



# WASTEWATER RECYCLING/REUSE AND WASTE-TO ENERGY PLANT FOR A CHEMICAL INDUSTRY,

**A leading producer of Furfural and Furfural alcohol in Thailand required a sustainable solution to treat and recycle its high COD wastewater. The company decided to implement a wastewater treatment and recycling system to address both the rising freshwater crisis and environmental concerns.**

The project involved designing, engineering, supplying, erecting, and commissioning a wastewater treatment plant (WWTP) capable of recycling 1000 M<sup>3</sup> of wastewater per day. The system is also designed to generate biogas for green power production

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## Challenges

- **High COD Levels:** The effluent had high COD of 15,000 mg/lit, requiring advanced treatment to meet reuse standards.
- **Biogas Generation:** Ensuring sufficient biogas production for green power generation while maintaining efficient wastewater treatment.

## Solutions

- **Design & Engineering:** Custom WWTP with multi-stage treatment.
- **Process:** EQ Tank → AHR → SBR → Flash Mixer → Flocculator → Sand Filter → UF → Cartridge Filter → Double Pass RO.
- **Biogas:** Generated to produce 6 MW green power.
- **Recycling:** Treated water reused as boiler feed, cutting 90% freshwater use.

## Results

Flow Rate 1000m<sup>3</sup>/day  
m<sup>3</sup>/day

PARAMETER	INLET	OUTLET
BOD	6000 mg/l	ND
COD	15000 mg/l	<5 mg/l
TSS	350 mg/l	ND
TDS	3000 mg/l	<5 mg/l

**For detailed techno-commercial proposal or site visit coordination,**

✉ **Drop us an e-mail at:**  
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## Impact

- Regulatory compliance achieved
- Consistent treatment performance
- Zero disruption during commissioning
- Reliable long-term O&M efficiency