

Green Development in China: Opportunities and Challenges for European SMEs

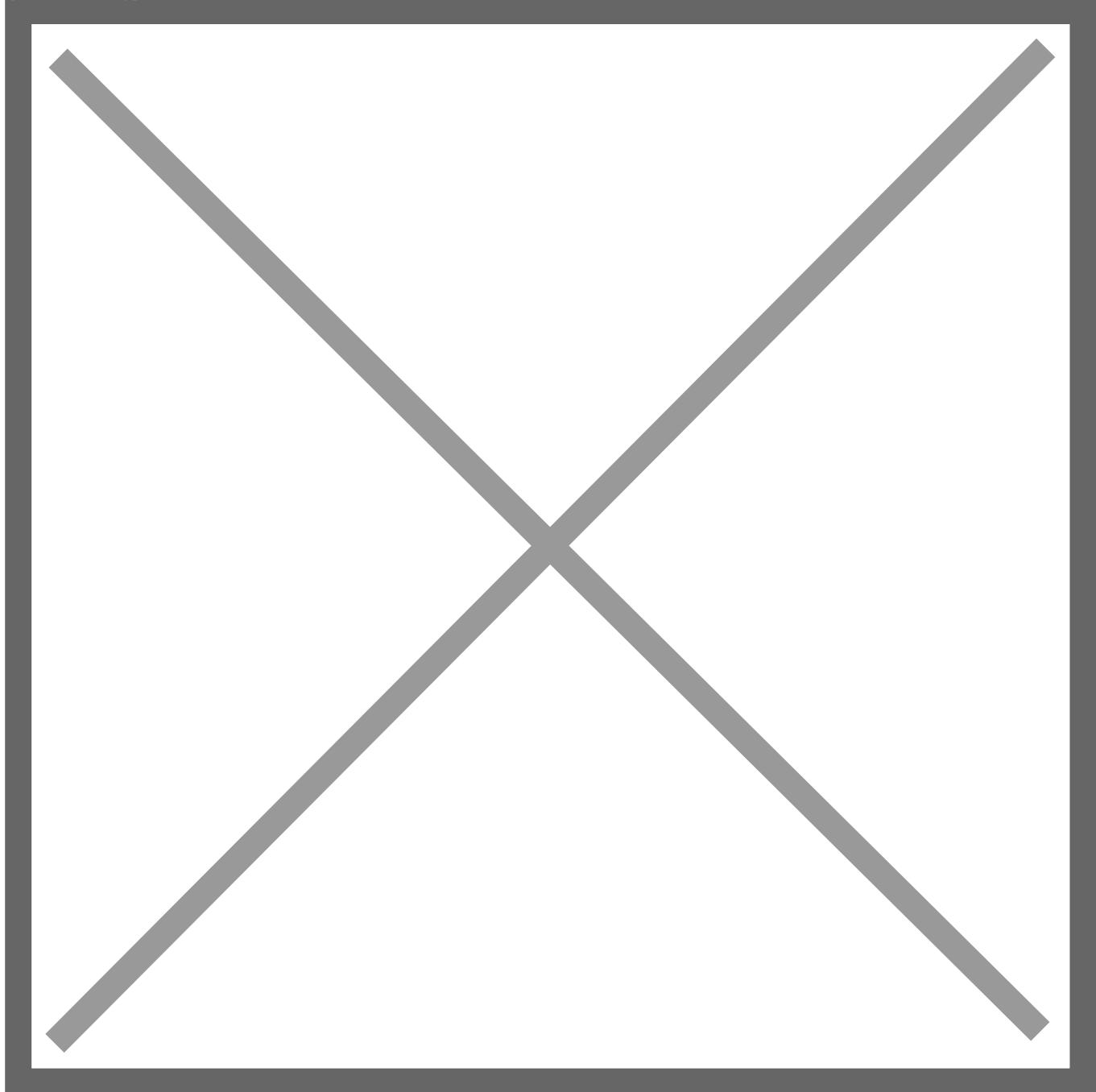
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The following article was commissioned by the EU SME Centre to shed light on green development regulations, changes, opportunities and challenges for European SMEs. The article was written by experts from [TERAO Asia](#). Please note that this article is provided for general information purposes only and that any views expressed in this publication do not necessarily reflect the views of the European Union.

The story of China's industrial rise, once shadowed by environmental concerns, is undergoing a major change. Today, China is addressing the ecological challenges of the past. The country has emerged as a global leader in green innovation, presenting unprecedented opportunities for European SMEs. This transformation, driven by rigorous policy reforms and growing green markets, requires a deep understanding of its complexities.

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From Pollution to Pioneer: China's Green Awakening

The journey towards a greener China has been gradual but decisive. Initially, environmental concerns were often overshadowed by the pursuit of economic growth. Cities like Beijing and Shanghai have experienced smog spells, with PM2.5 levels sometimes soaring to dangerous levels, exceeding 500 micrograms per cubic meter, far beyond WHO safety standards. Water pollution has been equally alarming, with reports of industrial wastewater polluting major rivers and affecting the health of millions of people and animals who depend on these water sources.

As the consequences of pollution became more apparent, the government began to act. China's pioneering adoption of green credit, with initiatives such as the Green Credit Guidelines¹, has channelled trillions of yuans into sustainable projects. The guidelines have facilitated significant funding for the construction of large-scale solar farms in the northwestern provinces and the development of advanced wastewater treatment facilities in heavily industrialised areas, demonstrating a real commitment to green infrastructure.

The 14th Five-Year Plan (2021–2025)² has further reinforced this commitment, embedding stringent environmental targets into the national development strategy. The plan sets ambitious targets for the construction sector, including requiring all new urban buildings to meet strict energy efficiency standards, aiming to reduce energy consumption per unit of building area by 13.5%. This means a direct impact on the construction sector by requiring the implementation of advanced insulation systems, smart building management and the integration of renewable energy sources into building design. Furthermore, the plan promotes the development of green building materials and expands green building certification programs nationwide. This plan is extremely important: it has

created a clear and achievable roadmap for the construction industry to actively participate in China's journey toward carbon neutrality.

The Ministry of Ecology and Environment (MEE): A Pillar of Environmental Governance

The development of the MEE reflects China's growing environmental awareness. Originally named the State Environmental Protection Administration (SEPA), it underwent significant restructuring to become the MEE, gaining significant authority and scope. This transformation underscores the government's commitment to strengthening environmental governance.

One of the MEE's most impactful strategies is the use of advanced digital monitoring technology and real-time data sharing. In 2023, MEE's nationwide air quality monitoring network detected unusually high levels of sulfur dioxide emissions from a cluster of factories in Hebei province. Through instant data analysis, MEE identified polluters, conducted unannounced inspections, and imposed significant fines, resulting in immediate emissions reductions.

The MEE is the driving force behind China's key environmental strategies. The *Action Plan for Air Pollution Prevention and Control*³ is a typical example. Through stringent regulations and targeted interventions, the MEE has achieved significant reductions in air pollutants, demonstrating its ability to deliver tangible results. Beyond air pollution, the MEE also plays an important role in implementing initiatives to improve soil health, water quality, and biodiversity conservation.

Expect more stringent Environmental Impact Assessments (EIAs), which will demand thorough preparation and potentially extend project timelines. The MEE's administration of the national carbon trading scheme compels energy-intensive industries to actively manage and reduce emissions. Increased stringency in national environmental standards, coupled with enhanced digital monitoring and real-time data sharing, fosters greater transparency and accountability.

For foreign businesses, understanding and respecting the MEE's authority is paramount to successful operations in China.

The 2025 Tariff Adjustments and Green Development

China's commitment to green development is further reinforced through the upcoming 2025 tariff adjustments. The 2025 tariff adjustments represent a strategic market restructuring, favouring European SMEs specialising in advanced materials and clean technologies relevant to the building sector. For instance, lower tariffs on low-carbon concrete, a material that significantly reduces embodied carbon compared to conventional concrete, provide immediate market access opportunities. Similarly, tariffs will be lowered on advanced insulation materials, such as vacuum insulation panels and aerogel-based products, and smart HVAC systems equipped with AI-driven energy optimisation. This will incentivise their import and adoption in China's growing green building market. Such tariff adjustments, in line with China's carbon reduction targets, create a preferential market for European green building technologies.

Simultaneously, the EU's Carbon Border Adjustment Mechanism (CBAM), in its transitional phase since 2023, aims to prevent carbon leakage by imposing tariffs on carbon-intensive imports. This creates an interesting interaction with China's green tariffs.

The CBAM forces Chinese exporters to reduce their carbon footprint to remain competitive in the EU market.⁴ In response, China's 2025 green tariffs serve as a proactive measure to encourage domestic green production, thereby mitigating the impact of CBAM. Furthermore, China is expanding its national carbon trading scheme to further reduce domestic emissions. The interaction between these policies necessitates ongoing dialogue and cooperation to avoid trade tensions and promote the global transition to a low-carbon economy. Notably, CBAM is driving demand for increased ESG reporting from Chinese manufacturers.

The nation's ambitious goals, including achieving a **Carbon Peak by 2030** and **Carbon Neutrality by 2060**, have brought sustainability to the forefront of national discussions. The term "**ESG**" (**Environmental, Social, and Governance**) has become popular, reflecting the growing focus on responsible business practices. However, the real meaning behind these terms lies in concrete action and measurable impact.

While the national government sets overall goals, implementation varies across regions. Provinces such as Guangdong, Zhejiang, and Jiangsu, with their strong industrial bases and advanced policies, are taking the lead in green development. Guangdong is investing heavily in offshore wind power and smart grid technologies, while Zhejiang is promoting circular economy initiatives and eco-industrial parks. Jiangsu is focusing on developing advanced manufacturing clusters centred on green technologies.

Business Opportunities for European SMEs

China's green transformation offers numerous opportunities for European SMEs, particularly in the following growth areas.

Renewable Energy Technologies

China's ambitious 2060 carbon neutrality goal is driving a surge in renewable energy demand, particularly in sectors such as offshore wind, with the aim of installing 430 GW by 2030. This presents a great opportunity for European SMEs with expertise in advanced turbine technology, grid integration, and energy storage solutions.

Environmental Technology

There is a huge demand for advanced environmental technologies, including waste management, water treatment, and air pollution control.

Green & Sustainability Consultancy

The demand for sustainable solutions is rapidly expanding across diverse sectors. This includes a significant increase in **green building** practices, where European SMEs can offer expertise in areas such as energy-efficient design, sustainable material sourcing, and building performance optimisation. Furthermore, businesses are increasingly focused on accurately measuring and

reducing their **carbon footprint**. This requires specialised services in carbon accounting, life cycle assessments, and emissions reduction strategies. Providing **ISO 50001** certification support and conducting detailed **energy audits** can help Chinese companies to achieve tangible improvements in energy efficiency and sustainability.

ESG Services

Chinese companies are increasingly looking for expertise in ESG reporting, sustainability strategy, and green finance.

Challenges: Compliance with Environmental Regulations

China's environmental regulations are often primarily implemented and enforced at the local level. This means that requirements can vary significantly between provinces and even cities. EU SMEs must deal with a wide range of regulations, making it difficult to maintain consistent compliance across operations. Local officials may have different interpretations of national regulations, leading to inconsistencies and potential conflicts. For instance, wastewater discharge permits in Guangdong require detailed, real-time monitoring data submitted to local environmental bureaus, whereas similar permits in Sichuan might focus more on periodic sampling. This discrepancy can lead to unexpected costs and compliance issues.

China's environmental regulations are constantly changing as the country strives to achieve sustainability goals. SMEs need to stay updated on the latest changes, which can be challenging due to language barriers and the speed of regulatory updates. This rapid change can cause uncertainty in long-term planning.

Understanding the nuances of Chinese environmental regulations requires fluency in Mandarin and a thorough understanding of Chinese legal and administrative procedures. Cultural differences in communication and negotiation styles can also make it difficult for EU SMEs to interact effectively with Chinese regulators and local partners.

Environmental Impact Assessment (EIA)

The EIA process in China can be complex and time-consuming, involving multiple government agencies and approvals. EU SMEs may struggle to navigate administrative procedures and understand the specific requirements for their projects. While engaging local consultants is recommended, finding reputable firms with expertise in EIA procedures and a strong understanding of both Chinese and EU environmental standards is important. Due diligence is very important, as some local firms may offer to "fast track" processes in ways that may cause issues later. The level of detail required for an EIA can vary greatly depending on the project's size, location, and potential environmental impact. This creates extreme uncertainty about finances and timing.

Water and Air Pollution Control

China has implemented increasingly stringent emission standards for air and water pollutants. EU SMEs must invest in advanced pollution control technologies and monitoring systems to meet

these standards. Real-time monitoring is increasing, and the data is being made available to the government. In addition to simply meeting emission standards, EU SMEs are encouraged to adopt energy saving measures and reduce their carbon footprint. This requires expertise in energy auditing, carbon footprint calculation, and implementation of ISO 50001 energy management systems. Green building material adoption can be difficult, as the supply chain in China may not be as mature as in the EU. Maintaining accurate monitoring records and submitting regular reports to environmental authorities is essential for compliance. Discrepancies in data or reporting can result in fines and penalties.

Waste Management

China has strict regulations on the treatment, storage, and disposal of solid waste. EU SMEs must develop comprehensive waste management plans that comply with these regulations. This includes proper sorting, recycling, and disposal of hazardous waste. The availability and quality of recycling infrastructure can vary across China. EU SMEs may need to work with local partners to ensure proper waste disposal and recycling. China is promoting “zero waste” initiatives, which require businesses to minimise waste generation and maximise resource recovery.

Data Protection

Environmental data related to building projects, such as sensor data and building performance data, is considered sensitive in China. EU SMEs must comply with strict data protection regulations, which may differ from those in the EU. China's cybersecurity laws may require certain data to be stored and processed within the country. This can create challenges for EU SMEs that rely on cloud-based data storage and processing. Transferring environmental data across borders can be subject to restrictions and require approvals from Chinese authorities. The penalties for data breaches can be severe.

EU SMEs entering the Chinese market must be prepared for a complex and evolving regulatory landscape. They must invest in expertise, build strong local partnerships, and adopt a proactive approach to environmental compliance. Thorough due diligence, and a willingness to adapt to local conditions, are key for success.

Incentives for Green Energy and Eco-Friendly Solutions

The Chinese government offers a range of incentives to promote green energy and eco-friendly solutions, including:

- **Tax reductions and exemptions:** Companies investing in approved renewable energy projects within designated economic zones may qualify for a corporate income tax reduction of **up to 15%**, as outlined in the *Preferential Catalogue for Environmental Protection, Energy Conservation, and Water Conservation Industries*.⁵
- **Subsidies and grants:** Government subsidies are available for projects that contribute to environmental sustainability. Specifically, significant subsidies have been allocated for solar and wind energy projects. In the past, the National Energy Administration (NEA) has released notices regarding feed-in tariffs and subsidy schemes for renewable energy.⁶ While nationwide feed-in tariffs have been phased out, certain subsidy programmes may still exist at

the local level.

- **Local government programmes:** Many local governments offer incentives, such as preferential land use policies and financial support. For instance, in Zhejiang, companies investing in green technologies or sustainable manufacturing may be eligible for reduced land leasing fees or priority access to industrial land.

These incentives can significantly reduce the cost of investing in green technologies and solutions, making it more attractive for European SMEs to enter the Chinese market.

Best Practices for Integrating Sustainability

European SMEs can successfully integrate sustainability into their operations by adopting several best practices:

- **Monitor Regulatory Developments:** Stay up to date on new policy and regulatory changes to ensure compliance and allow for proactive adjustments.
- **Risk Management:** Conduct thorough due diligence to assess environmental risks and ensure compliance.
- **Engaging Local Stakeholders:** Collaborating with local communities, government agencies, and industry groups will boost a supportive environment for sustainability initiatives. These practices not only enhance the competitiveness of SMEs but also contribute to broader goals of environmental protection and sustainability.
- **Implement ESG practices:** Integrate ESG considerations into all aspects of business operations. This includes conducting detailed carbon footprint assessments, implementing ISO 50001 energy management systems, and adopting green building principles. Regular energy audits are essential for continuous improvement and demonstrating tangible results.
- **Localise solutions:** Adapt technologies and solutions to the specific needs of the Chinese market.

China's commitment to green development offers significant opportunities for European SMEs. By understanding the regulatory landscape, leveraging available incentives, and adopting best practices for sustainability, SMEs can successfully navigate the Chinese market and contribute to a greener future. The change is not just about environmental responsibility; it is opening up a large and rapidly growing market for sustainable solutions. The potential for collaboration and mutual benefit between China and European SMEs in pursuing a sustainable future is colossal.

Sources:

¹ *Green Credit Guidelines:* <http://www.pbc.gov.cn/en/3688006/3995557/index.html>

² *The 14th Five-Year Plan for National Economic and Social Development and the Long-Range Objectives Through the Year 2035*, National Development and Reform Commission, 2021:
<https://en.ndrc.gov.cn/policies/202203/P020220315511326748336.pdf>

³ *Action Plan for Air Pollution Prevention and Control*, State Council, 2013:
<http://www.ramdevchemicals.com/p-notice-of-the-state-council-1430.html>

⁴ *Carbon Border Adjustment Mechanism: Questions and Answers*, European Commission, 2021: https://ec.europa.eu/commission/presscorner/api/files/document/print/en/qanda_21_3661/QANDA_21_3661_1.pdf

⁵ *Preferential Catalogue for Environmental Protection, Energy Conservation, and Water Conservation Industries*, National Development and Reform Commission: https://www.ndrc.gov.cn/xxgk/zcfb/fzggwl/202210/t20221028_1339662.html?code=&state=123

⁶ Policy interpretation of the *Management Measures for the Development and Construction of Distributed Photovoltaic Power Generation*: https://www.gov.cn/zhengce/202502/content_7004211.htm