# Scaling up the energy transition

Our survey looks at how corporates and capital providers are setting priorities, staying competitive and managing risk





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### Introduction

he journey to a net-zero economy has started around the world. Smaller carbon footprints and cleaner energy sources are a priority for energy companies, despite geopolitical challenges and the imperative to meet near-term energy needs that is boosting demand for fossil fuels.

Energy companies are concerned about whether they can remain competitive throughout this energy transition.

So they are taking decisive steps to cut their greenhouse gas emissions and are making massive investments in clean energy, funded by an ever-widening mix of capital.

They are in a good position to lead the transition, but to do that they need to develop new technology and infrastructure to provide an affordable, reliable and greener energy mix. And that means they need capital.

At the same time, there is pressure to invest in carbon capture, utilisation and storage (CCUS) to reduce the environmental impact of continued fossil fuel-based energy production and use. Less than half (42 per cent) of energy companies see divestment of emissions-intensive assets as a last resort.

To reduce legal and financial risk as they pursue ambitious decarbonisation goals, corporates are taking advantage of government support—and lobbying for more, often benefitting from domestic producer preferences and protections. Given the energy crisis in Europe, some governments are reassessing the levels of support they have provided to determine whether they meet current needs.

For capital providers, energy transition risks include grappling with new energy technologies, lack of tangible and reliable government support, and the growing threat of litigation. But they are persevering: Our research shows that 45 per cent have a strong preference for working with emissions-intensive companies to help lower their emissions.

This is a turbulent time for energy markets. We carried out quantitative research and conducted in-depth interviews with senior executives to find out how they are coping with the risks and opportunities. In this report, we look into our findings in detail.



Michael Watson Partner, Head of Energy Transition, White & Case



Energy transition capital is being deployed faster than ever, funded from ever-increasing sources, and we are moving from a phase of piloting transition technologies to rolling out at scale

#### **Key findings:**

- 42 per cent of corporates say energy transition investment is a high priority now, compared with only 14 per cent two years ago.
- Over the next 18 months, 45 per cent of energy companies intend to pursue investment opportunities in greenfield renewable energy projects, and 41 per cent are looking into carbon capture and abatement technology.
- ☐ Given the enormous amounts of capital required to finance the transition, capital providers are readying a mix of asset classes, and private equity financing (45 per cent), project finance (36 per cent) and corporate green bonds (35 per cent) are their preferred options.
- ☐ Fifty-nine per cent of corporates say that staying competitive is the greatest risk in a net-zero economy, but only 22 per cent say they are well prepared to do so.
- More than four in ten corporates and capital providers favour making investments to reduce emissions over divesting emissions-intensive businesses and assets in their portfolios.
- Corporates and capital providers will continue to invest in traditional lines of business while also expanding into new technologies and renewables.

Explore our interactive insights on the energy transition here: http://whitecase.com/energy-transition



## **Section 1:**

# Energy transition financing has become a clear priority

There has been a distinct shift in capital allocation across the energy sector. In our research, 42 per cent of energy company executives say they now see capital investment in the energy transition as a high priority. That percentage has tripled from just 14 per cent two years ago, when respondents favoured capex in traditional business areas (see Figure 1).

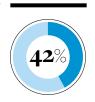
This change reflects the scale of the net-zero challenge, says David Tilstone, a Managing Director at Macquarie Asset Management. "Capital needs to flow into renewables but also into less clean sectors," he says. "That will help them become more mature over time—as they need to—and will help to decarbonise other areas of the economy."

White & Case partner Sandra Rafferty agrees. "Initially, when corporates, funds and banks considered energy transition, it was with a view to identifying and funding renewable energy sources like wind and solar, as well as newer technologies," she says. "However,

the more forward-thinking players in this sector now recognise that full energy transition will also encompass taking fossil fuel-based systems of energy production and consumption and decarbonising them.

"While corporates and funds are still looking to governments for support in relation to developing new renewable and energy transition technologies, governments need to ensure that any such support is proportionate and does not result in super profits for the recipients—particularly at the expense of the consumer," adds Rafferty. "To ensure this, it is likely that there will be greater scrutiny and regulation in the energy sector, not dissimilar to what happened to the financial services sector following the global financial crisis."

Another reason for this shift in capital allocation is the outlook for long-term cost savings for companies, says Peter Wexler, Schneider Electric's Senior Vice President and Chief Legal Officer. "Take the utilities on the US West Coast—their transformers will

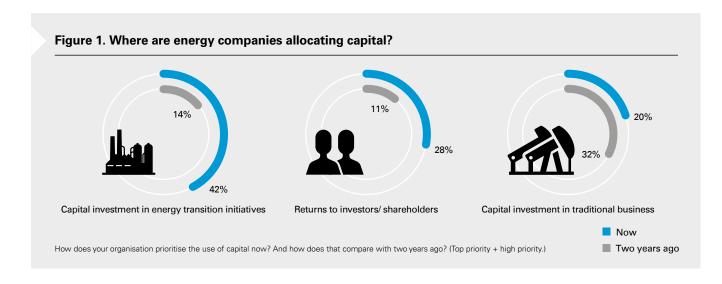


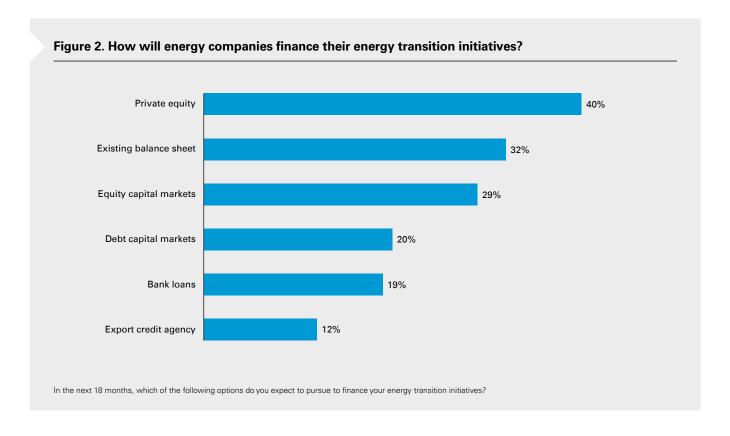
of energy company executives say they now see capital investment in the energy transition as a **high priority**  cause these huge wildfires," he says. "If they find a different way to operate through other resources and modernisation, it is worth the investment. They have to suffer in the short term to prosper in the long term."

"Unfortunately, we are a crisisdriven society. That's the only way we seem to operate. I think companies have to mentally prepare for investment, and then, make it," says Wexler.



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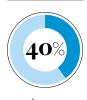


#### A mix of funding will speed up the process

To reach net-zero by 2050, clean energy investment worldwide will need to more than triple in this decade to approximately US\$4 trillion. The first half of 2022 showed a promising increase, with a record high US\$226 billion investment in renewable energy, a year-on-year increase of 11 per cent on the first half of 2021.

Energy companies in our research expect to be able to draw on a range of financing sources, both from third-party capital providers and from their own balance sheets. Germaine Gurr, partner at White & Case, explains that financing firms can provide a great balance for companies to be first-movers or to continue to provide energy transition-related products to clients that might not have the capital to invest, but can leverage financing support from sponsors by using an energy-as-a-service model.

"Strategic players such as Siemens, Schneider or ABB, or traditional oil & gas companies like Chevron, are teaming up through commercial partnerships and joint ventures with financing sponsors such as Carlyle, Macquarie, Morgan



of energy companies expect to access **PE investment** over the next 18 months Stanley and others, to bring together the best of their respective worlds," says Gurr. "One party is providing expertise in energy transition and understanding the products that are required to support these alternative energy systems. And the other party is providing the financial engineering expertise and the capital to backstop some of these projects or M&A opportunities—especially where companies are not really in the business of holding projects as assets."

Private equity (PE) will be an important provider of cash and expertise, with 40 per cent of energy companies expecting to access PE investment over the next 18 months (see Figure 2). The recent behaviour of PE firms suggests that there is appetite to invest in transition, with US\$21.5 billion flowing into the US renewable energy sector in 2021.

"The investment community has really made climate action the new business imperative," says Annette Clayton, CEO of Schneider Electric North America. "It's a business opportunity because less carbon is less cost, so it's a time for organisations to reimagine themselves, their solutions,

their stakeholders."

Schneider Electric has recently entered into two joint ventures with capital providers to create energy-as-a-service solutions: AlphaStruxure with The Carlyle Group, and GreenStruxure with Huck Capital and ClearGen. "This is an absolutely new way of serving the market," says Clayton. "The energy-as-a-service business model eliminates all the upfront customer cost for the project, and it gives them long-term cost predictability for energy supply and insulates the customer from rising energy costs."

Many energy companies will look inward to fund their investment programmes. Almost one-third (32 per cent) expect to draw from their existing balance sheets—particularly as soaring oil & gas prices boost the profit margins of many players in the energy sector. There is also an opportunity to tap into capital markets—both debt and equity—to fund the transition.

As for the funding itself, many capital providers focussed on decarbonisation plan to tap into a range of financing options to supplement their own resources. Forty-five per cent expect to make

use of PE financing—echoing the views of energy companies—as they pursue energy transition (see Figure 3).

And the size of the transition opportunity is drawing ever-bigger sums into infrastructure funds, including Brookfield's Global Transition Fund, which raised US\$15 billion in June 2022.

Installing renewable capacity is often the first step, but delivering it to the customer can be costly. One of the biggest infrastructure developments to capture solar power and export it across borders is the Australia-Asia-PowerLink, which in March closed a Series B capital raise with AUD 210 million. "There is significant demand for zero-emission electricity delivered on a dispatchable basis and at scale in our target markets: Darwin and Singapore," says David Griffin, Founder and CEO of Sun Cable, the developer behind the AAPowerLink project.

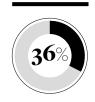
More than one-third of respondents (36 per cent) expect to

be able to secure project financing (see Figure 3). Investors are keen to offer more than just financing, according to David Tilstone of Macquarie Asset Management. "Bringing capital into this sector is enormously important, but there is also a skill in being able to create assets," he says. "It requires expertise and experience to be able to go through that development period and to commercialise a project."

White & Case partner Sibusiso Zungu agrees. "This is a very important point, especially in emerging markets with power utilities and sovereigns that have weak credit scores. Commercialising projects in these markets often requires innovative structures around off-take payment risks, and these generally involve multilateral institutions providing payment security instruments on these power utilities, and taking residual risk on the sovereigns owning these power utilities. Therefore, bringing

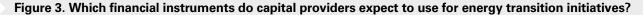


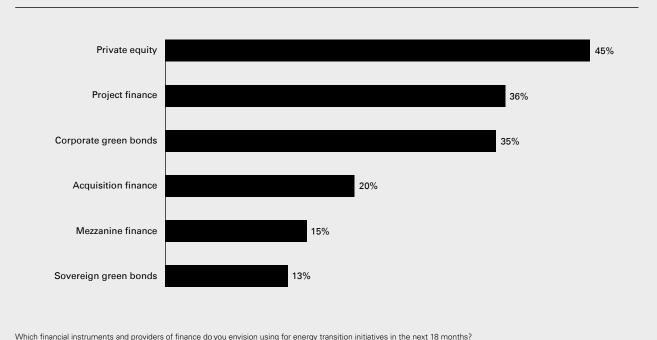
# It requires expertise and experience to be able to go through that development period and to commercialise a project



of capital providers expect to be able to secure project financing capital into the sector will not be a solution on its own—it will require industry expertise to ensure that viable projects are created that can, in turn, attract both equity and debt investors."

The growth of the green bond market could provide further financing support. Green bond issuance went above U\$\$500 billion for the first time in 2021, which is a 73 per cent increase on 2020. In this research, 35 per cent of capital providers expect to make use of corporate green bonds in the months ahead.







## **Section 2:**

# Can energy companies stay competitive in a net-zero economy?

The energy sector recognises that it needs to focus on decarbonisation and the transition to cleaner energy without undermining its own competitiveness. Therefore, it will have to balance its investment in the transition with the demands of operations and returns to shareholders and investors.

Our research suggests that many energy companies are facing challenges here. The risk most highly ranked by companies when they are thinking about the energy transition is their ability to remain competitive. Not only do 59 per cent of them have this concern, but only 22 per cent feel that they are on track in preparing for it (see Figure 4).

John Moon, Head of Morgan Stanley Energy Partners, says that the sector must not delay simply because it does not have all the answers yet. "There are lots of things we can do to decarbonise without putting our shareholders' financial welfare at risk," he says. "But it takes real creativity and differentiation." Moon says that

investing in battery storage and microgrids is an alternative to the competitive environment for investing in utility-scale solar and wind power. There are also opportunities within fossil fuels—switching from coal and diesel to cleaner-burning natural gas and liquefied natural gas (LNG), for example.

#### Shareholder activism looms large

Moreover, energy companies that are overcautious may run into problems of a different kind with shareholders. In the past two years alone, there have been activist investor campaigns at companies including AGL, ExxonMobil, Royal Dutch Shell, Glencore and SSE. These campaigns' objectives might vary, but the common theme is that activist investors believe energy companies must do more to plan for the transition.

No wonder, then, that managing shareholder activism is seen as the second-biggest energy transition risk faced by the sector. Nearly half of corporate respondents in



The risk most highly ranked by companies when they are thinking about the energy transition is their ability to remain competitive. our research (44 per cent) are concerned about it, and just 21 per cent feel well prepared to deal with it (see Figure 4). They recognise that shareholders are beginning to allocate more money to transition activities, and that many of them see this investment as the key to securing future competitiveness, rather than a threat to it.

White & Case partner Seth Kerschner cites Climate Action 100+ as an example of a shareholder initiative that aims to ensure that large corporate greenhouse gas



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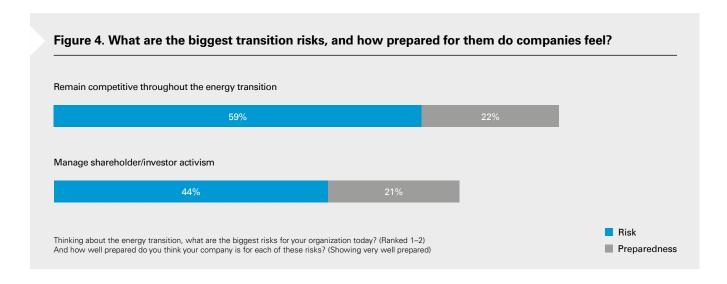
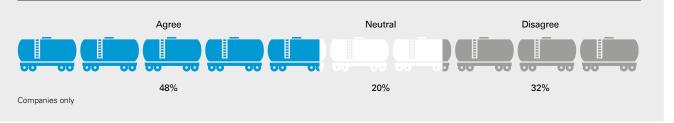


Figure 5. Litigation risk related to energy transition transactions will increase over the next two years.

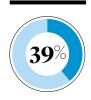


emitters take enhanced climate change mitigation action. And he says that, in at least one case, environmental advocacy organisation ClientFarth is using its claimed rights as a Shell shareholder to attempt to effect climate change mitigation by Shell. Earlier this vear. ClientEarth notified Shell of a derivative claim, which would be brought in ClientEarth's capacity as a Shell shareholder, concerning allegations that Shell's Board of Directors failed to properly prepare the company for the net-zero transition and mismanaged material and foreseeable climate risk facing Shell. "It remains unclear whether ClientEarth will be able to pursue this type of derivative claim," says Kerschner. "And the main aim may be more the publicity surrounding the claim itself than any ultimate remedies."

#### Regulation raises risks

This research sets out many of the ways in which energy companies plan to navigate the energy transition challenge—from mergers and acquisitions (M&A) activity that grows renewable energy portfolios and cleantech use to investment in the research and development that helps to clean up emissions from energy producers and industry. But many energy companies also have significant concerns about the risks of their acquisition strategies.

Although global M&A transaction volumes in the energy sector reached an all-time high in 2021, the volatility of the regulatory and political environment in many jurisdictions could impede future deal-making. With the outlook uncertain, 39 per cent of respondents feel that regulatory risk is a stumbling block for their M&A strategies (see Figure 6).



of respondents feel that regulatory risk is a **stumbling block** for their M&A strategies. The ongoing efforts of policymakers to incentivise decarbonisation mean regulatory change affects both emission penalties and subsidy schemes. "Across the market, you can point to instances where instability in the regulatory regime is creating uncertainty, and uncertainty is bad for investment," says Morgan Stanley's John Moon. "As regulatory regimes go back and forth, it is very difficult to plan."

In the US, the Inflation Reduction Act (IRA), which President Biden signed into law in August 2022, has created optimism in the renewables industry and the energy transition space. The IRA marks the largest public investment in the US energy sector in modern history, allocating more than US\$300 billion to climate and energy. Many see the IRA as the impetus for a clean energy revolution in the US.

White & Case partner Taylor
Pullins says that the wave of
investment optimism is encouraging,
but to implement the tax incentive
programmes authorised by the IRA,
there will need to be significant
updates to existing regulations
to remove (or at least mitigate)
regulatory hurdles to investment.

"The IRA marks the dawn of a new day for the US renewables industry and regional energy transition," says Pullins. "There is valid reason for optimism in the industry and investment community. Notwithstanding, key regulatory changes are needed over the coming year to determine how quickly we arrive at the brightness of noonday for more reliable and scalable projects. Delays and other challenges to obtaining required permits for US energy transition projects in carbon capture, nuclear and even hydrogen technologies have caused significant frustration for project sponsors and investors alike. So, to accelerate innovative progress in the region, regulators must reduce the regulatory uncertainty, financial burden and time required for projects to receive necessary permits and other authorisations."

With more high-cost infrastructure such as cross-border interconnectors and subsea cables planned to support the energy transition, reducing legal barriers across jurisdictions can help. Sun Cable's AAPowerLink, which spans five jurisdictions, is one example.

"We are managing across different countries and their waters from a legal perspective, which involves navigating bilateral and multilateral agreements that exist



Across the market, you can point to instances where instability in the regulatory regime is creating uncertainty, and uncertainty is bad for investment

between Singapore, Indonesia and Australia—all of which support the viability of projects like the Australia-Asia PowerLink," says Sun Cable's David Griffin. "The same outcome has to be achieved from a regulatory side across each of those jurisdictions, so we do work very closely with each one of them, and have mapped out in detail the processes and expectations that we have to meet. We have been able to design a system that can operate in a frictionless manner across jurisdictions."

#### Supply chains need to adjust to new rules

Policies to support the energy transition are not always designed in a way that promotes regulatory compatibility or global economies of scale, and this creates risks for companies at all stages of the supply chain. For example, some jurisdictions have made access to clean energy tax incentives contingent on domestic or regional sourcing of raw materials and components, reflecting industrial policy and geopolitical objectives. Some governments have questioned whether such requirements comply with international trade rules that require equal treatment of domestic and imported goods. "The proliferation of local content measures in the sector creates risks and challenges for companies that rely on global supply chains," says David Bond, partner at White &

Case. "Many companies will need to restructure their supply chains in order to take full advantage of government incentives and remain competitive in the marketplace," says Bond. "Countries may also face pressure to withdraw measures that are found to violate trade obligations, and companies benefitting from government incentives need to understand that risk."

#### Risks of expanding in a shrinking economy

Then there is the possibility of post-deal problems. Close to half of respondents (48 per cent) believe that litigation risk related to energy transition transactions will increase over the next two years.

Mark Clarke, partner at White & Case, says that climate litigation is accelerating around the world, increasing the prospect of litigation and liability risk for a diversifying pool of potential claimants and defendants. "Formerly focused on the so-called carbon majors, the range of defendants now includes capital providers, financial institutions and businesses participating in the energy transition—all of which are also exposed to rights-based litigation risk, as they purport to support a 'just' transition," says Clarke. "It is now accepted that climate change is also a human rights issue, with the UN General Assembly's recent adoption of the historic resolution declaring access to a clean, healthy



# Strategic climate and rights-based litigation claims are converging to create a two-pronged exposure for companies

and sustainable environment to be a universal human right. Strategic climate and rights-based litigation claims are converging to create a two-pronged exposure for companies."

Strategic litigation risk, says
Clarke, may be associated with novel
theories of harm, which include
harm to people or communities, or
shareholder claims based on harm to
business value—including portfolio
risk, disclosure risk and securities
litigation risk relating to allegations of
misrepresentation. "Greenwashing
or climate-washing has also emerged
as a key regulatory enforcement risk,
with concepts of social-washing,
transition washing and just transition

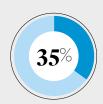




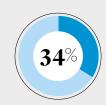
Regulatory uncertainty about emissions, subsidies or incentives



Difficulty raising finance



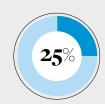
Shareholder/ Investor pressure



Increasing scrutiny by antitrust/ competition authorities



Buyer/Seller valuation gaps



Lack of suitable targets for M&A in line with net-zero strategy

Which M&A challenges do you expect to encounter in the energy sector over the next 18 months? (All respondents)



#### While navigating the complexities of the ever-evolving global regulatory frameworks is possible, it will require market participants to be both intentional and strategic

washing waiting in the wings," he says. "Also coming down the track will be new regulatory enforcement claims relating to forthcoming EU legislation, such as the corporate sustainability due diligence directive, which will likely lead to a wave of actions related to breaches of enhanced directors' duties and due diligence obligations."

Clarke says we are witnessing a rapid increase in the number of sophisticated, well-funded, nongovernmental organisations and civil society players and activists seeking opportunities to use litigation as a lever to enhance corporate accountability and drive regulatory change. "While there has been limited explicit reference to energy transition in climate litigation and theories of harm, as energy companies and capital providers strive to meet their decarbonisation targets and commitments, this is likely to become more prevalent," he says.

"Strategic litigation, stakeholder activism and regulatory enforcement risks are all clear and present dangers for businesses," adds Clarke. "OECD National Contact Point complaints are also likely to remain popular given their low cost to initiate and the high level of publicity they generate. Boards need to take all these risks seriously, especially when crafting their energy transition or just transition frameworks, as well as their governance structures. Energy companies and capital providers alike must implement strategies to mitigate such risks by ensuring that institutional policies are cohesive in terms of climate and human rights. commitments, with effective due diligence mechanisms and practices in place to support them."

The shifting regulatory backdrop, for instance, may partly explain why many energy deal participants now appear to prefer domestic M&A—or, at least, deal-making in the jurisdictions with which they are most familiar.



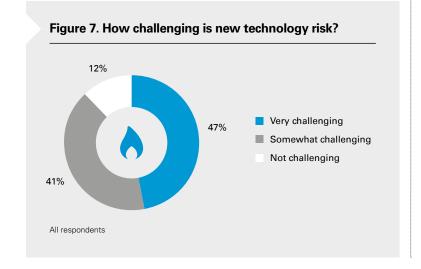
of respondents say that acceping new technology risk is very challenging.

"The difficulty is, there are so many different regulations coming globally that it is tough to keep track of them all, and to be prepared to meet all of the various requirements as and when they fall due in multiple jurisdictions—especially as the regulation coming from different countries is not aligned," says Mary Nicholson, Head of Responsible Investment at Macquarie Asset Management.

"While navigating the complexities of the ever-evolving global regulatory frameworks is possible, it will require market participants to be both intentional and strategic," says White & Case partner Serena A. Rwejuna. "Regulatory developments and compliance considerations cannot be an afterthought. Rather, embedding regulatory and compliance considerations into your energy transition strategy, deal structures, financial modelling and long-term plans will be essential in this environment, where jurisdictions are moving at different paces and there is no one-sizefits-all answer to how regulatory and compliance considerations will impact your energy transition strategy."

#### Technology is a growing concern, but partnerships help

Close to half of respondents (47 per cent) say that accepting new technology risk is very challenging. They are keen to explore the possibility of new solutions—both through their shift into renewables and in their efforts to reduce the impacts of carbon-intensive activities through the likes of carbon capture, utilisation and storage (CCUS)—but they worry that they are being asked to take a gamble on technologies that are not fully



proven or are difficult to scale up.

"This is a critical point for the traditional energy markets to push the boundaries on what new technology risks they may accept," says White & Case partner Carina Radford. "Most investors and financiers understand that the first-mover advantage could be significant, and they may just have to take a leap into the less-proven to capture real opportunity as the pace of change is so fast."

Choosing solutions from the many competing technologies and providers can be a daunting task, but increased collaboration will help. One opportunity will be to participate in the growing number of projects incorporating the expertise of multiple partners. These include large energy companies and stakeholders from finance, academic research and public sector organisations.

For example, Italian renewable, energy company Enel Green Power, which is planning to achieve netzero by 2040, expects to strike partnerships with international investors and local partners to enable energy transition investments—mainly in wind and solar power, energy storage and hydrogen.

"We expect green hydrogen production to develop from pilots. ideally by partnering up with green hydrogen users," says Salvatore Bernabei, CEO of Enel Green Power. Enel says it will continue to develop green hydrogen projects by working with partners such as ENI, Saras and AME to advance existing projects and widen its pipeline with a focus on Italy, Chile, Spain and the US. "The projects will contribute to the decarbonisation efforts of industrial customers, whose processes cannot leverage direct electrification, and on cost reduction of the green hydrogen technology,"

says Bernabei.

He expects green hydrogen to become a competitive alternative to fossil fuels for hard-to-abate sectors by 2030, with the industry scaling up with the support of funds such as IPCEI (Important Projects of Common European Interest).

"Large-scale green hydrogen production has quickly emerged as a key battlefield in the energy transition story," says White & Case partner Fergus Smith. "Key challenges remain to be solved on both the supply side and the demand side, but it is clear that this market is poised for substantial growth in the near term."

In the UK, for example, the HyNet North West project is attempting to decarbonise an entire region's industrial activity through hydrogen. It involves a core consortium of eight partners that are focussing on developing the principal infrastructure, as well as organisations from the chemicals, glass and oil refining, food, paper and automotive sectors.

Launching initiatives such as a hydrogen economy may require the involvement of state-backed entities-at least at the outset, says David Tilstone of Macquarie Asset Management. "New technologies may need some support to get off the ground," he says. "With that support, they can scale up and,

ultimately, become something that stands alone with less need for support in the future."

Joint ventures with strategic technology partners provide another opportunity to mitigate risk. By working with specialist technology providers and developers, energy companies can share risk and expertise with their partners.

But one risk—of moving too slowly—could eclipse all others. "Decarbonisation is a form of risk management in itself, given the transition risks associated with climate change and the increase in regulation that impacts our businesses globally," says Macquarie Asset Management's Mary Nicholson. "If we don't work with our businesses to help them navigate that transition, we are at risk of having detrimental impacts to their valuations or finding it harder to sell them in the future."



Large-scale green hydrogen production has quickly emerged as a key battlefield in the energy transition story



## **Section 3:**

## Engagement outweighs divestment

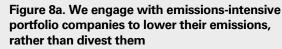
**Energy companies and investors** are engaging with emissionsintensive sources of energy to simultaneously secure supply and reduce emissions. The desire for divestment from the sector is limited and the tone of the conversation is broadly supportive: Shareholders and companies are anxious to accelerate the transition—and to be prepared for regulation.

The key, says Morgan Stanley's John Moon, is transparency. "We should work to decarbonise carbonemitting industries, rather than vilify them," he says. "Good engagement means accountability, and this requires good measurementholding them accountable for specific decarbonisation goals is part of the trick."

Such sentiments reflect the general preference of investors for engagement over divestment. In this research, 45 per cent of capital providers say they engage with emissions-intensive portfolio companies with the aim of lowering emissions, rather than divesting; 34 per cent say their companies take the opposite view (see Figure 8a). Energy companies, meanwhile, are focussing on how to decarbonise their emissions-intensive lines of business, rather than getting rid of them-42 per cent say divestment would be a last resort (see Figure 8b).



of capital providers say they engage with emissionsintensive portfolio companies, rather than divest.



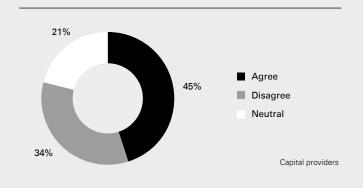
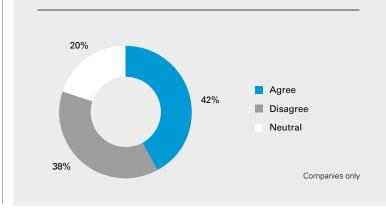


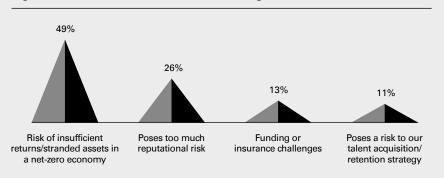
Figure 8b. Divestment of emissions-intensive lines of business will be a last resort for my organisation





Good engagement means accountability, and this requires good measurement—holding them accountable for specific decarbonisation goals is part of the trick

Figure 9. What are the reasons for divesting?



You said your organisation intends to "divest emissions-intensive companies/securities." What is the most important reason for this? (Capital providers)

#### A case for engagement?

For investors that do expect to divest from emissions-intensive businesses their reasoning is based less on disillusionment with the decarbonisation efforts of their holdings than on economics.

Almost half of capital providers with divestment plans (49 per cent) say their view is informed by a fear of being left with stranded assets or a risk of insufficient returns (see Figure 9). In an economy that is moving towards net-zero at pace, they say, carbon-emitting businesses will have less and less value.

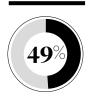
For the majority of investors, however, the decision is more nuanced. On the one hand. divestment means both losing a seat at the table from which to influence the pace of transition and missing out on the opportunities of decarbonisation. On the other, maintaining the holding

means exposure to carbon taxes, increasing regulation and, potentially, litigation—plus, the difficulty of competing with cleaner energy businesses that enjoy legislative support.

#### There is a range of ways to cut greenhouse gas emissions

The most straightforward way to achieve net-zero and profit from the transition is to invest in new renewable energy capacity. However, in the coming decade, the world will not rely exclusively on renewables, and fossil fuel use is likely to continue.

White & Case partner Jay Cuclis says that there is substantial emphasis on CCUS projects to extract CO<sub>2</sub> from major industrial emitters of CO<sub>2</sub> (point source emitters) or directly from the atmosphere (direct air capture)both in terms of major government



of capital providers with divestment plans say their view is informed by fear of being left with stranded assets or a risk of insufficient returns.

support and substantial investment, particularly by global energy companies.

"We are seeing significant and increasing activity in the CCUS space, both in the US and globally, as this is viewed as one of the most effective ways of reducing the environmental impacts of continued use of fossil fuels and achieving the world's net-zero goals for 2050," he savs.

Energy companies' plans for investment are ambitious. Close to half (45 per cent) expect to invest in new greenfield renewables projects over the next 18 months, and 41 per cent are prioritising investment in carbon-reduction technology (see Figure 10a). Interest in investing in greenfield renewables is strongest in the Americas (50 per cent) and the Middle East and Africa (46 per cent). (see Figure 10b)

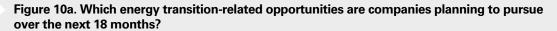
"The US hasn't really invested in infrastructure in decades" says Annette Clayton, CEO of Schneider Electric North America. "So, we're now seeing and embarking on this unprecedented investment in US infrastructure to modernise it, to digitise it, to make it more resilient to climate impacts and to make it more sustainable. And we're starting to see more money flow from the US government into the states, so we see this as tailwinds for our sector"

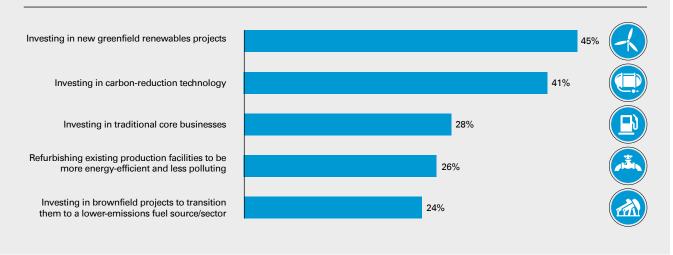
Again, these plans must not be seen as an alternative to cleaning up the current portfolio, but should run parallel with it. Fossil fuels will inevitably remain a mainstay of energy companies' activities for some time, but 50 per cent of companies also see potential in refurbishing their existing facilities or transforming brownfield projects to become less dependent on carbonintensive fuels.

This is in line with Enel's vision. In 2015, it launched an initiative with the purpose of giving a second life to 23 thermoelectric power plants and a former mining area that would have been shut down to achieve carbon neutrality by 2040. The initiative has now grown to 80 sites located in Europe and Latin America.



We're now seeing and embarking on this unprecedented investment in US infrastructure to modernise it, to digitise it, to make it more resilient to climate impacts and to make it more sustainable







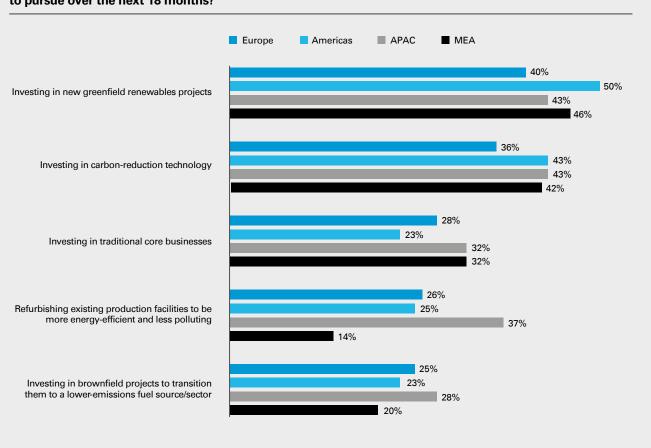
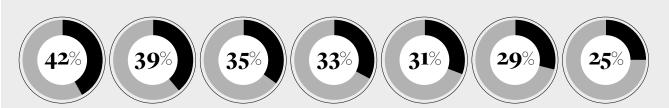


Figure 11. Where do capital providers intend to invest?



Invest in low/zero-carbon technology

Acquire renewable energy companies or securities

Acquire emissions-intensive assets to green them

Invest in portfolio companies that are reducing their CO2 emissions

Divest emissions-intensive companies or securities

Require investment managers to reduce exposure to companies not reducing CO<sub>2</sub> emissions

Carbon trading and offsetting activities

You said your organisation is planning to reduce its portfolio exposure to greenhouse gas emissions. To this end, which of the following actions does your organisation plan to take in the next 18 months? (Capital providers)

"The goal of the Futur-e initiative is to valorise the energy potential of the sites with renewable, storage and, when necessary for the grid's needs, with gas technologies," explains Enel's Salvatore Bernabei. "Coal phaseouts have to be customised based on the circumstances of different countries in order to ensure the stability and the security of national energy systems. Otherwise, for sites where there is no potential new energy development, the plan is to entrust the redevelopment to investors and external developers who will take over part of the areas to carry out projects in new and different development sectors such as logistics hubs, fish farms or recycling projects."

In the Asia-Pacific region, where there is ample opportunity to switch from coal to gas use, there is an even stronger desire to upgrade existing facilities and transition to lower-emissions fuel sources. Nearly two-thirds (65 per cent) of respondents say that this is the most significant opportunity in the next 18 months.

Where capital providers are maintaining investments in fossil fuel-focussed companies, they are also determined to invest in greener solutions and technologies.

In this research, 42 per cent of capital providers say they now want to invest in low-carbon technologies that will help to reduce emissions and speed up the decarbonisation process (see Figure 11). Decarbonisation of hard-to-abate industries is considered to be essential to the transition, which is why capital providers are taking a strong interest in investment in cleantech, such as carbon capture, storage and digitalisation.

Thirty-nine per cent, meanwhile, have plans to acquire renewable energy assets, and 35 per cent intend to acquire emissionsintensive assets with the intention of areening them.

"As the need for renewables increases, there is a tremendous opportunity in that asset class," says Macquarie Asset Management's Mary Nicholson. "But we're also looking beyond renewable energy generation to the technology that will enable the transition. That could be clean grids, battery storage, electric vehicles and more—they are all equally important components of the future world as clean energy generation."



As the need for renewables increases, there is a tremendous opportunity in that asset class



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**David Tilstone** Managing Director, Macquarie Asset Management



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#### Methodology

To gain insight into how energy companies and capital providers are addressing the energy transition, White & Case, in association with FT Longitude, surveyed 584 senior executives from 29 countries across the globe in April and May 2022. Respondents consisted of 214 senior investment executives and capital providers (corporate banks, investment banks, infrastructure funds, insurance companies, private equity funds, pension funds and sovereign wealth funds) and 370 corporate executives at companies operating in the energy sector.

Percentages in this report do not always add up to 100% due to rounding.

Explore our interactive insights on the energy transition here: http://whitecase.com/energy-transition



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