

# Biofuels Company Builds Synthetic Diesel Facility

A leading biofuels company partnered with MAVERICK as its Main Automation Contractor (MAC) to implement a turnkey design and installation for a brownfield synthetic diesel facility.

## Objective

The manufacturer developed a 5,000 bbl/day brownfield synthetic diesel facility that uses animal fats, grease and vegetable oils as the primary feedstock, chemically modifying the feedstock in high-pressure reactors resembling a refinery hydrotreater. The synthetic diesel fuel contributes to the nation's energy independence and helps reduce greenhouse gas emissions.

## Results

MAVERICK worked closely over a span of two years with the customer to define, design, program and install the functional system, which included design and configuration of the Emerson® DeltaV™ DCS and DeltaV SIS™, field instrumentation and associated wiring, as well as implementation of the back-office infrastructure and plant maintenance systems.

## Solution

**Automation Solutions:** MAVERICK served as the MAC, overseeing the planning, design and implementation of the process automation systems. Services included construction management, DCS / SIS design and implementation, third-party functional testing and operator training. MAVERICK developed a DCS specification and performed a critical analysis to assist in selecting the proper platform for the application. MAVERICK's modular design of the fieldbus system allows for easy modification during future expansions and deployments.

**Enterprise Integration:** MAVERICK facilitated the design and implementation of the back-office infrastructure, enterprise resource planning (ERP) and maintenance systems. Applications include Microsoft Dynamics AX™ running on Windows Server™, SQL Server™ and Terminal Services™. The applications provide functions for finance and accounting, trade and logistics, purchasing, inventory, asset management and maintenance. The implementation included system configuration, training and consulting to help the customer develop business processes using best practices and to ensure optimal information flow throughout the enterprise.

**Field Services:** Field services personnel installed all the wiring, instrument tubing and DCS consoles (1000 I/O; 850 DCS and 150 SIS). The install team utilized a best-practice combination of seasoned personnel in management, supervisory and direct labor roles, coupled with a labor pool local to the site to effectively and



cost-efficiently formulate an install team.

**Methodology:** MAVERICK executes all projects according to the requirements of its quality program, Project Complete®. A detailed project management, design and implementation approach is key to the success of any complex project. Tracking work scope and efficiencies at a very granular level on this project allowed MAVERICK management to not only look at overall trends, but also to identify and enhance work practices before problems arose. MAVERICK's reporting methods are easy to understand and clearly identify areas of concern, so key stakeholders can focus on those areas to alleviate potential problems.

**Safety:** MAVERICK's dedication to safe work practices, efficient installation practices and right-sized teams contributed greatly to the project's success. MAVERICK led the site in proactive work practices including job safety analysis, weekly tool box talks and quarterly safety audits from the director of health and safety.

**Execution:** From installation of instruments, conduit and wire to detailed design and engineering studies, DCS / SIS configuration and commissioning, all the way through to the back-office ERP implementation, MAVERICK was there each step of the way. The full breadth of the scope was executed in an efficient, cost-effective and quality-driven fashion that MAVERICK's customers expect.

### The MAVERICK Difference

MAVERICK applied its comprehensive service offering to meet this customer's goals while minimizing project costs and streamlining execution.



A Rockwell Automation Company

### MAVERICK Technologies, LLC

265 Admiral Trost Drive | Columbia, IL 62236 USA

+1.888.917.9100 | Fax +1.618.281.9191

info@mavtechglobal.com | mavtechglobal.com