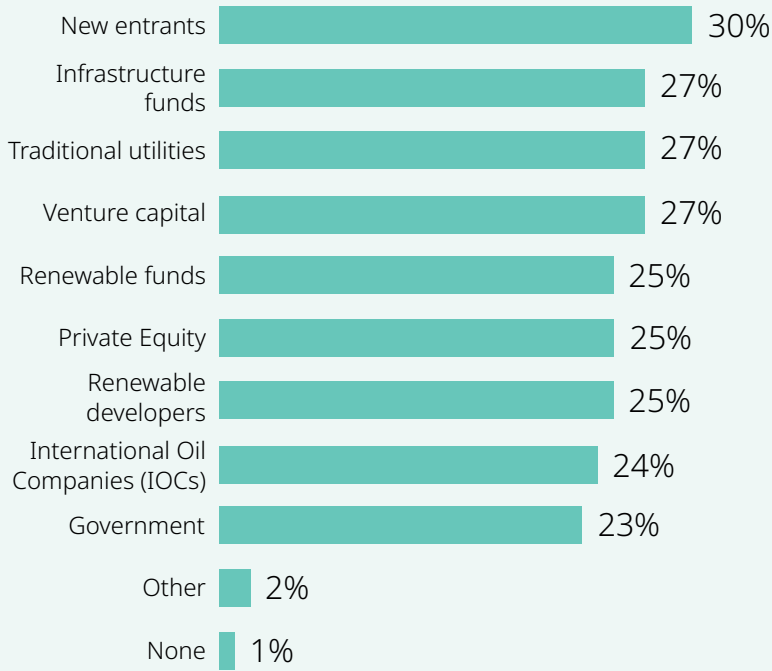
“We have been supporting our clients at the forefront of energy transition projects in developed markets such as the UK, the rest of Europe and Australia. New technologies including hydrogen, carbon capture and batteries are being exported to other nations. For example, we organised a full-day workshop in Australia, where, we provided an overview of the carbon capture regimes for a senior delegation from Korean companies, alongside speakers from Australian industry and government. We are also working on a mandate with a client in Asia to help craft carbon capture legislation in their country, because the legal regime there didn't anticipate this new technology. So there is a need to craft and create the legal regime along with the government, to enable the development of the sector.”



**Anna Chung**  
Partner, Korea JV



## Which new investors in non-power generation technologies do you expect there to be in your country over the next five years?





## Viewpoint

### Unlocking investment from private capital

“There is a lot of optimism in the market around how much capital is available for the transition here in Australia, however, there are a few key levers we need to have in place to unlock that capital. Private capital investors, for example, are not fully unleashing themselves on the market because they need scale to achieve the desired returns. There are ways this can be overcome, for example, by aggregating small scale decentralised energy assets into platforms that give them greater operational flexibility, which in turn allows them to maximise returns. More embedded challenges however will require active thought and management from government and regulators. For instance, in order to attract the foreign capital critical for renewable energy projects, we need more certainty around permitting issues, approval processes (including FIRB) and, in the case of the offshore wind industry, thoughtful targeted skilled workforce initiatives to compete on the global market.”



**Jo En Low**

Partner, Sydney

An abstract, high-contrast black and white image featuring flowing liquid, possibly water or oil, with several reflective spheres of varying sizes scattered throughout. The liquid flows from the top left towards the bottom right, creating dynamic, curved shapes. The spheres are highly reflective, showing bright highlights and dark shadows. The overall composition is fluid and energetic.

## Case Study

### **Australia: “we need to work in a collaborative and coordinated way going forward”**

“In Australia there is no shortage of investors in the energy transition space. There are the big energy companies, wealthy individuals with a particular interest in clean energy, impact funds, private equity funds and infrastructure investors. But what people are finding is that the energy transition is actually a lot harder than it looks. Some projects are not commercially viable at this stage, Government policy can be hard to navigate – especially permitting on projects and incentives. There is also a shortage of skilled labour in the space. We’ve seen some high profile players pull back on their investments given the massive cost involved in developing new low emissions energy, like hydrogen, and decarbonising in hard to abate industries. It’s a really complex playing field: there is no shortage of investors or money, but of course its about how investors can make a commercial return. All stakeholders need to work in a collaborative and coordinated way going forward, with public and private partnerships.”



**Neil Pathak**  
Partner, Melbourne





# Conclusion

**At the next global climate summit – the COP29 meeting in Azerbaijan in November – there are likely to be calls for even more urgent action to accelerate the transition. There may be demands that stakeholders work more closely together to achieve it as quickly as possible. But, as with previous summits, it will be vital for substantive actions to take place once the delegates have returned home. Although, this does not appear to have happened following COP28, notwithstanding the apparent consensus that more must be done and quickly.**

This year's Powering Change survey found that corporates are fully engaged in the debate. They are optimistic about the transition, and are willing to finance and develop both existing and new technologies to help the world move at a faster pace.

What they require is certainty from governments and regulators, as well as a clear pathway into the future. Only by working together can barriers be overcome, new sources of capital exploited, and new technologies brought to fruition, to help the world meet its climate goals.

# Endnotes

## A note on methodology

We surveyed a total of 2,140 senior executives and managers who are involved in energy decision-making in businesses across the G20 nations between 29 October and 3 November 2023. The average annual global turnover of the companies whose executives we surveyed was US\$15.1 billion.

## What we mean by the energy transition

For the purposes of this research, we define the energy transition in the following way: the transition of the global energy sector away from fossil-based fuels to net-zero carbon emissions from energy and industrial systems. This comes through a combination of improvements in energy efficiency and digitalisation of electricity grids (e.g. smart grids and meters), decarbonising the energy mix through lower carbon fuels (including gas and hydrogen) and higher levels of renewable energy sources, integration of batteries and other storage technologies, as well as the electrification of other economic sectors (e.g. transport, heavy industries, manufacturing, agriculture and buildings).







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