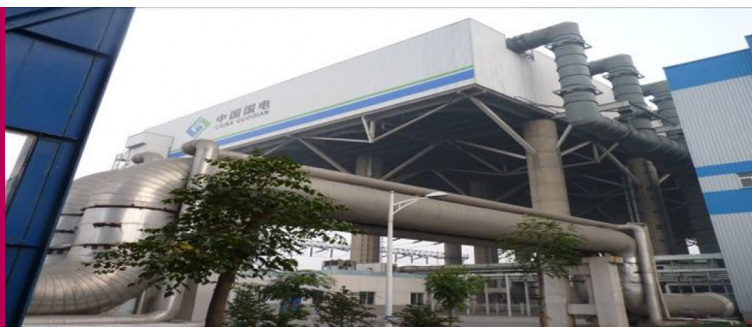


## CHINE

### Optimizing urban heating in Taiyuan and Jinzhong for low-carbon development



This project was launched in 2010 and has supported Shanxi Province in its efforts to decouple urban growth from greenhouse gas emissions. It has also fostered reflection on heating sector reform.

#### CONTEXT

In 2010, some 40% of the energy consumed in the residential and service building sector in Northern China was for heating. One of the main reasons for this consumption was the inefficiency of existing heating systems (small individual boilers and obsolete networks).

Coal was the main energy source for urban heating, particularly in Shanxi Province, a major producing region for this fossil fuel. In the 2000s, the Chinese government began actively promoting district and centralized heating, as well as the use of cogeneration power plants for heating. AFD assisted the cities of Taiyuan and Jinzhong in implementing an efficient and innovative urban heating solution.

#### DESCRIPTION

In Taiyuan, the project involved phasing out 254 inefficient small boiler systems 20 years and building three levels of urban heating networks: a 9.6 km-long primary network from the power plant to a pressure isolation station, a 44 km-long secondary network comprising 75 substations, and part of the tertiary network. This network is supplied by a cogeneration plant and supplies a surface area of 10.6 million square meters.

In Jinzhong, 677 small boiler systems and 8 district boiler systems with low levels of efficiency were decommissioned. They were replaced by a heating network for which the first 97.5 km-long phase is equipped with 87 heat exchange stations and supplied by a new cogeneration plant. This network supplies a surface area of 10.15 million square meters.

#### IMPACTS

- Improved quality of urban heating in Jinzhong and Taiyuan;
- Significant reduction in CO<sub>2</sub> emissions and pollutants, with positive impacts on the environment, and the health and comfort of residents;

08/07/2010

Project start  
date

31/12/2014

Project end  
date



Taiyuan and Jinzhong  
Location



Climate , Energy , Sustainable  
Cities  
sector(s)



Loan  
financing tool(s)



68 000 000 EUR  
Amount of the program

ACHEVÉ

Status

Jinzhong local authorities  
Taiyuan Heating Power Company  
Beneficiaries

- This program has helped the heating sector in China transition towards low- carbon management by promoting technological innovations for energy efficiency and effective network management.

