

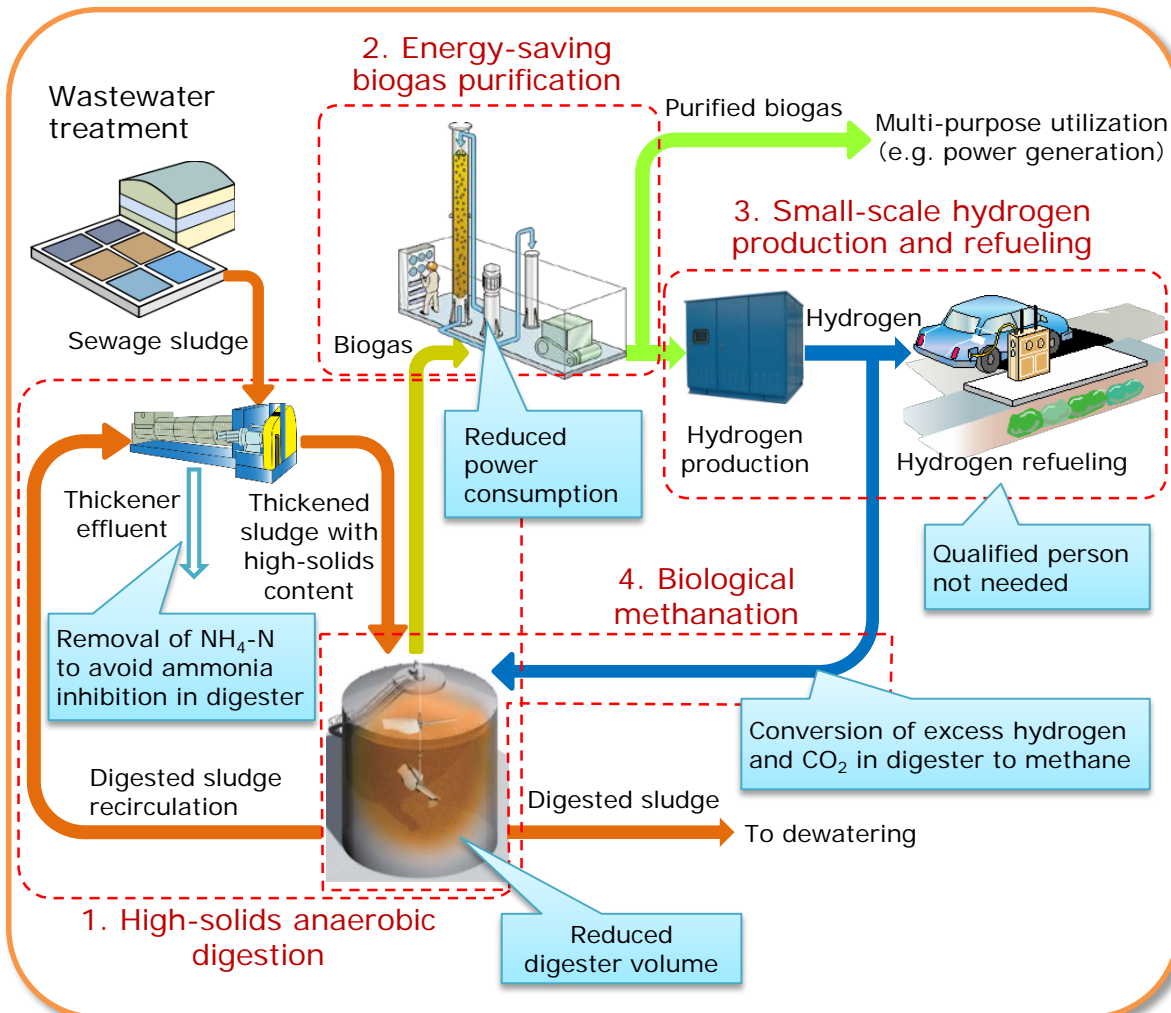
# Demonstration on Efficient Energy Utilization Technology using High-solids Anaerobic Digestion and Energy-saving Biogas Purification

## Implementer

The consortium of Kobelco Eco-Solutions Co., Ltd., Japan Sewage Works Agency, and Fuji City

## Demonstration field

Tobu Wastewater Treatment Plant, Fuji City, Shizuoka Prefecture



## Technology features

### 1. High-solids anaerobic digestion

- Sludge fed into digester is thickened to high solids content
- Control of ammonia concentration in digester by digested sludge recirculation
- Digestion performance, despite the reduced digester volume, equivalent to conventional system

### 2. Energy-saving biogas purification

- Less power consumption by reducing operating pressure
- Enough pressure for removal of  $\text{CO}_2$  and other impurities

### 3. Small-scale hydrogen production and refueling

- Small refueling capacity to meet early-stage demands of hydrogen for fuel cell vehicles
- Qualified person not needed due to small capacity

### 4. Biological methanation

- Hydrogenotrophic methanogens utilize excess hydrogen added into digester and convert  $\text{CO}_2$  to methane