

# ALTERNATIVE ENERGY

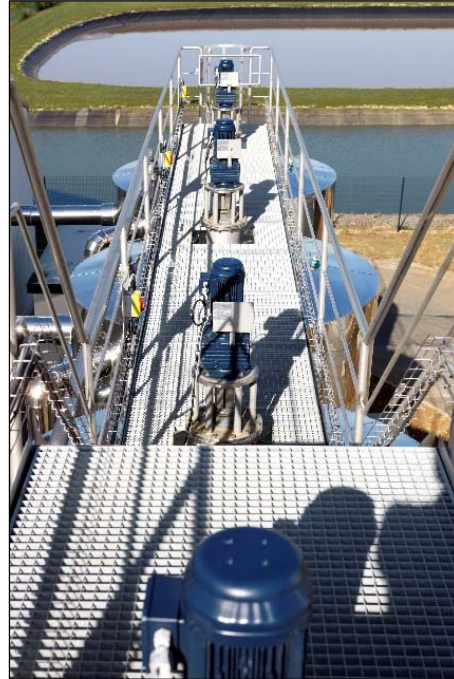
**Evergreen Engineering** is on the cutting edge of emerging waste-to-energy technologies. We have designed systems utilizing pyrolysis, gasification, and anaerobic digestion. Because these techniques have the potential to produce more power from the same fuel than is possible with direct combustion, modern renewable initiatives are calling for more such facilities around the country. Put our expertise to work for you as a leader in this growing industry.

## Confidential Client

- Provided preliminary engineering to produce renewable fuel oil incorporating a rapid thermal process utilizing particleboard residuals in a cutting-edge wood-to-liquid fuel business serving the transportation sector.

## Agilyx

- Engineering for a plastic-to-oil recycling system included design package for a skidded shop-fabricated version of the multi-vessel system.
  - Layout design and general arrangement drawings
  - Design options for heat transfer fluids, cooling systems, OSS, and product storage vessels
  - Specification sheets for new equipment
  - Thermodynamic analysis for Heat Transfer Unit
  - Analysis of safety systems for cartridge handling, gas transfer, condensing, and vacuum systems
  - Detailed fabrication drawings for equipment skids, vessels, electrical, piping ductwork, & supports
  - Structural design for skids and support frames



## JC Biomethane

- Assisted owner & process specialists in developing general arrangement drawings for 1.6 MW animal and food waste-to-energy plant
- Detail engineering for biogas plant foundations, utility piping, fire protection systems, electric power and lighting

## Confidential Client

- Front-end engineering for a 250 TPD MSW-to-energy plant
  - Sizing major equipment, including heat recovery steam generators, steam turbine generators, cooling towers, and electrical switchgear
  - Purchasing specifications for the major balance of plant equipment
  - Construction bidding documents in enough detail to allow contractors to provide Gross Maximum Price submittals
  - Budget estimate for detail engineering services for a 250 TPD MSW-to-energy plant
  - Scalable plant design for future site-specific locations

## Columbia BioGas

- Assisted owner & process specialists in developing general arrangement drawings for 3MW food waste-to-energy (biogas) plant
- Detail engineering for plant foundations, utility piping, fire protection systems, electric power and lighting



**EVERGREEN ENGINEERING**

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