LIBERALISATION OF THE NATURAL GAS AND ELECTRICITY DISTRIBUTION MARKET:
OPTIONS CHOSEN AND LESSONS LEARNED
Remy HATERT
Netmanagement - Belgium
Remy.Hatert@netmanagement.be

INTRODUCTION

Gas and electricity distribution in Belgium is the responsibility of the regions. As a result, the liberalisation of the markets is organised differently in the country’s three regions. In Flanders (60% of customers), the entire market has been liberalised since 1 July 2003. In the two other regions, Wallonia (25%) and Brussels (15%), HV-HP (High Voltage-High Pressure) customers and business customers have been liberalised since July 2004. Domestic customers in these two regions are due to be liberalised on 1 January 2007. So, today we are over half way there. It is therefore useful to take stock of the situation and learn lessons for the road ahead. The disintegration of existing systems, decentralisation of originally integrated processes, the arrival of new players on the scene and the multiplicity of data are new realities of the current situation. The quality of data, a coherent architecture and a gradual approach to the transition are key success factors. The experience described here concerns the mixed Distribution System Operators (DSOs) (80% of supply points)(partnership with Netmanagement – Electrabel subsidiary).

BREAK WITH THE VALUE CHAIN = BREAK WITH THE VERTICAL NATURE OF PROCESSES AND THE CENTRALISATION OF IT APPLICATIONS

One of the major changes made for the liberalisation of the market is the personal identification of each actor in the value chain all the way from the generator to the customer, not forgetting the roles of energy transmitter, distributor, trader and supplier. Each existing process is being revised not only because it is being carried out within a new organisation but also because this revision takes account of the new state of affairs. New processes must also be established (calculation of the grid fee, allocation, reconciliation and so forth). As part of the implementation of the Belgian mixed Distribution System Operators, the Business and IT architecture has been restructured as follows:

Management of connection asset and works,
is the responsibility of Netmanagement. Any modifications made to assets are added to the Metering database. Metering will then inform suppliers of these modifications in such a way that they will become familiar with the formats used for the consumption values that are sent to them.

Management of the access registers,
('real time' description of access contracts) is the responsibility of the DSOs. It is at this level that the system can be accessed by all players on the market who make their information available -- via a secure network (Value Added Network) – according to a generally accepted and standardised protocol (EDIEL).

Management of metered data,
all practicalities linked to meter reading, the processing of metering data and sending results files are performed by Indexis, a wholly-owned subsidiary of the DSOs.

Keeping the three above-mentioned databases synchronised is key. This alignment is carried out in real time and is triggered by the processes themselves. For example, a single modification to a meter affects the data in all three systems. Triggering interfaces is critical and follow-up procedures must be flawless to avoid the risk of upsetting the workings of the entire system.
QUALITY OF INFORMATION

Needless to say, the quality of information is of paramount importance if the liberalised market is to function successfully.

Quality must be higher than the quality we expected in the regulated captive market.

- In the regulated market, the single operator alone held the key to data integrity. For example, during the billing process the operator would uncover an error which it had introduced whilst carrying out the works. Today, each player identifies its problems and may have to turn to others to correct them.

- The stability of relations between the operator and the customer allowed subsequent corrections to be made without major problems by means of bipartite negotiation between the operator and the customer. The increased number of players and, above all, the option for customers to change suppliers and DSOs (for instance when moving house) give rise to major difficulties for subsequent corrections.

- Needless to say, the complexity of the new processes is leading to an increase in data which are necessary for these processes to be completed. The more data there are, the more complex the quality challenge becomes.

The source of poor data

The processes can be divided into two main categories:

- Physical scenarios (e.g. connecting a customer on the network). These situations materialise in the field independently of a running or not running IT application. Consequently, the input of data into the computer is not in synch with the actual process in the field. Moreover, IT input of relevant data has to be strictly compliant with the timeframe of events. So this is not insignificant source of IT data errors where physical situations are concerned.

- Relational scenarios (e.g. supplier switch). These situations refer to processes (without works) that are only supported by IT applications. For these processes, the system modules and their interfaces must function impeccably. There must also be perfect dialogue between all players involved – in the case of a supplier switch for example where the two concerned suppliers have to carry out the switch following very strict and constraining procedures. We must also take care not to forget the customer's meter-reading, which is a key factor for all events, be they physical or relational. Given the fact that it would not be financially feasible to take meter-readings systematically and for each event by an external company (Indexis), it is necessary to rely on the discipline of the customer (difficult to acquire) or on generally approved estimation techniques.

The impact of wrong data

Any wrong data has a major knock-on effect, for example the desynchronisation of the three main databases, meaning that the data are no longer consistent with each other: supplier, meter specifications, grid usage price, date of the switch and so on.

The result of all of this is often an incorrect bill (or no bill, or several bills) sent to a customer. It is not always simple for the supplier to identify the problem and it is necessary to define the causes. The rectification is a new process accurately getting installed in the context to the new EDIEL messages normalised between all players and which, finally, should automate the corrections to a maximum.

At DSO level, a procedure to monitor the system and an internal follow-up system for problems (ticketing) have been set up in a bid to accelerate the examination of and the solution to the problem.

GRADUAL APPROACH IN THE TRANSITION

Electrabel – as a private partner of the mixed intermunicipal companies which manage the network – has addressed the issue of market liberalisation by using an integrated application – monobloc – which was already being used in the captive market. This three-pronged application managed the customer billing process, connections and all issues related to meter-readings and meter processing.

The two years between the decision to liberalise (beginning of 2001) and the actual liberalisation (July 2003) did not allow enough time to enable complete separation of the IT applications before the deadlines. A detailed action plan was drawn up and accepted by the regional regulators to put together a complete split:

- Billing Electrabel Customer Solutions customers (ex-partner of the municipalities within the captive market) will be carried out via another application from the end of 2005 onwards. The aim will be – within a short period of two months – to align the old and new billing applications and to then migrate all the 'customers' list to the new application.

- We will then be able to migrate all the functions of 'meter' reading and make the Indexis application completely independent.

- Thirdly, all the supply point assets will be migrated to a new SAP application which is compatible with the DSOs' new architecture. This application will benefit – during its implementation – from all the lessons learned in the first phase of liberalisation:
  - distinctive features of data linked to liberalisation (e.g. treatment of installations without a meter);
  - control process evolved from encoding data;
  - possible revision of the interfaces with the access tables and the metering responsibilities of Indexis.
This new outlook could benefit as from spring 2006 the customers who are currently liberalized. A roll-out phase will last until the end of 2006, the date when the liberalisation of domestic customers begins in the country’s two other regions.

CONCLUSIONS

In connection with the liberalisation of the energy market and within an evolving regulatory context, it is above all essential to stabilise the processes. The large number of players and functions and demands in terms of data quality require the gradual implementation of a decentralised, modular and upgradeable Business and IT Architecture and constant monitoring of the system’s success.

The internal and external factors which cause desynchronisation must be pinpointed as early as possible. It is particularly important to draw attention to the network-related physical scenarios, which – if not carried out with the utmost discipline – will cause fundamental data problems.

The transition from captive to liberalised market also implies that vast amounts of data will be migrated; this data must first be tidied up. If it all possible we must avoid 'Big Bang'-type operations even if they initially seem less costly. Processes -- such as following up a connection or monitoring energy billing -- must not be jeopardized.