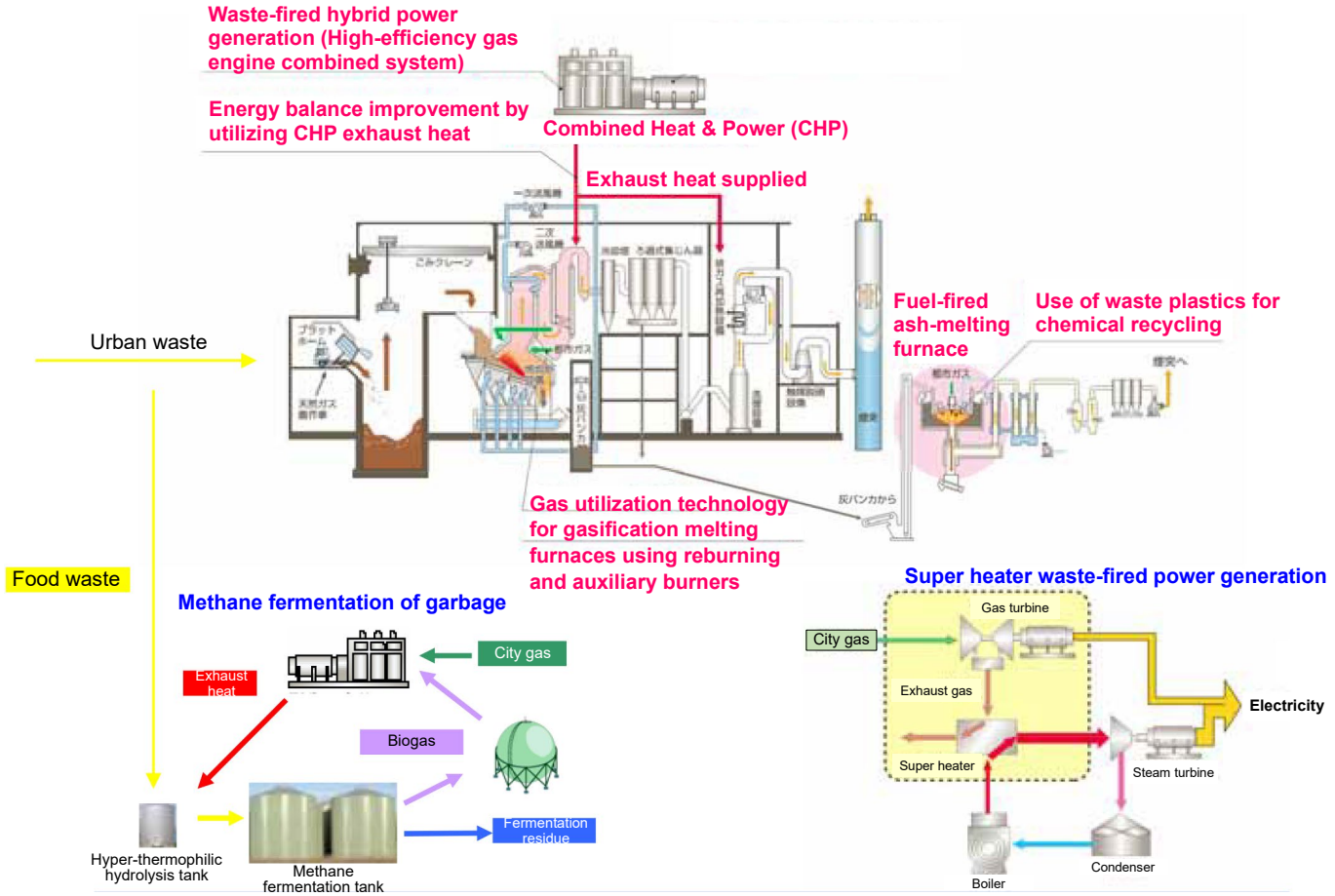
City Gas Introduction System at Incineration Plants

We propose a system intended for improved energy efficiency and eco-friendliness made possible by the introduction of city gas.

Rendered Image of Introduction of City Gas Utilization Technology to an Incineration Plant



Overview of City Gas Utilization Technology for Incineration Plants

1. High-efficiency power generation system incorporating a Combined Heat & Power (CHP)

- Super heater waste-fired power generation
  A high-efficiency power generation system leveraging steam heated to a high temperature and high pressure using exhaust heat from a gas turbine
- Waste-fired hybrid power generation
  A high-efficiency power generation system tailored for steam heated to a high temperature and high pressure using exhaust heat from a gas engine

2. Energy balance improvement by utilizing CHP exhaust heat

- Feedwater preheating, deaerator heating, air preheating, exhaust gas reheating, and white smoke prevention

3. Reburning technology

- Reduces dioxins and NOx with combustion technology

4. Auxiliary and reburning burners

- Auxiliary and reburning burners using clean city gas

5. City gas-fired ash-melting furnace

- Ash-melting furnace using clean city gas for auxiliary combustion
- Chemical recycling making efficient use of waste plastics

6. Gasification melting furnace

- Gasification and gas reforming melting furnaces that use clean city gas

7. Methane fermentation of garbage

- Stable power generation by combining biogas and city gas
- Heating the methane fermentation tank using exhaust heat from CHP and introducing hyper-thermophilic hydrolysis (80°C) to increase biogas generation and reduce fermentation residues