

AERA ENERGY

A Manufacturing Mindset in a Process Industry

Applying a manufacturing mindset to a process industry isn't exactly the traditional method of doing business, but for Aera Energy, it's a mantra that has elevated the company to one of California's most successful and productive oil and gas producers.



Aera Energy uses its enterprise information architecture to monitor oil production, materials and cost.

The Bakersfield, CA, company, the result of the combined exploration and production assets of Shell, Mobil and ARCO, is today owned by affiliates of Shell and ExxonMobil and operates as a separate company.

Aera also is operating as a progressive energy company with a keen eye toward innovative new technologies and processes, said Greg Williams, Aera internal lean advisor.

"We drill more than 1,000 wells a year, and it's a repetitive process, so lots of innovations come with how we apply lean principles," Williams said. "We also spend time visiting other companies to learn about their processes and innovations and apply them to our company."

One of Aera's innovations is its information system, which Williams said is unmatched in the industry, and provides a distinct competitive edge.

"We've put a lot of effort into our enterprise information architecture since our formation to manage our business in real time related to how much oil and water each well is producing, run times, material management, cost tracking, planning and scheduling," he said. "It's unbelievable the amount of detail gleaned from one keystroke."

This approach has enabled Aera to track its processes and attain a cost leadership position, which Williams maintains is critical.

The AME Excellence Award assessors challenged Aera's development team to make innovative improvements beyond its information system, and Aera listened.

The team responded by creating a double-lane, single-piece flow process for its "injection skids," which deploy required meters, valves and other equipment at the new injection well sites.

"The Development team created flow lines to get injection skid construction to just in time, straight-through flow on-site in the field rather than a remote location 50 miles away," Williams said. "These innovative improvements led to reduced costs and shorter lead times."

Aera is working on another innovative process that uses biomass to produce steam while reducing greenhouse gas emissions and costs. The process has been piloted near Aera's largest oil field in California. Results are being incorporated into the next step of process development.

The innovation process doesn't stop at technology or information systems for Aera, however. It's now moving deeper into the business model and future growth opportunities.

"We've always been a production company," Williams said. "Now we're looking at a significant growth opportunity which would make us a full-blown exploration and production company. But that will require innovative new technologies and processes. It's a whole new way of doing business. But based on the way we've applied a manufacturing mindset to the production process, we can meet the challenge."