

Sensus Auto-Adjust™ Meters Stop a \$47,000 Overcharge

Case Study

Reputation Protection At Its Best

A large gas utility installs a Sensus Auto-Adjust Turbo (AAT) meter for a commercial customer and discovers an unanticipated pile of leaves and other debris in the pipeline.

But the AAT was designed for the unexpected. It alerted the utility of the issue and then set about correcting it. In the end, the meter saved the customer from a \$47,000 overcharge and protected the utility's reputation for accurate billing.

The Challenge:

For any company measuring large volumes of gas, unseen pipeline flow conditions are a reality. System maintenance and routine checks prevent some reading inaccuracies, but not all. When meters are not reading accurately, the utility is either under-billing or over-billing customers. Either way, someone is losing out.

The gas utility needed a solution that would provide continuous meter reading accuracy under all circumstances. They also wanted a solution that alerts them to changes and potential issues. These problem alerts need to be received before they impact service to customers or cause costly issues to the utility.

The Solution:

The utility turned to Sensus to pilot the Auto-Adjust Turbo meter at a high-value customer. As part of this pilot program, Sensus representatives and the utility visited the facility to ensure the meter and turbo corrector were working properly right from the start.

The team uses the AAT algorithm within the instrument to check meter and installation accuracy; the meter was adjusting approximately 1.5 percent above the original factory calibration. The meter had done its job, but this adjustment reading was also a red flag of an issue. The team begins investigating.



First, they made sure piping to the meter fully meets configuration standards and the meter is installed correctly and well lubricated.

Next, they decide to remove the bottom of an upstream filter for cleaning and inspection. They found their suspect. The dirt and debris in the filter (enough to fill a 5 gallon bucket a little over half-full) had been caught and did not go downstream, but the heavily contaminated inline filter created an abnormal velocity profile, possibly positive swirl, jetting, or a combination of both. The magnitude of this non-uniform flow profile was – you guessed it – approximately 1.5 percent. Without the Sensus AAT meter, the utility could have taken several months or even years to uncover the issue. This customer would have been significantly overcharged.

When a Sensus AAT meter is first installed, its performance is checked against the factory calibration by comparing field-installed Delta A readings with the factory Delta A values. As the meter remains in service, it is continuously rechecking against the original calibration value.

The Conclusion:

Most, if not all other types of meters, would have overbilled the customer by 1.5 percent, or \$47,000. Had the error been in the other direction, the utility would have lost that in revenue. The utility pilot of this Sensus AAT meter proved many benefits, but this incident was a loud call to action to continue implementing AAT meters.

"Things can always go wrong, but AAT meters provide utilities, transmission companies, end users, and customers peace of mind," said Paul Honchar, senior product manager at Sensus. "In this particular instance, the meter alerted us to the problem and saved the utility from the aggravation and potential backlash of incorrect billing."

The utility is now looking to install more AAT meters throughout their system. In addition to accurate reads and alarms, the utility made the business case by pointing out time saved and improved operational efficiency.

"Routine maintenance intervals can be expanded, possibly until the meter indicates the need," added Honchar. "The meters tell the utility instantly when there is an issue and reads are adjusted back to factory accurate. Now, when the leaves fall, we don't need to worry about anyone losing money."



Accuracy Counts When You've Got Millions in the Line.

It's not what you paid for the meter, it's what the meter can pay you.

With dual rotors that respond and adjust to variances in upstream conditions, Sensus Auto-Adjust™ meters ensure accuracy at all flows and pressures. Plus, they're easier to install and service than other high-volume inferential meters.

Can the Auto-Adjust save you money? Find out at www.sensus.com/turbo – take a tour, see video and download a comparative white paper.



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