

# Pacific Gas and Electric Company Saves \$80,000 with Multivariable Mass Flow Transmitter

## RESULTS

- \$80,000 in total installation savings
- Eliminated 12 miles of wiring
- Improved gas well protection and reduced troubleshooting

## APPLICATION

Oil and Gas

## CUSTOMER

Pacific Gas and Electric Company - California, USA

## CHALLENGE

Pacific Gas and Electric Company (PG&E), a primary distributor of natural gas & electricity to over 5 million customers in central and northern California, needed to improve operation at one of their natural gas storage facilities. The facility was composed of 34 gas wells that deliver up to 1.2 billion cubic feet of natural gas per day. George Gaebler, a senior gas engineer with PG&E, was given the task of finding a solution that improved well flow control and provided increased well protection.

PG&E had previously been using individual differential pressure, static pressure, and temperature transmitters at each well. These three measurements were then tied into a flow computer for gas flow monitoring and control. This method of well control proved to be maintenance intensive and cumbersome due to all of the required instrumentation.

## SOLUTION

Gaebler evaluated his options and chose the Rosemount 3095 MultiVariable™ Mass Flow Transmitter with FOUNDATION™ fieldbus protocol. This solution was appealing for numerous reasons. Because the 3095 measures differential pressure, static pressure, and temperature in a single device, the need for individual transmitters was eliminated. This cut out nearly 12 miles of wiring and reduced installation and maintenance costs. The Rosemount 3095 also computes fully compensated mass flow in real-time, which eliminated the need for an additional flow computer.



*Pacific Gas and Electric Company has eliminated over 12 miles of wiring since using the Rosemount 3095 with FOUNDATION fieldbus protocol.*

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FOUNDATION fieldbus protocol was chosen for two main reasons: diagnostics, and distributed control. The advanced diagnostics found with FOUNDATION Fieldbus simplified troubleshooting and improved well protection. Additionally, PlantWeb® Alerts provide specific recommended actions for various failure conditions and the ability to categorize failures into different levels of criticality. FOUNDATION fieldbus also puts control functionality at the device level. This allowed PG&E to have instantaneous control of each storage well at the transmitter level, providing additional measures of performance and reliability to the system.

PG&E has installed 68 Rosemount 3095 MultiVariable Mass Flow Transmitters at their storage site. The Rosemount 3095 combines all of the traditional benefits of a multivariable transmitter and adds the advanced diagnostics and control functionality available with FOUNDATION fieldbus. This results in a single device that is able to perform critical control functions in mass flow applications. George Gaebler estimates that PG&E has saved over \$80,000 since switching to the Rosemount 3095 MultiVariable Mass Flow transmitter. Not only did PG&E achieve their goal of improved well efficiency and protection, but they also reduced their wiring, installation, maintenance, and calibration costs.



Rosemount 3095 MultiVariable™ Mass Flow Transmitter

**RESOURCES**

**Rosemount 3095 MultiVariable™ Mass Flow Transmitter**

<http://www.emersonprocess.com/rosemount/products/flow/m3095mv.html>

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