MILKEN INSTITUTE

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WORKSHOP SUMMARY

# Investing in Europe's Competitiveness:

## Infrastructure and Decarbonisation

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## Investing in Europe's Competitiveness Initiative

In its role as a global, nonpartisan, nonprofit think tank, the Milken Institute has launched a new initiative called Investing in Europe's Competitiveness. Our aim is to develop actionable steps to catalyse the investment needed in the European Union (EU) and United Kingdom (UK) to meet productivity challenges and generate growth, aligned with themes diagnosed in reports by Mario Draghi, Enrico Letta, and Christian Noyer, as well as Keir Starmer's Missions. The initiative is centred on three pillars: attracting new investment into infrastructure and decarbonisation, closing the innovation tech gap, and investing in Europe's defence and security priorities.

On 23 June 2025, the Milken Institute hosted a workshop at the Royal Society of Chemistry in London, bringing together leaders from infrastructure, tech, policy, finance, and academia. This workshop sought to identify opportunities and challenges—as well as how public and private finance can be best deployed to address them—in two of the pillars under the initiative:

*attracting new investment into infrastructure and decarbonisation* and *closing the innovation tech gap*.

# Background

The UK and EU both have commitments to be net zero by 2050 in terms of their $CO_2$-equivalent ($CO_2e$) emissions. Infrastructure sectors are some of the largest contributors to net $CO_2e$ emissions—for example, surface transport constitutes 24 per cent of UK emissions,[1] and energy constitutes 75 per cent of the EU's emissions. [2]

Removing fossil fuels from infrastructure sectors will require significant public- and private-sector investment. For example, in many northern European countries, gas remains the main source of fuel used in domestic heating. Reaching net zero will necessitate switching to electric sources that have no direct CO2e emissions, such as heat pumps. Electrification will also be required across Europe's fleet of vehicles powered by internal combustion engines to eliminate tailpipe emissions. Further up supply chains, it will be essential to remove natural gas from feedstocks that supply industries, such as chemicals, and CO2e emissions from industrial products, such as steel and glass.

The exact investment requirement is unclear, but a report by former European Central Bank President Mario Draghi, which provides a blueprint for the transformations Europe needs to undergo to improve its economic competitiveness and meet net zero, estimates that investment as a share of gross domestic product (GDP) will need to rise to 5 per cent, a level not seen since the 1970s.[3]

Despite these high costs, the cost of inaction is significantly greater. Without significant mitigation and adaptation efforts, by 2100, global GDP could decline by 24 per cent in a world with unabated fossil fuel consumption.[4] Furthermore, Europe, as a major importer of fossil fuels, suffers from some of the highest energy costs globally, impacting industrial competitiveness and placing downward pressure on living standards.

Decarbonisation is therefore essential to Europe's competitiveness. But there are significant economic benefits, too; the value of the EU's net-zero start-ups already exceeds €100 billion, and 4.5 million jobs are in the European green economy.[5] Further investment in these areas will yield additional growth and productivity benefits.

How public and private sources will finance this transition remains uncertain. Governments across Europe are witnessing significant fiscal pressures from high debt-servicing costs stemming from aging populations, state support in economic sectors since the global financial crisis and the COVID-19 pandemic, and the end of the 'peace dividend' following Russia's invasion of Ukraine.

The private sector, which could help to fill this gap, faces its own challenges caused by high financing costs, limited investor risk appetite, and questionable returns from projects.

The infrastructure and decarbonisation breakout session during the workshop sought to identify the challenges that Europe faces in these areas vis-à-vis its economic competitiveness

and how finance can help to address them. With the valuable input of our contributors, we identified four key themes that policymakers and investors will need to address, together with some suggested solutions.

# Themes from the Roundtable

Europe needs to utilise public and private finance to support an orderly transition to a world without reliance on fossil fuels for energy and industry, and to seize the economic and productivity opportunities this transition will provide. To achieve these aims, workshop participants provided insights around several themes:

- Ensuring consumer buy-in through better communication by governments of the long-term benefits of the energy transition.
- Deploying different sources of capital to help first-of-a-kind projects and new technologies receive adequate financing, including adopting blended finance models and utilising capital from nontraditional sources.
- Unlocking capital from pension funds and non-bank sources and then directing this capital into infrastructure and decarbonisation priorities.
- Tackling ongoing barriers to deployment, which create financial risks in the delivery stages of projects and impact infrastructure's investability as an asset class.

## Consumer Buy-In Is Key to the Decarbonisation of Infrastructure Sectors, but Governments Are Failing to Communicate the Long-Term Cost-Benefit to Consumers

**Issue:** The first challenge raised by participants was the difficulty of communicating the necessity of raising end-costs for infrastructure users to pay for investment. Politicians and the wider infrastructure sector are failing to craft a narrative that explains the necessity of bills rising in the short term to finance new investment, their potential to fall over time, and infrastructure's crucial role as an enabler for other socioeconomic objectives. The recent example of Germany, where a new heating law mandating the installation of heat pumps was watered down in the face of public and political opposition, demonstrates the importance of public engagement.

**Context:** Most infrastructure investment is ultimately paid for by end users through bills. New investment (such as that required for the transition to net zero) will cause bills to rise in the short term in order to fund the infrastructure improvements required for the transition. In some infrastructure sectors, including energy, after an initial rise, bills will likely fall over time because of the transition away from fossil fuels (which are subject to global price volatility). However, as

the Draghi report notes, Europe already has some of the highest energy costs globally, which could limit public appetite for the investment required for the energy transition.[6]

Underinvestment in infrastructure already limits the pursuance of wider political and social objectives. For example, in eastern England, several housing developments as well as laboratory space for research are delayed because the local water infrastructure is insufficient to support further population growth. This situation demonstrates the dependency between infrastructure and productive investment in other sectors.

**Resolution:** For solutions, we would need to examine examples of best practice or identify from consumer surveys the communication methods that are most effective in the climate space. Participants highlighted Octopus Energy as a positive example of a company that effectively communicates with consumers around managing demand and helping to reduce system costs. Octopus has also reduced bills for consumers who live near wind farms, which has helped to increase engagement on decarbonisation and to reduce consumer opposition to such projects.

## The Risks Inherent in First-of-a-Kind Projects Are Still a Stumbling Block to Unlocking Private Capital: A New Approach Is Needed

**Issue:** The second challenge centres on bridging funding gaps in infrastructure when the private sector has limited risk appetite, from predevelopment finance to the valley of death in commercialisation of new infrastructure technologies to first-of-a-kind projects. Certain sectors, such as building materials, have witnessed limited decarbonisation to date and therefore require significant capital investment, even as potential sources of private capital sit idle because of a lack of adequate risk-adjusted returns. Uncertainty transmitted through the political cycle and changes in regulation erect additional barriers to private-sector investment.

**Context:** Hard-to-abate sectors, including industrial products (such as steel, cement, and glass), aviation fuels, and shipping, will require significant investment to become cost-competitive with fossil fuels. Many technological solutions in this area are still in the research and development stage. In fact, there is uncertainty about the most appropriate technological solutions. This uncertainty poses significant risks for potential investors, but, as the Draghi report notes, at least €100 billion of investment in hard-to-abate sectors will be required each year from 2031 to 2050 to meet the EU's decarbonisation goals.[7] Therefore, the need to identify forms of capital that can be deployed to address this challenge is significant.

**Resolution:** Participants raised three possible solutions to this challenge. We will need to road-test these solutions for their potential to stimulate private capital in riskier parts of the project development life cycle, particularly in first-of-a-kind projects and emerging technologies.

The first solution is deploying catalytic capital strategically so that it can crowd-in private-sector investment in early-stage projects or technologies. This approach has been used in the US in

sectors such as hydrogen with the US Department of Energy's Loan Programs Office, which has provided upfront grants to fund capital investment.

The second solution is using philanthropic capital in lieu of public or private capital to de-risk these projects. This capital has benefitted other sectors such as food systems.[8]

The third solution is using the balance sheets of the hyperscalers, such as Microsoft and Meta. These companies are increasingly investing in infrastructure to facilitate the growing demands for energy and water that AI data centres require in significant quantities. In Nevada, a new clean transition tariff provides an option for larger customers to pay extra for electricity generated from emerging energy technologies—for example, Google, which pays extra to use geothermal energy—which helps to de-risk investments. Opportunities exist for synergies with defence, where new investment in technologies could spill over into decarbonisation technologies.

## Europe Is Still Reliant on Bank Finance; Finding New Resources Is Key to Closing the Investment Gap

**Issue:** Participants raised the key challenge of the lack of access to financing across all projects in Europe. The continent is too reliant on bank financing. Banks still dominate financing for companies and projects, whereas in the US, banks provide only 30 per cent of financing. Another major issue is the lack of financing from pension funds and insurance companies, which have consistently underinvested in infrastructure as an asset class.

**Context:** Europe remains significantly reliant on bank finance for investment. However, as the Draghi report notes, banks are ill-equipped to finance innovative companies or sectors because they lack the expertise to monitor such companies and to value their (typically intangible) collateral.[9] Unlocking finance from alternative sources is vital to meeting the investment challenge in infrastructure and decarbonisation, particularly in innovative solutions driven by start-ups.

**Resolution:** The UK is already moving in this direction with its 'Mansion House reforms' to encourage greater pension-fund investment. Europe should undertake similarly radical reforms to unlock investment that can be directed towards infrastructure and decarbonisation priorities. Germany's reliance on bank financing, for example, constrains investment in growth assets at scale, where more pension and insurance players are needed in this space. The Savings and Investments Union proposes simplified regulations so that banks, pension funds, and asset managers can invest in innovation and growth assets without prohibitive capital charges, which should help unlock additional investment.

However, any proposals must overcome the significant challenges that precluded the creation of the Capital Markets Union. Much work remains to be done to channel more capital into infrastructure, even if progress on creating a Savings and Investment Union proves slow.

We would need to examine the potential pathways to unlocking non-bank finance in infrastructure projects and decarbonisation technologies, including through surveys and qualitative research methods. Also important to understand are the risk-adjusted returns that are necessary to unlock additional finance.

## Tackling Delivery Barriers Is Vital to Reduce Cost and Schedule Risks on Projects for Investors

**Issue:** Participants identified several barriers in both the finance and delivery stages of projects. These include the time devoted to securing the permits, or consents, required to build infrastructure projects. Regulation is another key challenge; in Europe, companies are reluctant to adopt hydrogen because the rules to verify its cleanliness are burdensome, which highlights the role of environmental regulation in inhibiting efforts towards further decarbonisation. Other barriers, including supply-chain constraints and a lack of access to skilled staff, can crystallise as cost and schedule risks in the delivery stages of projects.

**Context:** Managing and reducing these barriers is critical to achieving net zero by 2050, given the large volume of new construction required. Permitting delays have a particular impact on a project's schedule and consequently its cost, creating significant risks for project sponsors and investors. For example, completion of grid projects in Germany can take up to 15 years because of delays in receiving the necessary consents. The Draghi report identifies the time needed to manage permitting, which varies significantly between EU member states, as a major barrier to renewable projects.[10]

**Resolution:** Community engagement was highlighted as a solution to the permitting issue, and best practices to draw on already exist. For example, in France, 8 per cent of the value of a project can be provided to local communities that are situated close to new infrastructure projects. Europe can also provide policy stability through regulatory certainty, which augurs well in comparison to policy instability in other blocs, such as the US. We could also examine recent work to identify the cost barriers for infrastructure projects[11] to identify solutions to the barriers that investors have deemed most significant in reducing the attractiveness of projects.

# Next Steps

Although each topical section above presents possible next steps, we propose to move forward with each workstream in the following three-step process:

1. Understanding the Problem Roundtable(s)
    - We will host a roundtable in the coming months, bringing together relevant stakeholders to provide feedback on our understanding of the different dimensions of the problem, gleaned from interviews and secondary literature.
    - These roundtables could be held in multiple jurisdictions so that geography-specific barriers can be teased out.
    - The output of these roundtables would be a specific problem space against which solutions would need to be designed.
2. Understanding the Solutions Roundtable(s)
    - Using the problem areas identified from the previous stage, we will conduct additional interviews and research to shortlist solutions.
    - These solutions will be debated and refined at a roundtable with the stakeholders needed for their success, including asset owners, investors, policymakers, corporates, and innovators.
3. Hosting a Solutions Launch Event
    - We will bring the identified solutions and associated issue brief to the attention of decision makers most directly relevant to the area.
    - A launch event would complement a wider media strategy to get ideas into the public domain.

# Endnotes


1. "Decarbonising Surface Transport," UK Parliament, April 8, 2025, https://doi.org/10.58248/HS126.
2. "Renewable Energy Targets," European Commission, accessed July 31, 2025, https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-targets_en.
3. The Future of European Competitiveness (European Commission, September 2024, p.5), https://commission.europa.eu/document/download/97e481fd-2dc3-412d-be4c-f152a8232961_en.
4. "Climate Change Costs: Even Cool, Rich Nations at Risk," University of Cambridge Judge Business School, November 11, 2024, https://www.jbs.cam.ac.uk/2024/climate-change-costs-even-cool-rich-nations-at-risk/.
5. "The Green Deal Industrial Plan: Putting Europe's Net-Zero Industry in the Lead," European Commission, February 1, 2023, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/green-deal-industrial-plan_en.
6. Mario Draghi, The Future of European Competitiveness (European Commission, September 2024, Ch. 3), https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en.
7. Draghi, The Future of European Competitiveness, p. 39.
8. Sarah Kelley, "Role of Philanthropic Capital in De-Risking Regenerative Food Systems," Regenerative Food System Investment Forum, December 15, 2022, https://rfsi-forum.com/the-role-of-philanthropic-capital-in-de-risking-regenerative-food-systems/.
9. Draghi, The Future of European Competitiveness, p.64.
10. Draghi, The Future of European Competitiveness, p. 45.
11. For example, "Understanding the Cost Drivers of Major Infrastructure Projects in the UK," Watson Farley & Williams, October 31, 2024, https://www.wfw.com/articles/understanding-the-cost-drivers-of-major-infrastructure-projects-in-the-uk/.

# Roundtable Attendees

## Workshop Opening Panel

### Moderator:

**Karen Kornbluh**, former United States Ambassador, Organisation for Economic Co-operation and Development

### Speakers:

**Vince Cable**, former Secretary of State for Business, Innovation and Skills

**Fabrizio Campelli**, Head of Corporate Bank and Investment Bank, Deutsche Bank

**Simon Johnson**, Kurtz Professor of Entrepreneurship and Professor in Global Economics and Management, Massachusetts Institute of Technology

## Infrastructure and Decarbonisation Breakout

### Moderators:

**Bernice Lee OBE**, Research Fellow, Hoffmann Distinguished Fellow for Sustainability and Chair of Sustainability Accelerator Advisory Board, Chatham House

**Aidan Irwin-Singer**, Associate Director of Policy, Milken Institute

## Capitalising on Tech Innovation Breakout

### Moderators:

**Karen Kornbluh**, former United States Ambassador, Organisation for Economic Co-operation and Development

**Simon Radford**, Director, Programming and Policy, Europe, Milken Institute

## Organizations Represented

Amazon

British Growth Partnership

Chatham House

Cisco

Darktrace

Deutsche Bank

Energy Infrastructure Partners

Equinor

Eurazeo

Fingleton

Galvanize

Graphcore

House of Commons

Intuit

Lakestar

Mirova

National Infrastructure and Service Transformation Authority

Novo Holdings

ServiceNow

Siemens Energy UK & Ireland

Urban Partners

## Milken Institute Attendees

**Laura Deal Lacey**, Executive Vice President, International, Milken Institute

**Petra Freddi**, Managing Director, Europe, Milken Institute

**Simon Radford**, Director, Programming and Policy, Europe, Milken Institute

**Sophie Eggar**, Director, Europe, Milken Institute

**Giancarlo Bruni**, Senior Advisor, International, Milken Institute

**Aidan Irwin-Singer**, Associate Director of Policy, Europe, Milken Institute

**Daniel Baigent**, Senior Associate, Policy & Research, Europe, Milken Institute

**Ben Davies**, Associate, Business & Program Development, Europe, Milken Institute

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# About the Milken Institute

The Milken Institute is a nonprofit, nonpartisan think tank focused on accelerating measurable progress on the path to a meaningful life. With a focus on financial, physical, mental, and environmental health, we bring together the best ideas and innovative resourcing to develop blueprints for tackling some of our most critical global issues through the lens of what's pressing now and what's coming next.