



s-curve
economics

Annual report
2025-2026



Welcome

S-Curve Economics CIC is dedicated to advancing understanding of the economics of the transition from fossil fuels to clean technologies.

We produce analysis to inform action on the transition, using economic concepts and tools consistent with the context of rapid innovation and deep structural change. We also provide guidance and tools for others to use in making their own analysis.

We work with the leading academic researchers of the economics of transition, and top experts in the major greenhouse-gas emitting sectors of electricity generation, road transport, and steel, bringing these fields of expertise together to produce decision-relevant analysis. We are international in our partnerships and in the focus of our work.

Our findings can be used by governments, businesses, and civil society organisations. By helping governments and other actors target their efforts more effectively, we aim to enable a faster and less difficult transition, with lower costs and greater economic gains.

S-Curve was incorporated on 23 April 2024, and this is our second year of operations. We are grateful for the generous collaboration we have received from others working in this community.

We have built on the success of our first year, expanding the scope of our workstreams on power, steel and analytical tools. We have more than doubled our income and our team has grown from four to ten people.

We are delighted to work with so many partner organisations from around the world. We worked with partners to hold steel scenarios workshops in Washington, Beijing, and Brussels, a power sector conference in China, other events at London climate week, events at COP30 in Brazil for COP30, and online. We believe that collaboration builds community, and we are looking forward to further strengthening our international partnerships in 2026-27.

Funding

S-Curve Economics CIC is a non-profit organisation. In the past year we have received funding from private philanthropy and government sources both in the UK and abroad. We are grateful for the support that has made our work possible.

S-Curve Economics CIC is a Community Interest Company registered in England and Wales (15673351).

Our approach

We conduct focused projects to develop a better understanding of the economics of the low carbon transition in specific sectors, as well as engaging widely to share this understanding within the community of researchers and policymakers working on the transition.

Research

Our research is grounded in academic understanding, informed by practical sector expertise, and produced in partnership with colleagues from some of the countries that matter most to the global transition.

In 2025-26 we produced major reports on scenarios for the global steel transition in China, the European Union and the United States, making clean steel competitive in international trade, and a 'first build, then break' framework for accelerating zero-carbon transitions. In addition, we published policy briefs on modelling-based insights for steel producers, and system archetypes of the energy transition.

Events

We bring people together for in-depth discussions that challenge assumptions about the future, and that work constructively with uncertainty and different national perspectives.

Our workshops on the steel transition continued through 2025 and brought together leading thinkers from eight countries important to the sector, to grapple with the question of how to align industrial competition with the shared goal of advancing the global transition. We hosted two full-day events at London Climate Action Week in June 2025: a Breakthrough Agenda Policy Network meeting bringing together international experts on steel decarbonisation, and a China-UK expert dialogue with discussions of power, steel, finance and trade.

Community

We benefit from the knowledge and experience of others in the field, and we work to share the new understanding of the economics of transition as widely as we can.

We took part in the *Forum on the Macroeconomics of Green and Resilient Transitions*, sharing our 'First build, then break' policy framework with finance ministry officials from a wide range of countries.



Power Sector Reform

The direction of change in the power sector is clear – from coal and gas to solar and wind, as the dominant technologies – but how to achieve that change quickly and cost effectively, while keeping electricity prices low and security of supply high, is less obvious.

China is growing its power capacity faster than any other country, and the UK has decarbonised its power sector faster than any other. We established the UK-China Power Market Reform Advisory Group (PMRAG), a new structure for more intensive, in-depth and continuous exchange of learning between the UK and Chinese power sector policymakers and researchers. This will support both countries' rapid transitions to clean, reliable and low-cost power systems. As the convening institution on the UK side, S-Curve Economics has supported bilateral dialogues involving both government policymakers and leading researchers from the UK and China and built a network to broaden connections between communities of power sector researchers in both countries. We set up dedicated joint research programmes on the electricity market design problems of greatest interest to both governments.

Our research partners in this project were: University College London, Tsinghua University, and China Energy Storage Alliance. The guiding authorities (co-chairs) are UK Department for Energy Security and Net Zero (DESNZ) and China National Energy Administration (NEA). The convening institutions (secretariat) are S-Curve Economics and GEIDCO. The members are: University College London, Imperial College, Oxford Institute of Energy Studies, Strathclyde University, Energy Systems Catapult, Regulatory Assistance Project, Ofgem, NESO, Octopus Energy Group, Centre for Net Zero, Energy Foundation China, European Climate Foundation Pooled Fund on International Energy, Tsinghua University Department of Electrical Engineering, China Energy Storage Alliance, State Council Development Research Centre, State Grid Energy Research Institute, North China Electric Power University, Peking University Energy Research Institute, China Huaneng Group Energy Research Institute, China Electricity Council, China Energy Research Society, China Renewable Energy Engineering Institute, Beijing Power Exchange Centre, Guangzhou Power Exchange Centre, State Grid Corporation of China, China Southern Power Grid Company, China Electric Power Planning & Engineering Institute, NDRC Renewable Energy Centre, State Power Investment Corporation, Chinese Academy of Social Sciences, Shanghai Jiao Tong University.

Engagement and events

- We co-convened a UK-China energy transition dialogue in June 2025 at London Climate Action Week.
- We launched the UK-China PMRAG and held its first meeting during the International Forum on Energy Transition in Suzhou, China, in October 2025.
- The PMRAG had its first conference in Beijing in March 2026, bringing together power sector researchers from the UK and China to discuss market design for high variable renewable energy penetration systems, demand-side flexibility, interconnectors and transmission flexibility, and integrating energy storage into power markets.



Research findings

- *Dynamics of the Power Sector Transition in China: a systems mapping study* uses systems mapping to provide a new perspective on the power sector transition in China, drawing on insights from the UK experience where appropriate.
- The policy brief *System Archetypes of the Energy Transition: feedback loops and levers of change* shows how systems mapping can be used to understand typical dynamics of clean energy transitions that are likely to play out across many countries and sectors.
- The academic publication *Virtuous and vicious cycles in the energy transition* was published with S-Curve Research Associate Max Collett as the lead author.
- We are developing policy briefs on market design to sustain investment in renewable power, reform of China's capacity compensation mechanism, and how to ensure cost effective deployment of energy storage in line with the needs of a power system dominated by variable renewable energy. These will be presented to our stakeholders in June and published in July 2026.



Steel

We are working to develop a shared understanding among the expert community in major economies on how effective national action and international cooperation can advance the transition to clean steel.

Over the past year, we have continued to work with leading research institutes in China, India, Brazil, the EU, Africa and Japan to advance international cooperation to accelerate the steel sector transition. Building on previous joint research, we have developed new proposals to deploy primary near-zero emission steel in the UK, EU, China, India and Brazil. We have also expanded our analysis on tariff and trade-related measures, with a particular focus on the EU and key partner countries, to explore how international trade and decarbonisation partnerships can support a global transition.

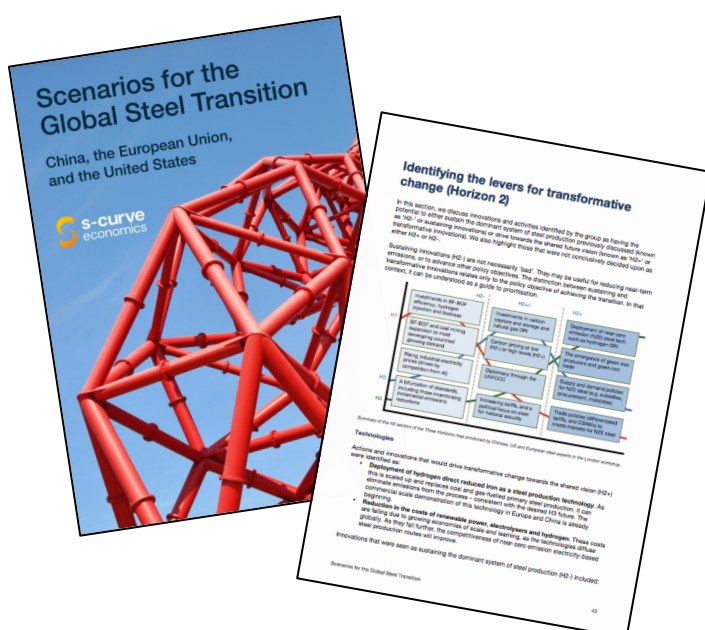


Engagement and events

- We convened an in-person meeting of the Breakthrough Agenda Policy Network during London Climate Action Week 2025, bringing together experts from across the globe.
- We held a further network meeting at COP30 in Belem, where the Breakthrough Agenda Policy Network's joint report was launched.
- We organised workshops in Brussels to explore trade-related measures to support the steel transition.
- We conducted steel transition scenario exercises with government, industry and the research community in China, the United States, and London. A similar workshop had been held the previous financial year in Brussels. The findings from these workshops were published in January 2026.
- We continued a programme of online workshops exploring different aspects of the steel sector transition.

Research findings

- A joint report with our partners at the EEIST project, *Towards Near-Zero Emissions Steel: Modelling-based Policy Insights for Major Producers* was published in August 2025. Our research partners were WRI India, Cambridge Econometrics, and the University of Exeter.
- In November we published *Making Clean Steel Competitive in International Trade: A Positive-Sum Agenda for Policy and Diplomacy*. This was a report of the Breakthrough Agenda Policy Network, whose member institutes are: African Centre for Economic Transformation (headquartered in Ghana), Chatham House (UK), Council on Energy, Environment and Water (India), Energy Foundation China, Institut du Développement Durable et des Relations Internationales (IDDRI, Paris), Institute for Global Environmental Strategies (IGES, Japan), Institute of Climate and Society (ICS, Brazil), and Instituto E+ Transição Energética (Brazil). The network and its research have also benefitted from the expertise of other contributing experts.
- We published our findings from our workshops as *Scenarios for the global steel transition: China, the European Union and the United States*.



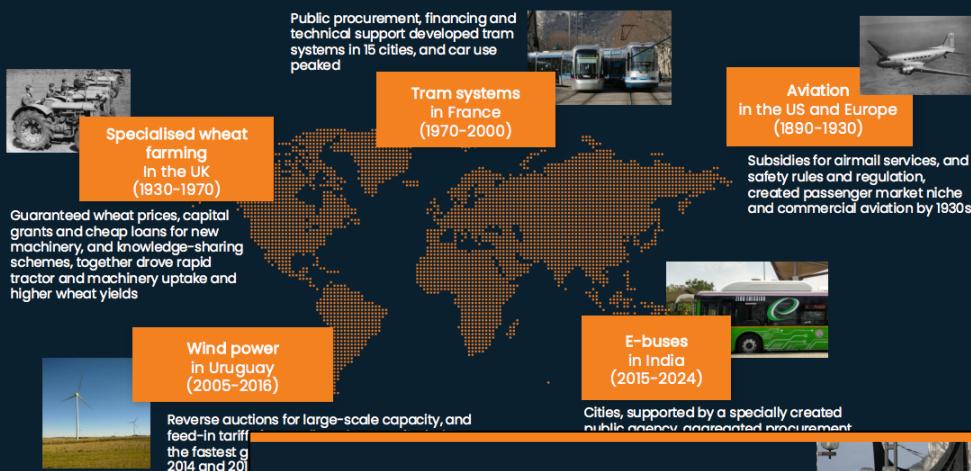
Analytical Tools

The low carbon transition is a process of innovation and structural change. The analytical tools that are appropriate for this context are different from those that are based on an assumption of marginal change.

In the past year we continued developing analytical tools and conceptual frameworks to support ministries of finance, energy, transport and others to evaluate the risks and opportunities of the low carbon transition.

We worked with a wide range of partners to develop, test and share analytical tools and conceptual frameworks that can help governments to navigate this transition in an increasingly challenging and uncertain environment.

Market introduction case studies

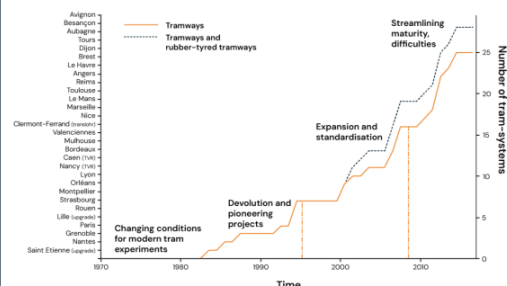


Case Study 5 Public procurement increased the number of French tram systems, and car use peaked 1970 - 2000

- Urban congestion, accidents and the success of high-speed rail in France motivated policymakers to commission new trams.
- The first new trams were paid for by increased employment tax for transport, and central funding for 15-40% capital costs.
- Funding schemes were complemented by supply-push measures, including codifying technical knowledge and the provision of advisory support.
- Early successes were replicated, with new tram systems established in 15 of 19 major French cities.
- From the late 1990s, the use of trams increased and the use of cars decreased. Trams were associated with quality of life, access, sustainability and urban renewal.



Modern tramways diffused across many French cities



Engagement and events

- We engaged with officials from a range of departments, regulators and arms-length bodies from the UK and internationally.
- We presented *First Build, then Break: a policy framework for accelerating zero-carbon transitions* to UK government officials from several departments and to the UK Regulators Network Sustainability Academy.
- We shared conceptual and decision-making frameworks and analysis on the risks and opportunities of the low-carbon transition at events including the Forum on the Macroeconomics of Green and Resilient Transitions, the Exeter Tipping Points conference 2025, and the British Institute of Energy Economics Research conference 2025.
- We discussed the *First Build Then Break* framework with officials from Bangladesh, Cambodia and the Philippines (UNDP), the World Bank, and the Brazilian COP30 Presidency.
- We took part in workshops hosted by the COP30 Presidency on using complexity science to inform global climate diplomacy.
- We discussed transition milestones as a framework for climate governance nationally with members of the International Climate Councils Network.

Research findings

- *First Build, then Break: a policy framework for accelerating zero-carbon transitions* provides a practical framework to help governments identify the policies needed now, foresee those likely to be useful in future, and inform strategies for effective transitions. It includes 18 case studies, with examples from historical transitions and recent low-carbon transitions. The report also includes principles for effective policy design at each stage of the transition.
- *Carbon budgets are not enough: the case for transition milestones* proposes a governance framework that can increase focus on the critical steps in the pathway of the transition.



Future plans

We have secured funding to launch a Road Transport workstream in Autumn 2026, including a new data analysis and modelling project on road transport decarbonisation in Brazil, and a study assessing risks and opportunities of heavy goods vehicle transition policies in the UK. We aim to develop further analysis on the power and steel sectors, identifying the actions best able to advance economic objectives at the same time as enabling transformational change towards zero emission systems.

We will also continue to strengthen the set of analytical tools and conceptual frameworks that we offer to governments, industry and researchers, to inform decisions as they navigate the transition.

We will expand our connections with other researchers working in this field in the UK and internationally. We aim to contribute to strengthening the community of researchers building a better understanding of the economics of the transition.



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