



Securing Energy, Unlocking Growth

The infrastructure that lets LPG
companies expand into every market,
with confidence



2 Billion People Worldwide Still Need Access to Clean Energy

2B+

people globally without
clean cooking access

3.7M

premature deaths per year
from toxic cooking smoke

1.8B

still without access by 2030
under current policies



Open fires and toxic biomass

Over 80% of sub-Saharan households cook with wood, charcoal or dung — releasing toxic fumes at lethal concentrations indoors daily.



Concentrated in rural areas

The access gap is overwhelmingly rural, communities hardest to reach, most underserved by distribution infrastructure, most reliant on LPG as the viable clean alternative.



A solvable crisis

The IEA projects LPG will provide clean cooking access for over 60% of newly connected African households. The technology exists. The infrastructure to deliver it does not yet exist.

One Problem Stops LPG Reaching the People Who Need It Most

Across Africa, Asia and Latin America, LPG distributors know the market is there, but they cannot afford the asset risk of deploying cylinders into rural areas they cannot track, secure, or recover.

Without Asset Control

- Up to 75% of cylinders are unaccounted for once they leave the depot
- Rogue dealers refill branded cylinders illegally, destroying margin and safety
- No cross-company visibility when cylinders circulate between competitors
- Rural distribution economics are unviable, too much capital at risk
- LPG companies cannot expand into new communities with confidence

The Clean Energy Consequence

- LPG companies limit deployment to areas they can directly supervise
- Rural and peri-urban communities remain excluded from clean energy
- The billions of people who need LPG most are the hardest to reach commercially
- Distributors cannot scale without first solving asset security
- The global clean cooking transition stalls despite the technology existing

The SMART VALVE system is built to eliminate every blocker

Securing the world's energy infrastructure with intelligent, traceable systems. Empowering providers to protect assets, operate with confidence, and expand clean-energy access for all.

Our Smart Valve System eliminates these risks, giving energy providers secure access to untapped markets and enabling them to sell more gas with confidence.

With IGV, industries gain:

- Real-time visibility into asset movement
- Enforcement of safety and maintenance cycles
- Elimination of unauthorised refilling
- Securely expand into new markets
- A safer, more reliable national energy ecosystem
- Boost cylinder utilisation rates

WHAT IS A SMART VALVE



A Smart Valve is an innovative solution designed to enhance the efficiency, safety and control of gas distribution systems. Equipped with advanced tamper-proof technology and integrated software, Smart Valves provide real-time monitoring, diagnostics and control capabilities.

This enables LPG companies to prevent unauthorised refilling, ensure compliance with maintenance schedules and optimise the overall management of their cylinder fleets.

By leveraging Smart Valve technology, businesses can significantly reduce operational risks, improve safety, foster customer loyalty and ultimately increase the return on investments for their cylinders.

Part of the IGV Platform

01. Smart Valves

02. Blockchain

03. Elysian AI

04. Track & Trace

Intelligent, Tamper-Proof Technology That Protects Every Cylinder



Smart Valves combine hardware, software and cloud intelligence to secure assets, eliminate theft and maximise cylinder turnover.



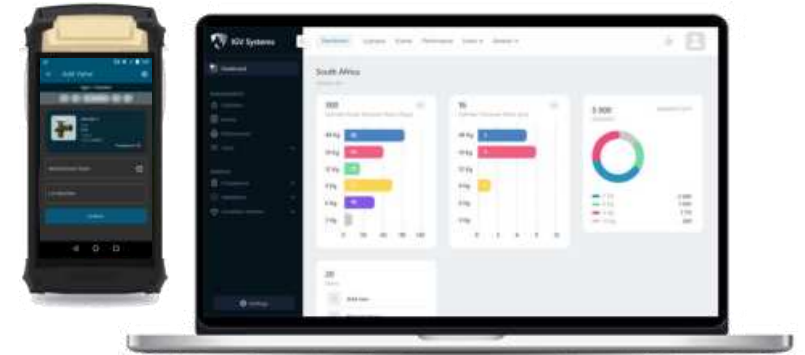
Smart Valves

- Tamper-proof
- Prevents illegal filling
- Anti-removal device prevents unauthorised removal
- Every cylinder carries a secure digital ID
- Real-time verification at filling, transport and delivery



Hardware

- Centralised compliance checks
- Operates during network failures
- Operates with normal valves



Software

- Track inventory, maintenance & utilisation rates
- Dashboard for performance and cylinder management
- Advance Blockchain technology for cylinder exchanges

From Cylinder to Cloud - Total Control & Total Growth



Every Smart Valve connects seamlessly to IGV's digital ecosystem, giving companies traceability, compliance and the ability to sell more volumes securely.



Capture



Cylinder, valve, and company details are captured via the IGV Mobile App and stored on both the RFID tag and the secured IGV cloud database



Fill



Cylinders connect to the IGV Filling Unit, which reads valve data and sends it to the IGV Controller for verification. The controller grants or denies filling access, and all filling data is stored in the cloud.



Deliver



Customer details are captured on delivery with the IGV Mobile App, which links cylinders to the customer's account. Returned empty cylinders are scanned and recorded.



Analyse



All data is updated in real time to the IGV cloud, where it can be viewed, managed, and monitored.

SMART VALVE SYSTEM: CORE PLATFORM CAPABILITIES



Compliance

Set and enforce company standards across individual cylinder types or entire fleets. Issue recall orders instantly; enforce safety and maintenance standards across the entire value chain.

Cylinder Utilisation Rates

View the rotation of individual cylinders or the entire fleet. Understand the factors that influence rotation rates and act to improve turnover.

Maintenance

Full control of cylinder maintenance, ensuring customers always receive a properly maintained cylinder. View and track service records over the entire lifecycle.

Access Control

By increasing the circulation of cylinders by securing, tracking and maintaining cylinders, users can reduce the number of new cylinder purchases, thereby increasing profits effortlessly.

User can:

- Prevent rogue and illegal filling
- Prevent filling of invalidated cylinders

Real-Time Management

Centralised cloud dashboard surfaces performance data as it happens. Identify bottlenecks, recover lost cylinders and drive decisions with live intelligence.

Inventory Management

View and manage cylinder inventory levels in real-time, by size, status and location. Instant visibility across every depot and distribution point.



The Smart Valve System is only one component of a fully integrated enterprise asset security & management platform

As your operations scale, each additional module extends visibility, intelligence and control across your entire gas supply

01 THIS BROCHURE

Smart Valve System

Tamper-proof hardware, access control and cloud intelligence.

The foundation of the solution.

02 BETA

Blockchain

Immutable audit trails for every cylinder exchange between companies.

Eliminates disputes.

03 COMING SOON

Elysian AI

Predictive demand forecasting, theft pattern detection and automated fleet optimisation

Powered by Elysian AI

04 COMING SOON

Track & Trace

End-to-end supply chain visibility from production to last-mile delivery with full inventory reconciliation

Ready to stop losing revenue and start growing?



Let's secure your cylinder fleet - today.

The blocker is solved. IGV's Smart Valve System gives companies the asset control they need to expand into every market, recover lost cylinders and grow volumes, while enabling clean energy access for the communities who need it most.

Implementation is fast, the ROI is clear and our team supports you every step of the way.

REQUEST A DEMO

See the system live in
30min

GET A PROPOSAL

Tailored to your fleet
size and requirements

SPEAK TO AN EXPERT

No obligation, all
answers



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