#### Project 2011



#### Gardiner Farms, Inc.

Facility: Cattle feedlot

Location: Kirkton, Ontario, Canada

Total System Size: 250 kWe

Fuel Type: **Biogas from animal** waste

Power Source: Caterpillar® naturally aspirated engines

Hot Water Output: **Approx. 1,710,000 Btu/hour** 

Overall System Efficiency: > 80%



#### Elite's CHP EnviroGen® Energy Module Fuel Source



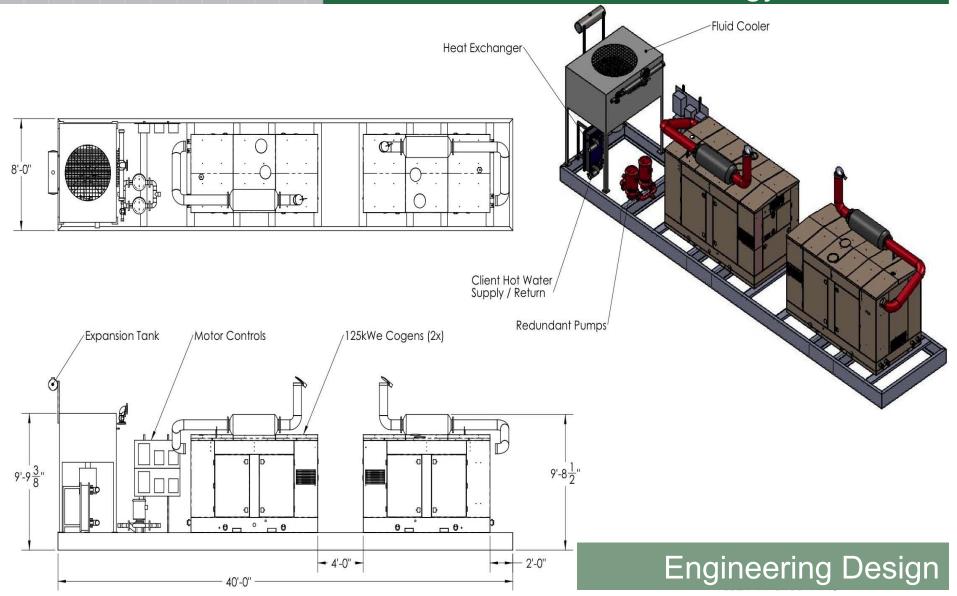


#### All Farm Operations <u>and</u> Private Residences to be Powered by CHP



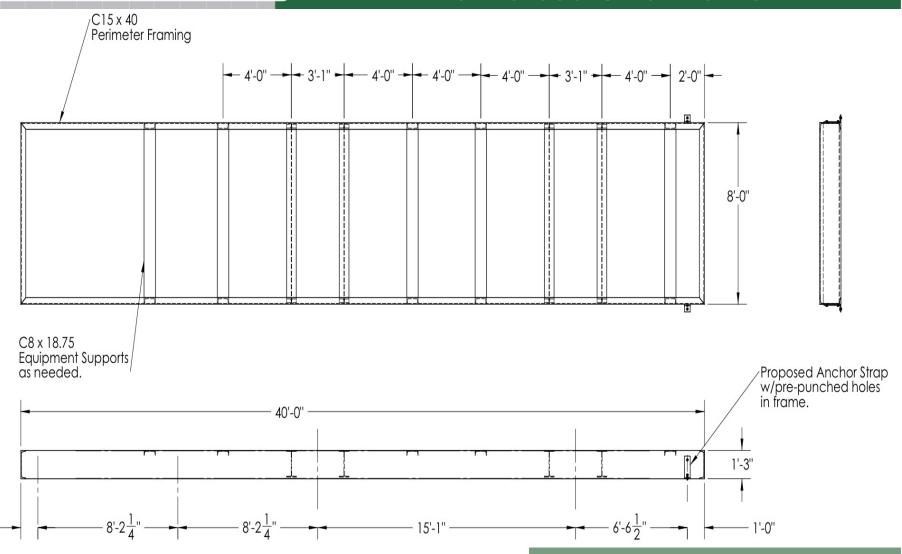


## Preliminary Drawing of Digester Gas Fueled EnviroGen® Energy Modules



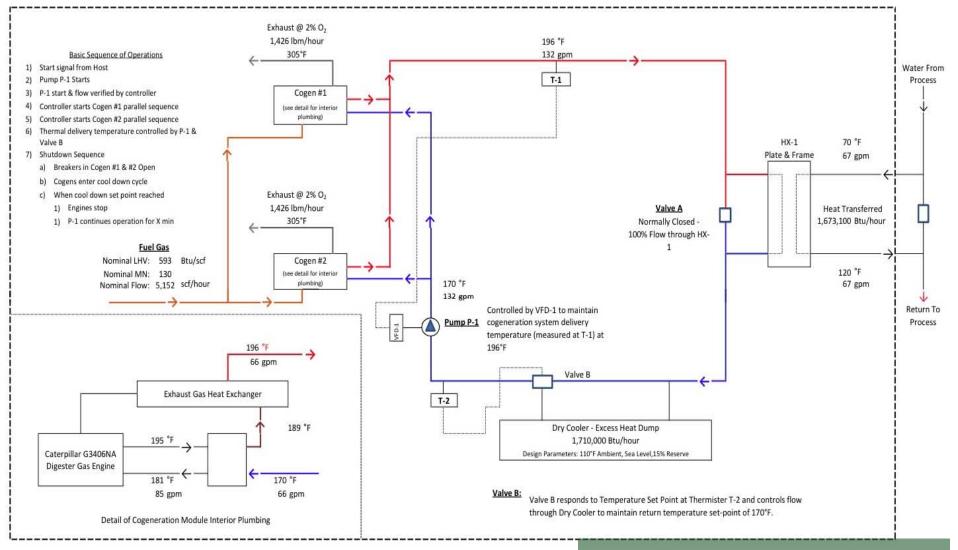


#### Preliminary Drawing Seismically Reinforced Skid Frame



#### ELITE ENERGY

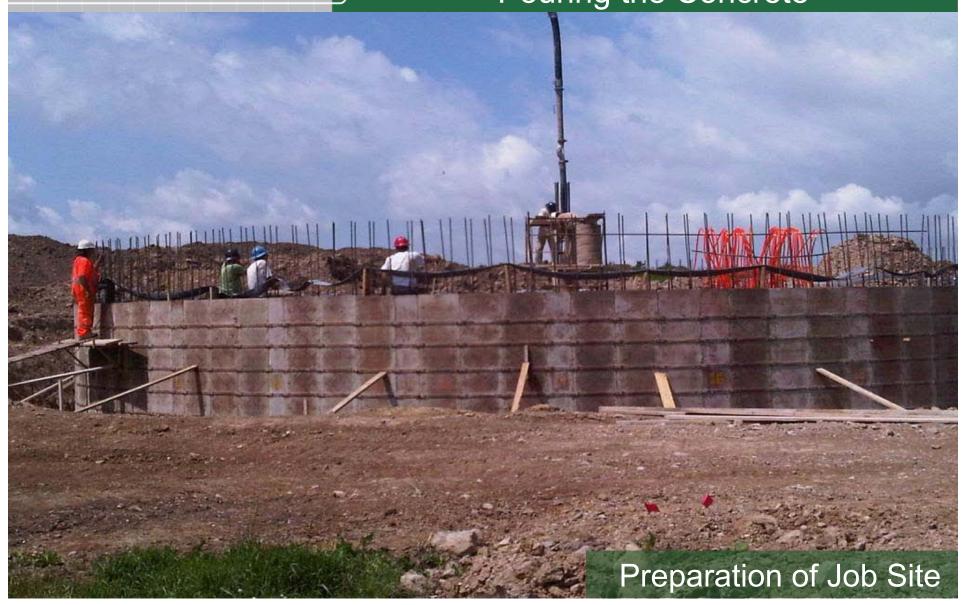
## Combined Heat and Power (CHP) System Schematic



**Engineering Design** 



## Biodigester Construction Pouring the Concrete





## Biodigester Construction Insulating the Walls





## Biodigester Construction Near Completion





#### Support Skid Base Frame





## Customized Water Inlet and Outlet with Heat Exchanger Piping and Pumps



Fabrication/Assembly



Breakers and Controls – One Part of the Fully Integrated Skid System





## Caterpillar 3406 Naturally Aspirated Engine in EnviroGen® Energy Module







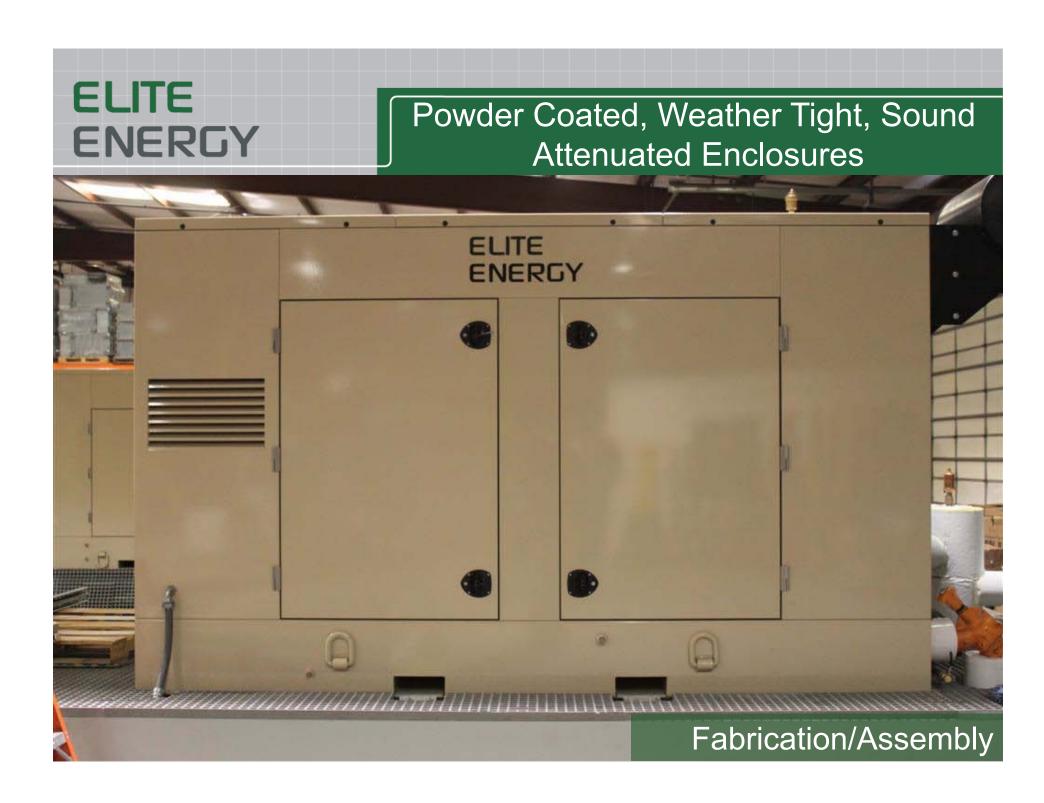
# Controls Cabinet and Generator in EnviroGen® Energy Module



# **ELITE ENERGY**

Finished EnviroGen® Energy Modules Ready to Mount on Skid Frame





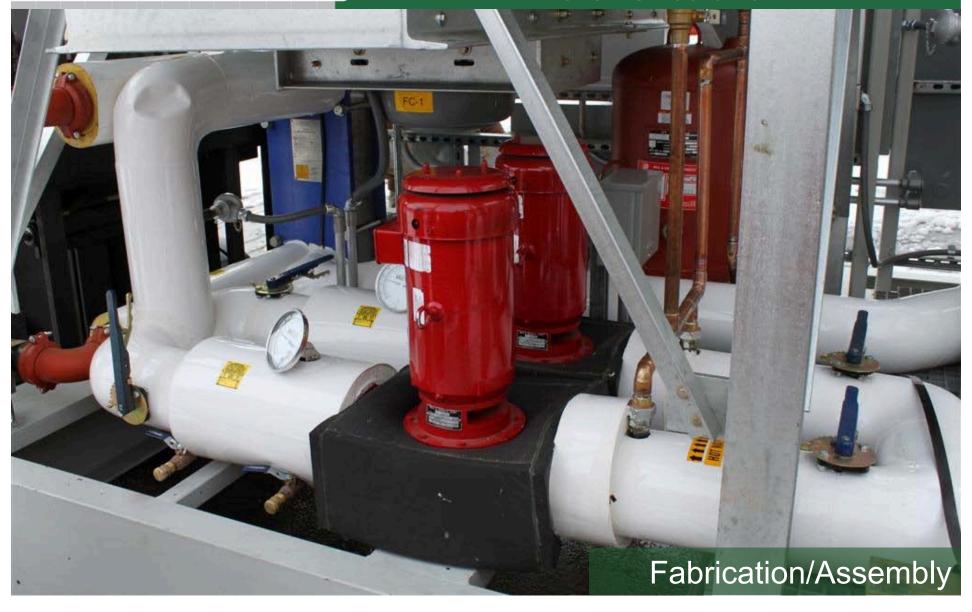


## Lift-off Doors and Removable Panels Provide Easy Access





#### Finished Piping and Pumps for Hot Water Circulation





#### Finished Control Panels and Pump Disconnect Switches





#### GenView™ Control System for Remote Monitoring and Control





Lifting the CHP System at Elite's 70,000 sq. ft. Manufacturing Campus in Nevada





# Loading the CHP System on Flatbed for Transport



# **ELITE ENERGY**

#### Centering the CHP System for Transport to Ontario, Canada





## CHP System Loaded and Ready for Transport to Job Site from Nevada, USA



**Loading for Transit** 



# Preparing for Installation of CHP System at Cattle Feedlot





# Installed CHP System on Foundation Next to Biodigester at Farm





## CHP System Ready to Provide Heat and Power for All Farm Operations



# ELITE ENERGY

Provided a CHP system to: Gardiner Farms, Inc.

System powered by:



All major components and 97% of system content is:



#### Gardiner Farms, Inc. (recap)

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- Fuel Type: Biogas from animal waste
- > Power Source: Caterpillar® naturally aspirated engines
- Hot Water Output: Approx. 1,710,000 Btu/hour
- Overall System Efficiency: > 80%

#### Gardiner Farms, Inc.

- To schedule a site walk of this project (in Kirkton, Ontario, Canada) please contact:
  - Paul Beck National Accounts Manager pbeck@eliteenergysys.com, 619-518-0447
- To schedule a tour of our manufacturing, engineering, fabrication, and test facilities in Carson City, Nevada please contact:
  - Kirk Fowkes VP of Sales and Business Development kfowkes@eliteenergysys.com, 916-467-6606