

# *High Efficiency Power Generation System with Digestion Gas Using Sludge Solubilization*

***REDUCE POWER CONSUMPTION ON WWTP BY 50-70%***

***Japan Sewage works agency (js) has a solution:***

***Sludge reduction technology***

- A conventional treatment per 1m<sup>3</sup> of wastewater consumes 0.3-0.5 kwh electricity.
- Influent has an enormous amount of organic matter or sludge.
- Sludge solubilization is a sludge reforming technology to accelerate its biodegradation.
- When sludge solubilization works with anaerobic digestion and high efficiency power generation, the combined system recovers 0.2-0.3kwh electricity.
- Besides the combined system enables WWTPs to achieve **50-70% self-sufficiency in electricity.**

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JS promotes R&D for energy recovery from sewage sludge using the following technologies

- *Anaerobic digestion system with high concentrations*
- *Sludge solubilization system*
- *Latest power generation system using digestion gas*
- *Cogeneration system*

These technologies enable to:

- *Reduce power consumption of WWTPs by 50-70%*
- *Reduce a huge amount of sludge generation*
- *Efficiently recover phosphorus in sludge*
- *Contribute global environmental protection by reducing carbon dioxide*

# Energy Independence by High Efficiency Power Generation System with Digestion Gas

