



Intelligent Sensing Anywhere

## Summary

### Project:

Telemetry: Remote monitorization of tanks and gas meters

### Industry:

Gas distributors

### Challenge:

Improve the efficiency of operations and reduce logistic costs  
Estimate the necessary gas stocks and the number of vehicles for the distribution  
Invoice based on real consumptions  
Increase customer loyalty

### Solution:

iGasAMR – Telemetry system for gas Automated Meter Reading

### Benefits:

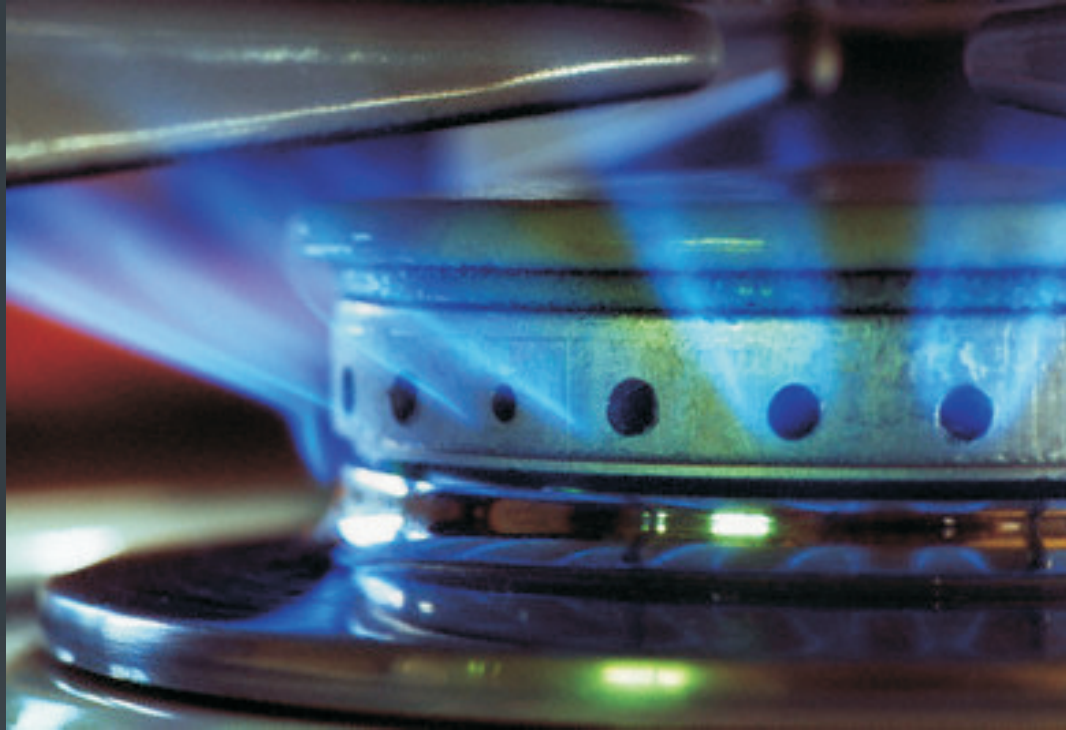
- Reducing costs associated with manual reading and estimated invoicing
- Prevision of supplies and optimization of the distribution routes
- Intelligent remote metering
- Eliminating reading errors
- Possibility of multiple tariff plans
- Easy to operate and install
- Access via cell-phone/web
- Tampering alarms
- Better customer management

### State of business:

Pilot phase concluded with confirmed logistic gains.  
Large scale implementation in process, covering a wide universe of tanks and meters.

### Requisites/Specifications:

- Analog, digital or counter inputs
- GSM/GPRS Communication
- Radio interface ready for Mesh Networks
- Powered for a long life battery
- ATEX Certification Zone 1
- Operative Temperature: -20°C to 55°C
- Prepared to read up to 4 tanks and 100 meters



## Remote Gas Metering

### Automatic Reading of Meters and Gas Tanks

Essentially gas distributors, for which gains related to logistic optimization are very significant, have been intensifying their investments in technologically innovative solutions, namely in telemetry systems that will allow them to know the amount of gas in each tank, as well as each customer's consumption, at distance.

ISA was pioneer in launching of iGasAMR into the market, a device, with ATEX certification for the installation in potentially explosive areas, which monitors tank levels and natural gas meter readings, making records remotely available.

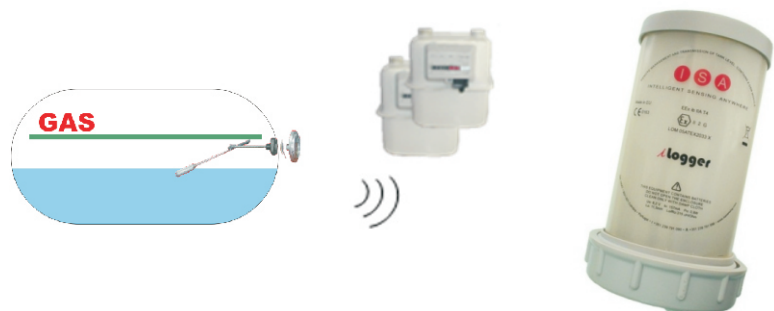


Figure 1 - iGasAMR: Solution for automatic reading of gas tanks and meters.

### Detected Necessities

To increase the efficiency of operations, *Primagaz* needed to know remotely each tank's level in order to optimize the deliveries routes. This important distributor intended also to know the consuming profile of its customers - in order to avoid manual readings and calculate each tank's autonomy and more efficiently estimate the necessary stocks and the number of vehicles to be allocated for the distribution - and also to improve customer loyalty.

The iGasAMR appeared as the best response for *Primagaz*, as it worked as a complete solution, which integrated the remote availability of meter and gas tank level readings. With this information, it is possible for the client to increase the efficiency of its operations, promote gains and recover the investment made in telemetry in a very short time.

# Case Study Remote Gas Metering



Figure 2 - LPG tank monitoring



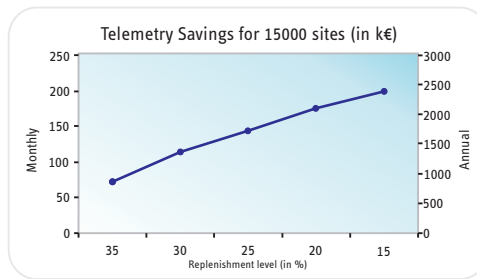
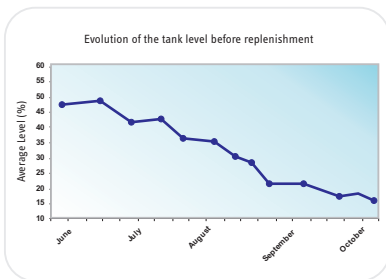
Figure 3 - Gas meter reading

## Implementation

The Project started in 2006 with a testing phase, which contemplated the installation of iGasAMR in around 400 meters and 90 gas tanks. After evidencing the benefits of ISA's solution, *Primagaz* decided in 2007 to expand telemetry onto a universe of 13,000 meters and 4,000 tanks.

## Conclusions/Future Developments

Currently *Primagaz* has access to tank levels and gas consumption remotely. In the figure it is shown the decrease of the tank level before replenishment, during the pilot phase of this project which represented a reduction in the frequency of gas deliveries. According to the gains presented, it is foreseen that the investment made by *Primagaz* will be recovered in two years which means that telemetry is an attractive business to investors.



As a future evolution, it is expected that the potentialities of this solution will be put into practice, and its use expanded on to the intelligent monitorization of energy consumption.

## Primagaz

*Primagaz* is one of the branches of the *SHV* group, worldwide leader in Liquefied Petroleum Gas (LPG). It exists in 22 European countries, as well as in Asia and Latin America, integrating more than 11,000 collaborators.

As the first private company to obtain the status of public gas supplier in France, *Primagaz* is proud to invest in innovation, a fundamental value to continuously broaden the variety of products and services accessible to their clients. *Primagaz* was the first company in the sector to promote the service of energy counseling with the purpose of helping clients to optimize their consumption.



Intelligent Sensing Anywhere

ISA is an award-winning global company specialized in Telemetry and M2M (Machine to Machine) Communications. ISA is a global leader in different market segments such as: Remote Management for Utilities, including telemetry and remote metering solutions for gas, fuel, electricity and water. The products, solutions, and services offered by ISA are based on its own technology and know-how in the fields of electronics, software development, telemetry and control, which have been accumulated over the past 20 years. The ability to develop and launch innovative products into the market in a very short time is the key to ISA's international success. Among many awards received, ISA was distinguished in the course of Metering Europe 2006 in Copenhagen with the Innovation Award of the European Utility Awards. This award cited ISA's iEyeMeter – an innovative solution which enables wireless multi-utility remote metering without the need to exchange legacy meters.

[www.isasensing.com](http://www.isasensing.com)