

CHONGQING (CHINA)

General information:

Area:	82,000km ²
Population (millions):	31 million
National GDP per capita (city GDP):	USD 3,976 (USD 600)

Solid waste generation

Total generation:	7500 ton/day
Waste generation per capita:	0.24kg/person · day
Waste source:	7500 ton/day (domestic); 35,600 ton/day (industrial) (13 million ton/year); 1228 ton/day (hazardous) (448,400 ton/year)
Waste composition:	35% organic, 40% inorganic

Solid waste management:

Collection rate:	85%
Recycling:	25% (includes paper, rubber/plastic, glass, metal)
Incineration:	Central treatment of 1,700 ton/day of waste (planned)
Final treatment:	Sanitary landfill with total capacity of 3,000 ton/day (planned)
Expenditure:	User charges are CNY 3/household · month (USD 0.4)

Major challenges and strategies

Urban domestic waste in the city proper is collected and centrally disposed by a designated company operating under the Chongqing Municipal Administration Commission. Local construction management councils or the Chongqing Municipal Administration Bureau manage other districts and counties. Three landfill sites are planned for the city centre, with capacities of 1500, 1000, and 1000 ton/day, respectively. Due to the mountainous topography of Chongqing, the proposed investment of many landfill sites is higher than that of the same scale landfill sites in other parts of China because of higher engineering costs.

Challenges for Chongqing include improvements to the charge system by expanding targets and increasing standards; issuing prices for electricity produced by incinerators; and consideration of loans from foreign governments or Build-Own-Transfer (BOT) approaches due to financial difficulties in constructing waste treatment facilities.

The Chongqing Municipal Government has proposed a technical plan entitled "Screening-Landfill-Incineration Power Production" for eleven comparatively centralised districts/counties to centrally treat 1,700 ton/day of waste. Chongqing City has constructed small-scale screening and landfill sites and has disposed of hard-to-burn waste in landfills after decomposition. Because of decomposition, the amount of leakage from waste decreases which helps prevent secondary pollution. Chongqing City has also improved the technology of two to three coal-fired centralised power plants to act as waste incineration power plants (economically efficient transportation distances range from 28 to 94km.)

A designated company is responsible for business activities and technology-related research in the entire process of collection, screening, landfill and incineration. Based on a 15-year service period, this approach can reduce landfill volume by 30-50%, save 10-15% of investment, and increase the total capacity of power generators for waste incineration to 5500kw with an annual power production of 43.43 million kwh.