



CALSCAN

reliable
separator controls
& measurement

BEAR SOLAR CONTROL SYSTEM

Solutions for Pneumatic Devices with Problem Fuel Gas

Calscan has developed the solar powered Bear Control System for new and existing separators. This system goes beyond a High-Bleed to Low-Bleed conversion. It is a complete Zero-Bleed solution designed to *completely* replace all pneumatically powered devices on the well site with electric controls. Fuel gas is only needed for the catalytic heater.

With hundreds of field proven well sites successfully installed since 2008, this system has reduced well operating expenses, by solving many of the problems the oil industry is having with pneumatic devices operating on problem fuel gas.

Operational Expense Savings

- **Eliminate Propane for Fuel Gas** - High operating cost with pneumatic controls venting propane
- **No Wet fuel gas Contamination** - Contaminated pneumatic controls causing high operating expenses
- **Stop H₂S Venting** - Corrosion to pneumatic instruments, increased safety and elimination of odor
- **Well Site Automation** - The Bear can be attached to SCADA reducing the need for well site inspection
- **Increased Production** - Gas production will be increased by not venting methane

Environmental and Safety Benefits

- **Greenhouse Gas Reduction** - Eliminating venting methane gas saves on average saves 250 Tons CO₂e a year per well site, greenhouse credits are available to reduce installation costs
- **Operator Safety** - Eliminating the venting of explosive gas decreases the chance for an explosion



The Bear Solar Control System Reduces Operational Expenses and Helps the Environment

Bear Solar Control System Specifications

Control Panel

- Class 1 Div 2 CSA Approved
- Integrated PLC for control & ESD system
- PLC programming for turn key solution and easy install
- PID control available
- Solar Power system is engineered for 10 days reserve at -40°C with an average of 2 hours per day of sunlight
- Electronics rated for -40°C
- RS-485 Modbus communication available

ESD System

- Pressure Switches
- Level Switches
- Hydraulic or Pneumatic ESD Fail Safe Actuator with low power solenoid.

Level Control

- Two or Three Phase
- Displacement or Float type level control
- Electric Explosion Proof dump valve

Pressure or Flow Control

- PID controlled Explosion Proof electric actuator with choke valve

Chemical Pump

- Electric explosion proof Injection Pump
- Methanol and/or chemical injection with individually scalable rates.



Bear Controller Retrofit



Electric Actuator



Electric Chemical Pump



Keeping The Sky Blue

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