



INDUSTRIES SERVED

- Biogas
- Chemicals
- Energy
- Manufacturing
- Metals/Minerals
- Microelectronics
- Oil/Gas
- Petrochemicals
- Power
- Utilities

RENEWABLE ENERGY

- Solar
- Wind
- Hydro-Electric
- Biofuel
- Geo-Thermal
- Ground-Source Heat Pump

ENERGY STORAGE

- Pumped Hydraulic Storage
- Batteries
- Chemical Conversion

ENERGY EFFICIENCY

- Recuperators, Economizers
- Combine Heat & Power
- Building HVAC/Lighting

WATER REDUCTION

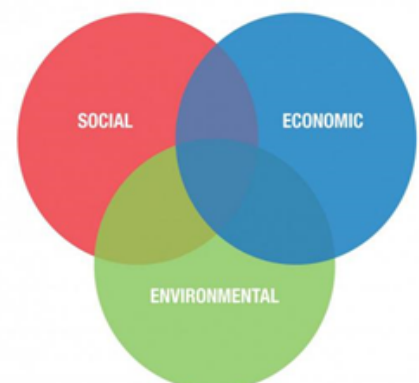
- Condensate Collection
- Onsite Wastewater Reuse
- Process Heat Exchangers
- Stormwater

Sustainable Engineering Solutions

From energy reduction to waste minimization, to reducing carbon footprint, no matter the sustainability goal, when engineering solutions are needed, CSD offers a customized approach. We listen to our clients, help define stakeholder needs, then provide technically innovative and cost-effective solutions. We understand the manufacturing processes and apply the most suitable technologies to minimize the impact to the environment and your bottom line.

Our services include:

- /// Permitting/Regulatory Negotiations
- /// Energy Audits
- /// Conceptual Engineering
- /// Feasibility Studies
- /// Innovative Process Development and Design
- /// Engineering, Procurement Assistance, and Construction Management
- /// Detail design, Specifications, Estimating, Expediting
- /// Vendor Inspections and Observation
- /// Contract Operations/Operations Consulting
- /// Commissioning, Start-up, and Operator Training
- /// Troubleshooting
- /// Existing Facility Retrofits





CSD is a full-service engineering company with professionals experienced in providing industrial, environmental, infrastructure, and construction engineering services. CSD has the resources to perform virtually any scope of work, regardless of size or complexity.

Our Clients tell us we are: Responsive and Reliable with Proven Results

For years, CSD has been providing industry with innovative system designs and upgrades. In addition to conventional systems, we thrive on addressing unique problems that require inventive solutions. Our diversified staff is also adept at regulatory negotiations and providing our clients with first class service.

CSD understands the importance of lowering client costs. Our strategic experience and methods can help identify cost-reduction opportunities.

Front End Loading Applied to Sustainability Projects

FEL 1

- /// Material/Energy/Balance
- /// Carbon and Resources Reductions Identified
- /// OOM Capital Cost, O&M, Cost, ROI

FEL 2

- /// PFD, Layout, Equipment List, Budget Capital Cost
- /// Develop Value Options

FEL 3

- /// Detail Engineering Documents
- /// Definitive Capital Costs
- /// Procure & Construct

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BIO-FUEL TECHNOLOGIES **Anaerobic Digestion or Landfill**

- Upgrade to Pipeline

Biomass Gasification

- Low BTU Gas Fuel
- Fischer Tropsch

Biomass Saccharification

- Fermentation
- Alcohol Products

Biodiesel

- Oil Extraction
- Esters
- Glycerol Byproduct