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Qiaoxi District Central Heating, Zhangjiakou, China

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On this page: A case study on Qiaoxi District Central Heating, Zhangjiakou, China. Find more at the [Municipal Public-Private Partnership Framework - Project Summaries](#) section for brief summaries of around 100 projects from around the world, examples of successes and challenges, as well as innovative ideas on solutions, or visit the [Guidelines on Innovative Revenues for Infrastructure](#) section.

Project Summary:

Background

The central heating service for the Zhangjiakou municipality was provided by a state-owned enterprise called Zhangjiakou Hengfeng Heating Company (ZHH). Previously, it was not being adequately maintained and monitored under ZHH. As a result, the central heating had become inefficient and led to an increased level of sulfur dioxide pollution. The state-owned company was also operating at a deficit and had been accumulating

significant debt, partly due to uncollected pipeline installation fees and user charges. The local government of the Qiaoxi District decided to remove the old heating boilers and install new ones, and then pursue a PPP for the operation, maintenance, and financing of the central heating system.

Project Structure

Following a competitive bidding process initiated in 2014 by the local government, Beijing Yuantong Heat Company Limited (BYHC) was selected as the preferred bidder in 2015. BYHC subsequently established the Project Company, a joint venture that was 90 percent owned by BYHC and 10 percent by the Qiaoxi District government. ZHH, acting on behalf of the local government, signed the PPP contract with the Project Company. Under the agreement, ZHH would transfer the existing heating assets to the Project Company, at which time the Project Company would assume responsibility for the operation and maintenance of the assets for 25 years. After this term, the assets would be transferred back to the local government at no cost. The agreement includes requirements for the Project Company to provide improved heating supply services with an extended coverage area, undertake management and maintenance of the central heating facilities, and install two new heating boilers during the contract period.

The Project Company receives revenue primarily from user tariffs charged for the heating supplied and collecting central heating pipeline connection fees, among other operational incomes. The user tariff was set by the local government, based on national, provincial, and local regulations and policies.

Lessons Learned

The project faced some initial difficulties, including challenges arising from the transfer of staff from ZHH to the Project Company, opposition from local communities to the removal of their small boilers and paying the new pipeline installation fees. However, the Project Company was able to overcome the employee issues by introducing a performance-based incentive scheme for the staff. The local government also helped overcome community opposition by agreeing to share the cost of the new pipeline installation fees. Ultimately, the Project Company was able to provide more reliable central heating, saw an 80 percent decrease in user complaints, increased the average indoor temperature from 19.3 °C to 21.4 °C, and increased the user-fee collection rate from 80 to 93 percent.

In addition, the area covered by the central heating service increased by 20 percent, as a result of the construction of additional boilers and the extension of the pipeline distribution network.

The involvement of the private sector helped free up public capital for other utility projects and promote knowledge and technology transfer. This in turn helped the government to improve the management of future infrastructure projects. It is estimated that the core of the Project Company's 20 percent increase in revenue came from cost savings, mainly as a result of reduced energy consumption.¹

Footnote 1: Source(s): https://githubmanagingppp-tools.s3.amazonaws.com/live/media/1434/gih_casestudy_china_qiaoxi-district-centralheating.pdf accessed 11 February 2019.

<http://www.bestchinanews.com/Finance/490.html> accessed 11 February 2019.

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