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Electric and Gas on One Meter Data Platform

Combination utilities should not need two meter data stacks. The answer is a platform that is commodity-aware where it matters and shared everywhere else.

PRODUCT	Grid Data Management Platform
AUDIENCE	Combination utilities, gas operations, IT and enterprise architecture

Two commodities, two stacks

Many combination utilities run electric and gas meter data on separate systems. The reasons are usually historical. Electric AMI arrived first and brought its own MDMS. Gas metering came through a separate program, an acquisition, or a legacy billing path that was never folded in.

The result is two of everything: two sets of VEE rules, two exception queues, two CIS integrations, two teams with different tools, two upgrade cycles and two security reviews. A customer with both services has two separate data stories, and the contact center stitches them together by hand. IT pays to maintain both, and every enterprise initiative, from a new CIS to a data platform, has to integrate twice.

The obvious fix is to put gas on the electric MDMS. That is where many consolidation efforts stall, because gas is not electricity with different units.

Why gas is different

Gas is metered in volume and billed in energy. A gas meter measures how much gas passed through it. Customers are billed for the energy in that gas. Getting from one to the other depends on conversion factors: heating value, delivery pressure, and correction for conditions. Those factors change over time, vary by area, and have to be governed. A bill should be able to say exactly which factor applied and when it took effect.

Pressure districts matter. Delivery pressure differs across the system, and it affects the conversion from volume to energy. The platform needs to know which district a meter sits in, and when that changes.

Weather drives usage. Gas consumption is dominated by space heating, so it tracks heating degree days far more closely than most electric load does. A cold snap that sharply raises a customer's usage is expected behavior. Validation and estimation have to understand that, or they will flag real usage and underestimate missing reads on the coldest days.

Safety events cannot wait in a billing queue. Gas meters and their communication modules can report conditions that are safety-relevant. Those events need to reach gas operations promptly, through a path designed for them.

Unaccounted-for gas is a regulated measure. The difference between gas entering a system and gas metered at customer premises is watched closely by regulators and operations. Tracking it well requires meter data that is complete, converted correctly and aligned in time.

Gas billing has its own certification. Gas determinants follow their own rules and certification steps, and regulators expect them to be handled with the same rigor as electric.

A platform that ignores these differences forces gas into an electric model and loses what matters. A utility that keeps two stacks to preserve them pays for everything twice.

Principles: commodity-aware where it matters, shared everywhere else

The right design separates what is truly different about gas from what is simply duplicated.

Share the foundation. Customers, exceptions, the audit trail, security and the connection to CIS should be shared, so a customer with both services is one customer with one history.

Govern conversion factors like financial data. Conversion factors should be approved before use, applied from the right date, and visible to the people who depend on them. Every gas bill should trace back to the factors it used.

Make gas VEE gas-aware. Validation and estimation for gas should account for weather sensitivity and gas-specific patterns, rather than reuse electric assumptions.

Route safety events to gas operations. Safety events deserve their own path, their own visibility and their own urgency.

Watch unaccounted-for gas continuously. Alerts should surface when a district or system trends out of range, so gas operations can investigate while the data is fresh.

Certify gas billing on its own terms. Gas billing should be certified on its own terms, then delivered to CIS through the same governed process as electric.

What it looks like in practice

The Grid Data Management Platform runs electricity and gas on one platform. Everything that should be shared is shared, from the exception workbench and the immutable audit trail to delivery to CIS. On the gas side, the platform supports pressure districts, governed conversion factors, weather-aware estimation, gas VEE, safety events, unaccounted-for gas monitoring, gas billing certification, gas dashboards and a library of standard reports.

Gas operations teams see factor status, unaccounted-for gas alerts, safety events and certification queues. Billing teams certify both commodities through one governed process. IT runs one platform, with one upgrade cycle and one security posture. Our platforms support more than 15 million meters and over 1 billion interval reads per day in production.

> **ILLUSTRATIVE EXAMPLE (HYPOTHETICAL)**
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> Consider a hypothetical combination utility heading into a hard cold snap in the middle of a gas billing cycle.

Gas usage across the service territory climbs sharply. Because gas VEE is weather-aware, the high reads are treated as expected rather than flooding analysts with exceptions. Some gas modules miss reads during the coldest nights, and the estimates that fill those gaps reflect the cold weather.

Midway through the cycle, an updated heating-value factor arrives from the gas supply team. It cannot be used until it is approved, and then it applies from the date it takes effect. When the cycle is certified, the billing team can see which factor was in effect on which days.

In one district, unaccounted-for gas starts trending up and an alert reaches gas operations. The same week, a safety event from a meter module in that district is routed straight to the gas operations team rather than sitting in a billing work list.

Meanwhile, a customer with both services calls about the winter bill. The representative sees the electric and gas history for the premise side by side, in one place, and can explain both.

Questions to ask any MDMS vendor

- Do electric and gas share one customer, premise and master-data picture, or are they integrated after the fact?
- How are conversion factors governed? Are they approved before use, and can a bill show which factors it used?
- Does gas VEE account for weather sensitivity, or does it reuse electric assumptions?
- How do safety events reach gas operations, and how quickly?
- How is unaccounted-for gas monitored and alerted?
- Does gas billing have its own certification, and does it use the same audit trail as electric?
- What does IT maintain: one platform or two?

One platform, two commodities

Combination utilities should not have to choose between treating gas correctly and running one system. The practical path keeps gas-specific logic where gas is truly different and shares everything else. That gives gas operations the tools they need, gives billing one governed process, and gives IT one platform to run.

Learn more about the Grid Data Management Platform at perinimble.com/grid-data-management/, or talk with our team at perinimble.com/contact/.

ABOUT PERINIMBLE

PeriNimble builds mission-critical grid data software for energy and utility companies. Founded in 2022 and headquartered in Bloomington, Minnesota, we support more than 15 million meters and over 1 billion interval reads per day in production.

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