Research on Market Investment and Financing Mechanism of China's Clean Warming

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Keywords: Clean warming, Marketization, Investment and financing.

Abstract. Clean warming was an important measure to improve the quality of the air environment in China. And the capital guarantee of renovation and operation was related to the in-depth promotion and sustainable development of clean warming. At present, China’s clean warming projects mainly relied on government fiscal and taxation and price subsidies. And the market-based investment and financing mechanisms had not been fully established. This paper analyzed the status of the investment and financing of clean warming market, also the restricts bottlenecks, and proposed a mechanism to promote clean warming and market investments.

Introduction
Promoting clean warming was an important measure for China to deal with its air pollution. In the current project promotion process, the capital investment was mainly based on financial subsidies. At the same time, it assisted in the adoption of fiscal and taxation policies. The mechanism had achieved positive results. However, the initial capital investment in clean warming projects was large, and the operation and maintenance costs were high in the later period. So how to ensure the sustainability of clean warming became an urgent problem to be solved. In the long-term, with the deepening of clean warming, increasing the supply of market capital funds such as finance and social capital would be an important measure to establish a long-term mechanism for clean warming.

Research Background and Significance
Clean warming reduced air pollution. However, the benefits were mainly reflected in environmental benefits and the economic benefits was poor. The technical requirements and operating methods of various heating methods was various. However, it was generally faced with problems such as huge initial investment costs, long payback period, and high operating costs. It weakened the willingness of social capital to invest in clean warming projects. On the other hand, the mode of clean warming social capital investment was less, and the supply and demand docking channels were insufficient, which further restricted the financial capital investment into the field of clean warming. China had introduced relevant policies to encourage policy-oriented and development-oriented financial institutions to provide credit support for projects that meet the requirements of air pollution prevention, clean warming and industrial upgrading in all areas of their business, and to guide social capital investments. This paper analyzed the current situation of clean warming market investment. And it analyzed the bottlenecks restricting the financial and social capital investment in clean warming projects. And it also put forward the channels and project implementation mode for clean warming market investments.
Research on the STATUS of Clean Warming Market Investment and Financing

Current Status of Government Fiscal and Tax Subsidies
In order to promote clean warming reforms such as "warming by burning natural gas" and "warming by electric", it mainly adopted subsidy policies and price policies in Beijing. Residents in rural areas of Beijing could enjoy the same subsidies as urban areas. And electric warming users enjoyed low electricity discount. It introduced a price policy for electric warming without ladder price in Hebei Province. Sub-meter measurement was used for electricity consumption and warming.

The Status Quo of Social Capital Investment such as Finance
There were three main aspects of current financial support for clean warming products and models. The first model was that supporting the clean warming project in the north with green financial instruments. For example, the Agricultural Bank of China Beijing Branch and the China Development Bank Beijing Branch reformed its financing model to support the clean warming projects in Beijing. The second model was that participating in clean warming renovation project with investment fund. The third model was that providing asset securitization services for heating enterprises, and providing securitization for gas supply and heating costs as bottom assets, thus providing new channels for financing enterprises for cleaning warming projects.

Research on Bottlenecks of Clean warming Market Investment and Financing

Reconstruction and Maintenance Costs Were High, and the Project Income Was Difficult to Cover Its Costs
The current “warming by burning natural gas” and “warming by electric” were the main engineering measures used in the clean warming renovation in the northern region. And the key area were rural areas. The initial project investments were large, and the operation and maintenance costs were generally high. Compared with urban district heating, the residents in rural areas were not willing to pay for clean warming and renovation, and their ability to pay was insufficient. In the short term, it was difficult to achieve a match between clean warming costs and resident fees through resource and environmental price adjustments. Clean Warming need to rely on financial subsidies to achieve its sustainability. This had affected the willingness of financial and private social capital to enter the field of clean warming.

Environmental Project Financing of Local Government Financing Platform Was Restricted
In order to prevent financial risks, China had strengthened the management of local government financing platforms. A financing platform company that only undertook the financing of public welfare projects and relied mainly on financial funds to repay debts may not undertake financing tasks in the future. At present, most of the clean warming projects were public welfare projects. So, the channels for financing through local government financing platform companies were subject to regulations.

Corporations of Cleaning Warming Projects Had Low Financing Capacity, and Financing Guarantees and Mortgage Models Need to Be Innovated
Clean warming projects tend to have lower economic returns. Therefore, credit institutions such as banks lacked the enthusiasm for supporting cleaning and heating projects. And the enterprises that carried out the credit demand for clean warming projects were mostly small and medium-sized enterprises. It lacked the necessary financing guarantee capability and it was difficult to obtain credit support from banks. The lack of financing guarantee mode and pledge mode was a major bottleneck of corporate environmental protection project financing.
Research on Clean warming Market Investment and Financing Mechanism

Vigorously Promoting Green Credit Financing and Increasing the Effective Supply of Financial Capital

Encouraging credit institutions such as banks to actively participate in air pollution control activities. Leading financial institutions such as banks to provide green credit funds to enterprises and projects that promoting clean energy and reduce emissions. Encouraging low-interest and unsecured loans for major projects that saving energy and reduce air pollution. Encouraging financial institutions to actively provide financial services. Striving to expand environmental project financing channels.

Innovating the Implementation Model of Clean Warming Projects and Expanding the Channels for Supply of Social Capital

Encouraging social capital to participate in clean warming project investment and construction through Public Private Partnership (PPP)Model. Multi-channel solutions should be used for project financing. Encouraging social capital to set up industrial investment funds and investing in clean warming projects and technology research and development. Encouraging qualified social capital to raise funds for clean warming projects by issuing corporate bonds.

Encouraging Development Finance to Support Clean Warming Projects

As a development financial institution, the China Development Bank should play a leading role in the field of providing financing support for major environmental protection projects. Development finance should continue to innovate in its financing mode and comprehensive use the mode of low-interest loans, financing guarantees, equity investments, etc. to assist in the financing of major clean warming projects. In terms of preferential measures, it should provide conveniences such as extending the loan period and reducing the financing guarantee conditions, so as to facilitate the financing of the cleaning warming project.

Strengthening Environmental Financial Product Innovation

Promoting the generation of environmental financial products suitable for China's national conditions, and gradually developing traditional derivatives and new environmental financial derivatives. Exploring the issuance of environmental financial bonds and local government bonds for the lack of financial services in the field of clean warming.

References