

# CASON DIWICON-G

## Gas Management System

CASE STUDY

ENI S.P.A – TIGÁZ ZRT

## Gas Management System

### Customer profile

TIGÁZ, an ENI S.p.A. subsidiary, is the market leader in the distribution of natural gas in Hungary with a service territory covering about one third of the country in the North-western region.

The distribution and connecting pipeline network is more than 32,000 km in length. In 2007 TIGÁZ distributed a total of 3.3 billion cubic meters of natural gas to a consumer base of 1,191,000 customers, 1,123,000 of which were household consumers and 68,000 Non-household consumers (industrial, agricultural, communal, commercial, etc.).



### Background

The customer had been using PDAs to read gas consumption data and there was no gas pressure monitoring system in place.

TIGÁZ was looking primarily for a technical monitoring system to collect pressure values and flow computer data at the most important distribution network nodes.

The Distribution division of TIGÁZ also required hourly on-line consumption data in order to monitor the consumption of eligible consumers purchasing gas from the liberalized market players.

### Solution

TIGÁZ began deployment of the technical monitoring system and installed Cason's field devices at the major gas transfer stations. As many important gas customers were connected directly to these stations, the DIWICON-G system revealed large discrepancies between the contracted maximal debits and the real peak consumption of these customers.

The problem was obvious because it was creating significant difficulties in capacity planning. However, before installing DIWICON-G, TIGÁZ was not able to identify the real peaks due to the lack of a frequent and reliable measuring method of these values.

Cason's DIWICON-G made possible automated hourly data collection and a much more precise follow-up of the main customers' gas consumption.

Because consumption above the contracted peak volume results in significantly higher prices and fines, the large consumers renegotiated their contracts for different maximum debits. DIWICON-G field devices were installed for all the major customers.

Today, the number of field devices installed at TIGÁZ is around 1500.

The central DIWICON-G supervision system includes a SCADA solution.

### Benefits

Cason's DIWICON-G solution, including Gas Management, SCADA, intelligent field devices and various sensors, is a comprehensive, cost-effective industrial grade solution specifically developed for gas distribution and trading companies.

By installing DIWICON-G, TIGÁZ has achieved

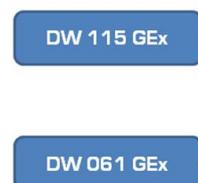
- very precise monitoring of the gas network,
- detailed and exact billing,
- optimized capacity planning,
- an increased and balanced revenue stream.

The whole field data collection process is automated. The system is interfaced with SAP.

DIWICON-G is a totally wireless, easy to install, modular, and flexible hardware + software solution. No additional hardware or licenses need to be purchased. Data is stored in an SQL database. There is no dedicated client software, since the application front-end is a web browser. All communication is secure, redundant, and uses the publicly available GPRS cellular network. Using GPRS networks for data transmission is an inexpensive solution. The field devices are ATEX-certified explosion-proof, battery-driven, and their autonomy can reach 5 years.

Also, on a liberalized gas market, distributing gas on someone else's network can be done by simply installing DIWICON field devices for the relevant customers.

### Sample DIWICON-G Installation



# CASON DIWICON-G

## Gas Management System

### ENGIE - DISTRIGAZ SUD

#### Customer profile

Distrigaz Sud is an Engie (former GDF-Suez) subsidiary, the market leader in the distribution and trading of natural gas in Romania supplying half the country an annual volume of 5 billion cubic meters through a 13,000 km long pipeline network with 2.5 million endpoints.

#### Background

Distrigaz Sud was facing serious gas distribution system balancing problems, mostly due to suboptimal planning of the high pressure gas transmission network and insufficient gas storage capacity.

The customer was looking for a solution to ensure the equilibrium of the gas distribution network, via the implementation of a reliable centralized network monitoring function, where pressure data is collected automatically and transmitted wirelessly.

The Trading division also required hourly on-line consumption data.

#### Solution

Distrigaz Sud implemented Cason's DIWICON-G gas management and SCADA system and installed 1,120 field controllers and 2,400 field transmitters on its network.

Both pressure regulation stations and gas transfer stations were equipped with field controllers. These controllers are connected to high sensibility pressure sensors and flow computers and send data wirelessly (every 50 minutes or on pressure change) to the central SCADA and gas management applications.

The installed DIWICON-G system provides Distrigaz Sud with a good solution for balancing the network and ensuring precise monitoring and supervisory control of the gas network.

As a result of this successful implementation, a similar system will be installed on the high pressure gas transmission network, operated by a different company.

#### Benefits

Cason's DIWICON-G solution, including Gas Management, SCADA, intelligent field devices and various sensors, is a comprehensive, cost-effective industrial grade solution specifically developed for gas distribution and trading companies.

The system fulfills the legal requirements of the liberalized gas market regulations.

By installing DIWICON-G, Distrigaz Sud achieved very precise monitoring of the gas network, got comprehensive tools to maintain balance on the network, detailed and exact billing, optimized capacity planning, and an increased and balanced revenue stream.

The whole field data collection process is automated. The system is interfaced with SAP.

The costs related to supervision personnel on the field, including those for the guards housed next to the major gas transfer stations, inventory, heating etc, have been drastically reduced.

DIWICON-G is a totally wireless, easy to install, modular, and flexible hardware + software solution. No additional hardware or licenses need to be purchased. Data is stored in an SQL database. There is no dedicated client software, as the application front-end is a web browser. All communication is secure, redundant, and uses the publicly available GPRS cellular network. Using GPRS networks for data transmission is an inexpensive solution. The field devices are ATEX-certified explosion-proof, battery-driven, and their autonomy can reach 5 years.

Also, on the liberalized gas market, distributing gas on someone else's network can be done by simply installing DIWICON field devices for the relevant customers.

#### Sample DIWICON-G Architecture

