

Energy-saving, Carbon-reducing Campaign in Key Industries

Policy Express

By LI Linxu

In its latest effort to foster new drivers for green development, China has launched a three-year campaign for energy conservation and carbon reduction retrofits in key industries.

A notice by the National Development and Reform Commission (NDRC), the Ministry of Industry and Information Technology (MIIT) and three other government bodies outlines the overall requirements and major 2028 targets for promoting energy-saving and carbon-cutting upgrades in key industries.

By the end of 2028, production capacity reaching current energy efficiency benchmark levels in key industrial sectors will increase by an average of 20 percentage points. These sectors include iron and steel, electrolytic aluminum, cement, flat glass, oil refining, ethylene, synthetic ammonia and methanol.

The coal-fired power sector will strive for a 15 percentage point increase.



Workers hoist steel coils in the finishing shop of a steel enterprise in Tangshan city, Hebei province. (PHOTO: XINHUA)

Production capacity below the energy efficiency baseline levels will be basically eliminated.

A cumulative energy saving of over 100 million tonnes of standard coal and a carbon dioxide emission reduction of over 200 million tonnes will be achieved.

"Energy conservation and carbon

reduction retrofits serve as a key measure to improve energy utilization efficiency and reduce carbon emissions, as well as an important support for expanding effective investment and promoting industrial quality enhancement and upgrading," said an official from NDRC.

Due to their massive scale and high

intensity of energy use and carbon emissions, key industrial sectors are the top priority for boosting energy efficiency, cutting coal consumption, and driving down emissions.

According to surveys and estimates by industry associations, the production capacity currently reaching the energy efficiency benchmark levels in sectors such as crude steel, electrolytic aluminum, cement clinker, and flat glass remains below 30 percent. More than 10 percent of the capacity in certain industries still falls below the energy efficiency baseline levels.

This indicates that there remains tremendous potential for energy conservation and carbon reduction retrofits.

In light of industry realities, the notice has set a series of key tasks, such as promoting the application of advanced energy-saving and carbon-reducing technologies and equipment, advancing the retrofitting and upgrading of key production processes and installations, and driving greener and lower-carbon energy consumption.



Collagen and Leather: Bridging Traditional Industries, Emerging Sectors

By SHI Bi

Collagen and Leather (CL), sponsored by Sichuan University in southeast China, centers its academic scope on collagen science. It is committed to advancing the green, high-end and intelligent transformation of the conventional leather industry, while exploring cutting-edge applications of collagen across various emerging sectors, including biomedicine, functional health food, daily fine chemicals and high-performance composite materials. *CL* has evolved into an academic hub bridging traditional industries and frontier technologies.

From a Chinese to a global journal

CL traces its origin back to 1988, a period marked by booming growth across China's leather sector. To foster indigenous innovation in leather manufacture technologies and build a dedicated platform for exchanging advanced theories and industrial practices, Professor He Xianqi of Sichuan University, founded the Chinese-language journal *Leather Science and Engineering*. For decades, the journal steered academic progress in China's leather research and supported the sector's sustained development.

By 2019, China had a leading global position in leather production, international trade, scientific research and higher education. However, the global leather research landscape was long dominated by two century-old overseas journals: the *Journal of the American Leather Chemists Association* (est.1906) and the *British Journal of the Society of Leather Technologists and Chemists* (est.1916).

Chinese academics lacked a prestigious in-house English journal to amplify their research on the global stage. To fill this critical gap, *Journal of Leather Science and Engineering* was launched.

Collagen is the fundamental raw material for leather fabrication. Driven by rapid technological advances, it has gained widespread adoption in biomedicine, daily chemicals, functional food and advanced composites, giving rise to fast-growing emerging industries.

Aligning with such disciplinary advances and industrial evolution, the journal rebranded to its current title *Collagen and Leather* in 2023, completing a strategic upgrade from leather-only coverage to full-spectrum research spanning the entire collagen industrial chain.

The rebranding kicked off a phase of accelerated growth and surging global visibility. In 2024, *CL* was indexed by the EI and ESCI databases and earned its inaugural impact factor of 9.2. Submissions arrive from more than 30 nations, including the U.S., Canada, Russia, Germany and India.

Catering to practical industrial needs

CL adheres to an editorial philosophy of "pursuing top-tier frontier research while committing to grounded



Cover of Collagen and Leather, Volume 8, Issue 1. (COURTESY PHOTO)

industrial demands." The "top-tier pursuit" refers to spearheading pioneering theoretical exploration and core technological innovation across collagen and leather disciplines; the "grounded commitment" targets industrial bottlenecks, translating lab discoveries into deployable solutions to facilitate smart upgrading of conventional leather production.

For instance, *CL* published groundbreaking research on a tanning agent-free leather-making approach using self-driven oriented composite dehydration media, upending the century-old industry consensus mandating tanning agents in leather production. This drastically cut emissions of metallic and organic pollutants and pioneered an eco-friendly development pathway for low-carbon leather manufacturing, sparking follow-up investigations by research teams globally.

An open platform for cross-disciplinary integration

The editorial team views the journal as more than a publication platform — it serves as a bridge connecting scholars and industry leaders to identify emerging research directions and market demands, thereby linking academic innovation with industrial transformation.

Centered on in-depth industry-university-research collaboration, *CL* regularly hosts high-profile academic conferences to forge seamless links between lab innovations and commercial demands. It also delivers end-to-end support for enterprises, ranging from research results systematization to academic promotion, helping China's indigenous industrial innovations gain global traction.

As an international, application-focused journal, *CL* showcases China's innovative prowess in collagen and leather research in the global arena, composing a new success story of the traditional leather industry's transformative shift toward diversified collagen-based emerging businesses.

The author is editor-in-chief of *Collagen and Leather* and a member of the Chinese Academy of Engineering.

Journal Review

CL makes a valuable contribution to the advancement of tanning science and the valorization of collagen-based resources. Its growing international recognition reflects a strong commitment to scientific excellence, academic rigor and practical relevance.

A distinctive strength of the *CL* is its broad interdisciplinary scope, which encompasses fundamental and applied research across the leather, biomaterials, biotechnology and sustainability sectors. This comprehensive approach highlights the increasing importance of collagen as a versatile biological resource with applications spanning multiple scientific

disciplines and industrial domains.

Looking ahead, *CL* is well-positioned to play an increasingly influential role in advancing both the leather industry and emerging collagen-based technologies. By promoting innovative, high-value applications of collagen, supporting industrial diversification, and fostering interdisciplinary collaboration, it is expected to remain an essential platform for scientific exchange and technological progress.

— Joan Carles Castell, former president of the International Union of Leather Technologists and Chemists Societies

Capital Market Support Strengthened for AI Innovation

By Staff Reporters

China will proactively embrace the new wave of technological revolution and industrial transformation while enhancing the inclusiveness and adaptability of its capital market system, Wu Qing, chairman of the China Securities Regulatory Commission (CSRC), said at the 2026 Lujiazui Forum held in Shanghai on June 17.

Wu announced that the CSRC will expand the applicable range of its fifth listing standards for the STAR Market in the Shanghai Stock Exchange (SSE) to the AI sector, and support high-quality AI large model companies in going public.

guidelines detailing how AI foundation model enterprises can qualify for listing under the fifth listing standards, providing greater clarity for the firms seeking access to capital markets.

Regarding business scope and "hard tech" requirements, the standards specify that eligible companies should primarily engage in independent development of AI foundation models, model services or model-based applications.

During the forum, Wu said the commission will support more "hard tech" enterprises in fields such as quantum technology, bio-manufacturing, embodied intelligence and beyond to list on the STAR Market.

To demonstrate a significant technological advantage, enterprises are re-

quired to maintain continuous research and development efforts in the field of AI, achieve breakthroughs in core technologies, possess clear technological strengths, deliver major R&D achievements, or take a leading role in undertaking national-level AI initiatives and projects.

In terms of market potential, the standards require applicants' AI foundation model businesses or products to target clearly defined markets with substantial existing or potential demand.

Companies should also demonstrate strong competitive advantages in areas such as R&D progress and key performance indicators, supported by significant market opportunities and robust

growth prospects.

Regarding commercialization, issuers must establish clear commercialization plans for their AI foundation model businesses or products. The standards also stipulate that there should be no circumstances indicating an obviously insufficient commercialization outlook that could materially undermine the company's ability to sustain operations.

Next, the SSE will facilitate the initial public offerings of eligible AI foundation model enterprises on the STAR Market, providing stronger support for tech enterprises that have achieved key technological breakthroughs.



Xinfeng Forges 10-billion-RMB Electronics Hub

Case Study

By TANG Zhexiao, WEI Yichen & WU Wenlong

According to the recent government work report released by Xinfeng, a county in Jiangxi province, east China, its three pillar industries — electronic information, high-end equipment manufacturing and new energy — achieved synergistic growth in 2025. Their year-on-year revenue increased 23.6 percent, 37.3 percent and 36.3 percent respectively.

Since the Xinfeng High-tech Zone was listed as a provincial-level industrial cluster and a pilot zone for the digital transformation of small and medium-sized enterprises (SMEs), the digital transformation of manufacturing industries has advanced.

Once a traditional agricultural county and a former revolutionary base area,

Xinfeng is now listed among the first batch of economically strong counties in Jiangxi and approved as a national innovative county. It has evolved into a nationally renowned printed circuit board (PCB) industry cluster.

Building an industry from scratch

As early as 2002, the first batch of Xinfeng entrepreneurs doing business in south China's Guangdong province brought the spark of the electronic information industry back home. However, due to Xinfeng's landlocked location, the development of its electronic information industry was long constrained by weak industrial foundation.

Then Xinfeng leveraged its geographical proximity to the Guangdong-Hong Kong-Macao Greater Bay Area. It seized the strategic opportunities of the Ganzhou-Shenzhen pairing assistance, an initiative in which technologically and economically advanced Shenzhen assists Jiangxi's Ganzhou in its development, and the joint development

partnership with Shenzhen's Bao'an district, to connect with leading enterprises in the electronic information industry chain.

In 2022, Shenzhen Hans CNC Technology, a leading enterprise in PCB manufacturing, chose to settle in Xinfeng. Today, driven by anchor enterprises such as Hans CNC and Shenzhen Kinwong Electronic, Xinfeng has built an electronic information industry chain centered on green PCB.

In 2025, the county's electronic information industry generated an output value of 28.34 billion RMB, accounting for three-quarters of the total output value of industrial enterprises, official data shows.

Upgrading enterprises from survival to excellence

From tech-oriented SMEs to high-tech enterprises and then to high-growth companies, the Science and Technology Bureau of Xinfeng provides personalized technological service guidance

tailored to enterprises at different development stages, ensuring they benefit from policy incentives and subsidies, according to Lan Yu, director of the bureau.

Lan said to address financing difficulties, three types of financial products such as the "Ke Dai Tong" (Tech Loan) issued a total of 1.2 billion RMB in loans in 2025, ranking first in Ganzhou.

Currently, the proportion of R&D investment in the regional GDP has reached 2.11 percent, higher than the provincial and municipal averages. With 109 high-tech enterprises, sci-tech achievements continue to emerge.

Furthermore, Xinfeng has built bridges for industry-university-research cooperation. In 2025, it deepened cooperation with Jiangxi University of Science and Technology, founding an electronic intelligent manufacturing research institute and enabling on-site industrialization of university research achievements in factory workshops.

Summer Davos Discusses Innovation at Scale in China

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Chafic Nassif, senior vice-president at communications tech giant Ericsson and head of Ericsson Northeast Asia, said China's combination of "scale, speed of execution and innovative industrial ecosystem" makes it a uniquely critical market in the global technology landscape.

Learning from China's experience

Innovation was one of the central

themes of this year's meeting.

On June 23, the opening day, the WEF released its report, *Top 10 Emerging Technologies of 2026*, highlighting the breakthroughs expected to reshape industries, public policy and society over the next five years. The report identified technologies ranging from everything to grid energy systems and direct lithium extraction to personalized

mRNA cancer vaccines.

According to WEF managing director Mirek Dusek, countries around the world are increasingly interested in learning from China's innovation-driven development experience.

China's growing strength in emerging technologies has drawn particular attention. By 2025, the country was home to more than 6,000 AI enterprises, with

the core AI industry expected to exceed 1.2 trillion RMB in value.

Data from the Organisation for Economic Co-operation and Development show that Chinese AI companies attracted approximately 13.9 billion USD in venture capital investment in 2025, ranking third globally behind only the U.S. and the European Union.

The sustained confidence of international investors in China's technological and innovation potential also contributed to the strong interest in this year's Summer Davos gathering.