

Virtual Check Meter Service for Natural Gas Generating Plants

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Introduction

We are C-SMART Analytics, a company specializing in providing our automated Virtual Check Meter™ services for natural gas measurement stations with our cloud-based, AI assisted digital twins.

With our help, our customers are provided 24/7 assurance of the accuracy of their custody transfer natural gas volumes, detect 2.5 times more errors when they are small, correct them 60% faster, and as a result, lower their accumulated measurement error by 80%.

Electricity Generation fueled by Natural Gas

Today's developing story is the increasing electricity demand led by the addition of AI computing centers. Most of the additional generating capacity that will be added in the next 5 years must be fueled by natural gas. Some projections predict demand for natural gas will increase by over 10 BCF/day to fuel these new plants.

Importance of volume/energy measurement verification

The number one operating expenditure will be, of course, the \$30 - \$40 million annual cost of natural gas. Volume and energy accuracy must be assured for billing, of course, but also impacts plant heat rate and efficiency calculations which will also impact emissions calculations and regulatory reporting. Obviously, verification that the natural gas volume is correct is essential for every plant.

Industry data show that errors in measurement across the natural gas supply chain average about 0.4% of throughput per year, so on average, \$160,000 of measurement accuracy risk is on the table for the typical plant, with the potential for large errors running to over ~\$1M/year.

The easy, low-cost solution

You could spend hundreds of thousands of dollars per year to have staff manually and periodically audit your supplier's measurement station performance, but months could go by before errors are detected and corrected. Protracted disagreements and arguments with the supplier would lead to more cost before a resolution is reached.

Or you could spend valuable capital to install expensive redundant measurements, but that would simply flag a difference and require the same investigative and litigative energy to resolve when a difference is detected.

But with today's smart ultrasonic measurement station technology, verification with C-SMART's Virtual Check Meter service reduces and mitigates this risk by 80% for just a few dollars per day. C-SMART's service provides instant alerts, and daily reports on the veracity of your critical natural gas volume/energy consumption and provides actionable intelligence for you and your provider to resolve the problem fast. And it quantifies and tracks the error over time, providing the documented data driven basis for any in or out of period adjustments, all while keeping your plant staff focused on generating electricity efficiently.

Contact C-SMART Analytics at sales@c-smartanalytics.com today to see how you can make use of Virtual Check Meter service at your existing and planned natural gas generating plants.

About the Author

Ernie Hauser has over 35 years of experience in developing, manufacturing, calibrating, installing and maintaining ultrasonic flow meters for water, oil and gas, and nuclear applications worldwide. He has been an industry leader in applying remote diagnostics to verify measurement integrity. He is now President of C-SMART Analytics, a cloud-based provider of 24/7 virtual check measurement in support of its customers in the natural gas delivery value chain.