

Large Agri-Business Company Meets Environmental Requirements

RESULTS

- Met environmental requirements for CO₂ emissions
- Saved \$200,000 annually in energy costs
- Improved community image



APPLICATION

The oil seeds processing plant of a large agri-business company has historically relied on natural gas provided by the local utility as its sole energy supply. As environmental regulations tightened, the facility came under increased pressure to reduce its CO₂ emissions from natural gas burning. The plant and the local city devised a mutually beneficial solution to this problem by installing a methane gas collection system at a landfill approximately one mile away from the plant. The city sold the methane to the plant at less than 10% of the going rate for natural gas. The plant used the cleaner-burning methane whenever possible, supplementing it with utility natural gas.

CHALLENGE

The processing plant faced two main problems: they needed to meter the methane from the city for billing purposes, and they needed to control combustion for two gases with different properties. An additional complication was that the methane delivery occurred at widely varying flow rates, and flow could at times be very low.

The plant's existing orifice plate metering system was not capable of meeting the low flow requirements, and was thrown off by changes in gas composition. Therefore, the plant needed to install new flow metering technology for this application.

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Micro Motion meters allow an oil seeds processing plant to efficiently utilize two different gases for energy.



For more information:
www.EmersonProcess.com/solutions/food_bev
www.micromotion.com/food



SOLUTION

The plant installed Micro Motion® Coriolis meters for both custody transfer of methane and combustion control. The key advantage of Coriolis meters in this situation is their ability to measure flow accurately regardless of gas composition. No matter which gas the facility burned, they were able to optimize combustion and achieve the highest value for their energy dollar. Furthermore, because Micro Motion meters operate accurately even at high turndown, even when methane flow was very low the processing plant still achieved an accurate accounting and utilization of the gas.



This Micro Motion Coriolis meter accurately measures gas flow regardless of composition, allowing the plant to switch between different fuel gases.