Survive & thrive

Net Zero Jeopardy Report II

EIC Insight Report 2025

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EIC Insight Report 2025 | **VOLUME II**

Methodological Note

Net Zero Jeopardy Report II is the second in a series from the EIC, which started in 2024. This volume builds upon the first edition, delving deeper into the issues surrounding the achievement of short- and long-term net-zero targets.

The report encapsulates the views of industry leaders and provides a subtle understanding of the barriers to progress and the actions required to accelerate the energy transition.

For this report, the EIC spoke to 38 energy leaders and executives from 35 EIC member companies operating across a wide range of sectors. The sectors include renewable energy (78%), nuclear energy (46%), sustainability (41%), decarbonisation (68%), electrification (46%), emission reduction (68%), energy transition (76%), and alternative fuels (11%). This diversity captures a comprehensive view of the energy landscape.

The interviewed senior executives came from companies based in 10 countries, including Belgium, Brazil, Canada, Finland, France, Germany, Scotland, the UAE, the UK, and the US. The interviews were conducted over video link, and each executive was asked 11 key questions and 49 sub-questions to understand their viewpoint regarding net-zero targets and the obstacles they face. The questions also delve into strategies they believe are required to achieve net-zero targets from the perspective of the energy industry. That is, having more cleantech projects reach the investment stage.

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Introduction

The energy industry is sharply losing confidence in the global ability to achieve net zero emissions by 2050. According to the findings of the EIC's Net Zero Jeopardy Report II, only 16% of surveyed leaders think that 2050 global climate goals are achievable, a huge drop from 45% last year. This is more than a perceptual shift; it's underpinned by systemic barriers, policy inertia and flip-flopping, as well as critical and widening gaps in affordable supply chain and technology, accessible grid and infrastructure, and international accord, trade and cooperation.

Many respondents said the lack of international alignment was a major challenge, a significant shift from the COVID years when alignment was truly global, and everyone shared a common sense of urgency. For many executives interviewed, achieving global targets requires a unified approach to policy and energy security across the highest-emitting countries, such as the United States, China, and India. However, political agendas and differing views on climate science remain significant hurdles.

But it's also a question of getting projects to the Final Investment Decision (FID) stage. While there is robust activity in installations in areas such as offshore wind in the UK, much of this progress came from decisions and FIDs made over a decade ago. If anything, the problem of turning projects from pledges, concepts and plans into reality is a symptom of the need for urgent interventions to tackle bankability (the ability to attract reliable financial investment), erratic policies, and infrastructure access.

When participants were asked about the prospects of the countries they are based in, things began to look a little brighter. About 59% of respondents believe their countries can achieve net zero by 2050. This optimism could stem from the fact that nearly 90% of the executives interviewed are based in developed countries where the institutional frameworks are more solid and there has been more investment in infrastructure over the years. But the outlook for interim targets, such as those for 2030, remains starkly grim, with only 14% believing their countries will meet these goals. This compares to 16% last year.

Another interesting finding of the report is the perceived accountability of governments. About 78% of respondents ranked governments, and consequently their policymakers, as the most accountable for achieving (or failing to achieve) net zero. But then when they were asked about where they're feeling pressure to deliver on net zero, most of them said the pressure is actually coming from shareholders and, increasingly, staff. Not from governments. This dissonance raises an important question about governments' roles in effectively incentivising and pressuring all parties to take appropriate actions to meet net-zero targets. It highlights lapses in government leadership, particularly linked to the erratic nature of energy security, net-zero, and trade policy setting, as well as the lack of binding mandates and regulations needed to drive faster implementation that current costs allow (using the stick, not just the carrot).

01 A Mixed Picture in Wind Energy Development

The offshore wind sector is a case in point that exemplifies the challenges of the energy transition but also its promise. In the UK, for example, current project installations, and the good news linked to the sector, are largely the result of FIDs made ten years ago. Hence, the momentum we're seeing today is in fact the fruit of past investments rather than a new alignment with pressing interim targets.

This is making the industry apprehensive. As one business leader interviewed for this report put it, "We need projects to pass FID so we can deliver as an EPC company. The barriers are the lack of actual projects (that reach FID), not engineering ones. As more of those projects come online, supply chain pressures, like skills and capacity, will eventually resolve." The slow movement from planning and design stages into construction is the result of lengthy permitting processes and a lack of financing, according to energy supply chain executives.

But it's not all doom and gloom. Business leaders believe that these systemic issues can be addressed domestically by taking immediate action and starting greater collaboration between the government, private sector, and supply chain participants.

02 Know Thy Targets

A recurring challenge identified in the interviews is the inconsistent awareness of net-zero targets across the energy industry. While most participants could articulate their country's overarching interim and final climate target years, there was a huge drop in understanding when it came to sector-specific or regional targets. For instance, while 41% of respondents attempted to answer the question of what their country's interim targets were, only 8% could, in fact, provide accurate responses. In contrast, there is better familiarity with the final 2050 net-zero targets, with 73% of respondents identifying these goals correctly. One participant observed, "Everyone knows about 2050." But for interim targets, many answered something to the effect of, "I don't know in terms of specific targets."

03 Aligning Action and Accountability

Industry leaders didn't just point to problems. In fact, as detailed in this report, they proffered plenty of solutions and ideas to help individual nations and the world as a whole to achieve climate goals. These solutions share one important element, which is that achieving net zero will require a multi-pronged, collaborative approach bringing together governments, international organisations, financial institutions and investors, and the energy industry and its supply chain. In short, cooperation and collaborative action are key.

Energy executives called on governments to have clear, consistent policies, enabling long-term direction and certainty for the industry. This includes offering financial incentives like subsidies and carbon pricing to de-risk investments and encourage innovation in

the industry. They added that simplifying the regulatory environment would accelerate project approvals and help the sector overcome one of its most pressing challenges, namely delays in infrastructure development. They called on governments to prioritise collaboration across borders to establish global standards and align efforts toward shared goals. Without this leadership, they said, interim and long-term targets will be out of reach.

For the energy industry, executives said, there is no choice but to prioritise innovation and collaboration. Companies need to invest in research and development in order to commercialise emerging technologies at scale, including hydrogen and carbon capture. Cost-prohibitive technology will not be widely adopted. Industry also needs to forge partnerships that cut waste and inefficiencies.

Adopting long-term strategies that balance profitability with sustainability is another thing the industry was urged to do. This will be a cultural shift that requires a commitment to transparency, measurable accountability, and deliberate action over quick wins.

Financial institutions also have a special role to play in the transition to net zero. The financing models needed should be risk-tolerant and patient to accommodate the scaling up of emerging technologies and infrastructure projects. It means that institutions should also align capital allocation with genuine sustainability outcomes, not superficial ESG metrics. Indeed, executives said, financial institutions can catalyse progress within cleantech sectors by providing long-term funding structures and de-risking early-stage projects.

04 The Road Ahead

For the world to move quickly toward achieving climate goals, pressing supply chain issues need to be tackled. In fact, more than 76% of respondents flagged the risk of sizeable bottlenecks in manufacturing capacity, logistics, and skilled labour if all the projects pending FID actually went ahead. They said these issues may affect the supply of essential components like turbines, electrolysers, and floating foundations. For example, the lack of specific installation vessels and cranes represents an important barrier to scaling up offshore wind, as turbine technology continues to grow in power rating and physical size. Industry urges turbine players to standardise turbine sizes to prevent these issues from worsening. Ports are struggling to accommodate the increasing size and complexity of ever larger cleantech installations, creating further delays and inefficiencies.

Above all, there is a need for predictability in project pipelines. A steady flow of work will enable supply chain businesses to plan and grow organically, avoiding the operational disruptions caused by sporadic demand. Governments and industry leaders must collaborate to ensure the availability of raw materials, expand manufacturing capacity, and develop infrastructure capable of supporting large-scale projects. Equally important are training programs and workforce development initiatives to bridge the skills gap and prepare the workforce for the demands of net-zero technologies.

05 The Question of FID Rates

EIC proprietary databases, covering energy projects worldwide, reveal a sharp contrast between FID rates for cleantech and oil and gas projects on a global scale, even as many countries race to meet their interim climate targets over the next five to 10 years.

It's a grim picture painted by persistent regulatory bottlenecks, sluggish permitting processes, and financial uncertainty stalling cleantech investments. The report presents these issues in detail.

To be sure, this trend is not globally uniform. Offshore wind in Europe and the UK sees relatively higher FID rates because the industry is more established. By contrast, oil and gas in the Middle East has so far kept strong FID conversion, again due to regulatory stability and lower production costs. But these exceptions don't change the global pattern—cleantech projects continue to face systemic hurdles, while fossil fuel investments progress with fewer delays.

Globally, offshore wind, despite the massive number of announced projects, sees a lower percentage of projects reaching FID, with only 10% of offshore wind projects making it to FID. Floating offshore wind is performing even worse at just 2%. Upstream oil and gas projects, by contrast, have achieved an FID rate of about 21%. Downstream is even doing better at 29% while midstream stood at 24%.

The drawn-out approval cycles are affecting other cleantech sectors even more, with hydrogen seeing only 8% of announced projects reaching FID, while carbon capture lags at even a lower rate of 7%.

Transmission and distribution (T&D) infrastructure faces a similar challenge, which means that in many places, even if more cleantech capacity comes online there won't be enough infrastructure to take them on. And that includes regions like the UK and Europe. About 17% of T&D projects have reached FID, despite accounting for 11% of the energy sector's total investment pipeline. Many of these delays are the result of regulatory complexities, land use conflicts, and protracted approval timelines.

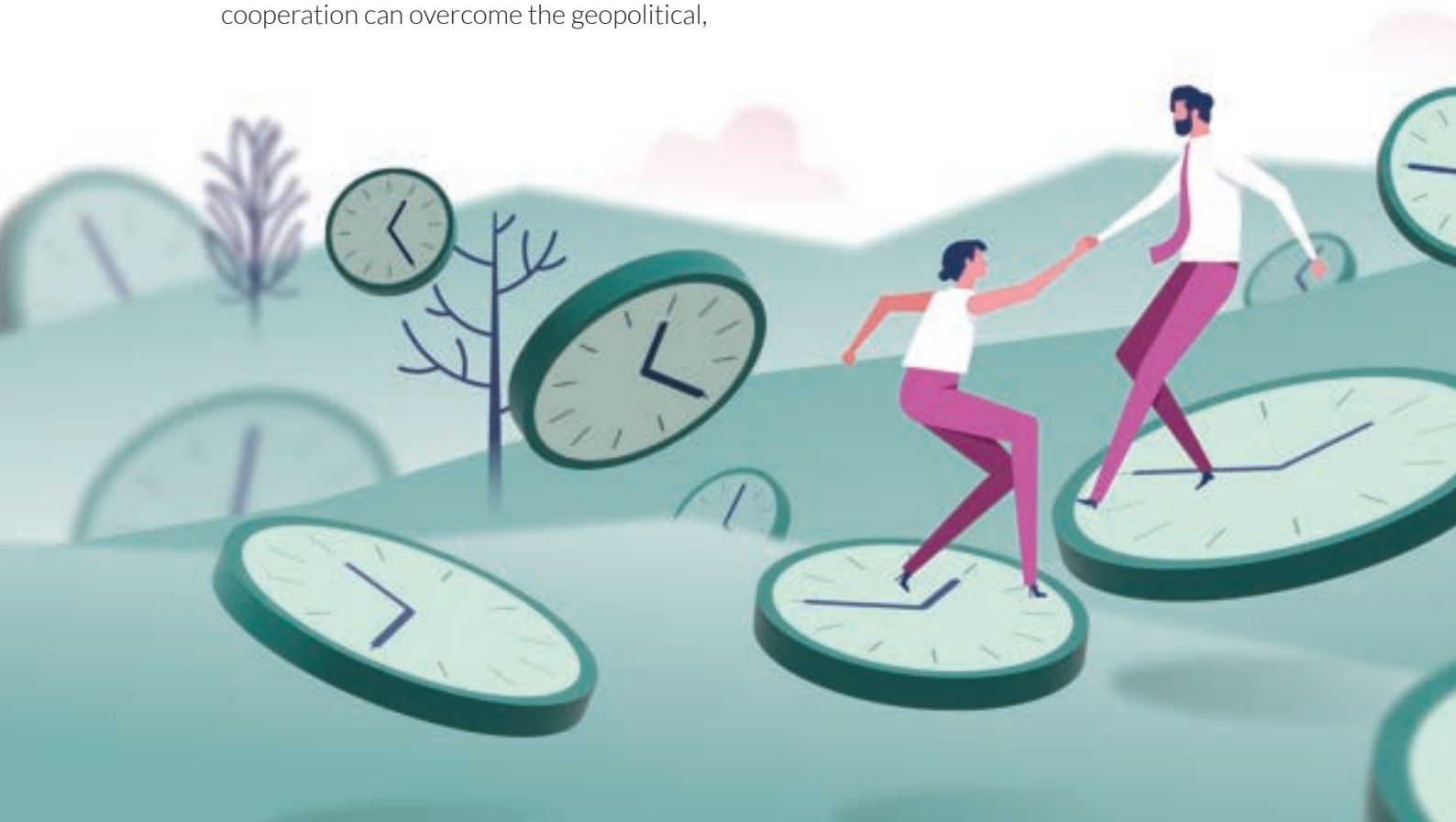
02

Net Zero Goals: **A Race Against Time**

Speaking to energy industry leaders leaves you with a crystal-clear impression: achieving long-term and interim climate targets (e.g., 2030 and 2050) is a race against time.

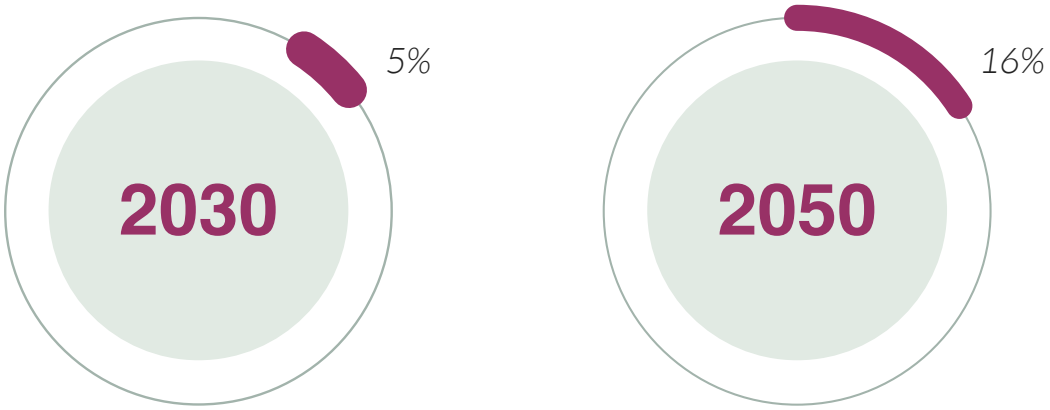
Perhaps one of the most alarming findings of the Net Zero Jeopardy Report II is the drastic decline in business leaders' confidence in the world's ability to reach net zero targets by 2050 compared to what they believed just a year ago. Of those interviewed, only 16% believed that long-term targets will be met globally, compared to 45% last year.

If anything, this dramatic tumble in confidence in the world's ability to meet its climate targets is perhaps a symptom of deep scepticism about whether international cooperation can overcome the geopolitical, technological, and financial barriers standing in the face of lowering global emissions. For many of our interviewees, achieving the 2050 net-zero targets is impossible without firm action from major emitters like the United States, China, and India, alongside developing nations with pressing, and indeed increasing, energy security needs. One participant commented, "You can't really discuss net zero without addressing major emitters... they collectively contribute more than the rest of the world." Another said that any hope of achieving global targets "would require a unified approach to policy and energy security across the countries that are the highest emitters—like the United States, India, and China. I think it's very unlikely, but in a perfect world, it could happen." Another reflected a similar sentiment: "There are



three major countries or continents—China, Russia, and America—that are significant producers of CO2. Unless they take a completely different approach, I don't think we, as a globe, will make those targets. Many countries will try to achieve them, but political agendas and differing beliefs in the science stand in the way."

Percentage of participants who believe targets will be achieved globally



For some, the issue is as simple as taking action immediately, and the global failure to achieve interim targets is a sign of what's to come. As one leader stated, "I think by 2050, they'll reach 2030's target—let's put it that way. Everyone will start meeting or start changing, but they'll be way behind what's needed. I think that's a realistic way to look at it." The same speaker continued: "If we cannot do it in 2030, what will change after that? We need an indicator, and I do not see that change coming unless there is a catastrophic reaction, and people wake up to reality." Another added, "We've already blown past the 1.5°C target. Even holding to 2°C looks unlikely unless radical steps are taken immediately."

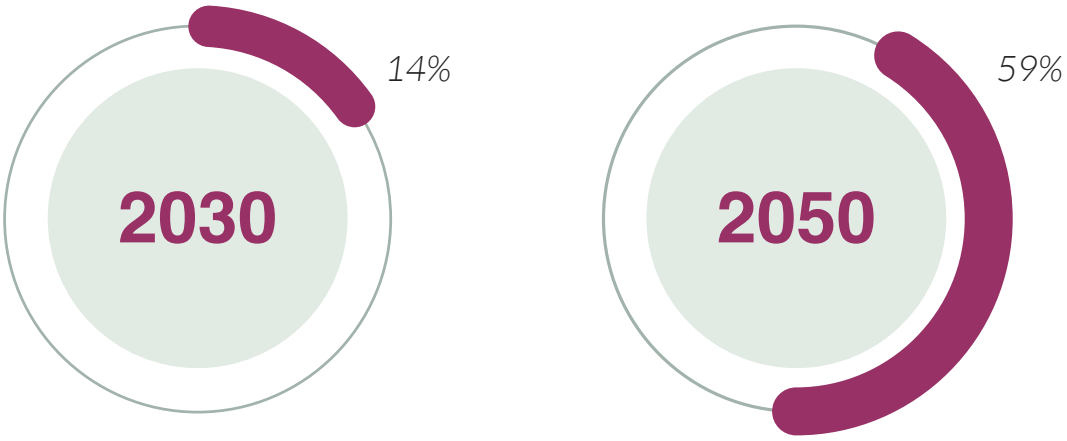
For participants working in or hailing from developing countries, there is a fundamental issue in what is referred to as the Global South, where billions of people are concerned about basic human needs, including securing daily meals, rather than issues like climate change. "Emerging economies are still reliant on carbon, and it is simply unrealistic to expect these economies to meet net-zero targets while trying to maintain economic growth. These nations haven't even begun to align with the framework needed to decarbonise at scale."

Another said, "I don't see 2030 or 2050 as realistic targets because emerging economies are built primarily on natural resource production—whether mining or hydrocarbons. Evolved economies are in a fortuitous position. We're typically richer, and we've had our period of evolution through natural resource use. Now we're heading in a different direction, but emerging economies aren't prepared to give up that economic benefit unless they're significantly compensated. The evolved economies can only contribute so much toward that journey."

Technological gaps were another major concern raised. For instance, one executive said that while hydrogen is seen as a key solution for decarbonisation, "we lack the supply, demand capabilities, and the commercial framework to scale this. The transition from 100 million tonnes per year to the 400 million target by 2050 looks like wishful thinking without a massive acceleration in investment and innovation."

01 Country Optimism

Percentage of articipants who believe targets will be achieved in their country



At the domestic level, energy executives are certainly more optimistic about achieving 2050 targets compared to the global outlook. About 59% of the interviewees believe long-term national targets will be met, versus 66% a year ago.

This confidence is the result of key factors, including the fact that nearly 90% of the interviewees are based in developed economies—the UK, Europe, Canada, and the United States—regions with historically greater access to resources and stronger institutional frameworks to tackle climate challenges.

For some, the fact that we have more than two decades ahead of us counts and cannot be ignored: "We've got 25 years. And in 25 years, an awful lot can happen. I look at other transitions, not just in energy but elsewhere, and it's taken less than 25 years." Another said, "We did it during COVID. We do it during wars. So yes, of course, it is possible to get back on track. We've got 25 years to do something more than feasible."

02 The Interim Challenge

When it comes to interim targets, about 14% believe their country will achieve its 2030 goals. This compares to 16% last year when we spoke to the same number of people. Confidence in meeting global targets is even lower, with a mere 5% believing interim targets will be met—a significant drop from last year's 11%.

"There is not enough time" is one of the most repeated answers to the question of why the interim targets will not be met in time. The matter of fact for many participants is that many projects that should be under construction now have not reached the FID stage (see Table 1 for more details on global FID rates). The sentiment is clear: current efforts are insufficient, and time to correct course is running out even if project execution begins now, as planning, design, licensing, construction, and linking to the grid would take much longer than five years for countries with 2030 targets, especially advanced economies. In the words of one participant, "If we were serious about 2030, the projects should already be under construction. Instead, we're still debating funding and policy frameworks." Another respondent remarked, "The industry cannot deliver on these targets when the necessary commercial and regulatory frameworks aren't in place. You can't build infrastructure at the speed of policy changes."

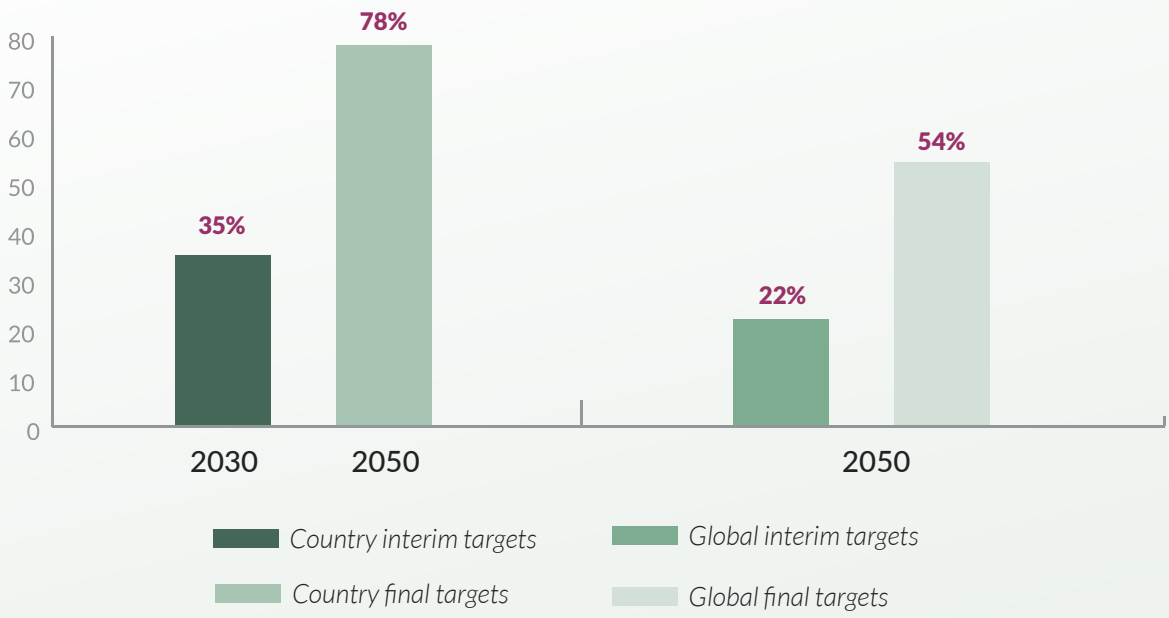
The UK's own targets, while ambitious, reflect the challenges of balancing progress with realistic timelines. For example, the government's adjustment of its clean electricity target from 100% zero-carbon to 95% clean electricity by 2030 is a clear indication of the challenges in achieving these goals. One interviewee said, "We haven't got enough time for it. The infrastructure is not in place to meet the targets for 2030." Another noted, with a real air of frustration, "I just don't think we've left ourselves enough time to properly develop the infrastructure and fully nurture the investment environment that we need in the North Sea to see a lot of these projects that are being proposed move from being talked about through FID. I just don't think we can scale up effectively in that short a period of time."

The sentiment is clear: *current efforts are insufficient, and time to correct course is running out even if project execution begins now, as planning, design, licensing, construction, and linking to the grid would take much longer than five years for countries with 2030 targets, especially advanced economies.*

Table 1: ***Global Final Investment Decision Rates (FIDs) for the Energy Industry based on EIC data (Q4 2024).***

Sector	Number of projects	Estimated CAPEX (million USD)	Number of projects to reach FID
Upstream	1112	1,393,513	233
Nuclear New Build	118	1,137,598	41
Downstream	685	1,403,187	198
Midstream	750	1,147,385	177
Power	784	793,279	133
Biofuel/SAF	439	183,452	125
Renewables	5616	2,047,897	685
Transmission & Distribution	720	555,426	122
Energy Storage	1180	525,048	186
Carbon Capture	472	231,311	31
Offshore Wind	585	1,831,552	57
Hydrogen	1067	1,325,701	89
SMR/AMR	71	226,309	3
Floating Offshore Wind	242	614,958	5

03 Is It Too Late to Get Back on Track?



*The percentages presented in this table have been rounded up to the nearest whole number.

Estimated CAPEX (million USD) on projects to reach FID	% of projects to have reached FID*	% of overall value to reach FID*
537,786	21	39
418,328	35	37
355,386	29	26
234,123	24	21
122,154	17	16
26,763	28	15
229,997	12	12
59,059	17	11
48,363	16	10
18,786	7	9
122,571	10	7
43,369	8	4
1,090	4	0.5
828	2	0.2

Despite deep scepticism about achieving net-zero targets, many energy industry leaders believe corrective action could still get countries back on track, particularly for their 2050 domestic goals. While only 35% think their countries still have the time to act immediately and meet interim targets, 78% remain optimistic about achieving final 2050 domestic targets. In contrast, just 22% believe the globe can recover for interim targets. This rose to 54% for final 2050 goals.

One executive sounded a call for intense collaboration: "During the pandemic, industry mobilised and was solution-driven—within a few months, we addressed a global challenge. Now we should have that mentality, a solution-driven mentality, in order to deliver a solution."

For some, the confidence at the domestic level is rooted in the belief that the necessary mechanisms, technologies, and frameworks are already in place, even if underutilised. In the words of one participant, "The mechanisms are in place. It's just a matter of political will and investment." Leaders stressed that in countries like the UK and parts of Europe, there is an opportunity to align policies, accelerate permitting, and support early-stage technologies. As another put it, "If governments give certainty on regulation and funding, especially for hydrogen and CCUS, there's a clear path to deliver projects."

This optimism is tempered with urgency. "If you want to accelerate this, you have to go to a war-like footing. We need trillions of dollars spent, not billions. You have to change the mindset of everybody. The rhetoric is there, but the hard work that comes with it isn't happening," one respondent said. Another said, "During the pandemic, industry mobilised quickly to address global challenges. We need the same solution-driven mindset for the energy transition—collaboration over competition." However, the global outlook remains far less encouraging. Many participants cited geopolitical barriers, policy inconsistencies, and slow action in major economies as critical obstacles. "The national picture looks feasible, but the global effort requires alignment we simply haven't seen," noted another.

For some, faith in their country's ability to meet 2050 goals hinges on action taken now. As one leader succinctly summarised, "It's not too late, but the clock is ticking. Without clarity on policy, finance, and execution, we risk losing even this final window."

04 Know Thy Targets

This year, we thought it would be fitting to test industry executives' knowledge of their national targets. What we found was a clear indication of a disconnect between government and industry.

While 41% of respondents attempted to answer the question of what their country's interim targets were, only 8% could, in fact, provide accurate responses. Most participants could not pinpoint specific benchmarks even in the areas they are active in. For instance, one participant noted, "I'm aware there are targets for 2030, but I couldn't tell you exactly what they are—it's something to do with reductions from 1990 levels." Another commented, "I think there's a plan for decarbonising specific sectors like power by 2035, but I'm not sure of the details." A third said, "I don't know what the percentage for 2030 is, but it's not going to be achieved."

The lack of knowledge—or in many cases, accurate knowledge—about the targets betrays a sense of detachment, perhaps wrought by inconsistent and ever-changing policies.

If anything, this lack of knowledge—or in many cases, inaccurate knowledge—about the targets betrays a sense of detachment, perhaps wrought by inconsistent and ever-changing policies. One interviewee admitted, "The targets are out there, but they keep getting updated. It's hard to keep track, and honestly, they're starting to feel less realistic." Frequent revisions to interim milestones seem to have diminished their relevance among some leaders.

In contrast, there is better familiarity with the final 2050 net-zero targets, with 73% of respondents identifying these goals correctly. One participant observed, "Everyone knows about 2050." But for interim targets, many answered something to the effect of, "I don't know in terms of specific targets."

The fact that more people were aware of the final targets could be a result of it being connected to COP, which brings clarity and

global prominence to the targets. This could point to a failure on the part of national governments to communicate targets to the industry to ensure that they are fully aligned with them. More importantly—and this is something many executives complained about—climate policies should be consistent, and targets should be set once and for all if industry is to be fully aligned behind them. Otherwise, constant change risks spreading an air of apathy among industry professionals.

"Swift messaging and clear direction are needed to show where the industry is heading," one interviewee said. Another noted, "Stability—don't keep changing policies because these projects take 5 to 8 years to get off the ground."

Global cooperation and financial incentives to reach targets:
A participant's view

*"**The only way to achieve consensus over net zero issues is to involve all the world's countries.** One country acting alone won't solve the problem—it has to be a global solution. For example, a carbon tax in the UK or Europe wouldn't work globally because the majority of the work we do is tied to markets in places like China, Brazil, Suriname, and Guyana. A carbon tax that works for the UK or Europe wouldn't suit those markets. **The solution has to be global.** Either there's global legislation that prohibits producing an FPSO (Floating Production Storage and Offloading vessel) while emitting CO2, or there must be some kind of carbon tax incentive. I spoke with a client who acknowledged the technologies are available, but the question remains: why do it? Without financial incentives, there's no reason to adopt these technologies. Businesses won't act out of goodwill alone—it's not how they operate. Financial incentives are essential to make it viable. Without them, companies won't adopt these technologies."*

03

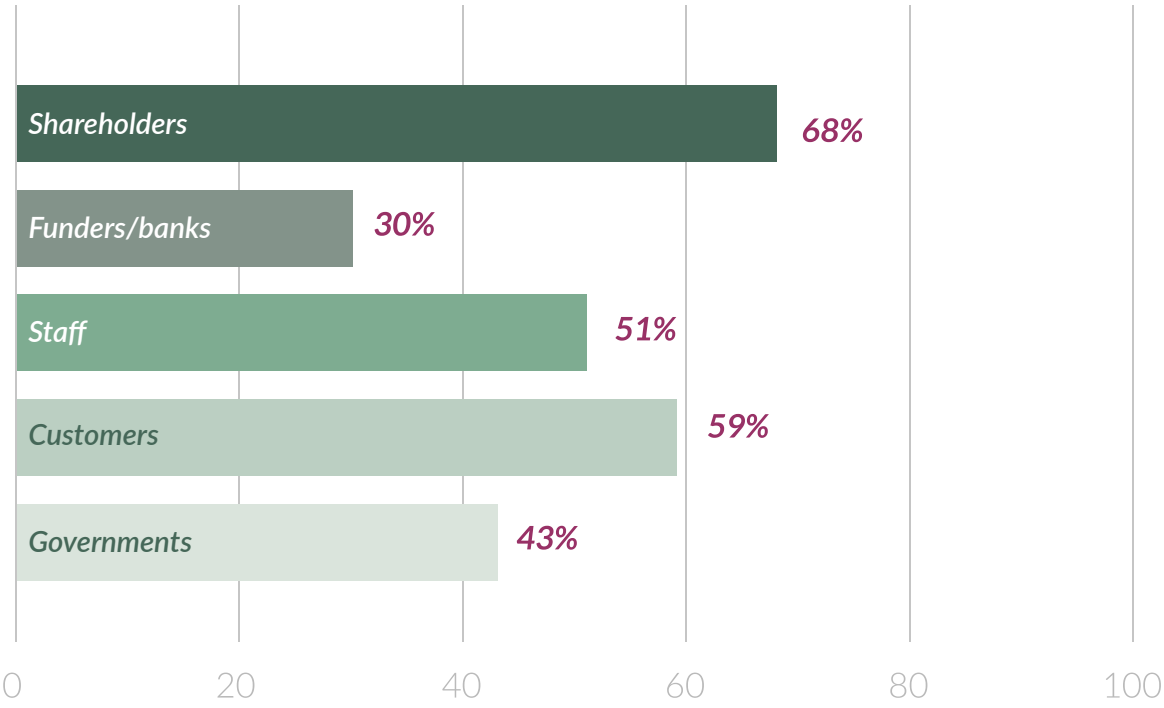
From All Directions: **Pressure to Decarbonise**

Companies are facing pressure from multiple directions to decarbonise their operations and support net zero targets by taking on more clean energy projects. That is, from business shareholders, customers, financial institutions, government, and staff.

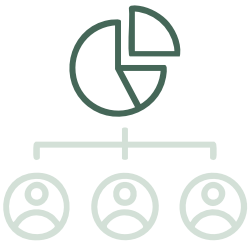
But before we go into any detail about how this pressure is distributed, it's well worth striking a key note about who industry leaders believe is most accountable for achieving climate goals. Hint: it's not in the same order as the sources of pressure the industry faces to achieve net zero.

While 42% of interviewees admitted to feeling pressure from the government, 78% actually ranked it as the number one stakeholder most accountable for net zero results. This dissonance raises an important question about the government's role in effectively pressuring all parties to contribute to meeting net zero targets.

Who pressures companies to deliver on the net zero journey?



Shareholders



About 68% of participants who said they are facing one or more forms of pressure reported that this pressure comes from shareholders and business owners. This applies to both privately held and publicly traded companies. Shareholders ranked highest this year, a testament to business commitment and, indeed, awareness of climate change issues. That said, this is a drop from last year's 74% of businesses that reported pressure from shareholders.

Interestingly, some participants from family-owned businesses noted that owners were often keen on contributing to sustainability goals. In the words of one participant, "As a family-owned company, with a third generation, we are deeply invested in sustainability."

Customers

Customers are a force to reckon with when it comes to pressure for net zero and sustainability. About 59% of respondents said that customers pressure them to include net zero and sustainability measures in their practices and to take on more work in the cleantech sectors when possible. This pressure comes from different types of customers.

As one EU-based company noted, "Our most demanding customers are those furthest along in their transition, such as legacy oil and gas companies shifting towards offshore wind. These companies place the greatest demands on us, which is a positive development." That said, companies are reporting less pressure this year compared to the previous year, when 76% of respondents said they were under some form of pressure from customers.

Staff

Some 51% of respondents reported staff as a source of pressure, particularly younger generations within companies, who feel a stronger need for more drastic action on sustainability. This aligns with results from last year. But, while this pressure certainly exists, it isn't always strongly felt within organisations. As one participant noted, "Staff, particularly the younger generation, show a strong interest in how companies engage with green initiatives. While some prefer to work for environmentally focused organisations, their influence tends to be more passive." Another executive observed that staff "are concerned about some of the organisations that we work with from a sustainability perspective."

Government

About 43% of respondents said they felt pressure from governments. As one executive explained: "I wouldn't say we're under pressure from the government. We work with them, and we have contracts with them. I think we help influence our area with the government. But if we don't meet our objectives or align with government needs—because, typically, the commercial world and the public sector never fully align—we could come under pressure from a reputational perspective. We might also find ourselves at a disadvantage commercially with government contracts."

Financial institutions

Banks and financial institutions exert pressure, with 30% of executives saying they felt some degree of pressure from them. But, for many, it's not nearly enough. One participant highlighted the potential influence banks could have in driving net zero: "If you say as a bank that we're not giving you a loan if you don't do XYZ, that's pretty powerful."

The same executive responded positively when asked if they were under pressure from financial institutions but qualified their answer: "I'd say it's more about wishing for more. For us, the requirements are, for the most part, relatively easy to fulfil. At the moment, it's mostly on us," adding that the real pressure comes from the company itself and its customers.

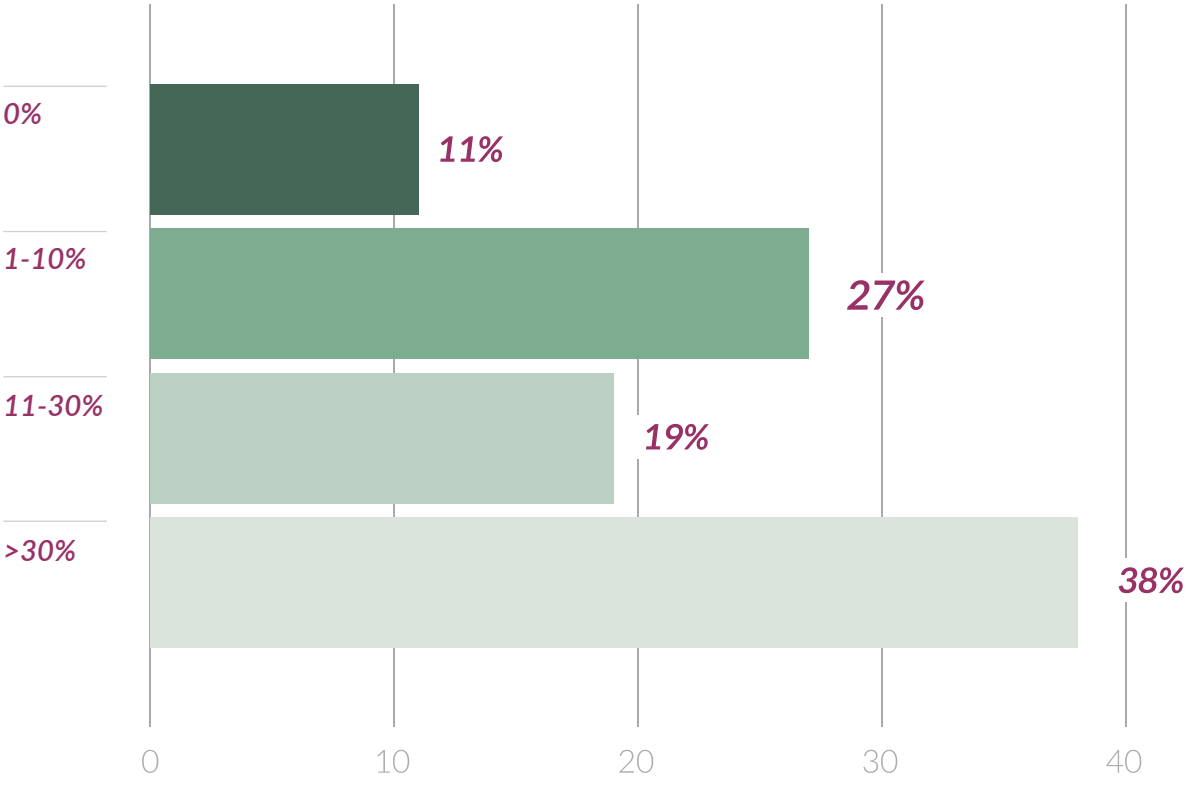
04

Net Zero and Sustainability **Requirements in Tendering Process**

The question of the percentage of tenders that incorporate net zero and sustainability requirements into their texts is a difficult one to pin down, largely because most of these requirements are either cosmetic or have no real impact on the results of the tenders. For many of the companies involved in this survey, the requirements don't make much difference because either a major segment of their work is in the cleantech sector or the company itself is meeting or has plans to meet sustainability requirements. By all means, we asked the participants to answer 'yes' as long as there are some requirements, regardless of their impact on the bid.

We specifically asked participants 'What percentage of your customers currently incorporate net zero and sustainability requirements into their tendering process?' The answers came as follows:

What percentage of your customers now build net zero and/or sustainability requirements into their tender process?



0%

About 12% of companies, up from 5% last year, reported no integration of net-zero or sustainability requirements in their customers' tenders compared to last year.

This increase might reflect the stagnation in some sectors where regulations and market demand for sustainability and net zero activities remain limited.

10%

In this range, the proportion of respondents also indicates a limited adoption of sustainability in tenders, with 25% of companies indicating that, down from 42% last year. One executive, who said they see these requirements in around 10% of the tenders, noted, "The challenge is that the tendering companies' sourcing teams often don't fully understand what net zero entails. Suppliers like us often operate too low in the organisation during the tender process, dealing with salespeople and junior sourcing assistants who are far removed from the net-zero conversation. There's still a significant gap in operationalising the broader net-zero vision into practical, everyday sourcing and sales processes."

11-30%

This year saw an increase in respondents who observed sustainability requirements being incorporated into 11-30% of tenders, 22%, which is up from 13% last year.

>30%

The largest proportion of respondents -- 41%, up from 37% last year -- reported that over 30% of their customers now include net-zero or sustainability criteria in tenders. One executive said, answering this question, "Over 30%. So it's quite high. In many cases, it feels like a box-ticking exercise, but every major customer includes the sustainability topic in their tender requirements. We need to mirror these requirements and show that we have the policies and procedures in place, just like all the major companies do."

05

Top Asks for **Stakeholders**

We asked participants to rank some key stakeholders in terms of who should be most accountable for achieving net zero targets and they ranked them as follows: Government, Industry, Financial Institutions, COP, and Consumer Behaviour. This was far from unanimous as many executives put serious thought into ranking these stakeholders. To give an example, some ranked consumer behaviour as being the most accountable given the massive impact individual consumers, collectively, make on climate change.

The argument is that it should all start from the individual. But most of them admit that it would be hard to just rely on the goodwill of consumers and industry for that matter, which meant most of them (78%) opted for government as being the most accountable given its power to regulate and issue mandatory legislation (the sticks) and offer incentives (the carrot). But more importantly, for the government's power over education, an education that reaches every citizen across all ages, but especially the young, about the urgency of climate change and what every individual can do to mitigate the impact of that change. Given that there are far more stakeholders involved in education besides governments, a few

respondents chose to add education as a category of its own. One interviewee said, “Education and academia must raise awareness of net-zero contributions by integrating sustainability into early curricula and fostering sustainable living environments.” Another added, “There’s a significant gap in understanding energy issues, and education is vital to bridge this and drive net-zero alignment.”

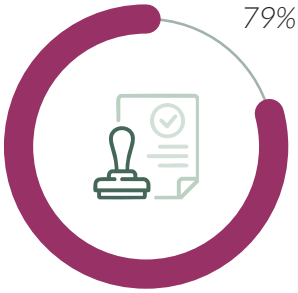
Then we asked our participants to list pressing asks for each of these stakeholders and their answers reflected a wide range of issues which we list below in order of importance as ranked by the interviewees.

01 Asks of Government

Five Asks of Government

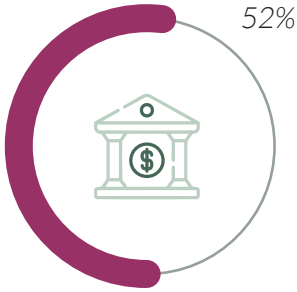
Policy and Regulation

Clear, consistent, and legally binding policies to ensure certainty and accountability.



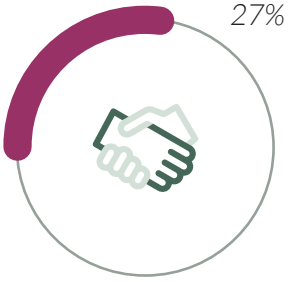
Finance and Economy

Financial incentives and stable fiscal policies to support renewable energy and reduce market uncertainty.



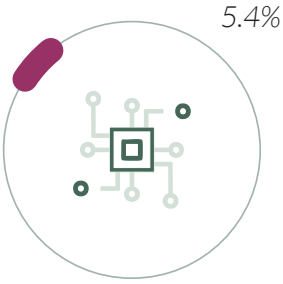
Collaboration and Coordination

Cross-government and cross-sector collaboration to align efforts and foster global cooperation.



Innovation and Emerging Technologies

Investment in technology, research, and development to drive breakthroughs in decarbonisation.



Consumer and Industry Behaviour Change

Education, incentives, and regulation to shift consumer and industry behaviour towards sustainable practices.

Clear Binding Rules, Long-Term Strategies and Global Standards

Energy supply chain executives asked governments for clear, consistent, and legally binding climate policies. Policy and regulation asks, which constituted about 79% of requests of governments, also included governance-related requests.

One executive raised an alarm, making a direct link between policy and capital allocation, which, in the views of many energy companies, is one of the most fundamental issues when it comes to the real-world impact of policy: "We need mechanisms that create certainty for businesses to invest in green technology. Without stable policies, it's very difficult to justify the capital expense."

Executives called for cross-government and cross-party cooperation to ensure alignment across political terms, with specific clarity on targets and interventions to achieve these goals. One participant stated that the "will and willingness" to achieve workable results through collaboration with other parties is there and that politicians say this is "their highest priority." But cautioned, "Reaching conclusions requires negotiation with other parties—which is a different level from genuine intent."

For many executives, depoliticising the net zero agenda was a priority as it ensures that policies remain steadfast despite government changes.

They also spoke of the need for mandatory legislation and stronger regulatory frameworks to drive decarbonisation which are now under threat due to lack of stringent enforcement mechanisms. One executive said, "My one request to the government would be to introduce legislation and regulation that make sustainability mandatory. Too much remains optional, and meaningful change requires enforceable rules."

Governments should also work together at a global level to ensure presence of aligned standards and emissions benchmarking.

Furthermore, they recommended simplifying and accelerating regulatory processes, including licensing, to create more supportive environment for investment in Greentech.

For many executives, depoliticising the net zero agenda was a priority as it ensures that policies remain steadfast despite government changes.

But for them the bottom line when it comes to policy is the need for decisive long-term strategies to build confidence and commitment among stakeholders.

Here is how one North America-based executive put it: "I think, in terms of government, it would be to develop stronger policies with more stringent regulation. Certainly, in Canada, there's very little enforcement of those at present. I think developing stronger policies, more stringent regulation, and consulting with industry is where I'd like to see it go. Obviously, similar to the U.S., we have quite a unique setup with federal and provincial governments, but if they could work together properly and develop something with a more long-term viewpoint, that would be my ask of them—without the normal political fighting and everything else that comes with it." Executives also called for the creation of governing bodies or groups that provide oversight for net zero initiatives across multiple political terms, which will ensure continuity and focus despite changes in government. There was also a strong emphasis on the need for leaders to prioritise long-term, difficult decisions over short-term political convenience, with one noting, "Do what's right rather than what's easy or popular, take unpopular choices."

The case for a fair business environment: a participant's view

"This is not about tax breaks, ***but it has to be an attractive financial proposition and an operating environment where a fair return on investment can be achieved without being overly taxed or profits being concentrated in the hands of the top 1-2%.*** *It's about reducing regulation and ensuring an attractive investment environment.*

Yes, you want inward investment and a free market, but the challenge is that free markets focus on maximising returns. In the UK, we are seen as a safe economy to operate in, but not a high-return economy. Investors will take their money where they can get the best returns.

There needs to be an adjustment to create an environment where things can happen quickly, money can be made, and that money is taxed and distributed fairly. There must be benefits for communities and individuals, not just large corporations and top shareholders. This isn't about socialism; it's about recognising the exhaustion with the current system. There has to be economic benefit for all."

Economic Incentives and Financial Mechanisms

About 52% of surveyed participants focused their requests of governments on economic incentives and financial mechanisms as means for bringing about net zero.

Incentives like those brought by the US Inflation Reduction Act (IRA) were invoked, especially by UK-based participants. "If you look at the United States and their Inflation Reduction Act, they have set the benchmark for incentivising clean energy. We need something similar to create a competitive edge here," said one respondent.

Carbon pricing was also mentioned as a tool to create a market for net zero infrastructure as a higher carbon price is seen as a conduit to economically viable investments.

Many urged governments to stabilise fiscal policies, reduce market uncertainty, and provide consistent funding and subsidies for renewable energy projects. One participant urged governments to "work meaningfully to stabilise the fiscal and policy environment while adopting an open-minded and pragmatic view of how oil and gas can be part of the solution—not just the problem. This is crucial not only for the UK's and EU's net-zero ambitions but also for our energy security objectives."

Another executive put the issue of subsidies into perspective: "Providing subsidies and funding is crucial to making projects viable," said the executive. "Net-zero projects require five times more work in risk assessing and designing compared to traditional oil and gas projects. That alone adds cost and delay because investors aren't as confident and need extra assurance. If there were more subsidies, policies, and funding available, it would make decisions easier and help move projects from pre-FEED (Pre-Front-End Engineering Design; that is, early-stage design and planning work) and FEED into FID. It's all about commercial return on investment and project viability. Without long-term subsidies and strike prices, every new project will have to go through multiple cycles of engineering and de-risking until investors are confident. That would help move things forward and grow from 2% to 5%, and then to 10% and beyond."

On broader climate issues, some executives said

increased carbon taxation was a potential driver for behaviour change among businesses that release carbon without imposing serious measures to reduce their emissions by means of efficiency, carbon capture and other decarbonisation and carbon reduction technologies and solutions.

For one executive, it's all about sticks and carrots: "There's going have to be enormous regulatory guidance to get there, either enormous carbon tax or huge incentives beyond what currently exists that would help actually hit those targets."

Fair taxation policies were also seen as necessary to avoid overburdening smaller players and so were ensuring equitable distribution of resources and maintaining a balance between incentivising investment and creating public revenue.

In the view one industry leader the government should also be thinking hard about securing raw materials such as steel which is needed to build wind power installations: "We need an honest dialogue about capital and materiality. You can set double, triple, and quadruple goals, but if we don't have the materials in the country, how are we going to do that?"

Collaboration Across Governments and Industries

Collaboration and coordination of parties came as a strong ask of the government. About 27% said that there is a need for cross-government and government-industry cooperation that breaks down silos. They said this collaboration and planning should span the terms of political office to ensure continuity.

In the words of one interviewee, "There needs to be a long-term cross-government plan and cooperation that spans terms of office. Five years of a government is not enough to fundamentally shape the landscape of something as strategically important as energy. Cross-party working groups need far more prominence to ensure continuity and collaboration across terms."

For one participant, joint effort involve opening effective communication channels between federal or central governments and provincial governments. For yet another, collaboration involves including everyone in vital national decisions around net zero, even if that requires holding referendums and involving different groups.

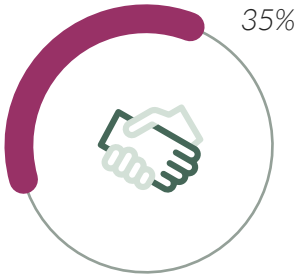
Participants also pointed out the need for national governments to cooperate with international institutions and other governments to ensure "globally-aligned regulations."

02 Asks of Industry

Top Five Asks of Industry

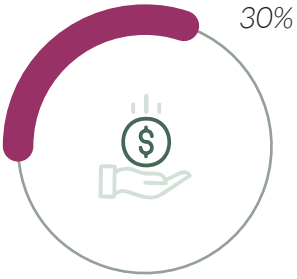
Collaboration and Collective Action

Cooperation across the supply chain and with governments to drive net zero efforts.



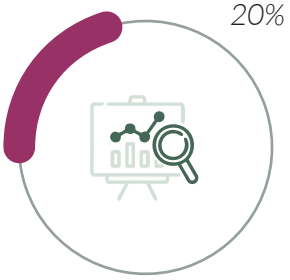
Investment in Innovation and R&D

Prioritise R&D and pilot projects to accelerate low-carbon technologies.



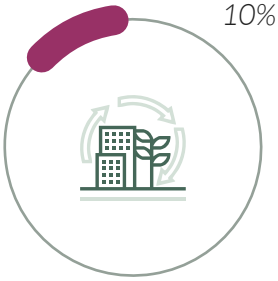
Adopt Long-Term, Transparent, and Accountable Strategies

Develop clear, measurable plans and ensure accountability for results.



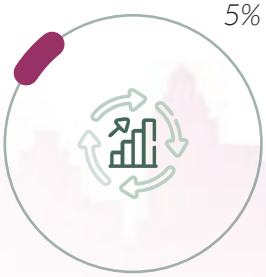
Shift to Sustainable Business Practices

Prioritise sustainability over profits and avoid greenwashing.



Improve Efficiency and Adopt New Technologies

Enhance operational efficiency and rapidly adopt new technologies to reduce emissions.



Increase Collaboration and Collective Action

Executives, 35%, made the point that achieving net zero isn't a solo task—no single player can transition to cleaner energy alone. Leaders want to see early, genuine partnerships that replace the traditional, fragmented procurement models. They envision an industry that willingly shares knowledge, best practices, and research, fostering trust and ensuring everyone moves forward together.

One executive said, "There has to be far more cooperation among all stakeholders among the supply chain." Another, "We need to move away from competitive tendering and focus on early, collaborative partnerships to reduce waste and speed up project timelines.

Traditional procurement models don't fit emerging sectors like renewables; we need flexible, adaptive approaches."

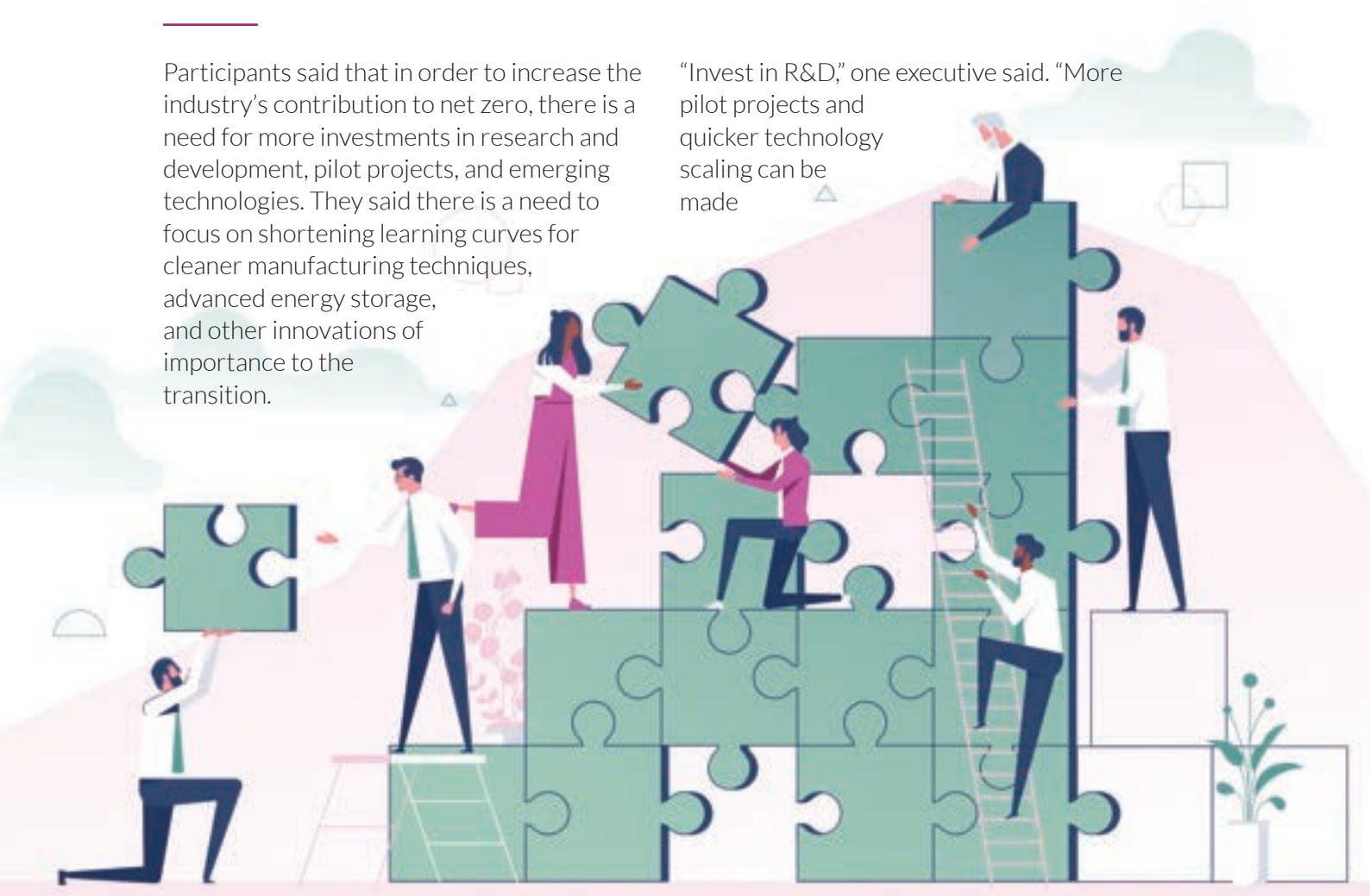
One executive stressed the importance of selecting partners early to avoid wasted effort: "Just collaborate right and select your partners early... We're wasting so much time and effort on these jobs. Let's just divide it equally or fairly, and let's get after it"

Another participant pointed to the industry need for joined-up thinking to address gaps in skills and supply chains.

Investment in Innovation and R&D

Participants said that in order to increase the industry's contribution to net zero, there is a need for more investments in research and development, pilot projects, and emerging technologies. They said there is a need to focus on shortening learning curves for cleaner manufacturing techniques, advanced energy storage, and other innovations of importance to the transition.

"Invest in R&D," one executive said. "More pilot projects and quicker technology scaling can be made



possible through peer collaboration and joint projects." About 30% of participants agreed with these demands for innovation, with several speaking of the significance of putting sustainability ahead of immediate financial gain. "Profit is not everything; most businesses are driven by the urge for profit only," one leader said.

Long-Term, Transparent, and Accountable Strategies

Short-term approaches cannot address the immense challenge of energy transition. About 20% of executives advocated for a shift in mindset, where board-level commitments to multi-decade planning take precedence. This involves establishing accountability structures to ensure continuity and measurable progress. The emphasis is on persistence and deliberate action, rather than chasing fleeting wins, to build a future genuinely aligned with net-zero objectives.

One executive summed it up, saying, "Follow the money in a longer-term way – no short money." Another stressed, "Develop a strategy with a 10 to 15 year-cycle."

03 Asks of Finance

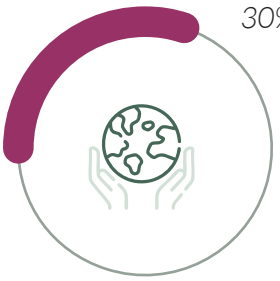
Top Five Asks of Finance

Long-Term, Balanced Financing Strategies & Risk Tolerance

Adopt long-term commitments and balanced risk tolerance to support green technologies.

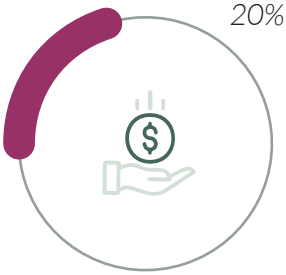
Aligning Capital with ESG and Sustainable Outcomes

Prioritise ESG-aligned investments and require credible sustainability plans.



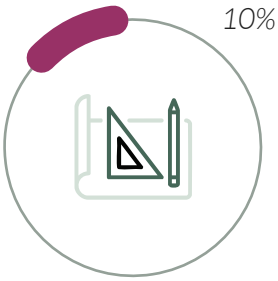
Investing in Emerging Technologies and Infrastructure

Fund emerging technologies and infrastructure to drive net zero solutions.



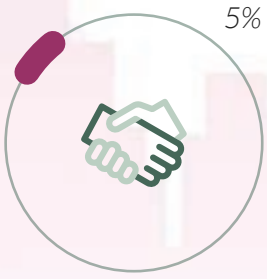
Improving Access to Finance for Transition Projects

Expand funding access for transition projects, especially in emerging markets.



Collaborative Frameworks Between Finance, Government, and Industry

Partner with governments and industries to reduce risk and accelerate progress.



Long-Term, Balanced Financing Strategies & Risk Tolerance

As many as 35% of surveyed executives agree that overcoming short-term thinking when it comes to making financing decisions at banks and other financial institutions is key to the energy transition. Most financial models have traditionally favoured quick, high returns, but in reality, executives say the need for patience and strategic vision cannot be overstated. Financial institutions, they say, need to accept lower returns initially, be more tolerant of risks, and support projects with longer maturation periods. Executives call for funding structures that are designed to accommodate the steady, long-term returns typical of renewables and a commitment to financing the entire value chain, not just its most profitable segments.

Touching on this point, one executive said, "We need long-term investment commitment. We need finance from bodies willing to invest strategically." Another said, "Be prepared to accept lower returns. Banks and financial institutions need to rethink risk by spreading it across novel green technologies."

Align Capital with ESG and Sustainable Outcomes

Another 30% of energy supply chain leaders were also vocal about the need to align financial decisions with genuine sustainability goals. They said that funds should be invested in the projects that have demonstrated impact instead of those merely passing according to ESG checkmarks. Executives want financing to be granted on the back of well-articulated, credible ESG plans supported by tangible environmental outcomes beyond vague commitments to support enterprises on the pathway of decarbonisation and net zero.

"Impose necessary clarity and credibility in ESG plans for companies to finance them," said one. Another urged, "Focus on the real impact, not on ESG."

Invest in Emerging Technologies and Infrastructure

Reaching net-zero will require financing early-stage technologies and critical infrastructure, even when the risks are higher, 20% of the interviewees said. Executives called for a supportive environment – including research funding, innovation grants, and targeted investments, especially in emerging markets – that makes patient, forward-looking investments possible to bring transformative technologies to market.

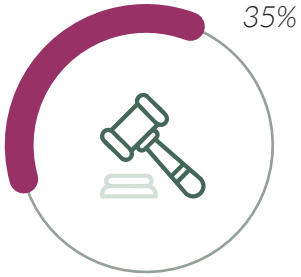
"Many of the technologies required for net-zero targets are relatively new," said one executive. "Significant investment will be needed to make these technologies viable." Another stressed the need for targeted early funding: "Early-stage equity funding for geothermal projects and hybrid renewable energy projects."

04 Asks of COP

Top Five Asks of COP

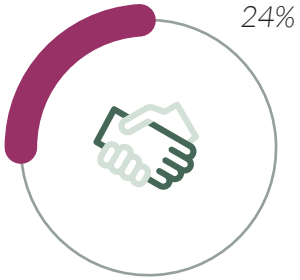
Strengthening Accountability and Binding Commitments

Introduce legally binding agreements, enforce mandatory regulations, and hold governments and industries accountable for meeting climate targets.



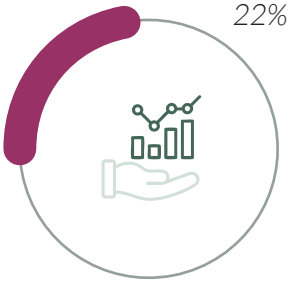
Collaborative and Inclusive Decision-Making

Prioritise R&D and pilot projects to accelerate low-carbon technologies.



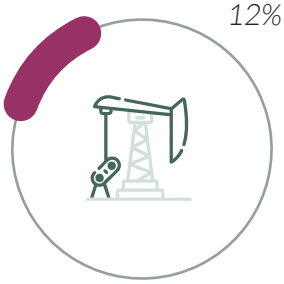
Tangible Implementation and Concrete Outcomes

Prioritise action over aspiration, focusing on medium-term strategies and immediate deployment. Deliver direct, actionable steps, avoid prolonged negotiations.



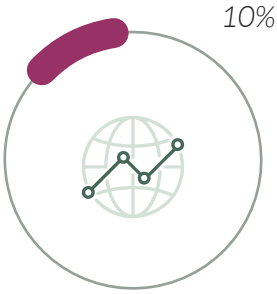
Transparent Role of Oil and Gas in the Transition

Address the role of oil and gas transparently, supporting their inclusion as part of the solution rather than embargoing them outright.



Global Trade and Regional Flexibility

Rethink global trade to align with climate goals and create flexible frameworks that respect regional realities and challenges.



Binding Commitments and Accountability

Executives, 35% of them, insisted that COP should develop into a body with actual powers of enforcement. This is something that also figured high in last year's conversations. It is not enough to just discuss climate issues, they said this year, mechanisms must be in place to ensure accountability by governments and industries. Leaders also called for legally binding targets, enforceable regulations, and transparent follow-up processes. Moving beyond voluntary pledges, they said, COP must ensure that commitments carry consequences, transforming it from a forum for dialogue into a driver of actionable progress.

"Legally binding commitments and heavy focus on achieving goals," said one executive. Another insisted, "They just don't have any accountability. They can sit around and discuss and then try and influence. If they're going to be the official body, then how do we hold them accountable for being well behind against these targets?"

Collaborative and Inclusive Decision-Making

If COP is to be truly effective, 24% said, it needs to be fully global, with inclusive participation and clarity on how to achieve net zero. Leaders called for the involvement of major players such as the US, China, and Russia, together with emerging economies, in the name of just transitions.

"Get everyone in one room and transition fairly," said one executive. "Align everybody—get the big ones doing something: US, China, Russia." Transparency and accountability are critical, with one leader stressing, "Set the framework on how to achieve net zero for different industries." Diverse stakeholders,

including governments, industries, and communities, will need to collaborate to ensure no one is left behind. Importantly, some executive pointed out, the role of oil and gas must be addressed in a transparent manner. "Oil and gas are part of the solution, not something to be embargoed—we need to support this messaging," said a participant.

Tangible Implementation and Concrete Outcomes

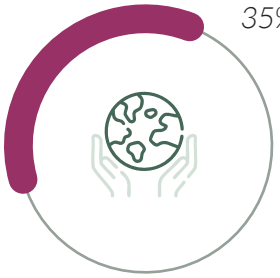
Action needs to be more important than aspiration and concrete outcomes prioritised, said 22% of participants. While long-term, ambitious goals are critical, executives stress that medium-term strategies and implementation are necessary. COP should deliver direct, actionable steps that encourage immediate deployment and ensure follow-through. Leaders urge the process to keep solution-focused, avoid prolonged negotiations, and deliver meaningful outcomes.

"Make sure it always has a strong outcome and doesn't become just a talking shop," said one leader. Another advocated for concrete plans: "Take decisions and define real, concrete actions, and then follow up on them."

05 Asks of Consumers

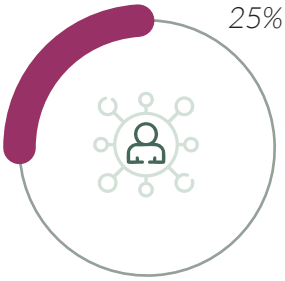
Top Five Asks of Consumers

Make Sustainable Lifestyle Choices



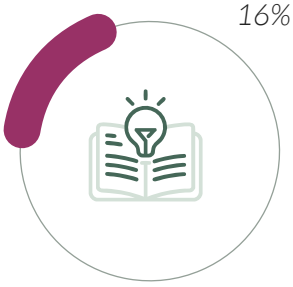
Adopt daily habits like reducing waste, repairing items, and avoiding single-use plastics to collectively drive market change and support sustainability.

Influence Policy and Industry



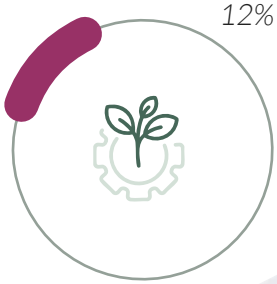
Push for stricter environmental standards and greener practices by using your voice as a consumer to influence governments and industries.

Educate Yourself and Others



Understand the environmental impact of your choices and share knowledge to empower others to make informed, sustainable decisions.

Adopt Green Technologies and Innovations



Embrace renewable energy, electric vehicles, and energy-efficient appliances to accelerate the transition to a low-carbon economy.

Engage in Collective Action and Community Efforts

Join local sustainability programs and grassroots movements to amplify your impact and ensure inclusive, community-driven climate action.

Make Sustainable Lifestyle Choices

About 35% of leaders encourage consumers to adopt sustainable behaviours that are collectively strong market signals. Reducing ecological impact can be achieved by choosing products with minimal packaging, paying a green premium for cleaner energy, repairing rather than replacing, and avoiding single-use plastics. These small, consistent changes pave the way for broader sustainability efforts.

"Start small with daily changes and explore new lifestyles that make a difference," said one executive. Another advised, "We should buy less and repair more. You don't have to do anything heroic, but the little things make a difference."

Influence Policy and Industry

The consumers are not mere purchasers, said 25%, they are citizens with influence on policy formation and a force for change in practices affecting the industry. Therefore, through influencing governments towards stricter environmental standards and inducing industries towards greener technologies, consumers are able to expand their strength. In so doing, the emergent collective pattern of their behaviour will shape future policies and products.

"Pressure government to make the right decisions. Recycle, buy stuff that has no packaging," one executive urged. Another noted, "The more people become greener, the more the industry will follow."

Educating Consumers to Promote Sustainability

Educating consumers about the environmental impacts of their choices and available low-carbon technologies is fundamental to driving the energy transition, said 16% of participants. Industry leaders stress the need for a cultural shift where individuals take responsibility for their environmental footprint. Informed and responsible consumers can make greener decisions, push industries toward sustainability, and influence policymakers to support low-carbon initiatives, they said.

"Consumers should be educated so they have correctly informed opinions," said one executive. Another added, "Be more informed about individual choices' impact on the environment." Responsibility is key as one leader explained: "It's about a change of mindset—to think responsibly about everything they do."

06

To the Rescue: What Needs to Be Done to **Get Net Zero Ambition Back on Track**

Industry leaders named clear, practical regulatory frameworks, robust financial mechanisms, and a united supply chain as key enablers of progress. For them, success hinges upon addressing infrastructure bottlenecks, building a skilled workforce, and coming up with demand-side solutions that were in tune with long-term clean energy goals. This section reviews the priorities of energy executives and stakeholders in detail, through strategies and actions that can help turn net-zero ambitions into a reality.

01 Financial Incentives and Funding Mechanisms

For net-zero projects to succeed, the economics must work, 55% of surveyed energy executives agreed. They said subsidies, tax relief, upfront investments, and stable offtake agreements are essential for mitigating financial risks and moving projects forward. They also identified the rising impact of inflation and interest rates on renewables as a major area of concern, calling for financial structures that both align with clean energy ambitions and provide long-term stability.

For one executive, financing and financial stability means scale: "We're seeing a lot of demonstrator projects, but what we really need is to move into an industrial scale, and that requires investment and certainty of return."

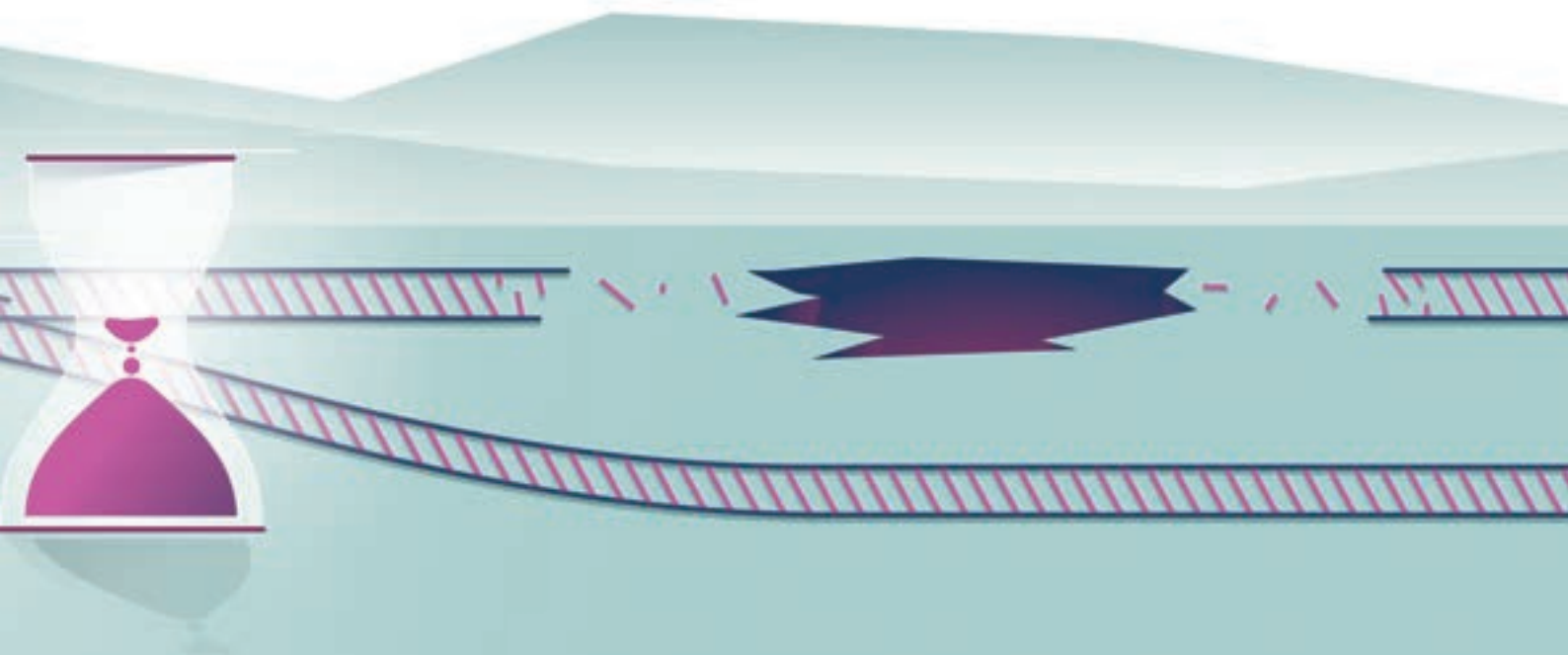
"The government needs to create up-front investment and clear policy plans," one executive said. Others said, "Subsidies and tax reliefs are needed to ensure stability in projects so the operators can reinvest into renewables."

For one industry leader what needs to be done is crisp clear: "I will point out the biggest one—probably finance… Inflation and interest rate increase gave a sharp blow to renewables projects."

Some made calls for government focus on long-term financial frameworks: "Government must provide long-term projects and finalise allocation of project contracts." Several stressed the need for addressing economic feasibility in clean technologies: "Regulation around future carbon tax might improve the economic feasibility of these projects. Banks need to offer better rates for clean tech projects. Insurance companies need to provide better premiums."

For some, and that include small and large businesses, financing emerging technologies was a challenge. One specifically addressed the challenging and complex nature of government grants applications, asking officials to "make sure that you don't put any barrier in the grant application process because otherwise, you could be harming your own purpose, which is finding innovators."

Increased public investment was also a recurring theme: "We need more government involvement in terms of having direct subsidies, consistent funding, or a clear regulatory framework. There needs to be more political will."



02 Clear, Stable, and Enforceable Policy and Regulatory Frameworks

Policy and other government national and in some cases global action made up 44% of the answers to the question of what needs be done to realise net zero ambitions. Solid and predictable policies are needed to reduce uncertainty and clarify direction, executives said. Faster licensing processes, standardisation of global carbon reductions, and punitive laws to discourage high-carbon activity were among the proposed solutions. Transparency in project approval rules and a long-term, stable regulatory framework form the foundation upon which investor and industrial confidence in net-zero programs are built, leaders said.

For one leader, policy is a highway to investment: "Having a transparent, coordinated national policy framework creates certainty for investors." Another noted, "People need certainty on regulation." A third said, "Until we have a policy in place and a mechanism to apply for and take advantage of the subsidies from government, the projects will be held from execution."

For one leader, the government needs to work more on speeding up permission: "We need to see changes in how projects are resourced, the efficiency of consenting and permitting processes."

03 Infrastructure, Skills, and Resource Availability

Net-zero projects need more than funding and policies, according to 22% of the executives, they require physical infrastructure, skilled labour, and available materials. Some identified bottlenecks in permits, grid connections, manufacturing capacity, and qualified personnel as their main concerns. Surmounting these challenges will be necessary to turn ambitions into reality, they said.

"There are a number of fundamental aspects that need to be addressed," one said. "Grid capacity is often cited as a prime example of that." For another, grid connections are part of a bigger issue: "There aren't enough permits. There aren't enough grid connections. There aren't enough people. There aren't enough materials. I think they want the rhetoric, but they don't want the hard work that comes with it." An executive also highlighted the skills gap: "We don't have the right skills for net-zero projects. We need intra-industry collaboration to tackle new challenges."

04 Demand-Side Measures and Market Clarity

Engaging in demand-side solutions is a facilitating factor for clean technologies, 18% said. Executives believe that achieving economic feasibility—through carbon pricing, stable demand signals, and scalable project support—will reduce costs and risks while also speeding up deployment at scale to reach net zero.

"More work on the demand side. Bring down the levelised costs of these projects," one executive said. Another said there needs to be "long-term offtake which comes from stable regulatory environments—something like what Japan is doing with ammonia, giving 10-year offtake. We need projects." Continuing the demand

theme, one executive called for a focus on near-term opportunities: “For stakeholders to look at the demand side more, low-hanging fruit instead of big projects.”

For some commercial clarity needs to be placed front and centre: “Commercial clarity: if the project makes sense, it will get FID.” For others it’s all about certainty: “There are a lot of projects that are waiting FID. There needs to be a clear strategy of what we’re going to do with these large-scale projects because people need certainty.”

07

Barriers to Scaling **Net Zero Activities**

When asked about the barriers their businesses face in scaling net-zero-related activities, industry leaders spoke about a different range of issues, which by now we're familiar with. These barriers range from unclear government commitments to weak market signals and regulatory delays. The bottom line is that businesses are contending with a mix of structural, economic, and operational obstacles. We must stress, however, that despite these hurdles, 81% of businesses said they're either maintaining or increasing their capacity, which points to confidence in the long-term potential of clean technologies. We already have a clue, which we heard in different ways throughout our conversations (see some of the quotes in this section), on where this confidence is coming from: businesses believe plenty of work in the cleantech space will come their way. The question, however, is when.

01 Uncertain and Insufficient Government Commitment

About 53% of participants named government related issues as the major barriers to expanding their business activity in the net zero space. These revolve around unclear, inconsistent, or insufficient government policies and commitments. Executives said their businesses face regulations that are pending approval, slow permitting processes, and policies that are often misaligned with industry realities. Inconsistent incentives and political uncertainty, they said, are preventing companies from making confident investment decisions. All of these are exacerbated by a perceived policy bias toward traditional fossil-fuel sectors, they said.

Some of the specifics executives discussed included:

> *"Lack of government clarity, too much bias towards big projects that are yet to be approved."*

> *"Governments need to get clarity on the objectives, develop a clear roadmap for achieving them, and implement the necessary policies with support in the form of subsidies and funding. This applies to global governments across the world. It's crucial to consistently deliver on this for the next 25 years, despite the political system in the UK and many other countries changing frequently."*

02 Limited Market Demand and Uncertain Economics

More than 33% of respondents identified weak market signals and uncertain economic returns as major barriers. Demand for new clean technologies, such as hydrogen and carbon capture, utilisation, and storage (CCUS), is still low, they said, which makes it hard to justify the upfront investment needed to scale such technologies. Furthermore, the fact that cost structures are still evolving creates additional risks for companies worried about locking into projects without clear commercial viability.

One executive said, "We are not confident the market is there, it's not stable, the margins are not enough to be worth investing. There isn't enough government initiative to retrain people in oil and gas to make them more suitable for cleantech. There needs to be more done on this front. The difficulty we have is that the operators don't see stability in the market, and they don't see the appropriate margins."

Another executive, who maintained current business capacity but stopped short of expanding, said, "We tried to scale up. But ultimately who is paying for it? This is the biggest dilemma, which is should you stop? All the market indicators say that you should not stop, but there is a limit to how much you can sustain right without customers."

A similar sentiment is reflected here: "The barrier for us is the fact that there isn't the money flowing down into the supply chain yet... You want to service these projects, but if you go too early, you've got very unhappy people in your finance department because they're saying, well, you've pulled up to deliver this service and we're not getting any revenue."

03 Skills, Infrastructure, and Collaboration Limitations

Transitioning to cleantech requires new capabilities, infrastructure, and inter-company collaboration, which 11% of respondents noted as lacking. Supply chain bottlenecks, vessel capacity constraints, and a shortage of skilled professionals are some of the barriers that hold back the industry from scaling up at the pace required. Unclear focus areas and a lack of collaboration between companies further add to these limitations.

08

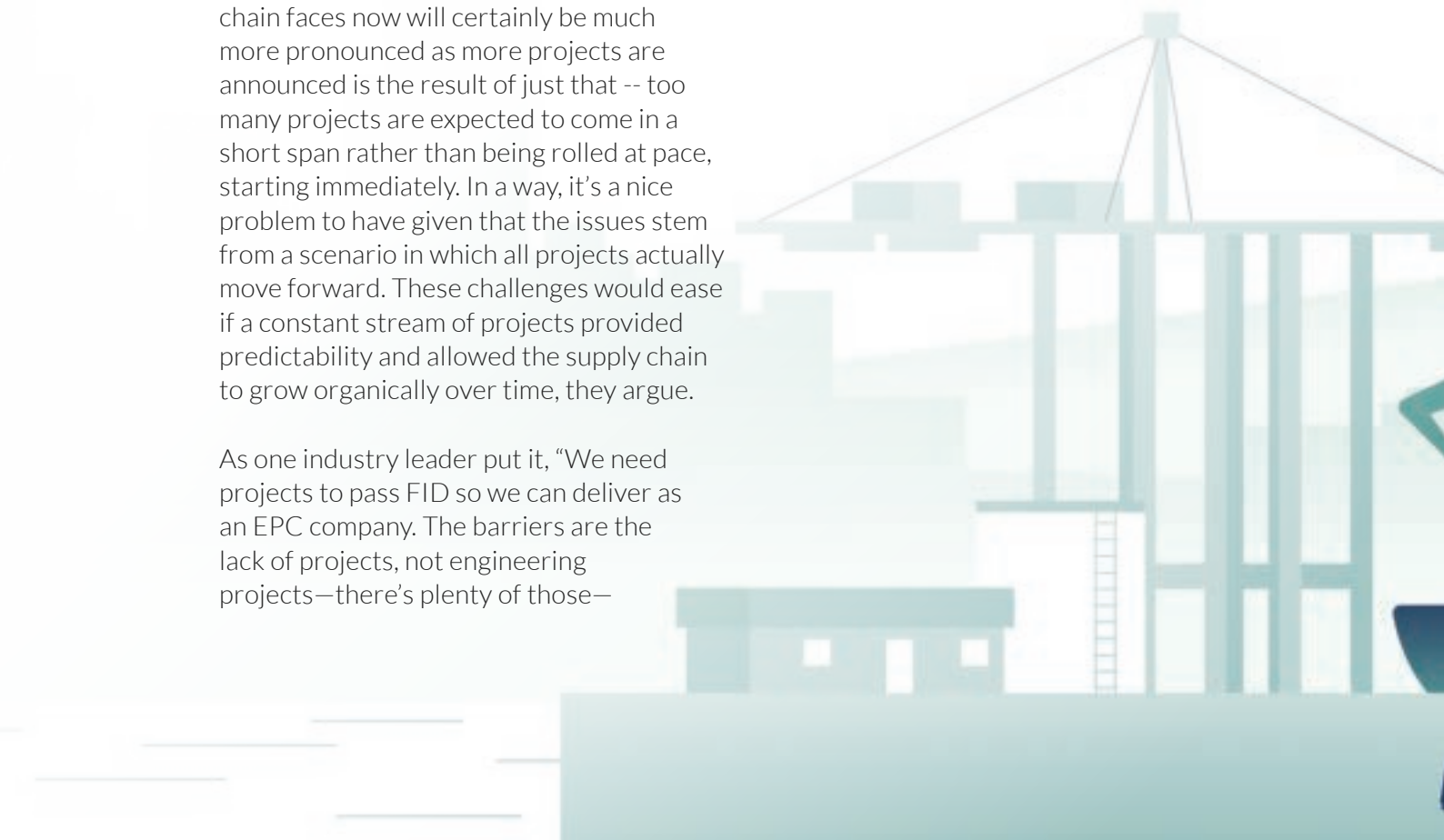
Challenges Facing the **Energy Supply Chain**

The global energy sector is on the brink of an unprecedented surge in activity. As we have already seen, leaders in the industry sense the sector is building toward a critical mass, a point at which energy projects—spurred by commitments to net zero—will flood the supply chain. But this anticipated moment of opportunity is also tinged with deep concerns. More than 76% of the interviewees agreed that net zero targets are at risk due to inadequate supply chain capacity in areas spanning across skills, infrastructure, ports, logistics, and technology readiness.

01 A "Nice Problem to Have"

While the supply chain is expected to be caught under immense pressure once cleantech projects reach a tipping point with accelerating FID rates, supply chain leaders argue that it is not the fault of the industry. The challenges the supply chain faces now will certainly be much more pronounced as more projects are announced is the result of just that -- too many projects are expected to come in a short span rather than being rolled at pace, starting immediately. In a way, it's a nice problem to have given that the issues stem from a scenario in which all projects actually move forward. These challenges would ease if a constant stream of projects provided predictability and allowed the supply chain to grow organically over time, they argue.

As one industry leader put it, "We need projects to pass FID so we can deliver as an EPC company. The barriers are the lack of projects, not engineering projects—there's plenty of those—but the actual projects that get built. In those projects that are being built like the wind projects, there's barriers around supply chain skills. As more of those new projects come on, all that pressure will go."



But the current state leaves companies hesitant to scale up. In fact, many are struggling to justify investment without a guaranteed pipeline of work. As one leader put it, "The vast majority of our customers are hugely invested in cleantech, but there are significant barriers to entry. They're still committed, but it's the lack of FID and the move into delivery on projects that's holding things back. Hopefully, in 2025 or 2026, we'll start to see some of these projects mature and deliver."

This lack of continuity in projects is certainly making things worse for many businesses. It cannot be emphasised enough that supply chain businesses thrive on predictability, and that sporadic demand creates serious operational inefficiencies: "If there's something that happens every year, we know it's going to happen every year—that's predictable. If it happens one year and then there's a three-year gap, that's much more difficult for us to support." For smaller entities, scaling up without guaranteed work is too risky. This is a serious issue given that much of the supply chain is made of small and medium size businesses and placing them at risk will limit the supply chain's ability to respond when demand surges.

02 Manufacturing Capacity, Logistics Bottlenecks

Leaders are confident that the supply chain has always delivered when there is steady flow of work, and the business case makes their investments worth their while. But in an age of anticipation, capacity issues arise across multiple areas as multiple executives have pointed out. Ports, transportation networks, and manufacturing facilities are often insufficient to handle the scale of upcoming projects. As one executive, focusing on manufacturing, put so succinctly, the industry is seeing "long, long lead times on some critical equipment." Another said, "it's also about not having enough manufacturing capacity for key components like floating foundations and turbines."

"The supply chain is absolutely at risk due to a lack of capacity," an executive said, pointing to challenges facing hydrogen production. "There's no way we have enough electricity to power all the announced hydrogen projects globally. A huge amount of additional renewable power will be required." He added, "For example, Egypt's target of producing 5 million tonnes of green hydrogen by 2040 would require about 10 gigawatts of electrolyser capacity. But manufacturers are only planning for 1.5 gigawatts annually—there's just no way to meet that demand."

Ports, critical for offshore wind, are a particular concern. As one leader remarked: "There are specific bottlenecks in some industries that will take a long time to remove, like ports in Scotland or in the UK for offshore wind, and just people with the right skills."

One industry leader said there aren't enough ships to move equipment, "There's bottlenecks in vessel capacity. In fact, I know there is because the charter times are already getting longer and longer. There's a finite supply chain. There are more vessels being built, but they take time to build. I don't know how long it takes—18 months, two years to build all of these vessels." These bottlenecks are a symptom of the wider challenge of ensuring that industrial infrastructure keeps pace with demand.

As projects grow in scale and size, e.g., the size of offshore wind installations, pressures develop on getting the right equipment to put them in place. "A big issue for us has been the lack of specialist cranes capable of handling the larger components required for floating offshore wind and other emerging sectors," said one business leader. "The cranes are in short supply, and even retrofitting older ones takes significant time and resources, which delays projects."

So, as technology grows in scale logistics need to catch up, and they aren't doing so at speed.

So, as technology grows in scale logistics need to catch up, and they aren't doing so at speed. Moving a 20 MW wind turbine or for that matter those at 2 MW, produced by China's Dongfang Electric Corporation, is something to be reckoned with: "You've got to have marshalling yards in which the factory that produces these turbines and blades can actually put them at a shoreside level, then be able to transport these large things. Then to install these large things—and large also generally means much heavier—and vessels that are capable of doing that."

Another supply chain executive brought to the attention the issue of scaling technology, this case hydrogen: "We are negotiating a contract at the moment about producing green hydrogen offshore, but it's never been done before," the executive

said. “The electrolyser stack is one MW, and you’re trying to produce, say, half a GW of energy offshore. That’s a massive undertaking... most of the public don’t understand the logistics involved in doing that. The technology is fundamentally simple, but the scalability and how it’s coupled together is the key challenge.”

03 Skills for Anticipated Projects

Many believe that while the supply chain has the skills it needs to deliver on existing net zero projects, the massive scale of anticipated projects requires much more engineers and technicians which the industry doesn’t have the moment.

“Skills are the biggest risk. Skills are absolutely the biggest risk,” stated one respondent before elaborating, “Anything that’s produced—whether knowledge, a physical product, or a process—depends on individuals and teams collaborating, sharing knowledge, and designing solutions. If we don’t have the skills in the supply chain, we will not be able to deliver the solutions that are needed to get us to net zero.”

The scale of the challenge is immense, particularly for industries like offshore wind. With projects planned across regions such as Scotland, the current workforce is stretched thin, and training programs are not keeping pace with demand, energy executives said.

“The infrastructure is not there; a lot of technologies are still at the concept stage, and we don’t have the people or capacity to deliver,” one executive said.

09

Trade with China **and Climate Targets**

China presents a serious challenge for any region with homegrown energy supply chains, including the West, thanks in no small part to its low prices and significant capacity. For instance, in the renewables sector, wind turbines produced in China cost as little as a third of what similar ones produced in the West do. Similarly, Chinese yards are becoming indispensable for delivering cleantech and energy transition projects, as European facilities are at capacity, forcing reliance on Chinese infrastructure. China's growing presence in hydrogen and carbon capture markets puts additional pressure on these two sectors: Chinese electrolysers compete hard against European suppliers. For SMEs, access to business in China is also becoming increasingly difficult because of demands to use locally supplied equipment.

While these insights reflect Western businesses' experiences with China, they are globally applicable, especially in regions with growing local energy businesses that offer the same products and services that Chinese counterparts do. This situation, while it unequivocally demonstrates China's important role in achieving climate goals, creates serious dilemmas for both businesses and policymakers: how to maintain a strong supply chain while also taking advantage of what China has to offer.

The majority of business leaders we interviewed agree that doing business with China is fundamental to achieving global net zero targets—that's 76% of them, in fact. The reasons are many, but the bottom line is that China has both the technology and scale to deliver, both for its own needs and globally. About 57% of the companies we surveyed have some form of business dealing with China, 49% have customers in the country, and 59% work with Chinese suppliers.

Most business leaders view China as an irreplaceable driver for scaling up low-carbon technologies because of its unrivalled manufacturing prowess, cost advantages, and resource base. But others seriously question whether relying on China—often at the expense of local production and economic sovereignty—will prove to be the best route to take. There are also voices that raise moral, environmental, and political considerations.

True, most executives unquestionably saw China as having a fundamental role in achieving global net zero targets. But some of those who shared this view were also seriously concerned about the health and the very future of their domestic supply chains in the face of China.

01 Manufacturing Cost and Scale

One executive noted that China "leads in the manufacturing of batteries, solar, and wind technology, and they have driven down the costs of these technologies globally. The world will need access to that capacity in order to achieve net zero in an economically viable way."

Another interviewee echoed this sentiment, saying China's "low-cost base" and flexibility "have substantial capacity and are very flexible, ready to build at short notice. They offer technology that is often cheaper than some Western alternatives. All told, we need China and we can't afford to ignore them."

The cost dimension is not just about cheap labour or manufacturing but also about strategic availability of key resources and components. A participant from a large multinational energy technology company remarked that "China is the world's second largest economy… and has invested heavily in green technologies. You look at the technology advancement in China's solar and wind and it's phenomenal." This edge enables China to push down production costs, making clean energy technologies more accessible and accelerating the net zero agenda, said the executive.

02 Speed and Flexibility

Global net zero targets often hinge on ambitious timelines, and delivering on these goals demands speed and China is seen by many as the one most capable of stepping to the rescue. Many interviewees said that at a time when other regions struggle with delayed project approvals or supply chain bottlenecks, China's ability to mobilize quickly is hard to ignore. One executive stated, "China's ahead of much of the rest of the world on this subject. On EVs and renewables, China's leading the way, and their supply chain will help us. China is almost the sole major supplier of solar panels at good prices. They're also becoming more of a tech exporter, which is kind of interesting."

The notion of speed applies to manufacturing scale-ups as well. As one respondent from a global company explained, "China is in the most advanced position in the entire world, way above any other region. They are still using a lot of carbon but they're using it toward net zero at an incredibly high speed. No one is building new capacity in cleantech like China."

03 Innovation and Resource Dominance

Beyond cost and speed, China's strategic control over certain critical minerals, including rare earth, and advanced manufacturing techniques makes it indispensable. Batteries, solar panels, electrolysers, and wind turbine components usually depend on raw materials and know-how that are in high concentration in China. One executive said, "We are already seeing China emerging as a manufacturer of wind turbines and electrolysers. It's got huge land mass and could produce electricity that it would actually export to others."

04 Cautionary Voices

Not all interviewees view reliance on China as an unequivocal good. Several raised concerns about the economic sovereignty and value capture of Western countries. One participant suggested that if the West simply imports everything from China, "you'd be fine if you just want to do it quickly and cheaply without capturing much economic value in the West." But, the interviewee added, "Relying on China might get things made cheaply, but it's not necessarily the best strategy."

Others pointed to the importance of building local manufacturing capacity and developing domestic skills. Some argue that while China can deliver at scale, transparency and mutual accountability remain crucial. There are also questions about intellectual property, environmental standards, and human rights.

One interviewee noted that one issue with Chinese products is that they are not local to where they would end up being used: "It might be very cheap, but there's a cost associated with it that we don't see. We try to consider the environmental impact of buying equipment or materials from China, including the global shipping and related emissions. Localization is important from that point of view as well. We invest in the markets where we operate, aiming to support the local economy while adhering to ESG principles."

Another executive drew parallels to Europe's reliance on Russian gas, warning about "the danger of too many eggs in one basket." Putting too much faith in one supplier could create vulnerabilities, both economically and geopolitically, he warned. Some participants pointed to post-pandemic shifts, such as the move by certain companies to establish production in emerging economies like India. Although China currently dominates, the energy landscape can evolve, they argue. The idea is not to exclude China, but to avoid over-dependence on it.

05 Final Thoughts

Facts on the ground and opinions testify to the complex role China plays and will keep playing in the net zero space. As we've seen, the majority of executives acknowledge China's cost advantages, manufacturing capabilities, scale, resource availability, which are all vital elements to achieving climate goals. On the other hand, cautionary voices warn against becoming overly reliant at the expense of local capacity-building, fair competition, ethical considerations, transparency, and diversification.

The bottom line is perhaps that China is critical for net zero under current conditions, but this role should be treated carefully. Doubtless, engaging China is as much a strategic imperative as a challenge, but if the world can leverage China's strengths while pushing for fairness, sustainability, and local value capture, we will certainly end up in a win-win situation. Otherwise, an unchecked reliance on China could simply shift dependencies rather than solving them.

One executive summed up much of the views we've heard on China: "China is the most influential geopolitical place right now, more so than America. Their ability to deliver technological solutions en mass far outweighs anywhere else. Whether or not we agree with them politically, or whether it's a place you'd want to do business because of human rights challenges, trade challenges, or the political regime, that's a personal debate. But in terms of their ability to produce quickly, efficiently, and to a high quality, they are a driving force toward net zero. Having worked in China and seen the scale of what they can do, it's quite mind-boggling."

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