

ETHANOL & CHP PLANT  
PLANT ASSETS AND LAND SALE  
CAPACITY 38MGY CHP 4 MW





# ABOUT THIS NEGOTIATED SALE

ETHANOL PLANT 38MGY  
CHP: EXPORT STEAM & 4MW

- **Complete Plant Sale**
  - **Plant Description**
    - Ethanol plant – corn wet fermentation
    - Capacity 38 MGY
    - Built 2008 – proved out over 2 months
    - Plant never ran – never produced
    - Idled in 2009 – clean, empty, shiny
    - Land – approx. 25 acres
  - **CHP: Combined Heat & Power Generation**
    - Coal combustor and HRSG
    - HRSG generates 650 psig steam for turbine generator (4 MW)
    - HRSG exports steam to plant 125,000 lb/hr at 150 psig
  - **Complete List of Equipment and Systems available**
    - Equipment still installed
    - Not a complete plant – some assets have been sold. See List

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Contact  
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- **Systems** ..... **5**
  - **Electrical**
    - Switchgear
    - MCC
    - Transformers
  - **CHP: Gen Set**
    - Main turbine generator 5000 kva 4KW
    - HRSG and Coal Combustor
  - **Distillation system**
  - **Load-Out Systems**
    - DDGS
    - Ethanol rail
    - Ethanol truck
  - **Rotary Steam Dryers**
  - **Dryer Fluid Bed Cooling Package**
  - **Scrubber Systems – CO2 & Process**
  - **Flare systems**
  - **Hammermill Package**



# GENERAL LISTING

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- **Major Equipment Cataloged**
- **All Pieces in Plant to be Sold**
  - Instruments & Electrical
  - Piping
  - Structural

# GENERAL LISTING

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- **Distillation system**
- **10 Columns, evaporators, & reboilers**
- **25 heat exchangers – especially large plate HEx & wide gap, ss**
- **108 pumps – stainless**
- **14 fans & blowers**
- **4 compressor systems**
- **31 stainless steel tanks**
- **5 silos and grain bins**
- **5 elevator legs**
- **40 drag and screw conveyors, ss**
- **12 baghouse dust collectors**
- **5 HVAC units**
- **8 metal buildings including locker room (moveable)**
- **36 ss butterfly valves 8 inch to 16 inch**
- **Marley ss cooling tower – 4 separate cells (gone)**
  - Note: not all equipment is still available

[LINK for Listing on our Website](#)

# SYSTEMS ELECTRICAL

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- **Substation 12.47 KV**

- Square D 12.47 KV 4000 A
- Incoming (3) 1/C 500MCM
- Metering enclosure
- Outgoing – 7 metal enclosures
- 600A fused 12.47 KV breakers



- **Switchgear**

- (8) switchboards - GE & Cutler Hammer
- GE 600A 480V
- GE 800A 480V
- (2) GE 3000A 480V
- GE 4000A 480V
- Cutler Hammer 1000A 4160V
- Cutler Hammer 3000A 480V
- Cutler Hammer 1200A 12.4 KV





# SYSTEMS ELECTRICAL

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- **Motor Control Centers (MCC)**
  - (14) MCC's – GE and Cutler Hammer
  - GE MCC's are Evolution Series E9000
  - Cutler Hammer are Freedom Series 2100



- **Transformers**
  - (6) Pad Mounted GE and Cutler Hammer
    - (3) GE 2000 KVA 12470V to 480V
    - (1) GE 2500 KVA 12470V to 480V
    - (2) Cutler Hammer 2500 KVA 12470V to 4160V
    - (1) GE 1000 KVA 12470V to 480V



# SYSTEMS CHP GENSET

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- **Turbine Generator Set Package 5000 KVA**

- Gen-Set Package 4000 KW 12.4 KV 60 Hz
- Murray Turbine 650 psig steam driven
- Ideal Generator
- Lufkin Gearbox
- Enter PK9109 for all components

- **HRSG and Coal Combustor**

- EPI Outetec coal combustor
- Rentech HRSG
- Lime system
- Fly ash handling system
- Fly ash silo





# SYSTEMS LOAD-OUT

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## • DDGS or Pellet Load-Out System

- SLY pellet load-out system
- Designed DDGS at 240 ton/hr (15,000 cfh)
- SLY loading arm & spout XP-12
- 3 drag conveyors, controls
- Load-out Building
- Control house
- Enter PK8420 for all components



## • Liquid Truck or Rail Load-out

- Designed for 1200 gpm ethanol
- 2 stations, platforms & arms
- 4" pipe and loading arm
- OPW swivels
- Filter & Meters



## • Liquid Truck Loadout (under)

- Capacity 600gpm ethanol
- Meter, ticket printer



# *DISTILLATION SYSTEM*

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- (2) Mole Sieve Columns 8' dia x 36'
- Beer Column 8.5 dia x 66' 25 trays ss304L
- Rectifier Column 6.5 dia x 95' 32 trays ss304L
- Evap Condenser 5.5 dia x 50' ss304L
- Evap condenser 4.5 dia x 50' ss304L
- Reboiler 3.5' dia x 16' ss304L
- Reboiler 4.5' dia x 50' ss316
- Reboiler 3.5' dia x 50' ss304L
- Heat exchangers, pumps, separators





# SYSTEMS ROTARY STEAM DRYER

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- **Rotary Steam Dryers (2)**
  - Davenport 11.75' dia x 70' long
  - Steam dryer, Capacity 29,397 #/hr
  - 304L ss, 100HP motor
- **Fluid Bed Cooler System**
  - Barr-Rosen Flash Dryer cooler
  - Cooler, baghouse dust collector
  - Designed to dry up to 10% moisture
  - Enter PK5430 for all components
- **Ancillary Equipment**
  - Pre-mixer, double paddle mixer
  - Elevators, FD fan, ss conveyors
  - Enter PK5410 and PK5420 for all components



# CO<sub>2</sub> & PROCESS SCRUBBER

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- **CO<sub>2</sub> Scrubber**
  - CO<sub>2</sub> packed scrubber by Ducon
  - 4915 ACFM
  - 3.5 ft dia x 25 ft tall
  - Enter PK3501 for all package components
- **Process Scrubber**
  - Process Scrubber FRP, mist eliminator by Ducon
  - 1001 ACFM
  - 2.5 ft dia x 24 ft tall
  - Packed column
- **Ancillary Equipment**
  - Exhaust stack
  - Blower fan 7.5HP
  - Centrifugal pump Goulds
  - Piping & instruments





# SYSTEMS - FLARES

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- **Flare Package – Ethanol Rail Loadout**
  - Enclosed Flare – by John Zink
  - Model ZCT-1-4-25x1/6
  - Combustion blower 15HP, KO pot
  - Controls
- **Flare Package – Ethanol Truck Loadout**
  - Skid package by John Zink
  - Pennbarry flare DRM
  - KO Pot, blower
  - Stack & controls
- **Flare Package - BioGas**
  - Varec flare system 244W
  - Capacity 193 cfm
  - Flare, controls, blower



# SYSTEMS *HAMMERMILL*

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- **Hammermill Ancillary Package**

- Package less hammermills
- Building & structure
- Elevator leg 69 ft tall
- Dust Collector baghouse 11,000 cfm
- Screw conveyor 16" x 31.5 ft long
- Silo surge bin 1500 bu 12' dia x 16 ft
- Enter PK1301 for all components

