



From High-Carbon Dependence to Green Metamorphosis: ——Financial empowerment program for a low-carbon transition in Chongqing

Abstract: As a traditional industrial region, Chongqing has long faced significant challenges in transforming its heavy industrial structure and reducing coal dependency. For instance, in 2023, coal consumption accounted for 49.4% of the total energy use, while the six major energy-consuming industries made up over 80% of the total industrial energy consumption—making Chongqing’s green transition an arduous task. To address this, Chongqing has explored and built a collaborative mechanism featuring policy guidance, financial innovation, and enterprise leadership. The government has released a transition finance support catalogue, strengthened fiscal incentives and assessment constraints, and established the Yangtze River Green Finance Connect system to promote policy and regulatory coordination. Financial institutions have set up dedicated green departments, developed innovative products such as carbon-linked loans and emissions-rights pledge loans, explored mechanisms to link interest rates with emission reduction results, and relied on digital platforms to accurately identify the needs of small and medium-sized enterprises (SMEs) and expand the coverage of transition finance. Enterprises have proactively engaged with transition finance, with core enterprises playing the role of “chain leaders” to drive coordinated transformation across the upstream and downstream of industrial chains. This model has created a replicable and scalable pathway for financial support in transition for high-carbon regions and holds significant reference value for the green transition of resource-based cities across China.

Keywords: Regional transition, Policy empowerment, Financial innovation, Digital construction

1. Background

As a traditional industrial base, Chongqing not only has a heavy reliance on a large number of high-carbon industries, but also heavily relies on coal. In 2023, coal accounted for 49.4% of the city’s total energy consumption, while the six major energy-consuming industries accounted for 83.4% of the total industrial energy consumption—highlighting the immense structural pressure to decarbonize. Constrained by its historical heavy industrial structure, rigidity in energy structures, and high transition costs in technology substitution, Chongqing’s path toward green and low-carbon development remains arduous, requiring coordinated policy and financial support.



Figure 1 Chongqing Wanzhou District
(Credit: SPS team)

2. Main Practices

(1) Government level: clear standards through a “carrot-and-stick” approach combining fiscal incentives and performance accountability

- The Catalogue of Transitional Financial Support Projects of Chongqing Municipality was released, covering six key sectors: energy, agriculture, chemicals, iron and steel, construction materials, and non-ferrous metals.
- Fiscal support: A fiscal support list was established, with RMB 26.1 billion allocated to support new energy systems and the low-carbon transformation of traditional industries.
- Performance accountability: Green and transition-related lending are included in assessment indicators for district- and county-level officials, ensuring accountability in promoting green finance at the grassroots level.
- Data support: The Yangtze Green Finance Connect system is integrated with the Enterprise Carbon Account Platform, enabling real-time monitoring of carbon emissions and providing transparent, verifiable data for regulatory oversight and policy enforcement.

(2) Financial institution level: tailoring enterprise needs through financial innovation and digital empowerment

- Policy response: Financial institutions have established dedicated departments and formulated special systems—such as green finance divisions and applying a one-vote veto system for “2 highs and 1 excess” (high energy consumption, high emissions, and excess capacity) projects—to redirect resources toward low-carbon sectors.
- Product innovation: Financial products, such as carbon linked loans and water rights/emissions-rights pledge loans, have been launched, with interest rates tied to emission reduction outcomes. These products unlock the value of ecological assets and help reduce financing costs.
- Digital empowerment: Digital platforms are used to accurately identify SMEs’ transition needs. Through the “core enterprise + upstream and downstream” model, credit support is extended across the entire supply chain. Ant Consumer Finance integrates consumption data to identify green consumption trends, and it has provided RMB16 billion in green loans in 2024.



Figure 2 Chongqing Green Finance Avenue
(Credit: SPS team)

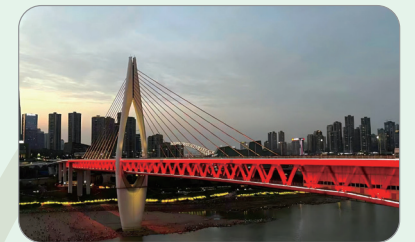


Figure 3 Chongqing Dongshuimen Yangtze River Bridge
(Credit: SPS team)

(3) Enterprise level: proactively accessing financial resources through emission reduction innovation to achieve significant decarbonization outcomes

- New Materials Technology Private Enterprise A: With an annual output exceeding 10 billion yuan, the company received a RMB 1.5 billion transition loan from Chongqing Agricultural and Commercial Bank under an innovative mechanism linking the loan interest rate to its carbon emission performance. This not only drives emission reductions but also leverages the company’s role as a key enterprise in the industrial chain to drive upstream enterprises such as raw material transportation companies to purchase new energy ships and renovate traditional power ships, thereby promoting joint low-carbon transitions among partners.
- Chemical State-Owned Enterprise B: Utilizing the enterprise carbon account established by Chongqing Credit Information Company, the enterprise has customized a transformation financial service plan and secured a transition credit loan under a mechanism that links the loan interest rate to the product’s energy consumption intensity, which has reduced its financing costs and cut comprehensive energy consumption per RMB 10,000 of output value by 25.3%, becoming a model for green transformation in the chemical industry.

3. Lessons Learned

Chongqing’s low-carbon transition experience demonstrates that green transformation requires systematic planning and multistakeholder collaboration. Strengthening top-level design is fundamental. By issuing the Catalogue of Transitional Financial Support Projects for Chongqing Municipality and establishing a fiscal support list, the city has clarified the direction of transformation and facilitated precise alignment of financial resources. Demonstrative enterprises play a critical role: core firms drive upstream and downstream partners to adopt low-carbon practices through a “technology demonstration + commercial support” model, helping to establish a comprehensive green transition ecosystem across the entire supply chain. Financial innovation must be balanced with risk management—while controlling the total volume of credit to “2 highs and 1 excess” sectors, differentiated support is provided to high-quality, high-carbon enterprises. Integrating transition finance into policy incentive mechanisms helps to alleviate operational pressures on financial institutions. Strengthening digital platform development enhances information transparency and facilitates the effective integration of financial resources.

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