

# The Role of Distribution System Operators (DSOs) as Information Hubs

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A EURELECTRIC Networks Committee paper



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# The Role of Distribution System Operators (DSOs) as Information Hubs

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## 1. Executive Summary

European Distribution System Operators (DSOs) are facing new challenges. Besides their traditional mission to operate, maintain and develop an efficient electricity distribution system, European DSOs are asked to fulfil a new role: facilitate effective and well-functioning retail markets. Effective retail markets are markets which should give options to the customers allowing them to choose the best supplier and should allow suppliers to offer options and services best tailored to customer needs.

In this new role as neutral market facilitators, DSOs are evolving towards *information hubs* to perform a reliable and swift change of supplier. In this paper, we highlight the key characteristics of what we understand as the role of DSOs as information hubs. We later explain how European DSOs are currently implementing new information hub solutions to facilitate switching. This new process represents a particular challenge, since with the advent of smart meters, the complexity of data handling increases.

The support of policy makers is needed to accompany DSOs' evolution towards information hubs:

1. EURELECTRIC deems essential that market actors are able to use a common market-specific communication and data management system. For this purpose, information requirements should be the same and a minimum level of information requirements should be specific: the database format for example should be open and escalating so as to facilitate data exchange as well as data aggregation.
2. EURELECTRIC considers that policy makers can assist in promoting harmonisation and standardisation of data exchanges and customer processes at the European Union level as this would facilitate supplier switches. Furthermore, EURELECTRIC calls for compatible systems, rules and processes to ensure regional compatibility and interoperability of retail markets.
3. Smart meters will help DSOs in their market facilitation task. EURELECTRIC recommends however that the functionality of any smart metering system should be determined by how it can improve customer service and retail functioning while at the same time keeping costs down.
4. EURELECTRIC sees the need to allow for interoperability and product innovation of smart meters. The meter should not be tied to any 'proprietary standard'. As such, a high level of interoperability and minimum technical standards are necessary in order to allow electricity consumers, suppliers and DSOs to benefit from economies of scope/ economies of scale and from innovation.
5. EURELECTRIC accordingly underlines the need to separate the definition of information and processes from the technology used to implement efficient information exchanges. Flawless and efficient implementation of business requires the interoperability of the corresponding IT support infrastructure to ensure simple, quick and reliable customer related processes.



## 2. Introduction

Electricity networks comprise both transmission infrastructure and distribution infrastructure. Although there is no official or formal "rule" to differentiate between transmission and distribution lines, as a guide, we can say that transmission is all about moving large blocks of power around a country or region or between countries, from where it is produced to the area (such as a city) where it is consumed. This is typically carried out via larger scale power lines at higher voltage. Distribution is then about distributing and delivering this power to final customers, via smaller power lines at medium and/or lower voltage which form the distribution networks. These are typically local infrastructure, but can also comprise some low-voltage regional networks, for example in rural areas.

From an economic perspective, electricity distribution is considered to be a "natural monopoly" activity, meaning that on this specific market segment one firm can produce a desired output at a lower social cost than two or more firms because of both high fixed costs and economies of scale. This explains why distribution tariffs are regulated by the national regulatory authorities, who define or approve the level of tariffs and/or profits that distributors are allowed to set/make. Requirements to separate these activities from the other segments of the electricity value chain (i.e. generation and supply activities) include legal provisions for separation at managerial, functional and legal level as set in articles 15-20 of the 2003/54/EC Directive "concerning common rules for the internal market in electricity"<sup>1</sup>.

Distribution companies have the responsibility to deliver energy of suppliers to end-users and to maintain the distribution networks. They are hence particularly important in ensuring faultless delivery of electrical power to the end users.

In addition, as each and every electricity customer has the right to choose his/her supplier in the competitive market, the distribution companies together with suppliers must work out practicable solutions for information exchange on large numbers of customers wishing to switch from one supplier to another, also because overall European DSOs remain key players in the activity of metering the electricity flow to customers.

As such, DSOs have a key role to play in enabling competitive retail markets in Europe among others by facilitating transparent and non-discriminatory access to network and customer information.

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<sup>1</sup> The same Directive's article 13 imposes Member States to "designate or [...] require undertakings that own or are responsible for distributions systems to designate [...] one or more Distribution System Operators (DSOs)" Ever since the adoption of this Directive, the acronym "DSO" has become commonly used among policymakers and stakeholders and this paper will not derogate to this rule.

However, an increasing amount of supplier-switches will pose challenges to DSOs if they want to keep playing their role of market facilitation. To exploit new functionalities in customer systems, investments in IT systems and customer service resources should be carried out. To finance them, DSOs should be allowed to have adequate returns to recover the investment and related operational expenditure. In this way, DSOs could contribute, at the level of their ambition, to the on-going development of well-functioning and competitive electricity retail markets.

As many observers - including EURELECTRIC - recognize, there is a real need to develop competitive and well-functioning retail markets in Europe in order to make customers gain from benefits in terms of prices, quality of services, choice of commercial offers and product innovation.

Taking into account existing papers on retail markets and customer protection by regulatory bodies, the European Commission as well as EURELECTRIC, this paper aims at clarifying the roles and responsibilities of Distribution System Operators (DSOs) in the ways towards achieving greater customer choice on the electricity retail markets.

### 3. The role of DSOs in achieving customer choice through competitive retail markets

When discussing the ways towards reaching competitive and integrated European electricity retail markets in the future, European DSOs should be seen as key stakeholders in the liberalisation process, along with suppliers, customers and regulators. As market facilitators, DSOs are indeed at the forefront when it comes to enhancing competition.

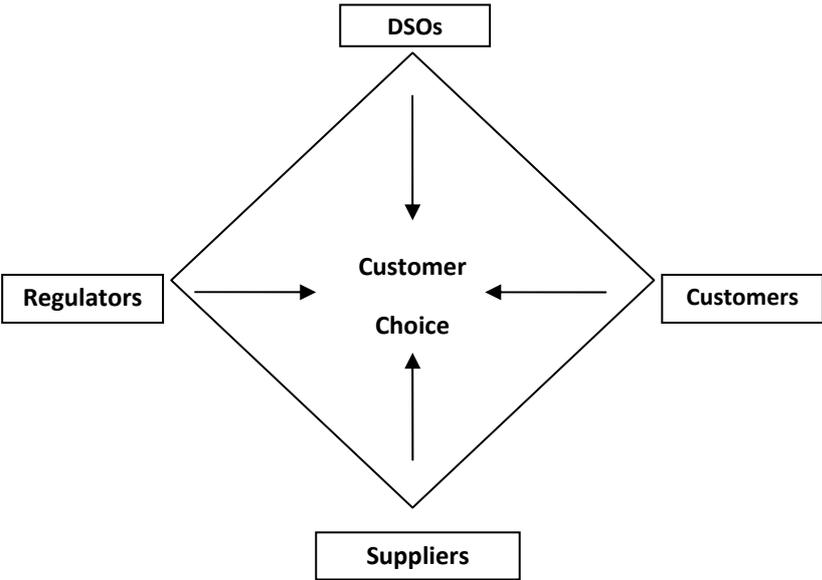


Figure 1: Mapping of the key actors involved in driving retail market competition for increased customer choice

### **3.1 Towards competitive and integrated European retail markets**

Under competitive and integrated retail markets, we understand retail market designs which bring benefits to customers in terms of prices, quality of services, choice of commercial offers and product innovation. In our view, a competitive market design is the main vehicle through which these consumer benefits can be achieved.

In a past publication<sup>2</sup>, EURELECTRIC has stressed that for competition to develop on retail markets, they should have a certain optimal design that would include following features, summarized in our Reference Retail Market Model:

1. A strong link to an efficient and liquid wholesale market for procurement and balancing
2. Market entry facilitation
3. A clear definition of market players' role
4. The guarantee that all market players have access to the same set of critical information and that customers have easy access to information on suppliers, prices and terms
5. A sufficient harmonisation and efficient organisation of basic information requirements and business processes, so that proper implementation and data exchange between market participants; including appropriate control and audit of these processes and data exchanges
6. Simple and reliable switching processes which do not entail excessive costs for customers and suppliers
7. An open governance structure is in place that leaves room for market participants in shaping the processes through which information should flow

The development of retail market integration, expected to benefit consumers, suppliers and the society as a whole, needs commitment of market players and facilitators since compatibility and inter-operability will not happen by itself.

So far, retail market designs remain indeed national. As a matter of fact, it is only possible to enter the market of another Member State by investing in country-specific systems and processes. To push for a regional integration of retail markets in a first stage and a pan-European integration of retail market in a second stage, core elements of national retail market designs should be compatible with each other and various business to business and business to customers processes should be interoperable.

Otherwise, new entry in electricity retail markets will be hampered by the fact that specific and costly applications are needed due to diverging market designs, rules and processes. This will result in a suboptimal level of competition on the electricity retail markets.

Therefore requirements for the interoperability and possible integration of retail markets should be set. This does not mean that retail markets should be fully harmonised; it simply signifies that the various national markets should have common features so as to promote competition, lower entry barriers and facilitate integration in the future. As major market facilitators, DSOs have a role to play in enhancing competition on the retail markets.

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<sup>2</sup> EURELECTRIC Reference 'Retail Market Model': Bringing the Benefits of Competitive Electricity Markets to the Customer, WG Retail Markets, April 2007.

### 3.2 DSOs as impartial and neutral facilitators of competitive markets

In order for electricity retail markets to function properly and to allow for greater customer choice, DSOs' transparent and neutral role will be essential. The Second Electricity Directive has made clear that DSOs' tasks was to "maintain a secure, reliable and efficient electricity distribution system" not to participate in the retail market by "discriminating between systems users or classes of system users, particularly in favour of its related undertakings"<sup>3</sup>. Accordingly, DSOs' role is to facilitate the market, not participate in it. This is especially valid when managing metering, providing information to market participants and smoothing the process of changing supplier.

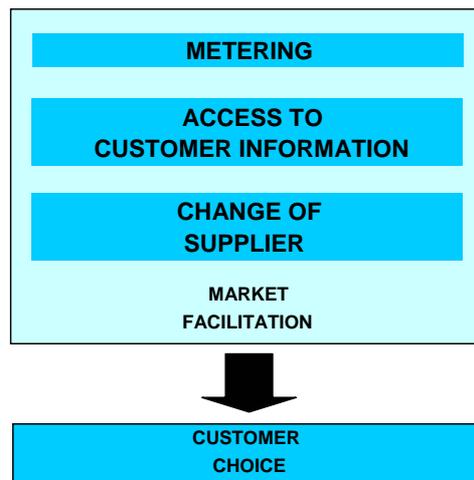


Figure 2: The three channels through which DSOs facilitate competitive markets

Hence, DSOs can contribute to the wider objective of achieving competitive and integrated European electricity retail markets in two broad ways:

- (1) By being proactive in helping achieving the lifting of operational and technical barriers which currently hamper the development of competitive retail markets.**

Entry for a supplier into different retail markets can indeed be greatly facilitated if compatible data models are used and if basic business processes can be implemented in the same way, i.e. via harmonisation. In particular, processes related to DSOs, metering and supplier switching and other key supplier processes should be considered for progressive harmonisation. Equally, European DSOs should move towards a unique identification of metering points to facilitate data exchanges.

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<sup>3</sup> Art. 14 : Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC

Nevertheless, well-defined information requirements and well-defined processes are unlikely to emerge without standardised information requirements. And yet, in a competitive retail market, market actors must be able to use a common market-specific communication and data management system. Thus, information requirement should be the same and a minimum level of information requirements should be specific: among the most important pieces of information are the identification of the metering point, energy usage data and customer information.

**(2) By being reliable and transparent service providers to both suppliers and customers, granting access to network and consumption information to all market players – including new entrants - without distinction**

In this regard, the Second Electricity Directive states clearly that “the Distribution System Operator shall provide system users with the information they need for efficient access to the system”<sup>4</sup>.

Currently, the different supplier switching models in Europe include variations on the role of market participants as well as in the format of various business to business and business to consumer processes. This means that it is only possible to enter the market of another Member State by investing in country-specific infrastructure systems and processes. Regional market integration, as first stage towards a common electricity market, implies that integrated national retail markets should be compatible. However this compatibility and/or interoperability will not happen by itself; all parties including market actors, regulators, governments, the European Commission and also customers should play an active role in ensuring that compatible systems, rules and processes are put in place. The section below will show in further detail what kind of information EURELECTRIC believes DSOs should provide to suppliers and customers, when this information should flow and in what format.

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<sup>4</sup> Art. 14 § 4: Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC

## **4. EURELECTRIC Model for DSOs as Information Hubs**

On the basis of the various scenarios under which customers and/or suppliers will turn to DSOs to access relevant information, we have developed an information hub model which summarizes (4.1) the information which should be provided by the DSO and when, (4.2) the format in which the data should be exchanged and (4.3) the need to strike a fair balance in this process, between market facilitation and the safeguard of consumer confidentiality.

### **4.1 What information should be provided from the DSO and when?**

Depending on the situation, the DSO will have to provide information to the suppliers involved in the process (4.1.1) and to the consumers (4.1.2).

#### **4.1.1 Information to the suppliers**

When DSOs are responsible for managing customer and consumption information, they should share this information with relevant market players in a timely and efficient manner. This is true in particular for suppliers, as it improves their ability to calculate quotas and target consumers with the most appropriate products. However they should at the same time maintain the necessary level of confidentiality.

The information sent to the suppliers is market information on the consumers' data that DSOs have to facilitate in order to improve competition among suppliers. In a competitive retail market, market actors must be able to use a common market-specific communication and data management system. For this purpose, information requirements should be the same and a minimum level of information requirements should be specific. The database format would be open and escalating so as to facilitate data exchange as well as data aggregation. It might include the following information:

- Personal Consumer Data (Name, Address)
- Consumption site info (Metering point ID, meter type, meter number, profile class etc)
- Consumption Data (Yearly, Monthly, Hourly consumption)

DSOs should provide suppliers concerned by the switching with all data related to the customer. Provided that the customer explicitly agrees, his data can be sent directly to the chosen supplier by the DSO. This enables the supplier to reduce uncertainty in the price calculation which in sum makes the offer more competitive. Therefore the DSO should attribute to each metering point a clear identification number so that an easy and fast data exchange is facilitated.

#### 4.1.2 Information to the consumers

For measures of simplification, one contact point could be established with the supplier. When establishing the connection, the DSOs would send information to the customer only related to the performance of the network duties (connection, end-usage contract/terms, network tariffs, metering service etc.). This would include contact details of suppliers (or a link to a national site regarding suppliers) and information following the Commission's European Consumer Checklist.

However, on every piece of communication (like invoices), the suppliers must provide its customer with an emergency contact of the DSO (in the event of disruption of energy supply) e.g. the metering point number and the meter identification number.

#### 4.2 In which format should the information be exchanged?

##### **Scenario 1: In the case of a supplier switching**

**When the customer would like to switch supplier, he should get in contact with a supplier and should ideally have no interface with the DSO. If the customer reaches his DSO, he should be informed on:** The need of contacting a supplier (as to where to find information) and make a contract with the supplier of choice. During the supply switch, as suppliers exchange data, no additional information is needed to be transferred from the DSO directly to the consumer<sup>5</sup>.

##### **Scenario 2: In the case of a first connection**

**When the customer moves to a house or a flat that has not been connected to the network before, the DSO should neutrally inform the customer on:**

- The electricity suppliers available in the customer area
- The right to access the network
- The time for initial connection
- The price to establish connection
- The connection charges (depending whether it is paid directly or through the supplier)
- The network tariffs
- The meter Point Reference number
- The network access contract conditions
- The metering services
- The contact in the event of disruption of energy supply
- The importance of signing a supply contract
- The procedure for customer claims

##### **Scenario 3: When a customer moves from one house to another**

The same logic as in the case of a supplier switch should apply. The customer should contact his supplier. To facilitate this process, there is a need to know the characteristics of the delivery point.

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<sup>5</sup> However, national regulation still differs on some of these elements.

In a liberalized retail market, network operators and other service providers must be able to interact with, and provide services for several supply companies. A well-functioning retail market should ensure that the related business and customer processes are carried out reliably and swiftly. This requires in turn clear operational and organisational rules as the processes necessitate a very high level of coordination between actors including data format standards across national regions and Europe.

Information technology plays a key role in the implementation of the change of supplier. It is, however, important to separate the definition of information and processes from the technology used to implement efficient information exchanges. This is important because new technologies are currently developing and it should be possible to make use of new and more efficient technologies without having to remodel the process. Flawless and efficient implementation of business requires the interoperability of the corresponding IT support infrastructure to ensure simple, quick and reliable customer related processes. In this way, customers can be confident about exercising their right to choose their supplier and that this switch will have positive effects on their electricity supply or bill without any risk.

#### **4.3 Finding a good balance between market facilitation and consumer's confidentiality protection**

With the increased number of supplier switches to be foreseen in the future, clear and harmonised rules that regulate consumer data access will need to be defined. So far, legal Aspects on Consumer Data Protection are defined by Directive 95/46/EC. The principle set out for making data access legitimate is unambiguous customer consent. However, the question raised has rather to do with the access to data by Third Parties, once the customer agreed to give a party data access. The challenge is then to reconcile automated processing and free movement of data with the "unambiguous customer consent principle".

To clarify this aspect, European Member States have adopted various national legislations in order to define the access to customer data. Considering that access to customer data represents a serious barrier to market entry for electricity retail market suppliers, each legislation regulating the access of (registered) third parties must be seen as a trade-off between the facilitation of access to market information (i.e. making retail markets more competitive) and the protection of consumer data confidentiality. As an example, a look at the Iberian Market gives more insight into the implications of this trade-off.

In Portugal, Law n°67/98 on protection of personal data makes a written consent provided by the consumer mandatory, being even auditable. Further requirements to access consumer data are (1) a point of supply code and (2) a supply contract reference number. The DSO as database controller must therefore comply with this law and has an explicit obligation to protect consumer data. In a nutshell: the Portuguese approach is very consumer protective.

In Spain, access to customer data is more easily facilitated. Registered suppliers are free to access customer data and they are not subject to any previous requirement such as a point of supply code or a contract reference number. Access is consequently conducted through IT

systems, by selecting data categories. However, consumers can deny access to their data with a written objection. The Spanish approach can therefore be seen as more market facilitative.

### **Taking up the challenge of smart metering:**

Smart Metering is a very promising technology that can substantially empower electricity customers to become active managers of their consumption. Smart Meters will improve (through accurate billing) the customer's knowledge about his/her electricity consumption thereby increasing customer awareness of energy end-use. Besides, Smart Meters will allow an optimization of the customer processes, making them more efficient and more reliable thereby leading to enhanced supplier switching and higher customer satisfaction. Lastly, Smart Meters will lead to an optimization of the overall electricity distribution infrastructure.

The expected large-scale deployment of smart meters in many EU Member States will enable both suppliers and DSOs to use more accurate individual consumption data (load profiles) in their processes. Smart Meters will indeed lead to enhanced demand-side management for household customers, in particular through the possibility of direct feedback and dynamic pricing opportunities.

However, because of the high cost and organisational challenge of large-scale introduction of smart meters, it is very important to carefully assess how smart metering should be introduced, under what conditions and with which specifications. DSOs must be prepared to handle the expected amount of data and to exchange it with suppliers. There should be some agreement at European level on selected aspects of smart meter framework, at least on a 'guiding principles' basis.

Key considerations to be taken into account in this respect are<sup>6</sup>:

- Firstly, the functionality of any smart metering system should be determined by how it can improve customer service and retail functioning while at the same time keeping costs down. This principle implicitly recognizes that this new technology is a means toward improvement and is not an end in itself.
- Secondly, although any business case with regard to large-scale introduction of smart metering depends largely on national characteristics, EURELECTRIC believes that smart metering solutions should be introduced in any national market in a manner which contributes to the development of compatible European retail markets.
- A third factor is the need to reconcile mandating smart metering with (voluntary) customer choice. Any policy maker considering the mandatory introduction of smart metering should impartially separate those benefits and costs which accrue to all customers from those which only accrue to certain customer groups. EURELECTRIC

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<sup>6</sup> These issues have been extensively developed in EURELECTRIC's position paper "Building a European Smart Metering Framework suitable for all Retail Electricity Customers" (May 2008).

accordingly considers that only essential functionalities should be put in the general roll out mandate. Moreover, DSOs or other concerned market operators should be allowed to pass-through the net costs of smart metering systems to these electricity consumer groups in a transparent and proportionate way.

- A fourth defining element is the need to allow for interoperability and product innovation. The meter should not be tied to any ‘proprietary standard’. As such, a high level of interoperability and minimum technical standards are necessary in order to allow electricity consumers, suppliers and DSOs to benefit from economies of scope/ economies of scale and from innovation.

## **5. Some examples of information hub models in Europe**

In order to facilitate supplier switches to the benefit of customers, European DSOs are increasingly developing data hub solutions. We selected 5 examples of these new systems also called “information hubs”.

### **5.1 Norway: The NUBIX Model**

In the past, an inadequate set of rules defined how network owners and power suppliers governed data handling during the supplier switch process and created faults due to insufficient data. The need for common procedures and business rules was identified to cover both the entire electricity supply business and the entire meter reading value chain. An independent body was therefore considered by the industry as an efficient means to implement and facilitate the creation of efficient message interface and exchange, in particular during the supplier switch process.

This discussion ushered in the creation of NUBIX (Norwegian Utilities Business Information Exchange) which is mainly a distributed solution for metering point ID search. It is implemented as a Web service and suppliers can implement NUBIX into their own IT-solutions. The NUBIX routes the query to the correct DSO, groups the answers, and delivers the answers back to the correct supplier. As such, it places the responsibility for administration of master data where it belongs; the DSO, instead of in a central database. The solution requires that the DSO implement a web service, between the Customer Information System and NUBIX.

As an example, NUBIX handled 1.5 million requests in 2008. Given its success, the Norwegian energy regulator (NVE) decided to follow up and sanction DSOs which are not complying with NUBIX. As a result, after the 3 first months approximately 75 % of DSOs were compliant, after 9 first months approximately 90% of DSOs were compliant and by end of 2009 almost 100 % of DSOs were compliant. Functional changes are now being considered.

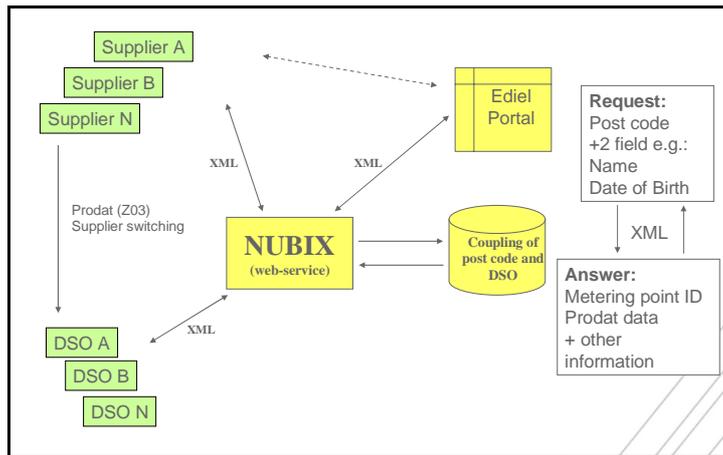


Figure 3: Norway's Nubix information portal

## 5.2 Sweden: the EMIX portal

Sweden's EMIX portal started as a proactive industry initiative and is run by a limited company established precisely for this purpose. This company is 100% owned by Swedenergy and "independent suppliers" are also represented in the board. The limited company is financed by some of the companies and Swedenergy. Its letter of intent indicates that it covers 70% of the end customer market. The Swedish regulator and Swedish government support the initiative.

However, EMIX is optional, not mandatory. Participation works through agreements with each distributor/supplier. The objective set by EMIX is to cover 100 % of the market by 2010. Currently, it is developing new services. It is recognised that EMIX enables an effective and simple integration and gradual transition to an open end-user market in the Nordic region/EU.

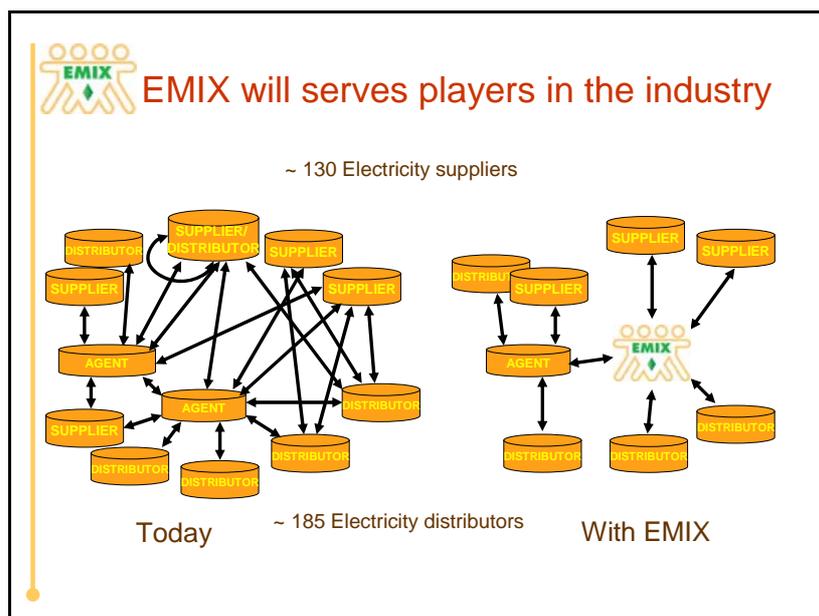
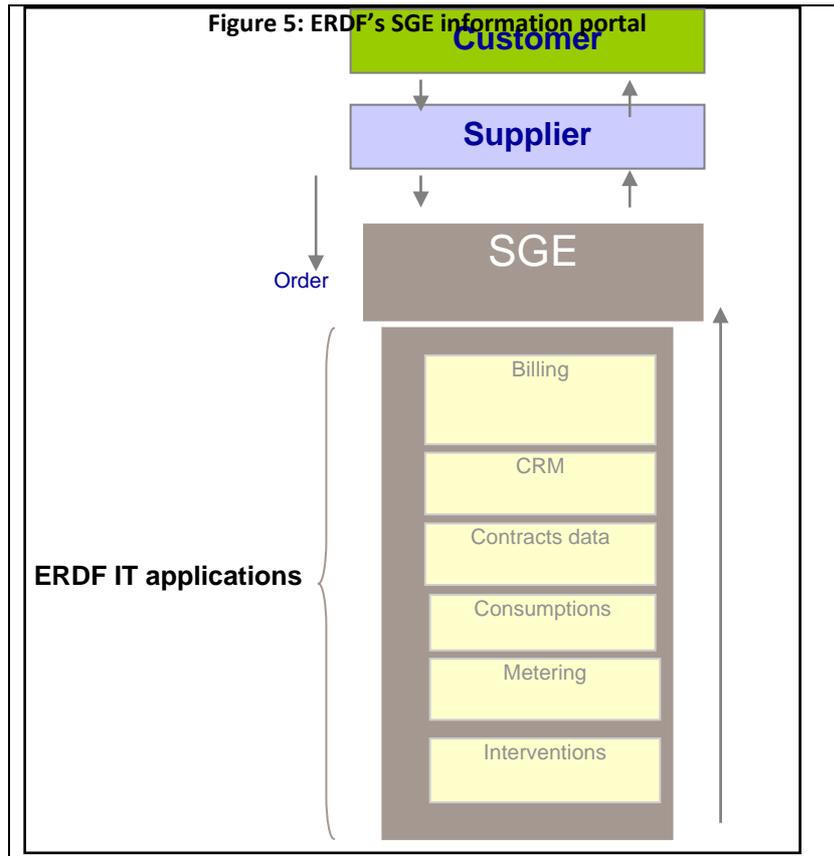


Figure 4: Sweden's EMIX information portal

### 5.3 France: the SGE Model

Thanks to ERDF's SGE Information Hub, data flows are facilitated during the switching process. While using the web portal, suppliers can have access to customers' information such as: address, meter technical data, etc. However, the former contract must be cancelled or a new contract must have been signed before the former contractual power is available. Moreover, the monthly average consumption is available, only if a new contract has been signed.



## 5.4 Slovenia: the «Perun» Portal

The PERUN internet portal administered by the DSO was designed in 2005 and is – in Slovenia –intended for providing support to the process of changing a supplier for the suppliers of electricity whereas all the authorised participants in the market (DSO contractors, regulator, market organiser and suppliers) may also exchange other information in one place.

Key technical features of the portal:

The Intranet part is intended for the providers of DSO activities in Slovenia; there are five distribution companies (Elektro Ljubljana d.d., Elektro Maribor d.d., Elektro Celje d.d., Elektro Primorska d.d., Elektro Gorenjska d.d.), which operate, independently yet under the same terms and conditions.

The Internet part is intended primarily for the suppliers of electrical energy pursuant to the principle of single entry point for all the suppliers of electrical energy in Slovenia.

It is also intended for data exchange between other participants in the electricity market, i.e. the Energy Agency, BORZEN (Power Market Operator), the Ministry of the Economy, etc.

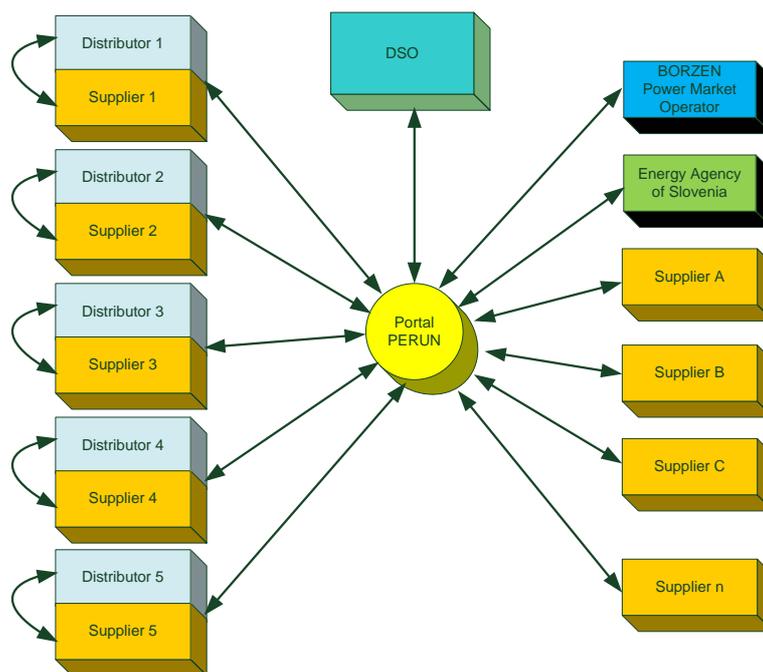


Figure 6: PERUN Internet Portal

An advantage for all its users is that PERUN is simple to use. It works with common browser tools and uses simple data and document transfer formats. It proves extremely trouble-free for limited number of metering points, data and documents.

The PERUN internet portal is thus intended for daily data exchange among the providers of DSOs' activities, suppliers of electrical energy and other regulated players in the electricity market.

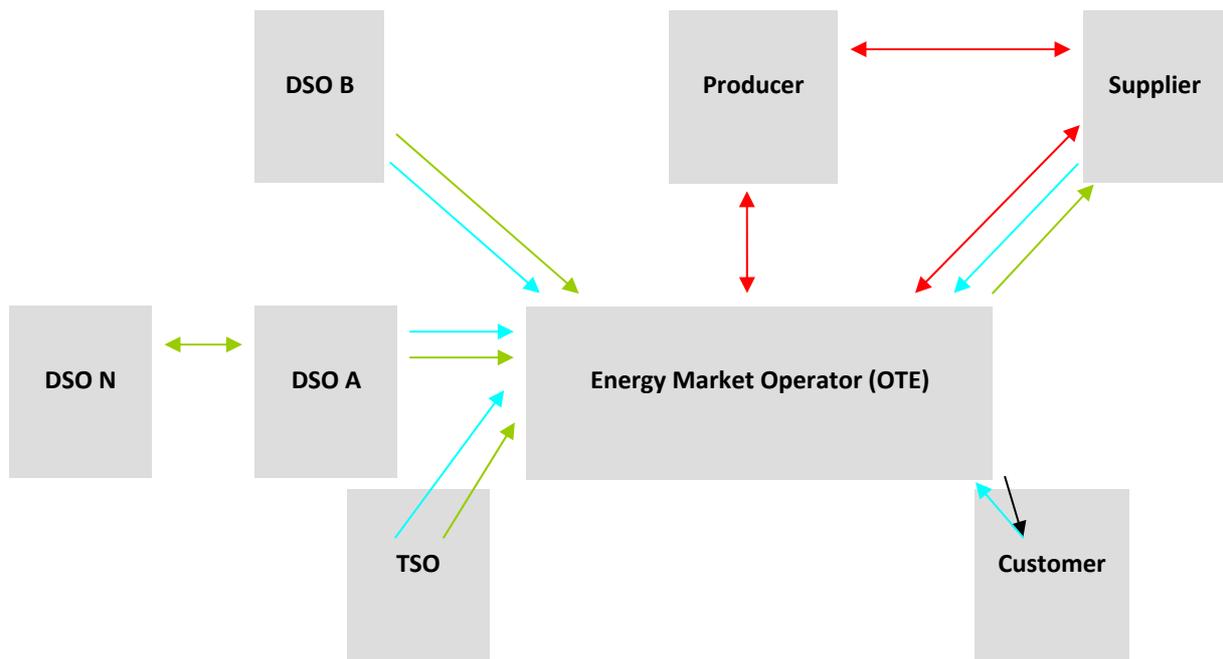
## **5.5 Czech Republic: Energy Market Operator (OTE)**

Since January 1, 2006 each retail customer can freely choose their energy supplier. The Czech energy regulatory body (ERU) provides information on all registered suppliers and DSOs. Customers can calculate their future costs and choose the best suitable solution. The total sum for electricity consumption consists of regulated part (transport of energy from producer to final customer, i.e. distribution, system services, support of RES production, combined heat and power generation and secondary sources) and non-regulated part (power energy).

In case of the first connection, the customer contacts the local DSO, grid owner and operator. In the application, the customer provides the DSO with all necessary data (name, contacts, address of point of consumption, planned volume of installed kW). The DSO registers the customers' data (and data of point of consumption) in the system of energy market operator (OTE), which is necessary for evidence of the future trades of this customer. The DSO is responsible for data reading, processing and archiving.

Following this, the DSO states the technical conditions of the first connection to the grid. Finally, after fulfilment of all requirements, the customer chooses the energy supplier. This is the two contracts solution: one contract for connection and distribution and one for power consumption. Another scenario is the combined contract, signed with supplier, covers both, distribution and power supply. In case of change of supplier the customer must terminate (based on the settled conditions) the contract with the existing supplier in advance, at least before the date the new contracts become valid.

## LEGAL MARKET MODEL – DATA FLOW



**RED** - Volume of trading and purchasing  
**BLACK** - Measured data of end customers

**GREEN** - Measured data (consumption, period)  
**CYAN** - Registered market participants

## 6. Conclusions and Recommendations

Besides their traditional mission to operate, maintain and develop an efficient electricity distribution system, European Distribution System Operators (DSOs) must fulfil a new role: to facilitate effective and well-functioning retail markets. Effective retail markets are markets which should give options to the customers allowing them to choose the best supplier and should allow suppliers to offer options and services best tailored to customer needs.

In this new role as neutral market facilitators, DSOs will be increasingly asked to work as an information hub to perform a reliable and swift change of supplier. In this paper, we highlighted the information DSOs should provide to suppliers and consumers. We then explained how European DSOs were currently implementing new information hub solutions to facilitate switching. This new process represents a particular challenge, since with the advent of smart meters, the complexity of data handling increases.

However, it would be misleading to think that DSOs – on their own – will improve the functioning of the Europe's retail markets. The retail market design still needs to be improved and regulated prices removed.

1. EURELECTRIC recognizes that in a competitive retail market, market actors must be able to use a common market-specific communication and data management system. For this purpose, information requirements should be the same and a minimum level of information requirements should be specific: the database format would be open and escalating so as to facilitate data exchange as well as data aggregation.
2. EURELECTRIC considers moreover that policy makers can assist in promoting harmonisation and standardisation of data exchanges and customer processes at the European Union level as this would facilitate supplier switches. These issues should in particular be considered in view of the establishment of a European market for retail. EURELECTRIC hence calls for compatible systems, rules and processes to ensure regional compatibility and interoperability of retail markets.
3. EURELECTRIC recommends that the functionality of any smart metering system should be determined by how it can improve customer service and retail functioning while at the same time keeping costs down.
4. EURELECTRIC sees the need to allow for interoperability and product innovation of smart meters. The meter should not be tied to any 'proprietary standard'. As such, a high level of interoperability and minimum technical standards are necessary in order to allow electricity consumers, suppliers and DSOs to benefit from economies of scope/ economies of scale and from innovation.
5. EURELECTRIC accordingly underlines the need to separate the definition of information and processes from the technology used to implement efficient information exchanges. Flawless and efficient implementation of business requires the interoperability of the corresponding IT support infrastructure to ensure simple, quick and reliable customer related processes.



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