

The great transition: Opening the renewables floodgate

How institutional investors can unlock
trillions and spearhead a global energy
transformation

octopus

A brighter way



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Foreword

It will cost the UK alone more than £1 trillion to hit net zero carbon emissions by 2050.¹ Following the recent UN Climate Action Summit in New York, the UK is now one of over 75 countries that have committed to the target. Action cannot come soon enough.

Across the world, the warning from scientists is the same: the Intergovernmental Panel on Climate Change has shown that we have only a dozen years to stop a two degree increase in global temperatures becoming an inevitability. Global average sea levels could increase by up to 1.1 metres by 2100 – 10 centimetres higher than the IPCC's last assessment only six years ago.

The half-point rise from 1.5 to 2.0 degrees would mean vastly increased risks of floods, drought, extreme heat and poverty for hundreds of millions of people.² Yet emissions are still going up.

In the face of urgent need for action, institutional investors can play an absolutely vital role. The global sample interviewed for this Renewable Energy Investment Report, the second from Octopus, manage \$5.9 trillion in assets between them.

Over the coming decade, they plan on divesting **\$920 billion from fossil fuels, while also ploughing \$643 billion into renewable energy** – assets which are actively climate-saving. To put their influence in context: UK investors alone plan on divesting \$360 billion from fossil fuels over the next decade, while investing \$194 billion into renewable energy.

It helps that investors are, globally, aware of their potential impact: most we surveyed believe they can make a material difference to the current climate crisis.

Globally, investors plan on divesting **\$920bn** from fossil fuels over the next decade, while investing **\$643bn** into renewable energy.

And yet, a far smaller number have altered their portfolios accordingly.

Divestment is popular, but it is not sufficient, and a notable proportion of our sample (**16%**) **has no allocation to any climate-saving sectors** – including renewables, cleantech and electric transportation. The main priority of institutional investors remains achieving good performance for their investors, rather than saving the planet.

Holding and deploying trillions across the global economy, institutional investors have an even greater role than they think in fighting climate change.

And positive investment into climate-saving assets is urgently needed. In the face of a global crisis, it is imperative that institutions receive the right support, making sure those investments work for them and their investors.

As a specialist renewable investor, we believe it is **our purpose to unlock this investment by helping investors** access renewable energy opportunities that fit their mandate.

¹ <https://www.parliament.uk/business/committees/committees-a-z/commons-select/business-energy-industrial-strategy/news-parliament-2017/climate-change-net-zero-17-19/>

² https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_Low_Res.pdf

Despite the many challenges that the world faces in preventing the devastating impact of climate change, and some of the mixed messages from this survey, we remain optimists.

That's because increasing numbers of institutional investors are recognising that they play a critical role in fighting climate change and are transitioning their investments away from fossil fuels and into climate-saving investments.

There's obviously so much more that needs to be done but this report gives us hope that **we will see a transformational shift of capital into investments that have a positive impact on the planet.**



Matt Setchell



Alex Brierley



Executive Summary

Increasingly comfortable with divestment, institutional investors, who are already moving away from fossil fuels, now need help investing into climate-saving assets while maintaining their investment returns.

This is the second Octopus Renewables Investment Report. Institutional investors who participated in the survey manage \$5.9 trillion between them. While almost three-quarters believe they can make a material difference to the fight against climate change, a quarter have not altered their investment strategy to reflect that.

Achieving the necessary returns for their investors of course remains paramount, and respondents favour launching their own environmental, social and governance (ESG)-specific products, bundling best-in-class assets that also satisfy key ethical metrics.

These investors are more likely to change their investment strategy because of the negative impact climate change could have on investee companies, rather than any positive impact arising from investments that mitigate climate change (43% versus 34%, respectively).

Over the next 10 years, respondents across the world plan on divesting \$920 billion away from fossil fuels – almost tripling current outflows – while also planning to invest \$643 billion into renewable energy assets – more than doubling what is currently invested.

Sixteen percent of our sample have no allocation to climate-saving sectors, accounting for approximately \$1 trillion of assets under management. Thus, among this cohort alone, there is significant capital that could be deployed as investment into renewables. Moreover, **nearly a third (30%) of those who have divested, or plan to divest, from fossil fuels say they intend to reinvest this capital into climate-saving assets.**

More than two-thirds (69%) of those surveyed believe renewables play a significant role in tackling climate change, and have an awareness that they offer stable, long-term returns.



However, divestment from fossil fuels remains the most popular route for these investors, highlighting that there are still barriers to entry associated with renewable energy investment.

Drilling down geographically, **the UK continues to spearhead action**. Our respondents here are the most likely to believe they can make a difference to climate change outcomes. With three-quarters worried about the negative impact of climate change on investee company performance, **half (52%) have reconsidered their portfolio allocations** in light of the recently intensifying spotlight on climate change.

And they are leading the divestment charge, with UK respondents planning to divest up to a quarter of their portfolios from fossil fuels over the next five to 10 years, while also investing 13% of their portfolios into renewable energy infrastructure.

Globally, respondents **continue to face persistent hurdles in realising the full potential of their role in tackling climate change**, namely investing in assets that actively mitigate and/or counter the effects of climate change – from renewables to cleantech.

Forty-five percent cite energy price uncertainties, 36% say a lack of renewable energy investment skills within their organisation affects how much they are able to do, and 19% say liquidity issues play a part in preventing further investment into renewable energy assets.

Interestingly, demand for greater access to renewable energy assets has risen by over a third (37%) since Octopus first surveyed institutional investors in October 2018, from 41% to 56%.

Solutions sought by investors include deep and liquid markets for power purchase contracts, and better government support – including a stability mechanism for energy prices – in addition to a larger pool of renewable energy companies listed on public markets.

A proven track record for buying and selling operational renewable assets helps investors overcome liquidity concerns, as do specialist managers, who can bridge the gap between assets on the ground and inclusion in a portfolio.



Key findings globally

71%

believe they can make a material difference to the fight against climate change

BUT

23%

have not altered their investment strategy to reflect this

\$920bn

the amount respondents plan on divesting from fossil fuels in the next 10 years (almost tripling current outflows)

43%

are more likely to change their investment strategy because of the negative impact of climate change on investee companies

BUT ONLY

34%

are willing to do so, based on any positive impact arising from mitigating climate change

\$643bn

the amount respondents plan to invest into renewable energy assets in the next 10 years

16%

of respondents have no allocation to climate-saving sectors, representing c. \$1 trillion of AUM that could be invested into renewable energy assets

30%

of those who have/plan to divest from fossil fuels intend to reinvest this capital into climate-saving assets

69%

believe renewables play a significant role in tackling climate change

37%

rise in demand for greater access to renewable energy assets since October 2018

What climate change means for institutions

Institutional investors know they can play an important role in tackling climate change, but less than a quarter of respondents have adjusted their portfolios to reflect that. While mounting pressure from external parties is being felt globally, the most common response is to launch ESG products in-house.

Making a difference

Global institutional investors surveyed recognise the importance and potential impact of climate change, with almost three-quarters believing they can make a material difference to outcomes through their investments.

Almost all (91%) think the effects of climate change are already being felt and over three-quarters believe the time to act is running out. They also believe the climate change issue has not been overhyped (78%). **Yet 23% have not changed their investment strategy as a result of the intensifying spotlight on the issue in recent years.**

Belief that institutional investors can make a difference is highest in the UK, where nine out of 10 respondents think they can materially impact outcomes. In the US, the equivalent figure is 68%, with belief the lowest among Asian investors (52%).

45% of investors surveyed say they believe the UK government’s 2050 target to be realistic.

Does public attention have an impact?

Growing public attention to climate change – including, most recently, the Extinction Rebellion demonstrations and the work of campaigners such as Greta Thunberg – has prompted 44% of investors surveyed to reconsider their portfolio. In the UK and EMEA, action is more prevalent, with 52% and 64%, respectively, reconsidering their portfolios following such events.

What – and who – drives action?

The pressure to act in the face of climate change is felt by surveyed institutional investors from a number of sources. The external influences placing the greatest pressure on investors include governmental and regulatory frameworks (54%), and clients (49%) (Figure 1).

Figure 1: Factors pressuring respondents to address climate change

	Global	UK	US	EMEA	Asia
Government/regulatory framework	54%	44%	59%	52%	60%
Clients	49%	56%	27%	56%	56%
Investment committee	38%	56%	50%	28%	20%
International bodies	29%	28%	23%	28%	36%
Competitors	25%	16%	32%	36%	16%

³ <https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law>

⁴ <https://www.theccc.org.uk/tackling-climate-change/reducing-carbon-emissions/how-the-uk-is-progressing>

Interestingly, perceived pressure from government is ranked lowest among UK investors. Investors in the UK are the most likely to feel pressure from their own investment committees, with over half (56%) citing this influence. Globally, this figure is 38%.

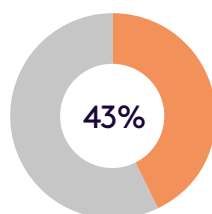
Avoiding negative investment impact

The negative impact of climate change on investee company performance has prompted 43% of respondents to change their investment strategy. They are less likely, however, to be motivated to make changes because of the positive impact arising from investments that mitigate climate change (34%) (Figure 2).

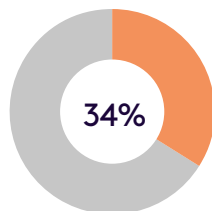
The key driver for institutional investors is, of course, performance. They do not typically have a positive mandate to mitigate climate change. They do, however, have one to deliver the best performance from their portfolio, which includes reducing exposure to companies that they believe could have their performance compromised by climate change.

The good news is that **it is possible to deliver attractive investment opportunities that have a positive impact on climate change without sacrificing performance.** That would include tailoring the renewable opportunity for the investors' own risk and return preferences. The fact that investors are changing their investment strategies due to climate change is an important first step.

Figure 2: Climate change strategies focus on avoiding negative investment impact



The negative impact of climate change on investee company performance



The positive impact of the investment in terms of mitigating climate change

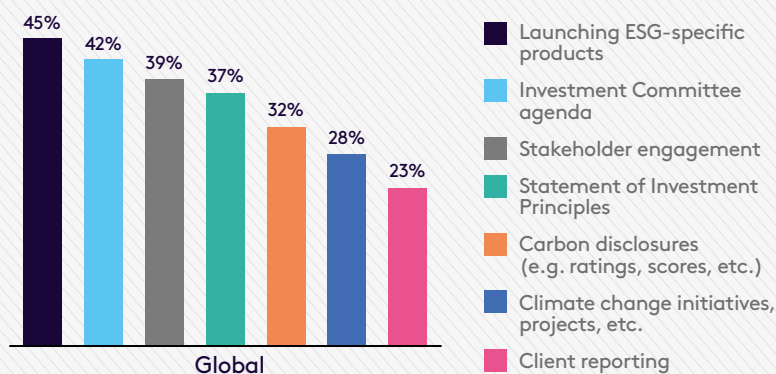
Popularity of ESG products

The popularity of environmental, social and governance (ESG) factors among institutional investors and asset managers is increasing, with in-house technology and dedicated ESG teams being built to satisfy market demand for ESG products.

ESG products are the most popular way among respondents to address climate change. Globally, nearly half (45%) of respondents are launching their own products, with 42% also favouring putting climate change on investment committee agendas, and 39% focusing on stakeholder engagement (Figure 3).

Relatedly, as part of the macro picture in the UK, the Financial Reporting Council has recommended that ESG factors be explicitly included in the UK's Stewardship Code.

Figure 3: Respondents' routes to address climate change



How institutions are responding to climate change risk

Divestment is currently the primary means by which institutional investors looking to tackle climate change do so. However, the emphasis is on moving away from fossil fuels, rather than into climate-saving sectors – which poses a missed opportunity.

Ramping up

Globally, institutional investors surveyed are set to **divest 5.7% of their portfolios from fossil fuels** over the next year. This dramatically accelerates by nearly three-fold over the next 10 years to 15.6%, accounting for **\$920 billion** (Figure 4).

At the same time, they plan to ramp up their allocations to renewable energy infrastructure by 5.2% over the next year, which will more than double to 10.9% over the next 10 years, equating to \$643 billion.

A missed opportunity?

However, **only 30% of respondents who divest from fossil fuels reinvest the capital into climate-saving causes.** Out of climate-saving sectors, renewable generation infrastructure is the most popular area for investment. Institutional investors allocate 4.6% of their portfolio to this asset class (up from 4.4% in our last survey) (Figure 6).

They often invest in line with existing allocations, excluding the sectors, companies and assets from which they have divested. Respondents in EMEA are most likely to take this approach; over half (56%) say it is in line with their strategy, compared to the US (32%) (Figure 5).

Figure 4: Divestment from fossil fuels outweighs investment in renewables

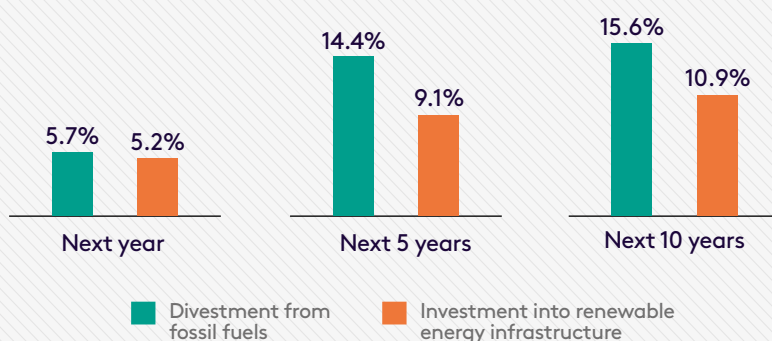
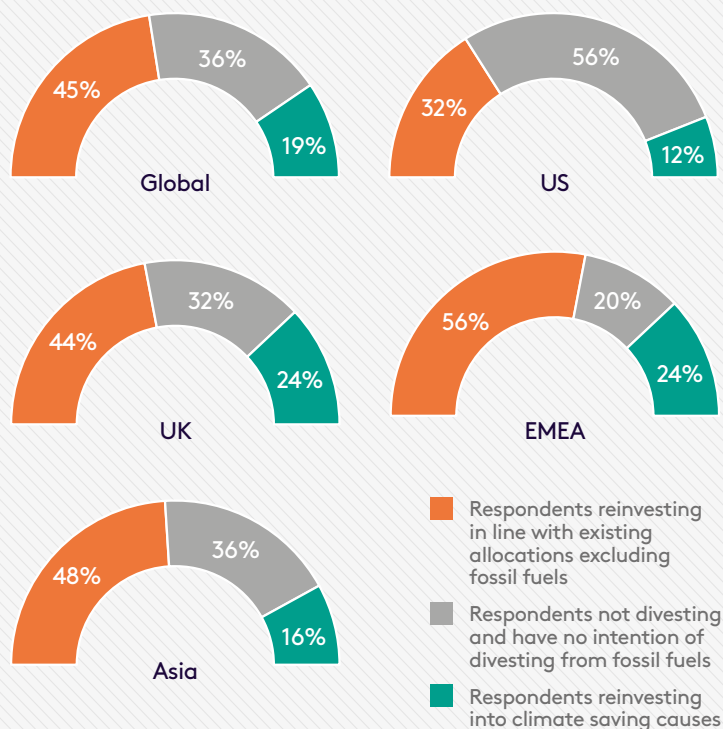


Figure 5: How proceeds from fossil fuel divestments are being allocated



Renewables' popularity

While divestment from fossil fuels outweighs investment into renewables, a large proportion of capital is flowing into the latter. **Institutional investors surveyed plan to invest a significant \$643 billion into renewable energy infrastructure over the next decade.** This is a welcome move that will help tackle climate change head on.

Global institutional investors currently allocate 11.7% of their portfolios to climate-saving sectors (see Figure 6 for a list of these sectors). Of these, **renewable energy generation and renewable infrastructure is the most popular route.**

Investors have historically been attracted to the fixed, inflation-linked cash flows from renewable energy assets that benefit from government subsidies. Demand for such assets is strong, with limited new supply of opportunities as governments around the world reduce and remove subsidies.

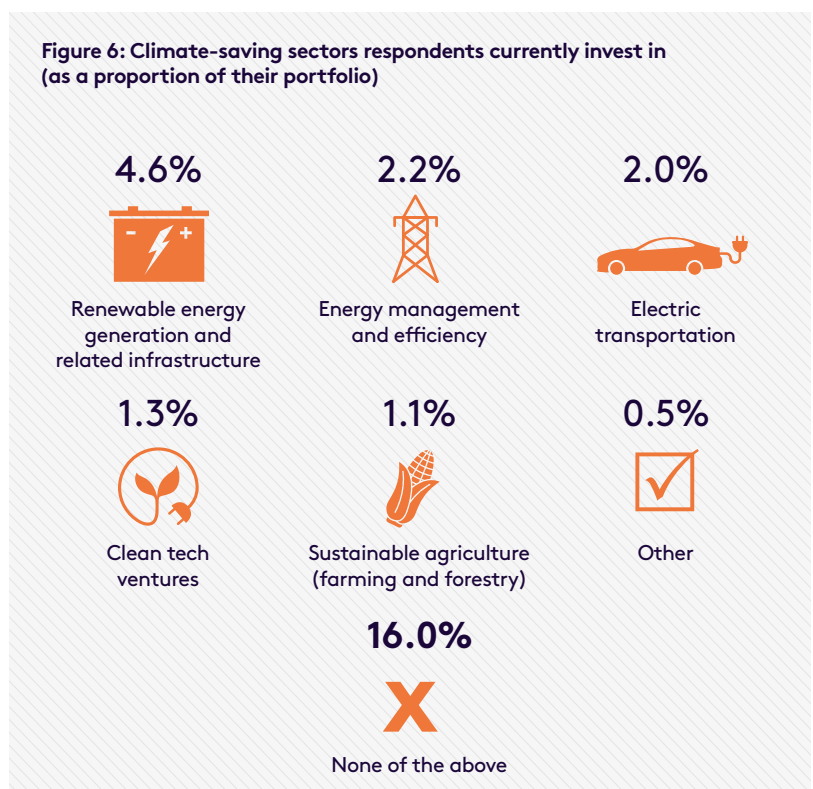
This in turn has driven up the value of these assets. As investors look to increase their allocation and fund new build renewable assets, they are accepting less government subsidy within their portfolio with accompanying higher returns and different risk profiles.

\$643bn
to be invested
into renewable
energy
infrastructure
over the next
decade.

Compared with other climate-saving assets, **renewables continue to deliver positive cash yields and attractive long-term returns**, in spite of short-term sensitivities. This, in combination with their sustainable credentials, helps explain their popularity among institutional investors.

On average, investors allocate 4.6% of their portfolio to renewable energy (almost unchanged from the 4.4% we recorded in 2018), 2.2% to energy management and efficiency, 2% to electric transport, 1.3% to cleantech ventures and 1.1% to sustainable agriculture (Figure 6).

Figure 6: Climate-saving sectors respondents currently invest in (as a proportion of their portfolio)



How institutions are responding to climate change risk

Access: different global preferences

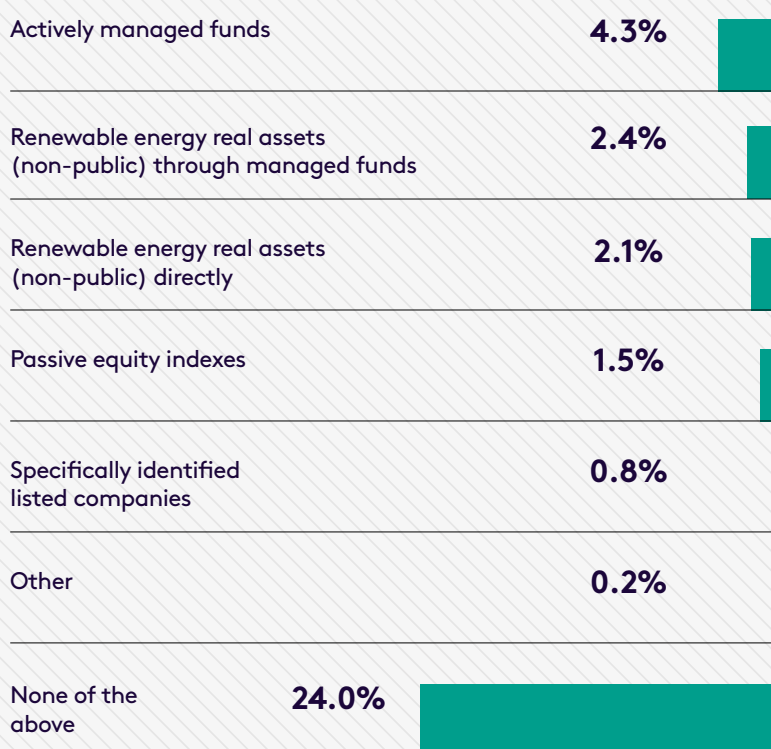
When it comes to how global investors like to access climate change sectors, **actively managed funds are the most popular route**, followed by non-public renewable energy assets via managed funds, then investing in renewable energy assets directly.

On average across those surveyed, 4.3% of portfolios are dedicated to funds with a mandate to invest in publicly traded companies considered to have a positive impact on climate change.

It is likely that **increased liquidity derived from public funds opens up the asset class to a wider pool of investors**, and we expect more funds like this to be raised owing to investor demand and the potential to offer a wider choice for investors (Figure 7).

However, globally, 24% of investors do not make use of any investment vehicles. In the UK, that number drops to 8%, compared to 36% in both the US and Asia.

Figure 7: Respondents' preferred channels for climate-saving sector investment



“Transitioning to a renewable energy future is challenging, but vital, and we still need to make bolder commitments on this front.”



The global climate change race

Institutional investors in the UK have the strongest belief globally that they are equipped with the tools to tackle climate change, and pair that with action. Action is lowest in the US, although investors there are still keen – in theory – to be part of the fight, and do acknowledge the severity of the situation.

The UK: A leading light

The UK's respondents are leading the energy transition charge. Over the next 10 years, our respondents plan to divest up to a quarter of portfolios from fossil fuels, while also investing up to 13.1% of their portfolios into renewable energy (Figure 9).

UK respondents are also the most attuned to the role that institutional investors can play in tackling climate change, with almost nine in 10 believing they can make a material difference (Figure 8).

That compares with 68% of US investors, and just 52% of Asian investors.

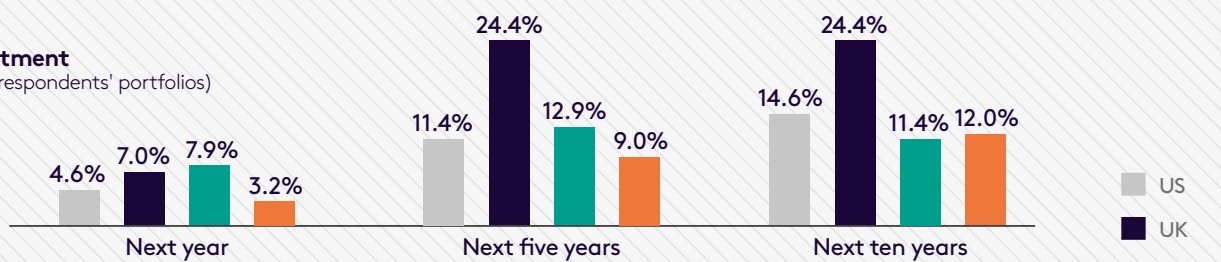
Figure 8: UK – a leader in the global climate race

	Global	UK
Climate change will take time to have a significant impact	23%	12%
Climate change is already having an impact	91%	100%
Recent attention to climate change has made me consider my portfolio	44%	52%
Institutional investors can make a difference to climate change	71%	88%
UK government's net zero target for 2050 is realistic	45%	56%
Climate change is overhyped	22%	16%

Figure 9: The renewable energy transition in numbers

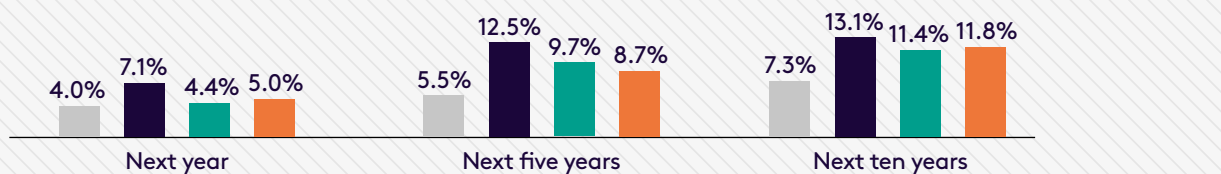
Divestment

(% of respondents' portfolios)



Investment into renewables

(% of respondents' portfolios)



US lagging behind

The US, faced with an administration that has pulled out of the Paris Agreement, has a **disproportionately high number of investors that are not making changes to their portfolio** to negate the impact of climate change.

This stands at over a third of US institutional investors surveyed, compared to 18% on a global scale.

US respondents are still planning to divest 14.6% of their portfolio from fossil fuels over the next 10 years (Figure 9), which is more than their EMEA and Asian counterparts (11.4% and 12%, respectively).

Disappointingly, the wall of cash that will be freed up is not all going into renewable energy assets. The US in particular is recycling a much smaller percentage, with only 7.3% of portfolios expected to be allocated to renewables over the next 10 years. This compares to 13.1% in the UK and 11.4% and 11.8% in EMEA and Asia, respectively, according to our survey sample.



The global climate change race

All UK and US investors believe that climate change is already having an impact. However, the speed at which the US plans to take action is slower, and volumes are smaller.

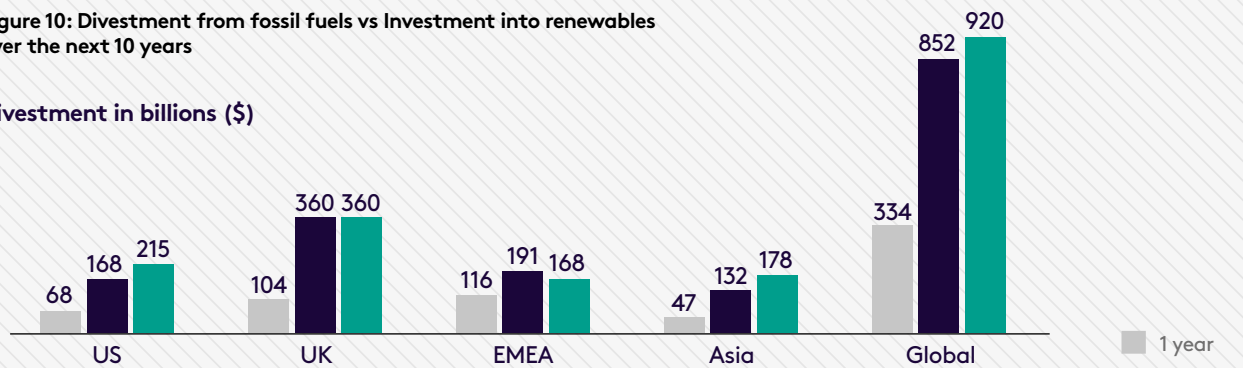
For example, UK institutional investors surveyed plan to divest \$104 billion from fossil fuels over the next year, leaping to \$360 billion in the next five years – a \$256 billion increase. By comparison, US investors intend on increasing by just \$100 billion – from \$68 billion increasing to \$168 billion (Figure 10).

But while the US is slow to divest from fossil fuels compared to the UK, it is not the slowest globally. Asia plans to divest the least, with respondents there planning to move \$47 billion away from fossil fuels over the next year, and \$132 billion over the next five.

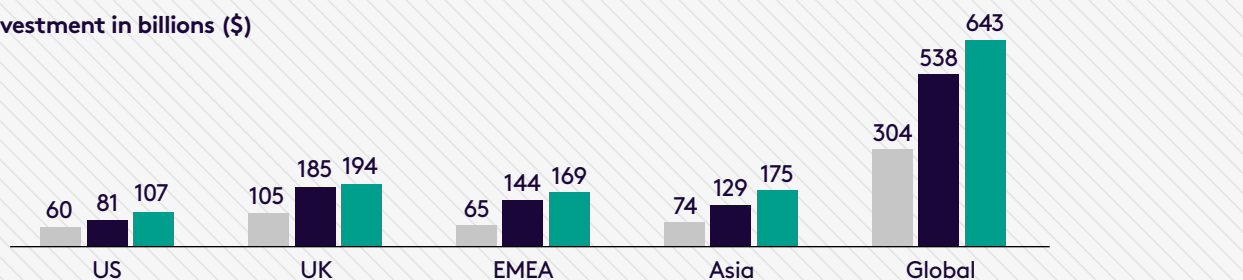
Yet, according to our survey, when it comes to investing in renewables, US respondents are – and plan to remain – the slowest in the world to plough money in. UK investors plan to ramp up from \$105 billion in the next year to \$185 billion in the next five years. In contrast, US counterparts plan to increase renewable investments from \$60 billion to just \$81 billion in the same time frame – the lowest across all geographies.

Figure 10: Divestment from fossil fuels vs Investment into renewables over the next 10 years

Divestment in billions (\$)



Investment in billions (\$)





The role of renewables in mitigating climate change risk – and how to access them

The majority of institutional investors know that renewables play a significant role in fighting climate change.

But divestment from fossil fuels is still the preferred response, as **investors prioritise portfolio performance, and struggle with access to renewable energy assets**. Well over half seek more support from government, alongside tangible, market-led improvements such as greater availability of power purchase contracts.

Divestment still trumps renewables investment

More than two thirds (69%) of respondents think that renewable energy infrastructure plays a significant role in tackling climate change. Yet divestment from fossil fuels remains a more popular investment strategy than proactive investment (Figure 11).

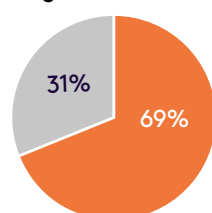
The role renewable energy infrastructure has to play in tackling climate change is most keenly understood by the UK and EMEA (respectively, 88% and 84% of investors).

Barriers remain

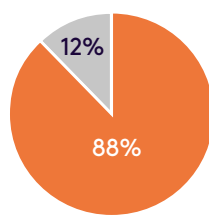
Despite the growing popularity of renewables as an investment, there are still significant barriers that must be addressed.

Institutional investors surveyed globally cite a number of hurdles that are preventing them from investing further in renewable energy infrastructure. **Energy price uncertainties (45%) remain the biggest challenge**, in line with the findings of the first Octopus Renewables Investment Report (Figure 13), followed by a lack of renewable investment skills within organisations (36%) and liquidity issues (19%).

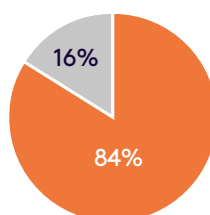
Figure 11: Renewable energy infrastructure key to tackling climate change



Global



UK



EMEA



Energy price uncertainties

To overcome the barrier of energy price uncertainty, over half (55%) of respondents are looking for a deep and liquid market for long-term power purchase contracts with investment-grade counterparties. Fifty-four percent seek better government support, with a stability mechanism for energy prices.

A lack of liquidity and in-house skills

Moreover, to overcome the lack of resources in-house, **48% of respondents say they are seeking specialist managers**. Meanwhile, for 64%, a bigger pool of renewable energy companies on public markets will help combat liquidity issues.

Over half (57%) also said that having a longer proven track record for buying and selling operational renewable assets also helps them to overcome liquidity concerns.

Missing pieces

Pertinently, **the demand for greater access to renewable energy assets has risen by over a third (37%)** since Octopus' first Renewable Energy Report, from 41% to 56% among global institutional investors surveyed (Figure 12).

To engender increased allocations, 52% of respondents (up from 48%) want better pooled investment vehicles. Meanwhile, 40% of investors (up from 36%) cite growing interest in ESG as a key driver and as touched on above.

Support and policies from government remain crucial factors in increasing allocations to renewables – cited by 50% versus 52% last year.

The role of government

Demand for government support and policies remains high amongst institutional investors. Globally, 59% of respondents would like to see stability mechanisms to counter energy price uncertainties, or for other support, such as tax credits and cash incentives.

Seventy-three percent globally said government initiatives to mitigate risk would be welcome, with 46% saying that legally binding climate change targets would help.

Figure 12: Perceived unblockers to increase renewable energy allocation

	2018	2019
Greater access to renewable energy assets	41%	56% ↑
Better pooled investment vehicles	48%	52% ↑
Better support/policies from government	52%	50% ↓
Increased investor interest in ESG	36%	40% ↑
Better in-house expertise	42%	37% ↓
Lower regulatory constraints/barriers	26%	23% ↓
Inflation indexation to maintain the purchasing power/guarantee returns above inflation	27%	21% ↓
Debt guarantees to provide financial security	27%	17% ↓
Liability-driven investments to match duration and liabilities profile	6%	13% ↑

The role of renewables in mitigating climate change risk – and how to access them

Institutional investors consider **government support at the project level as key to encourage further investment** into the sector. For example, among our respondents, initiatives to mitigate risks in renewable energy projects (73%), or a state-backed priced stability mechanism (59%), are preferred rather than mandating minimum percentage portfolio allocations to environmentally friendly assets from institutions (Figure 14).

Views on the role of government diverge materially between regions. For example, UK and EMEA investors put more importance on stability of government policy (58% and 56%, respectively) over the government introducing price stability mechanisms (50% and 48%).

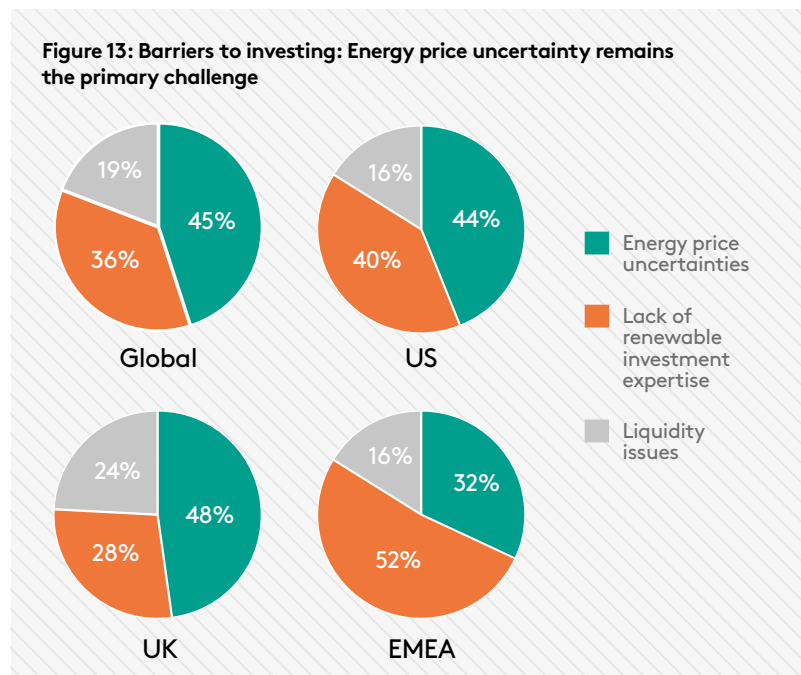


Figure 14: Key factors in encouraging investment into renewables (by region)

	Global	US	UK	EMEA	Asia
Government initiative to mitigate risks in renewable energy projects	73%	86%	67%	56%	83%
Some type of government backed, price stability mechanism	59%	64%	50%	48%	75%
Publish and update legally binding climate change targets	46%	45%	50%	52%	38%
Government mechanisms that facilitate necessary liquidity in renewable energy assets	46%	64%	38%	56%	29%
Limit the number of policy changes	44%	27%	58%	56%	33%
Mandate minimum percentage portfolio allocations to environmentally friendly assets	29%	14%	33%	32%	38%

Whereas it is the opposite for US investors, with 64% seeing government backed price stability as a key factor to encourage investment but only 27% to limit policy changes (Figure 14).

Following the same theme, more broadly, US investors look to the Government to unblock investment into climate-saving investments with 60% (vs 50% globally) indicating that this would help them increase their allocation with better support and policies from government. Whereas UK institutional investors are more likely to mention increased interest in ESG (52% versus 40% globally) and better in-house expertise (40% versus 37% globally).

Asian investors surveyed are in greater need of access to renewable energy assets, with 76% (versus 56% globally) saying that could increase their allocations to renewables.



Figure 15: Key factors in encouraging investment into renewables (by organisation type)

	Funds of funds	Pension fund	Private bank	Insurance company
Government Initiative to mitigate risks in renewable energy projects	68%	88%	58%	63%
Some type of government backed, price stability mechanism	41%	67%	58%	69%
Publish and update legally binding climate change targets	36%	39%	92%	38%
Government mechanisms that facilitate necessary liquidity in renewable energy assets	50%	36%	17%	75%
Limit the number of policy changes	59%	42%	42%	25%
Mandate minimum percentage portfolio allocations to environmentally friendly assets	45%	24%	33%	25%

Conclusion

Across the world, institutional investors increasingly understand the critical significance of climate change, and their role in fighting it. **For the most part, they are not kicking the can down the road: they know this is something to face now.**

Alongside external stakeholder support – from government, investors and the private sector – sensible, internal measures are being taken.

But nowhere near enough is being done. We believe it is our duty to make sure far more investment goes towards fighting climate change. We know that divestment remains the most popular way to have an impact, rather than rerouting that capital into climate-saving sectors.

More specifically, **investors are not making the most of the renewables opportunity.**

Indeed, we have identified that, across our sample alone, 16% of institutions (accounting for approximately \$1 trillion of AUM) have no allocation to climate-saving sectors.

It is time to make bolder changes. By reallocating capital from fossil fuels to sectors that are actively climate-saving, we can focus on the energy transition: funding the assets and infrastructure that brings the world clean, green power.

To do this, institutional investors need – and want – more support. In our last report, we listed three ways to unblock further investment, through education on underlying risks, mitigation of risks, and the widening of investment options. We continue to believe that these three initiatives will go a long way to support further allocation into renewable energy investments.

However, it is the last of these points onto which we are now putting even more emphasis. As a specialist renewable energy manager, it is incumbent on us to develop products that work for institutional and retail investors, in a future where investment in renewables will come with different types of risk and return.

In the last report, we set out the importance of creating more choice by tailoring investments into renewable energy assets, and combining assets across technologies, jurisdictions and energy price exposures to fit different risk-return appetite from investors.

Increased confidence will lead to a shift from narrow investment mandates

We recognise that it is not easy for investors to move away from home markets with government subsidies and lower risk operational assets, given the attractive characteristics of such assets. However, for institutional investors to support the next wave of renewable generation roll-out across the world, they will need to become increasingly comfortable with different types of risks and be rewarded with higher returns for taking these risks. **The scale of the challenge and the opportunity to have an impact is too large for investors to cling onto narrow mandates.**

Specialist managers should widen access to different types of renewables opportunities

That is why we believe that **investors should be able to access renewable opportunities that deliver an attractive risk adjusted return**, tailored for where they are in their renewable investment journey. And it is our role to help investors do this.

What this means in practice is that we expect investors early in their allocation to renewables to continue to seek lower risk, operational renewable assets with government subsidies.

As investors become more sophisticated in understanding how different assets combine in portfolios to reduce risk, we see them pursuing higher returns with mixed portfolios of operational and construction assets with, and without, government subsidy. Others will continue to seek even higher returns, perhaps looking at development opportunities, or a higher proportion of construction assets in their portfolio.

Investors need support to deal with different risk profiles

It is this ability to offer different investors access to renewable investments that satisfy their own risk and return preferences that we believe will unlock significant investment into renewable assets. We are already seeing that shift with investors who previously focused on operational assets: they are now looking for more additive investments – in other words, building out new renewable generation. This goes hand-in-hand with investors taking more pragmatic approaches in markets where there are no longer government subsidies.

As optimists, we take many positives from this report. It is clear institutional investors worldwide stand ready to cooperate. **Now, it is up to those of us that work with them to catalyse the change our planet desperately needs.**



Octopus Group

Octopus is a group of companies that invests in the people, ideas and industries that will help to change the world. We currently manage more than £9.1 billion on behalf of our customers. Octopus Energy, Octopus Investments, Octopus Real Estate, Octopus Renewables and Octopus Ventures are all part of Octopus Group. Of the £9.1 billion we manage, £2.4 billion is on behalf of institutional investors.

We are a specialist investor in real assets, private credit and high-growth small businesses. We offer institutional investors access to sterling-denominated investments in mainstream sectors of the economy. Our assets are long term in nature, cash-yielding and resilient

to economic headwinds. The Octopus team is made up of over 125 investment professionals and we have almost two decades' experience of operating in our chosen markets.

Octopus Renewables

Octopus Renewables, part of Octopus Group, is a specialist clean energy investor and our mission is to accelerate the transition to a future powered by renewable energy. We have a diverse portfolio of assets with a capacity of over 2.9GW, making us the largest commercial solar investor in Europe and a leading UK investor in onshore wind. Octopus is also leading the next wave of renewables being

33 Holborn. Octopus offices in central London.



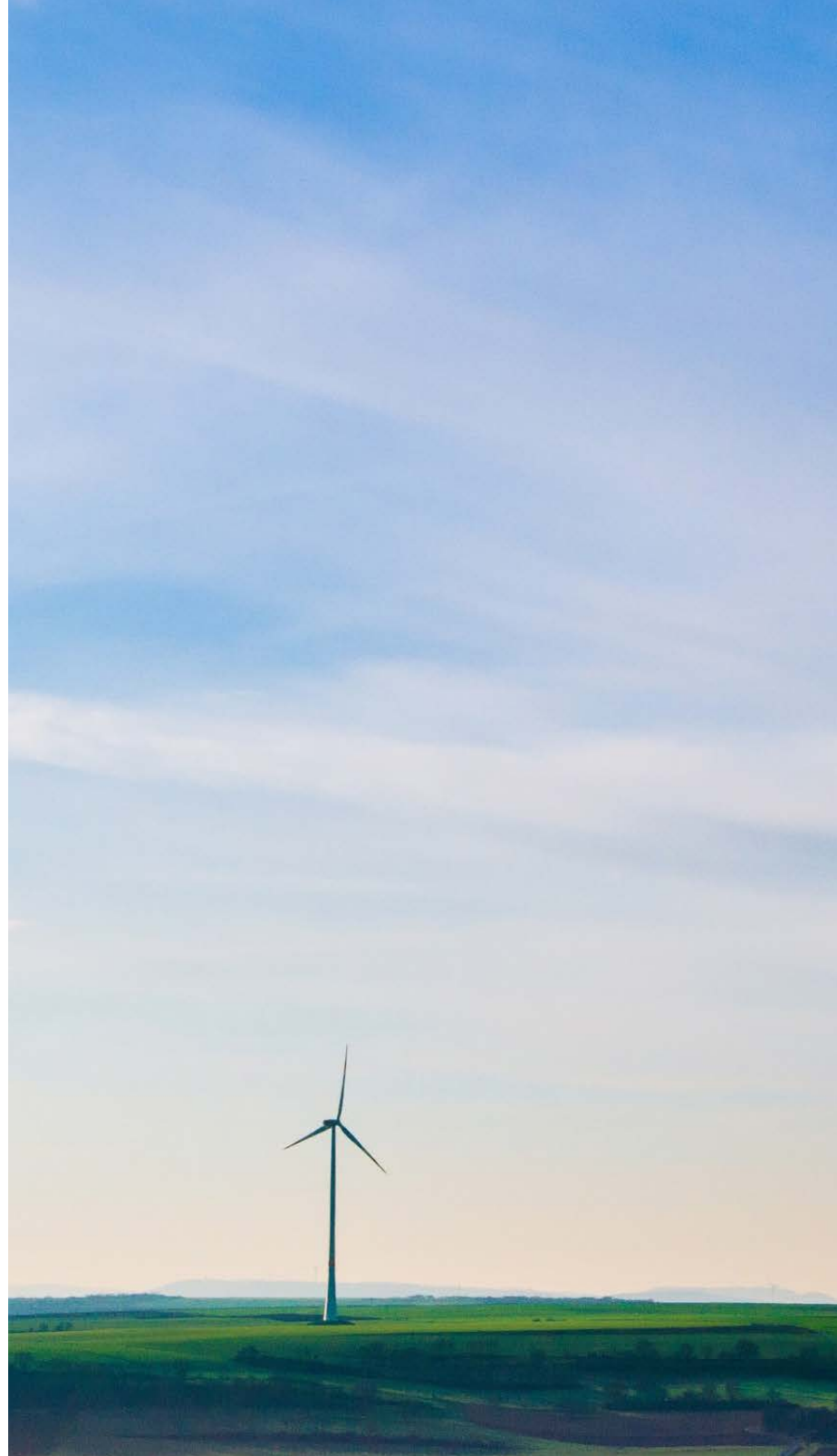
built across Europe and Australia without government subsidies. We believe there is a significant opportunity to unblock much needed investment by building bespoke portfolios of renewable assets at scale, across technologies and countries, to create better outcomes for our investors.

Visit octopusgroup.com.

Methodology

CoreData Research was commissioned by Octopus Renewables to conduct a study of institutional investors, to better understand their views about climate change and the role of renewable energy investments.

The fieldwork was conducted by CoreData Research in July 2019 via an online survey. The sample includes 100 respondents from the UK, EMEA, Asia and the US. The respondent pool represents a spectrum of organisations including pension funds, fund of funds, insurance companies, private banks, sovereign wealth funds, endowments and foundations. The total assets under management of the sample is an estimated \$5.9 trillion.





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