



TOTALGAZ

OPTIMIZING BULK LOGISTICS



Aims:

- to optimize the supply chain from the bulk gas storage depot to the delivery point
- to gauge the challenges set by different (*What-if?*) scenarios



Solution:

Recurrent studies based on the EURODECISION LP-SupplyChain model



Results:

- shorter distances travelled by the tanker trucks
- summer/winter logistics system set up
- optimized product exchanges with sector counterparts
- annual review of customer segmentation

"We have used the services of EURODECISION to define new scenarios to enhance our economic performance since 2010 and have found the pattern of working together most efficient. Now we have adopted the annual appointment with the Supply Chain consultants has become an institution not to be missed." Bertrand Vienot, Director, Procurement and Logistics, TOTALGAZ.

TOTALGAZ, the liquid petroleum gas sales specialist actively participates in every stage of its product distribution chain, from procurement at the refineries to customer delivery.

TOTALGAZ distributes gas in France, for both domestic and professional purposes. So while propane is generally used to supply homeowners' systems (heating, pools, etc.), butane is primarily used in industry (including the food-processing, metallurgy and chemicals sectors). Lastly, autogas or LPG is a vehicle fuel sold to the public at service stations.

The Deliveries unit of the Procurement and Logistics Division is responsible for organizing gas delivery rounds – an activity that is extremely prone to seasonal peaks because of the very nature of the products. With more than 180 000 customers in some fifty catchment

areas, TOTALGAZ is constantly on the lookout for ways to optimize its organization and thus improve its performance and enhance service quality to the customer.

The Delivery personnel have to contend with a sector-specific feature in carrying out their mission that takes the form of a product exchange system operated with TOTALGAZ's counterparts. As it happens only 22 storage sites belong to TOTALGAZ, however supplies are procured from the company's peers through agreements struck with the other gas distributors. Consequently, they can meet customer demand anywhere in France.

In 2010, the Deliveries unit retained EURODECISION to model its existing logistics structure and identify any optimization measures. EURODECISION's Supply Chain consultants had already carried out an assignment for another TOTALGAZ department and so were familiar with the energy sector.



EURODECISION mapped the TOTALGAZ distribution business, the depot storage capacities and delivery points grouped by canton on the basis of all the data gathered. Its project-specific mathematical model was configured to take into account the TOTALGAZ constraints, which mainly entailed giving priority to loading gas from its own depots. The optimization target also aimed to shorten the distances travelled by the tankers and so reduce the inherent risks of transporting hazardous goods.

The Deliveries personnel examined various avenues for change and their economic impact on the basis of the existing structure (moving the procurement sources, opening/closing a depot, reallocating cantons to depots, and so on) with a view to enhancing the performance of its distribution business.

This first study enabled the Deliveries personnel to quantify the usefulness of a seasonal approach without compromising service quality. Accordingly, during the low season (March to October), the call-center staff taking orders was downsized.

The delivery fleet has also been adjusted with 70 trucks in summer as opposed to 255 in winter

The model also tested the impact of "What-if?" scenarios. By way of example, TOTALGAZ decided to outsource the deliveries of this fuel after optimizing mapping of the autogas catchment areas in 2011 and assessing the related distribution cost. As a result, a single transport company was selected in 2013 to deliver TOTALGAZ autogas in France.

Since the first mapping assignment, the model has been revised to incorporate network changes and customer demand forecasts every year. This groundwork means that TOTALGAZ can prepare for the season ahead, with a good grasp of product exchanges and so optimize the gas delivery rounds. Joint work involving TOTALGAZ and EURODECISION's Supply Chain consultants continues in 2014. The parties are currently working on updating the model for next winter's campaign.