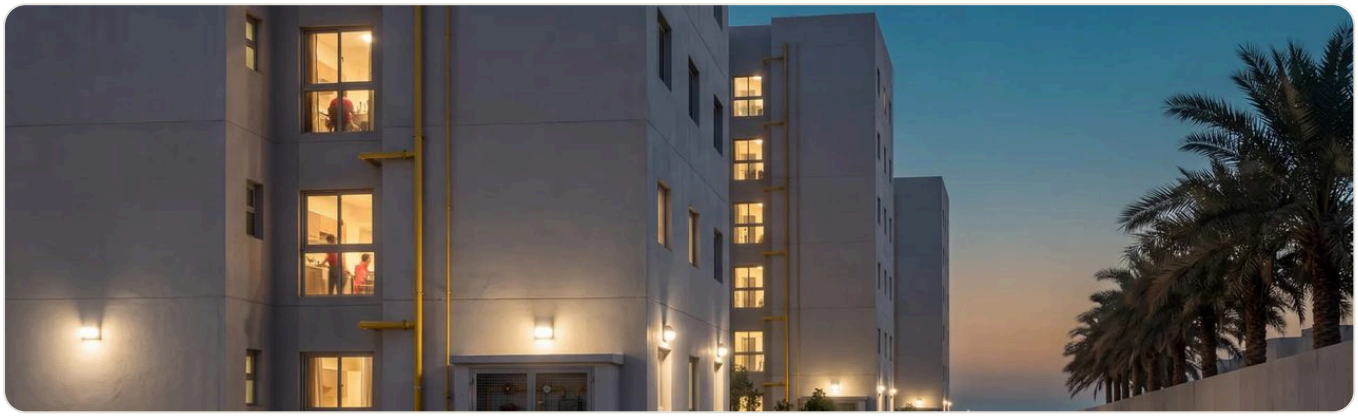
Energy & cooling · For LPG distributors, gas billing companies & building owners

Gas Shield — Central LPG riser slow-leak & meter discrepancy audit

Which tower needs a leak inspection first? Which discrepancy justifies a visit when crews also have meter faults and known demand changes to investigate?



01 · UAE REGULATORY & OPERATIONAL SCALE

Under Dubai Executive Council Resolution No. 85 of 2025 (Art. 13), licensed LPG operators must report any incident arising from their activity to the Supreme Council of Energy within 24 hours across residential communities and multi-storey buildings.

02 · ZERO-RISK START (UTILITIES & CITY INFRASTRUCTURE)

4-week replay at AED 0 upfront on 90 days of hourly master, flat and shop meter readings, riser pressure and temperature, as-built riser volumes and delivery records, with zero connection to valves or alarms. Later work on terms agreed after the study.

03 · AUDITED STAGE, BENCHMARKS & OPERATING BOUNDARIES

Stage: Simulated, internal review (100 simulated towers, 120 tanks; untested on a real network). Of 77 slow riser leaks that grew to 0.5 L/min across 16 unseen scenarios (out of 416 total leaks), 75 were flagged before 0.5 L/min vs 56 (or 61 re-tuned) for a night-gap threshold rule, and 184 of 185 (of ~826) vs 130–142 in 32 second-review scenarios. False inspections were 0.81 vs 0.70 per building per year (0.67–0.94 re-tuned; difference not statistically significant). Needs hourly master, flat/shop meters, riser pressure/temperature and as-built riser volumes. No gain is claimed on tanker routing (~2% to 4% more stops vs days-of-cover).

COMPATIBLE SYSTEMS & STANDARDS

Hourly Master & Unit Gas Meters · Riser Pressure, Temperature & As-Built Volume · Manual Technician Action Only

Verification Protocol · Zero Live Access

How the 4-week offline audit runs at AED 0 upfront.

Proven offline on your historical records before anything is switched on — with your own engineers, clinicians, surveyors or licensed customs staff keeping final sign-off.



Two safe ways to verify without system logins

NO VPN · NO LIVE CREDENTIALS

Option A · Read-only CSV/Excel slice under NDA
Share an agreed read-only historical export under mutual NDA. Nodal returns a quantified, line-referenced report in writing for your operational lead to verify.

Option B · Self-run by your own IT
Your IT runs Nodal's auditable offline checker locally on a standalone machine inside your UAE boundary and shares only the summary table if you choose.

What inputs are required for Gas Shield's night-time riser leak check?

Hourly readings from the master tank/inlet meter and every flat and shop meter, riser pressure and temperature (for line-pack correction) and riser volumes from as-built drawings; towers without a master meter or with monthly readings only cannot run the night check.

Does Gas Shield connect to or reset gas shut-off valves?

Never. It has zero connection to valves, detectors or alarms; qualified technicians inspect and act manually on site under existing safety procedures.

How did false inspection rates compare in simulation?

False inspections were 0.81 per building per year vs 0.70 for the first-tuned threshold rule (0.67–0.94 across re-tuned variants, a difference that is not statistically significant).

Delegate in one forward — no introductory call required

Web dossier: nodal.systems/gas-shield.html · Written checklist & mutual NDA: santiago@nodal.systems

AED 0 UPFRONT