

A devilish duality: How CEOs can square resilience with net-zero promises

Amid turbulence on the path to net zero, leaders will have to be much nimbler to balance resilience with an energy future that is secure, affordable, and clean. Five actions can help.

by Bob Sternfels, Anna Moore, Daniel Pachtod, and Humayun Tai

What a difference a year makes. In November 2021, business leaders showed up in force in Glasgow at the UN Climate Change Conference (COP26), pledging to take on the challenge of reaching net-zero greenhouse-gas-emission goals by 2050. While no one believed that the path to net zero would suddenly become easy, commitments made to target nearly 90 percent of CO₂ emissions for reduction signaled that the private sector was truly engaged. Then major new headwinds began swirling: surging inflation, war in Europe, energy insecurity, and a potential global recession. Still, governments pressed ahead, passing major climate legislation packages in Europe and the United States. More than 3,000 companies have made commitments on net-zero pathways.

At the time of COP26, McKinsey released a perspective on the requirements needed to secure a net-zero carbon emission transition.¹ It was clear, given the challenges to deploying capital at scale, managing economic dislocations, and scaling up supply chains and infrastructure, that the path would not be linear and would include slowdowns and backstepping. Ultimately, sustainable systems are more value creating than traditional ones. But countries and companies must balance trade-offs among net-zero commitments, affordability for citizens, and security of energy and materials supply.

As disruptions have intensified, the moment confronts CEOs—an organization’s ultimate integrator—with a devilish duality. As net zero has become an organizing principle for business, executives are on the spot to lay out credibly how they will deliver a transition to net zero while building and reinforcing resilience against the certain volatility of ongoing economic and political shocks. The zigs and zags of present conditions will tempt some

¹“Solving the net-zero equation: Nine requirements for a more orderly transition,” McKinsey, October 27, 2021.

leaders with exclusive choices—doubling down on fossil fuels, for example, at the expense of new and emerging renewable technologies. Leaders will face multiple calls on their attention, as well as concerns about how quickly to drive a sustainability agenda forward.

We believe that the right response to such challenges has always been a matter of “and,” not “or”—that is, maintaining focus on the long term while adjusting in the face of present conditions rather than opting for one or the other. A resilient stance, being prepared to withstand shocks and poised to accelerate into a changed reality, permits companies to weather not just the current moment but also the future storms that are likely to come their way in a world of rising risks.

The task is neither simple nor easy.² Yet as leaders prepare to gather in Egypt for the 2022 UN Climate Change Conference (COP27), there is also good news: today’s reality is that sustainability, economic competitiveness, affordability, and national security dovetail as never before. To make the most of the situation, CEOs can shape strategy around resilience now to tap value-creating businesses tomorrow as the world continues to head toward net zero in the long run. In this article, we present five core actions to help meet the dual imperatives at the heart of a new sustainability strategy.

Stormy weather

The path to net zero was always going to be fraught with complexities. Recently, several “weather fronts” have emerged, posing significant challenges to leaders across both the private and public sectors.

Energy availability and security

The Russian invasion of Ukraine and the resulting energy crisis in Europe are reminders that, fundamentally, disruption in energy markets can wreak havoc on the global economy. In response, countries are boosting the use of fossil fuels, including coal and gas, and extending the life of conventional energy infrastructure, which is under growing pressure.

Physical risks are proliferating. Europe saw a record-breaking heat wave this summer. Floods devastated Pakistan this autumn, and tropical storms raged across Japan, the Koreas, and China. In the United States, Texas saw an unprecedented grid failure in 2021, with a near miss in California this year. There are important choices to be made, some of which entail trade-offs between climate mitigation and climate adaptation—for example, rebuilding versus relocating and investing in cooling versus keeping energy consumption down—all of which occur within a limited envelope of infrastructure funding.

Affordability

Prices are rising across the globe, driven by the energy crisis in Europe, the growing food crisis resulting from the invasion of Ukraine, and a recovery from the COVID-19 pandemic that has been faster than expected, and, though welcome, has put pressure on supply chains. The outlook is ominously recessionary.

²“The net-zero transition: What it would cost, what it could bring,” joint report from McKinsey, McKinsey Global Institute, and McKinsey Sustainability, January 2022.

There is a growing perception that net zero comes at the expense of affordability, with a zero-sum trade-off. The universal problems of supply chain and talent shortages complicate the equation, particularly as deployment for the new assets and infrastructure needed for the net-zero transition pick up. This, in turn, could result in price spikes for the key inputs needed for the net-zero transition. Companies also face growing challenges in securing the parts, labor, and specialized skills they need to execute on net-zero commitments. From heat pumps to recycled textiles and insulation installers to carbon management data scientists, companies are struggling to match supply to customer demand.

Governance and regulation

A key tenet of any orderly transition to meeting net-zero goals is demonstrating ongoing governance and cooperation among public- and private-sector institutions, meeting commitments, and maintaining public support for progress toward cutting greenhouse gases. The war in Ukraine has already reduced the potential for such cooperation. Also, the United States is seeing growing backlash against standardized environmental, social, and governance (ESG) reporting requirements and skepticism of ESG funds that some criticize as punishing fossil-fuel producers and hurting local economies. The outlook for aligned standards, requirements, and public support is becoming murkier.

Shaping a resilient sustainability strategy

There is an increasingly popular view that leaders will need to navigate a zero-sum trade-off between addressing climate action headwinds and sticking to their commitments for achieving an orderly net-zero transition. However, while the path to net zero will not be a straight line, and some regions will step back commitments for the short term, the long-term trajectory remains intact.

More important, these discontinuities also create opportunities—and imperatives. We believe that the potential is great to shape a resilient sustainability strategy that creates a virtuous cycle of managing short-term shocks; bolstering prospects for an affordable, clean, and secure energy future; and improving the long-term competitiveness and value creation of companies. In part, this is because competitors may be tempted to pause during this period of turbulence. That creates a chance for those who stay the course to gain strategic distance:

- ***Energy independence via accelerated use of renewables and clean power and capture of the full potential of energy efficiency and distributed electricity.***

Diversifying the energy supply with renewables, green hydrogen, and green power promotes national energy security and economic competitiveness. In Europe, the invasion of Ukraine and the effort to develop a future free of dependence on Russian gas has prompted Europe to raise its commitment to renewables (alongside imported natural gas in the medium term and possibly nuclear power in the longer term). Of course, energy market resiliency must be built in tandem—for example, by rewarding the firming of capacity in power markets as the share of intermittent power generation grows. Even prior to the invasion of Ukraine, industrial policy across the larger European economies was focusing on clean-energy tech as a source of national competitiveness. Examples include European clean-tech export policies, support for

rare-earth minerals needed for new climate tech, and national funding to drive local new-energy industrial growth (such as the US Infrastructure Investment and Jobs Act). Companies that operate in this space or serve those in it have clear long-term growth prospects.

- ***New value from existing systems.*** It is becoming increasingly apparent that it may be possible to repurpose existing methods of carbon-intensive production with additional enabling technologies to future proof them for a sustainable future. Numerous examples—such as retrofitting existing industrial production facilities for carbon capture, use, and storage (CCUS); using hydrogen blends in methane carriers; and employing direct air capture (DAC)—are emerging to lower carbon intensity and transform existing systems into cleaner alternatives. Owners and operators of this infrastructure that invest in future proofing through CCUS, DAC, or other tech stand to make significant gains. Repurposing rather than stranding these assets will not just enable affordability and system resiliency but also provide incumbents with greater confidence that decarbonizing their legacy assets is feasible.
- ***Sustainable materials transition.*** The energy transition requires a materials transition. Projected electric-vehicle demand, for example, will raise demand for cobalt, copper, lithium, nickel, and rare-earth minerals, putting further upward pressure on pricing across these commodity classes. Commitments to decarbonize automotive, consumer goods, packaging, and other sectors are also already driving supply–demand shortages in aluminum, plastics, and steel. We expect, for example, a 50 to 60 percent shortage of same-cycled plastics compared with demand in 2030, driving significant green premiums. If supply eventually meets demand, early movers will most stand to gain. With the current commodity cycle at a peak, cash can be reinvested in nascent materials opportunities that will be in clear demand in the longer term.
- ***New sources of capital.*** Investors and incumbents have started a new wave of capital deployment toward net zero, including investments in new materials, new climate tech, and more adaptive supply chains. These investments are increasingly following a “private equity plus” model, with heavily involved investors helping build new green challengers from the outset. Countries and regions with hard-to-abate sectors are also increasingly important sources of climate tech and transition capital as they seek to decarbonize while preserving economic growth. These ventures are in their early stages as voluntary and policy-driven demand materializes and grows. But they demonstrate that while there is some ESG-related backlash, a broader set of clean investments are continuing to grow.
- ***Voluntary carbon market (VCM) development.*** A critical pillar of enabling net zero and financing asset decarbonization is the ability to value carbon with liquidity. VCM will be critical. Although the situation is unsettled now, we see expanded dialogue and more concrete actions toward establishing VCM at the country and private-financing levels. For example, several Southeast Asian governments are shaping national voluntary carbon exchanges, and company commitments to voluntary carbon have grown.
- ***Reshaped value chains and reindustrialized nations.*** In some developed economies, game-changing policies are supporting new net-zero value chain plays. The US Inflation Reduction Act commits \$370 billion in climate spending, targeting the creation of new

sustainable industries across the country and accelerating clean tech, such as green hydrogen. Another US legislative measure, the Bipartisan Infrastructure Law, is poised to prompt reindustrialization, replacing value chains based on internal-combustion engines with electric- and battery-based alternatives. In the European Union, the Fit for 55 and REPowerEU packages will create new winners across industries and reshape value chains in a way that brings affordability to the fore. New forms of public–private partnerships will therefore also need to take shape. Instilling more control within regions and individual countries will enable them to protect against price shocks for citizens.

Done well, pursuing these opportunities should create a virtuous cycle for economies among affordability, decarbonization, energy security, job creation, and resilience. Renewable energy is one obvious example with the potential to promote energy security, create high-quality jobs, and reduce emissions in tandem. New sources of capital and VCM could make sustainable investments more affordable, bringing them to market sooner, and successful delivery of these projects would in turn boost returns and attract further capital. Sustainable materials could facilitate the energy transition while creating new value from existing systems and infrastructure. And so on. These examples illustrate the power and possibility of the “and”—a flywheel-like effect that enables meeting security, socioeconomic, and sustainability goals in parallel.

Across these opportunities, incumbents are positioned to succeed more often than not. Every incumbent player, especially in hard-to-abate sectors, has two sets of opportunities: decarbonizing while extending fossil-fuel-based core business (potentially earning green premiums as a result, as early movers in sustainable materials already are) *and* building new sustainable businesses. Incumbents can use existing cash flows and strong balance sheets to fund new sustainable businesses that lay the foundation for future growth. They can afford to invest for the long haul and place bets across multiple new clean technologies—another advantage when the end point is clear but the precise path to get there is not.

Resilience today and value tomorrow: Five actions for CEOs

The pressure to demonstrate real progress on and create true value through sustainability is growing. The world has, however, entered an era that is increasingly challenging for CEOs and business leaders to navigate. There is a new strategic paradigm—one with reasonable certainty of where the world needs to be in the medium and long term and tremendous volatility in terms of how and when it will get there.

Leaders must build resilience to today’s shocks to build tomorrow’s champions. Some approaches will be easier than others and offer a good starting point.

Accelerate capital deployment with a private-equity mindset

Leading with resilience while navigating toward net zero means participating early in the materials transition and green-business-building wave to secure exposure to promising innovations (exhibit). Earlier-cycle investments have higher risk but also higher returns because they benefit from early policy funding, greater willingness for counterparties to

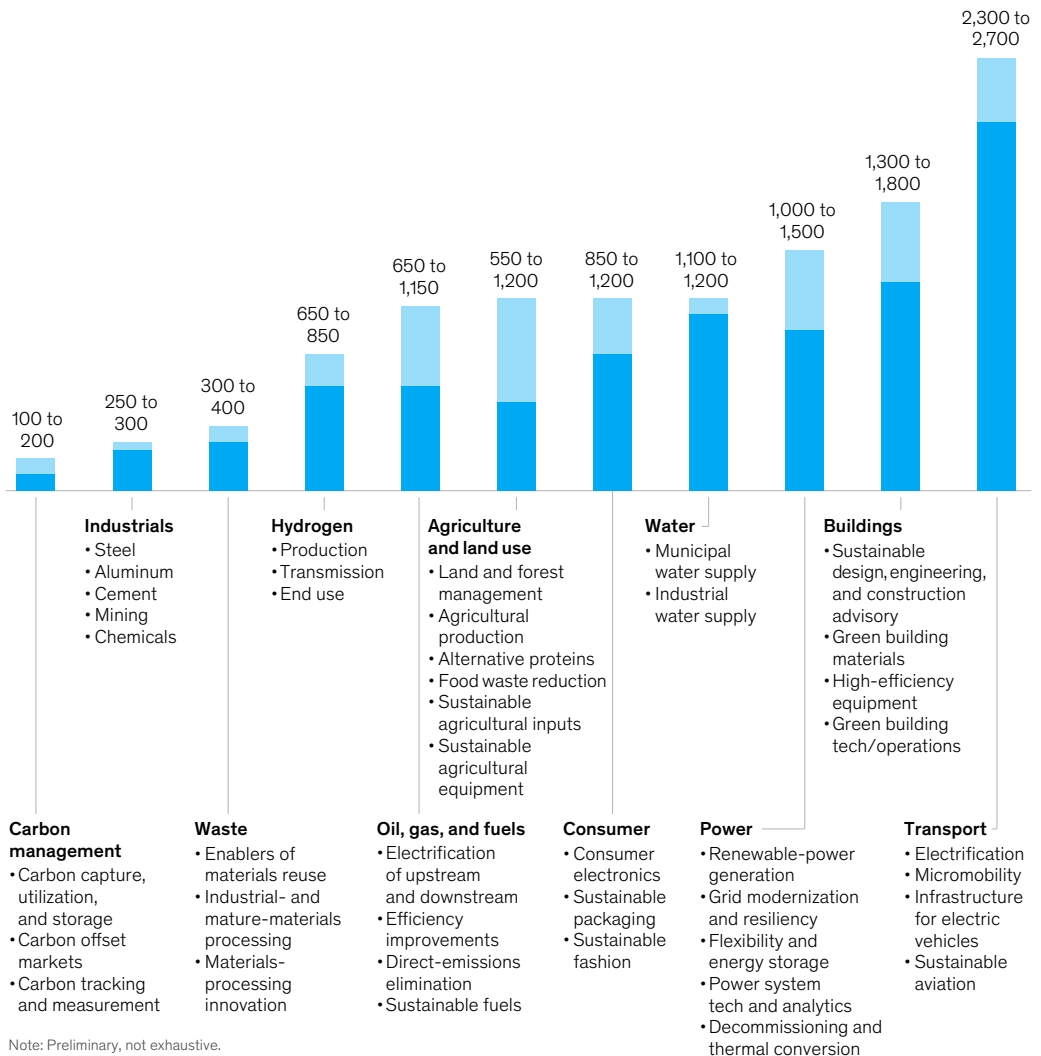
participate (for example, through sustainable aviation fuel contracts, which guarantee demand from airlines that allows investment in supply), new talent, and the opportunity to gain first-mover advantage in nascent and emerging value chains.

In many industries, there will be multiple sustainability winners. For example, we expect both hydrogen-fueled and electric vehicles to be part of the 2050 ground transport system. This is another reason to consider an investor mindset—spreading bets across multiple potential investments earlier. Companies can further manage their transition risk by aggressively pursuing operational decarbonization measures that already pay for themselves (for example, through energy efficiency) while making longer-term

Exhibit

Eleven high-potential value pools could be worth more than \$12 trillion of yearly revenues by 2030 as the net-zero transition advances.

Addressable market size in 2030, selected categories, \$ billion



investments in sustainable infrastructure and building new businesses. Pursuing energy efficiency and rapidly scaling distributed clean heating (for example, via heat pumps) will become a critical lever in Europe to manage the energy crisis.

Play offense through a sustainable value creation strategy

Two objectives should be paramount: to extend and decarbonize the core business and to build new sustainable businesses in reshaped value chains. This would represent an “*Apollo 11* moment” in many industries—a moon shot requiring not just incremental improvements but wholesale rethinking of how to build, operate, and maintain every sector of the economy. Leaders need to make quantum leaps to meet the moment, by getting smart on climate tech fast, engaging with the innovation ecosystem, and leveraging their engineering and business-building talent. Similarly, a focus on sustainability—and ESG measures, more broadly—is defensible, pragmatic, and needed. CEOs can articulate their approach to ESG topics proactively by focusing on resilience and value creation, not simply as part of “right to play” and risk mitigation.

Go beyond net zero

CEOs should also look to make their companies net nature positive. Actions include moving ahead in the game on biodiversity, demonstrating stewardship of shared water and air resources, ensuring a responsible supply chain, and contributing to a just transition, among other steps. Adaptation investments to address physical risks will also be critical. Companies able to weather the storm, literally, will have a material advantage.

In some instances, sustainability aims come into conflict—for example, lithium brine operations are less carbon intensive than hard-rock extraction but consume far more water. CEOs will need to weigh current trade-offs carefully and invest in innovation that meets multiple aims, “squaring the circle” in an increasingly complex ecosystem. The bar is rising on sustainability; companies need to have a plan on these and other factors.

Build the partnership and ecosystem muscle

CEOs should realize that the challenge of maintaining resiliency while driving toward net zero is too great to go it alone. New public–private partnerships will be needed because many of the emerging energy and materials value chains will require full ecosystem development. Consider, for example, clean-fuel consortiums, such as those developing around hydrogen hubs, and shared CCUS networks. There are also opportunities to partner with competitors on shared tech road maps to mitigate tech risk and to better direct innovation funding.

Aggressively reskill leadership teams, boards, and frontline workers

As companies embrace a sustainable future, they will need new skills. Sustainable fashion, for example, requires fully rethinking design, manufacturing, procurement, marketing, and waste management processes while also better tracking carbon emissions and circularity. Talent across the organizations will need to reskill to meet these new demands. Companies need to identify the skills needed for their more sustainable business models and work toward acquiring them *and* building them internally.

Navigating the current turbulent period for the net-zero agenda may require temporary responses that, in some cases, may look like setbacks. They need not be. CEOs who understand the virtues of strategic resilience know that addressing immediate hardship and building a sustainable future can—and should—be pursued at the same time. By maintaining vision, moving nimbly, playing offense, and embracing opportunity instead of recoiling from risk, leaders can improve the future of their businesses and the planet. [Q](#)

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