

**ELECTRICITY RETAIL REGULATION
IN A CONTEXT OF VERTICAL INTEGRATION:
THE DEBATE ON REGULATED TARIFFS**

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The deregulation of power markets gave origin to a new activity: the retail business. Although it should, together with generation, be opened to competition, its implementation has been usually postponed to the last stages of the liberalization process. The diversity of situations that can be found in the international experience illustrates the lack of consensus about the appropriate design of the retail market.

In particular, the advisability of maintaining a regulated tariff once the retail market has been liberalized is still a subject of debate. After considering two opposite views and some additional arguments, our proposal tries to integrate the future benefits that competition could bring, as well as its inability to compete against a well-designed regulated tariff in most markets. Therefore, the recommendation is to keep a last resort regulated tariff as an available option. Such a tariff should include a shopping credit, with the purpose of giving an initial impulse to the development of the retail market.

In addition, on the basis of the experience revealed by the Spanish situation, as reported in a recent White Paper (Pérez-Arriaga 2005), the main barriers to introducing competition in the retail business are analyzed for the case of vertically integrated firms, together with some proposals to mitigate them, mostly addressed to achieving an adequate unbundling of the retail and distribution activities.

1 INTRODUCTION

Power markets liberalization adopts as the starting point the unbundling of the different activities that compose the chain that spans the industry from production by generators and fuel

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acquisition to consumption by end users. While transmission and distribution are considered natural monopolies and therefore remain as regulated activities, both generation and retail -understood as the new business in which an intermediary (the retailer) is responsible for supplying energy and possibly providing some other additional services to a customer in exchange for a certain remuneration- are both well suited to be opened to competition.

The experience shows that, in the power systems that have opted for restructuring, on the generation side the development of the market has been rather completed, even if quite imperfectly in some instances. However, the full liberalization of the retail business has usually been postponed to the last stages of the deregulation process. International experience illustrates this fact with delays in the agreed processes, the persistence of crossed subsidies that leave no niche to the retail activity for certain segments of customers or some inconsistent consumer protection policies. There are many reasons behind this slow pace of the retail business development, such as political constraints and a lack of trust on market outcomes -due to market power concerns, typically-.

The main context for the discussion in this paper -the European retail markets and the Spanish case as a particularly illustrative example- is briefly presented in section 2. Assuming that competition should be introduced in this segment, the advisability of maintaining a regulated tariff for small consumers is discussed in section 3. Our recommendation is to keep it indefinitely, but topping it with a shopping credit that will give an initial impulse to retail market development. Section 4 examines the main barriers to retail competition that have been identified in the Spanish case and proposes some measures to mitigate their negative effects, which are centered on the adequate unbundling of the retail and distribution activities and an inadequate design of the regulated tariff.

2 DEREGULATION EXPERIENCES IN EUROPEAN RETAIL MARKETS

When examining the development of the retail market in Europe, it is clear that no standard exists. What is more, among the many different ways to classify the European power

systems reforms, when it comes to analyze the pace of market development, and particularly of the retail market, we distinguish two groups: while the first one -illustrated by the UK and the Nordic experiences- leads the reforms, the other implements a competitive structure more slowly, with France and Italy being representative cases (Pérez-Arriaga 2006b).

Both the UK and the Nordic market -precisely the two systems with the most competitive wholesale power markets- are also at the forefront of the retail business development. The introduction of NETA in the UK in 2001 involved the abolition of the last-resort regulated tariff -which was calculated as a pass-through of the pool price and a price resulting from the bilateral contracts market-. The process is regarded internationally as successful, with some 50% of the domestic customers participating actively in the market¹. Currently, the British market structure is characterized by an increasing concentration and the integration of retail with both generation and distribution.

In the Nordic markets -obviously excluding the Icelandic case-, the high electricity consumption of the Nordic households -from two to four times the OECD average- provides them with a strong incentive to actively participate in the market. From 11 to 29% of the residential customers have switched supplier and around 30% have chosen alternative contract terms with their incumbent supplier. The more usual alternatives are a standard regulated tariff -whose price can be varied at two weeks notice-, with some 60% of the customers-, a pass-through of *Nord Pool* prices plus a retail margin -with a 1% share- and fixed price contracts -chosen by the remaining 40% of customers-.

However, the evolution of UK and the Nordic markets cannot be generalized to the rest of Europe. There are some countries that, for diverse reasons, are developing the deregulation process with a slower pace. In France, where EDF has a 90% share in the wholesale market, the retail activity has made little progress. Immediately after the liberalization of this segment, when only some industrial consumers were eligible, a considerable difference between

¹ These developments were accompanied by a considerable drop in retail prices, although their relation to liberalization is currently under discussion (see Thomas 2005).

wholesale prices and the regulated tariff (around 30%) resulted in quite large switching rates. Lately, due to the energy prices increase, many of these customers are demanding the regulator to allow them coming back to the regulated tariffs².

Akin to the French example, Italian developments are being undertaken at a slow pace. ENEL, the former monopolist, still holds a 50% stake of the wholesale market. Domestic customers are not eligible yet -the expected calendar stipulates that they will be able to choose supplier from July 2007 on-. Captive demand is represented by the *Acquirente Unico*³, a public entity which purchases their energy from the spot market and bilateral contracts and resells it to the distribution companies at the price defined in the regulated tariff. Taking advantage of the massive installation of hourly meters, ENEL is offering some different regulated tariff formats, somehow allowing different risk profiles to select their preferred option⁴.

The case of Spain: in the middle of nowhere

The Spanish power market design is characterized by an inconsistent lower level regulation –the Electricity Act, although in need of some amendments, is basically correct- and both vertical and horizontal concentration, which makes it necessary to introduce extra measures to guarantee a fair retail competition.

The power system deregulation was established by the 1997 Electricity Act, which creates a wholesale electricity market whose marginal energy price must be paid by consumers. The retail market started on January 1st 1988, by enabling some customers -up to 500 industrial customers, accountable for some 25% of the energy purchases - to purchase energy from the

² In addition, the future improvements are uncertain. Indeed, the French government has been considering potential schemes to allow what it has been defined as the consortium of industrial consumers *électro-intensives délocalisables* to ‘benefit from specific electricity purchase prices’ (*Conseil de la Concurrence 2005, Le Ministère de l’Économie 2005*), which seems to effectively constitute a step back in the deregulation process.

³ www.acquirenteunico.it

⁴ http://www.enel.it/sportello_online/elettricitat/tariffeelettriche/

pool market directly or via bilateral contracts with generators or retailers. The process was implemented in several steps, achieving full eligibility in 2003.

Although the 1997 Electricity Act is based on orthodox principles, some secondary regulation (such as Royal Decree 1432/2002) established that the value of the regulated tariff, which is available to every consumer, would be determined almost independently of the market prices. In addition, any updates to this price should stay within a narrow band (this has been relaxed recently). The Government has consistently kept the value of the regulated tariffs well below the market prices, which results in the so-called “tariff deficit”⁵. The disparity between market and regulated tariff prices has as an additional consequence the inexistence of a niche for the retail activity.

This situation can be interpreted as a lack of trust of the regulator on the market prices (Pérez-Arriaga 2005, 2006), which is reasonable, given the considerable amount of market power existing in the Spanish wholesale market -the two largest Spanish companies, Endesa and Iberdrola, generate approximately 45% and 35% of the total electricity production, respectively (Pérez-Arriaga 2006)- and the distortions introduced by the former stranded costs recovery mechanism⁶. Moreover, the incumbent companies in the Spanish market are characterized by vertical integration of the distribution and retail activities, which enables potential abusive behavior.

Recent interventions and corporate activity -as the takeover bids presented for Endesa, the largest electricity company- amplify the regulatory uncertainty in the sector. In particular, the future of the regulated tariff -which is bound to disappear after 2010, at least for the majority of consumers- is unclear, although there seems to be a consensus among the Spanish industry

⁵ The government has tried to stop the growth of this regulated tariff deficit with measures such as the recent and controversial Royal Decree-Law 3/2006, which transitorily assimilates sales and purchases of energy made by the same holding to bilateral contracts made at a price set administratively -and unlinked to the market price evolution- by the regulator.

⁶ The stranded costs recovery mechanism was recently suppressed through the Royal Decree 7/2006.

players and institutions, obviously not shared by the power utilities and retailers, on maintaining the default rate for domestic customers for a longer time, or even indefinitely.

All these factors are actually preventing the retail business from functioning adequately. In order to create a framework in which retail competition can develop, all these problems should be correctly identified, and the necessary measures to overcome them should be implemented.

As the diversity of international experience suggests, the advisability of maintaining a regulated tariff as an option for domestic customers has been subject to a deep debate. In fact, two extreme approaches can be found. On the one hand, market true-believers defend the complete deregulation of the industry, including the complete abolition of the regulated tariff, while others find good reasons to preserve it. Their respective arguments, together with the intermediate alternative that is recommended here, are presented in section 3.

3 WHAT SHOULD BE DONE WITH THE REGULATED TARIFFS FOR SMALL CONSUMERS?

Assuming that a well functioning power market exists, now the question is: What should be done with the regulated tariff? Is it superfluous? Does it constitute an obstacle to retail competition?

The main alternative options consist of eliminating the regulated tariff, keeping it as a default option or maintaining a last-resort regulated tariff –an estimation of the market price plus an extra charge of a sufficient magnitude to make it attractive to look for alternatives-. The rationale behind these two different options has been clearly expressed in the published opinions by Paul Joskow and Stephen Littlechild, which are referenced and commented below.

3.1 The pass-through alternative

The first basic choice is to let the regulated tariffs remain. This position, defended by Prof. Paul Joskow (Joskow 2000), is based on the assumption that the deregulation of the retail market will not lead to any significant efficiency improvement or added value. He examines the

areas where retailers might add value in markets other than electricity -mainly, selling their goods at convenient times or locations, keeping stocks or developing more efficient technologies- and concludes that they cannot be easily translated to the case of power markets. In addition, he identifies the possibilities that retailers have to add value for the customer and concludes that they are unclear.

In particular, the potential retail savings in activities like metering, billing or customer services are uncertain, and their expected economic impact is too low to be significant for most domestic customers. In what respects the retailers, the costs of advertisement and the incurred financial risks would possibly offset any potential gains. He concedes that retailers may bring some other benefits. For example, they can offer other billing options, they may improve the functioning of the wholesale market as the number of agents will increase, or they can enhance demand elasticity or provide energy efficiency related services. Nevertheless, it is unclear that only retailers can lead to these additional developments.

Therefore, if retailers may face non-negligible costs and their opportunities to create added value services are uncertain, in general they will not be able to compete with a well-calculated regulated tariff -which could be provided through a Basic Electricity Service (BES) that is offered by the distribution company and that would calculate its energy term just by making a transparent pass-through of the market price-.

If retailers are not able to compete effectively with the regulated tariff, then they do not have a chance to create value, so the lack of retail competition for small consumers should not be considered a problem. Therefore, for small consumers the regulated tariff should be maintained indefinitely and calculated just by passing-through the market price.

3.2 The counter-argument: the retail market option

Prof. Stephen Littlechild (Littlechild 2000) argues that a plain pass-through regulated tariff is neither transparent nor even desirable. Profiling and uncertainty about future prices is the reason for the first disadvantage, and international experience is the support for the second

one. The percentages of clients choosing to pay pool prices are low in the Nordic market, in the UK and, in general, in all the regions where this option is available.

This shows that domestic customers are risk averse and that they are not indifferent to choices, and retailing is precisely the activity that can lead to products that best suit the preferences and low risk appetite of customers. Moreover, introducing competition is equivalent to open a door for innovation. Market can make possible some creative alternatives that a regulated frame would never consider.

From this perspective, establishing a BES makes no sense. If retailers decide to offer a direct pass-through option to the small consumers, then introducing an additional regulated one is not necessary. If, on the contrary, the retailers do not offer it, that would prove that it is not necessary, as neither the consumers demand it nor the retailers consider it to be an attractive offer.

From this perspective, the advantages of competition are clear and the retail market should be deregulated for all costumers, including domestic users, with the implication that the regulated tariff should disappear.

3.3 One step further on the pass-through alternative

From our perspective, the risk assignment problem -already mentioned by Joskow- is the most serious argument against implementing a BES. Nevertheless, introducing retail competition is not the only way of tackling this problem, which can also be solved in a more regulated framework. A well-designed regulated tariff should not be identified with a BES, in the sense that a direct pass-through is neither the only nor the most relevant approach. The “market price” to be passed-through to the tariff should not be reduced to the hourly energy price in the spot market, and at least the spot price should be considered together with the prices in the longer-term contracts markets. The proportion of the volume that is considered from each of these two markets will determine the level of risk that the regulator sees fit for the customers under the regulated tariff to bear, and the different risk profiles of users can be taken into account in several different regulated tariff formats.

From this perspective, if it is accepted that the risk objection is the most important one and that it can be properly addressed in a regulated framework, then a well-calculated regulated default⁷ tariff should remain available to all consumers. In the Spanish White Paper (Pérez-Arriaga 2005, 2006), further developed in (Vázquez 2006), it is proposed to strike a balance between the volatility of relying just on the spot price of the daily market and prescribing the acquisition of this energy by long-term contracts in organized public auctions. Therefore, it is proposed that the “energy-market price” to be used in the computation of the default tariff should be obtained as a prescribed weighed average of the price of energy in the short-term market (40%, for instance) and the price of acquisition of energy in one-year contracts by the retailers-selling-at-a-tariff in organized auctions that take place at regular intervals throughout the year; for instance, four auctions per year, where 15% of the energy that is required by each retailer is purchased at each auction⁸.

3.4 The final counter-argument: giving an initial push to the market option

As Joskow stated, it seems that in the current situation retailers may not be able to compete with a well-designed regulated tariff. International experience supports this view, as do the opinions of main industry players, regulators and retailers. There appears to be a consensus about the necessity of adding a shopping credit to regulated tariff prices, in order to give the retail business a possibility to develop. There is a justification for this extra cost: a system where

⁷ A default tariff would give all customers the option of purchasing their energy at a well-calculated price that reflects market outcomes –not only spot markets, but also forward and contracts markets-, with no shopping credit included.

⁸ Indeed, the recent instruction ITC/2129/2006 forces distribution companies to acquire some 5% of their energy in organized long term auctions, which can be interpreted as a first step towards the suggested direction. A new draft by the Energy Ministry seems to require that 100% of the energy under a regulated tariff be purchased in open auctions, which appears to be on the other extreme.

consumers are offered regulated tariffs could never replicate the level of innovation that a competitive market can generate.

Thus, if one believes that the market may contribute some added value, then the market option would be the correct choice. A shopping credit included in a well-calculated last-resort tariff⁹ should account for these expected benefits, reflecting the view on the potential value added by the retailing activity. The faith in the market would therefore be implicit in the value of the extra charge.

From a Joskow-like perspective, which appears to assume the impossibility for the suppliers to create value, the extra cost would be interpreted as a useless waste, and it should disappear completely. On the contrary, in the case of a view closer to Littlechild's ideas, this shopping credit would tend to infinity and it is the regulated tariff which should be abolished. Intermediate approaches would lead to halfway solutions, where the shopping credit would be viewed as an investment that would be as large as the expected benefits brought by competition.

However, this approach deserves a relevant remark: in certain systems the regulated default tariffs have been abolished just for certain consumers (commonly the larger ones), while the rest are giving the option to choose or directly are not allowed to abandon the regulated tariff (this is the case of many power systems in Latin America, e. g. Brazil or Guatemala). If the value that retailers are able to add does not compensate the costs they incur, the "liberalized" consumers would be unfairly mistreated. Indeed, in many occasions this decision is justified as a regulatory support for the retail business development, which implicitly means that the costs of investing on the future advantages of retailing fully rely on them.

On the contrary, if the retailer is able to provide added value, the non eligible consumers would be bearing an extra cost. This leads to the conclusion that in any case, the same levels of optionality should be given to all kinds of consumers.

⁹ A last resort regulated tariff would have a value that would discourage consumers that would be able to find a supplier in the liberalised market, but would remain as an option for those who do not or who have very high switching costs.

Retail in the context of actual tariff designs

The described shopping credit is just an extra charge to be added to a well-calculated tariff, that is, one calculated with a complete pass-through of the hourly spot prices, therefore avoiding cross subsidies among consumers classes. However, in real life the design of most regulated tariffs appears to deviate broadly from this description.

First, cross subsidies and design flaws that result in asymmetric impact on different categories of clients are common. Under these circumstances, the retail business has proven to be an activity with added value, not just for the mistreated customers, but for the entire system, as a tool to detect these caveats. For instance, a feature that allowed some development of independent retailers in Spain was a flawed and asymmetrical design of the charges to consumers that were derived from the capacity payments to generators¹⁰.

Also, the increasing trend of designing the default tariff on the basis of long-term regulated contracts, often rigid, resulting from mandatory public auctions¹¹ allows retailers to gain customers specially among the larger customers by offering flexible contracts that can fit more efficiently their consumption requirements and taking advantage of the fact that the marketing costs are smaller compared with the ones required to get household clients.

Some prerequisites should be enforced so that a sound regulated tariff design and a competitive retail environment can be attained. These requirements include a well-functioning wholesale market and the lack of vertical integration between the distribution and retail businesses. When these conditions are not met, additional difficulties appear for retail market

¹⁰ This is not an isolated example, by far. One of the main factors that favored the retailing in Guatemala was that a customer could avoid paying the stranded costs derived from the 15 years contracts signed by distributors before the system was liberalized.

¹¹ The Brazilian energy auctions (Bezerra 2006) appears to be turning into a reference design in Latin America (followed for instance by Peru or Panama). For instance, the 'regulated bilateral contracting for the energy demand of distributors through public auctions' announced by the Spanish government defines just two products, a baseload contract and a single load profile contract for the whole system.

deregulation. The difficulties for retailing that derive from the potential abuse of market power are illustrated in (Batlle 06) for the Spanish case. The potential impact of vertical integration is discussed next, as well as the recommended regulatory guidelines to avoid its negative effects.

4 REGULATORY SUPPORT TO RETAIL COMPETITION

The Spanish case is a good example of the additional difficulties that an inadequate power sector structure can pose to the establishment of a deregulated retail market. The main obstacles that have been identified as a result of vertical integration of distribution and retail are described first. The following section offers some measures to eliminate these barriers to retailing or at least to reduce its impact.

4.1 Structural barriers to retail competition

This section will ignore any obstacles to retailing that may be derived from an inadequate design of regulated tariffs. It will be assumed a correct tariff design, including a shopping credit to help to overcome consumer inertia. However, some barriers to develop an efficient retail market may still exist. They may come in three categories: insufficient unbundling between the distribution and retail sale activities, inadequate switching procedures and improper commercial behavior.

Insufficient unbundling is one of the most serious obstacles to retail competition. The European Directive 92/96/EG set the initial requirements for the unbundling of network and commercial activities and the subsequent directives 2003/54/EC (in the case of electricity) and 2003/55/EC (for the gas sector) require the distribution system operator or DSO to be independent (at least, legally and in decision making) of any other activity in the sector. This legislation therefore leads to the conception of retail sale as a separated business (ownership and not just legal separation), an idea that has already been implemented in some countries. However, integration between the distribution and retail activities remains frequent in some countries, configuring a framework that favors some irregular practices that prevent the retail

market from developing successfully. It follows a list of some illustrative examples of the many -rather isolated but anyway reprehensible- identified patterns of behavior in this category:

- When a consumer tries to change to a supplier that is not from the same holding that the incumbent distributor (who is in charge of metering the consumption, the distribution company has been reported to require a rise of the contracted capacity (which the meter does not allow to exceed). This capacity rise -not demanded when the customer remains with the retailer of the same holding than the distribution company- may offset the savings that the consumer expected to obtain by switching suppliers.
- Excessive charges for the metering equipment and the associated service.
- Asymmetry in the access to commercial information, so that the retailer belonging to the same holding as the distributor has an advantage.
- Commercial advertising of the retailer that mentions the services of the distributor, such as advantages in technical service or quality of supply.
- Effective discrimination that makes the threats in the previous bullet to become reality.

The lack of adequate mechanisms to switch supplier is the second type of barrier. These are some of the identified obstacles:

- Insufficient development of the procedures to exchange information between the distributor and any retailers. The switching process involves numerous and tedious steps that amount to a high “transaction cost” for the switching customers.
- Lack of precision in the specification of deadlines, resulting in unacceptable delays.

Undesirable situations involving improper commercial behavior have been also reported, such as:

- Invoicing scams, sometimes charging consumers with amounts that are unrelated to their actual consumption.
- Abusive commercial practices by retailers when trying to win new customers, for instance “moving” consumers to the liberalized market (obviously to the retailer of the same holding than the distribution company) without their explicit consent or using misleading advertising.

The next section offers some directions to address these problems.

4.2 Measures to encourage retail competition

The first conditions to establish a well-functioning retail market consist of a reliable and transparent wholesale market, a regulated default tariff that is correctly designed –as explained above-, adequate metering equipment and data processing, institutions that effectively protect consumer rights and a stable regulatory framework. In addition to these basic conditions, some extra measures and procedures can mitigate the problems that are caused by the identified barriers. They will be enumerated as they are proposed in (Pérez-Arriaga 2005) and classified in the same categories as in the preceding section.

Unbundling is the most basic step in power systems restructuring and liberalization. The separation between monopolistic and liberalized activities is an essential requirement. As indicated above, the revised European Electricity Directive now stipulates the unbundling –legal at least, ownership is not mandatory- of the operation of a distribution grid from any retailing activity. Nevertheless, as the examples above show, only a complete (ownership) separation between the retailer (for any customers, under default regulated tariffs or purchasing in the market) and the distribution company will remove all the identified additional obstacles to retailing.

Ownership unbundling would effectively eliminate the incentive for the inappropriate behaviors that have been described. However, in many European countries it happens to be a difficult measure to apply, so late in the restructuring and liberalization process. At least the regulated retail activity and the liberalized one should be legally unbundled, as it is already the case in Spain, preventing the last one from enjoying a privileged access to information that would constitute a commercial advantage. Additionally, clear minimum quality standards and metering responsibility -usually assigned to the distribution company- must be established.

Switching procedures should be supported by clear mechanisms of access to commercial information. An adequate data management procedure should guarantee the

availability of information for all the interested retailers, as long as it respects the data protection legislation. At least this should consist of a common but decentralized scheme, with standard data management and switching procedures. If sufficient, this option would avoid the extra cost of creating a new centralized entity. However, if experience shows that this does not provide sufficient guarantees, a centralized switching agency should be created. Deadlines and criteria for revision of the adopted measures should be appropriately specified.

Other measures for consumers' protection should be considered, like limiting the maximum duration of contracts or enabling the possibility of cancellation, following the example of the already derogated 28-day rule in the UK¹². Additional procedures could include preventing users from choosing the supplier from the same holding than their distribution company, or banning regulated retailers from operating in areas that are supplied by the distribution company of the same holding. Finally, strict supervision by regulatory agencies is necessary to avoid potential misbehaviors and to advise on the adequate package of measures to be finally adopted.

5 CONCLUSIONS

Liberalization and restructuring of the power sector has made possible to introduce competition in the retail business for small customers, although this has been usually postponed to the last stages of the liberalization process, due to its complexity. The solutions adopted by different countries differ in essence, and some of them have been presented as illustrative examples of the lack of consensus in this matter. The Spanish case has been used as an example to analyze the problems that may originate from vertically integration of distribution and retailing activities

The advisability of maintaining a regulated tariff once the retail market has been liberalized has been examined. It is assumed that the retailers cannot effectively compete against a well-calculated regulated tariff and therefore there would be no niche for the retail activity if

¹²The 28-day rule in UK gave consumers the right to terminate any contract with 28 days' notice.

no extra charge (or shopping credit) is added, at least temporarily, to the tariff. It is presumed that introducing competition would lead to future improvements that a regulated framework may never introduce. Thus, here it is recommended to maintain the regulated tariff but to increase it with a shopping credit that would reflect the expected value of the benefit that retail competition could bring. The principles that this well-designed regulated tariff should respect, as well as some calculation methodologies, have been shown.

However, a well-calculated regulated tariff does not guarantee the success of the retail deregulation process. Flaws in the market structure and the regulatory framework become serious obstacles for the development of retail competition. In particular, the Spanish experience shows that some inadequate patterns of behavior originate from insufficient unbundling -vertical integration between distribution and supply- and unsatisfactory switching procedures. Some regulatory actions aimed at minimizing these problems are proposed. They focus on improving unbundling to the level that is needed in each case, guaranteeing satisfactory switching procedures and securing supervision.

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