Are regulated prices against the market?

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1. Foreword

This article was written in January 2009 at a time when ERGEG was reviewing the situation of regulated end-user prices in Europe. ERGEG's second status review of end-user price regulation in Europe was published in March 2009 reflecting the situation as on 1 July 2008 (ERGEG 2009). ERGEG plans to conduct a third review reflecting the situation as of 1 January 2010 on request of the European Commission.

Although main ideas and the arguments subtending them are still valid, readers should be aware that the situation has evolved since January 2009, and still is very diverse and complex.

It is still correct to underline that in a large number of countries - 15 in electricity, and 13 in gas - both types of end-user prices (regulated prices and market prices) coexist on at least one of the various market segments; that the higher the customers' consumption in a given market segment is, the more likely the segment is not price regulated; and that in most of the countries with end-user regulated prices, the share of eligible customers supplied at regulated prices is more than 80%, all market segments considered, indicating a lack of competition.

However, it is worthwhile noting that between June 2007 and July 2008, 12 countries in electricity and also 12 in gas opened their household customer segment to competition, in accordance with European legislation. Some countries opened this market segment to competition while continuing to have regulated end-user prices (9 in electricity, 8 in gas), and others opened this market segment and did not use price regulation (3 in electricity, 4 in gas). In the same time, end-user regulated prices were removed in some of the previously opened market segments of some countries, essentially in electricity. Meanwhile, for gas, one country introduced regulated prices for the two largest market segments.

Several European countries (6 in electricity, 3 in gas) have also been contemplating the possibility of removing end-user price regulation from part of their market; household segments often being excluded from these plans. 5 countries in electricity and 3 in gas even planned to remove end-user price regulation from part of their markets until 2011.

2. Introduction

In the past few years, many European countries have experienced a shift from a fully regulated pricing system towards (theoretically at least) market-based prices. One of the main principles underlying this move is the perception that regulated prices are used to manage state-run monopolies of vertically-integrated undertakings, while market-based prices are viewed as necessary for a proper, competitive market to function. On one end of the spectrum are regulated end-user prices i.e., prices subject to regulation by a public authority, and on the other end, prices that are set exclusively by supply and demand. Reality is, of course, more diverse and more complicated. But this main supposition underpins the idea that end-user price regulation and market prices are incompatible, or to put it more directly: that *regulated prices are against the market.*

While ideology often intermingles with factual elements in this debate, this paper is an attempt to address more simply the effects of regulated prices on electricity and gas retail markets, particularly when set below market-based prices, and the methodologies for calculating these prices (1), as well as focusing on the actual experience with regulated prices, with a stress on the situation in Europe and some benchmarking elements from other regulated industries (2). Finally, an issue often raised in the context of raising prices, the interaction of regulated prices, market prices and the purchasing power of household customers and consumer protection will be addressed (3). This paper is an opportunity to present a regulatory perspective on the reverse of the question: what can customers expect from a well-functioning liberalised market (i.e., prices set by supply and demand, with no exertion of market power from market participants, and a good level of understandable information available to every market participant)?

3. Regulated prices have a detrimental effect on the proper functioning of electricity and gas retail markets

At first glance, regulated prices seem to be contrary to the principles of a competitive retail market. The European Commission (EC) 2007 sector inquiry unambiguously concluded that:

The setting of prices on supply markets can have very negative consequences for the market structure. If the regulated tariff is too low, new entrants are excluded from the market. Moreover, when prices are artificially low, market players will not invest in new capacity (…). In several Member States, regulated tariffs have generated adverse effects for the development of competitive markets, since they have been set at very low levels compared to market prices and cover a large part of the market, thereby effectively leading to reregulation[2] (EC 2007).

One observation is to be drawn from these conclusions: according to the EC, the main problem lies in the level at which regulated prices are set as compared to market prices (higher or lower). It raises a first question: is the debate on regulated prices about their level (and what is to be considered as a *low* level) (A) or are they to be considered *per se* as detrimental to the market (B)?

3.1. Setting regulated prices too low is not compatible with the development of competitive markets

As regulated prices, in many instances, have been set by political authorities for a long period of time, it is easy to assess their level in comparison with observable – that is mainly wholesale – prices. Regulated prices (in most if not all of Europe) can be qualified as being lower than market prices.

The negative impact of regulated prices set below market prices since opening the market to competition has already been widely discussed[3]. An in-depth presentation of these arguments goes beyond the purpose of this paper, however, it would be useful to sum up the major arguments.

[2] EC sector inquiry 2007 concluding part, p 9.
[3] See EC sector inquiry 2007.

3.1.1. Low level of regulated prices distorts the functioning of the market, both at wholesale and retail levels.

There is an intermingled relationship between wholesale prices and regulated retail prices. In other words, a low-level of regulated prices does not only hamper the functioning of the retail market but also the whole liberalisation process. It is likely to foster market foreclosure to the benefit of incumbent suppliers.

The EC showed that *new suppliers with no access to own-generation are effectively squeezed out of the retail market* (scissor effect[4]) *as they can no longer offer electricity purchased on wholesale markets at competitive prices. Accordingly, no merit-based competition for customers can occur, freezing the market position of incumbent operators* (EC 2007).

If regulated end-user prices are not in line with wholesale market conditions, suppliers without significant low-cost generation capacity or equivalent long-term contracts will not be able to make competitive offers that will allow them to recover their costs. Consequently, with a limited number of suppliers, there will be no development of the wholesale markets. Liquidity will remain at a low level. As a result, neither the wholesale nor retail markets will be competitive. (ERGEG 2007a)

Regulated prices limit the opportunities and incentives for customers to switch suppliers and thereby limit competition in the market. If customers benefit from artificially low regulated prices, there will be no incentive to switch supplier, whereas the lack of competition on retail markets hampers the customers' position. It is indeed through exercising their right to choose that customers stimulate retail competition between suppliers. Competitive pricing on the retail side is an important driver for market integration (ERGEG 2007a).

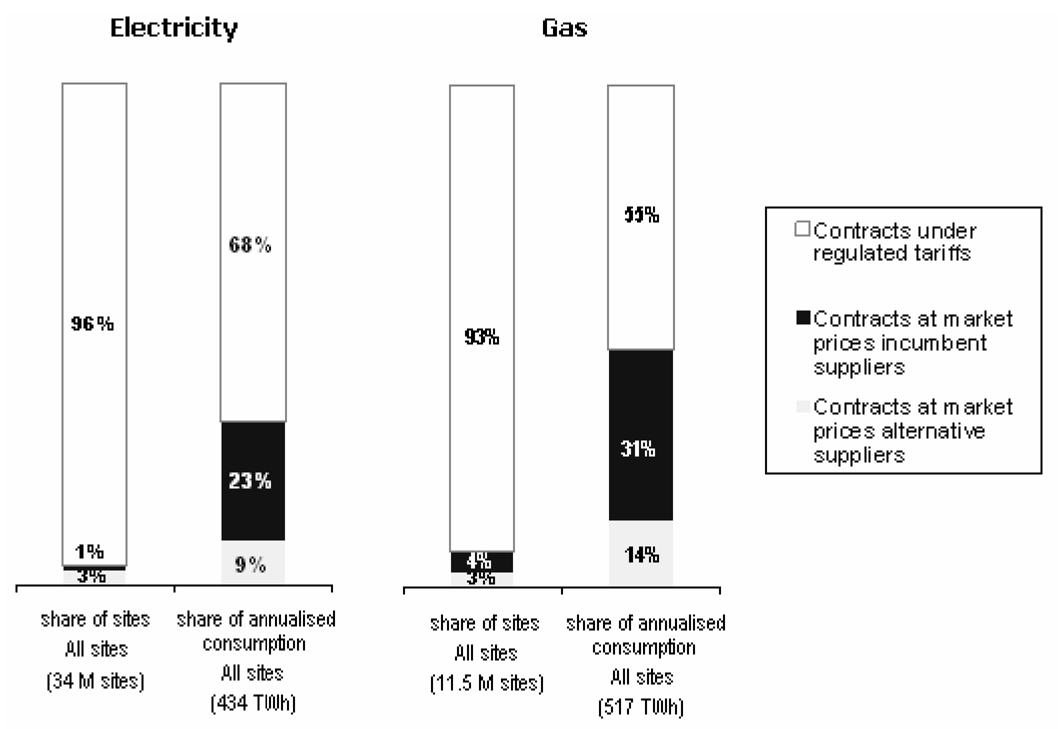
In this situation, new entrants do not actually compete with other suppliers/producers but with an alternative price-making system (Alavoine and Veyrenc 2008). Moreover, in some countries (like France) only a few operators (incumbent operators) are able to make offers under tariff conditions, thus reinforcing their dominant position, depending on the level

[4] Our emphasis – scissor effect for suppliers with no access to own generation/production capacities takes place when these suppliers have to sell electricity/gas to the final customers below the price they have acquired it from suppliers with generation/production capacities.

of regulated prices compared with the level of market prices, allow their competitors to propose new offers.

Simple figures show the extent to which the French retail market is still dominated by regulated end-user prices. In September 2008, in electricity, 96% of the 34 million customers (68% of total consumption) were supplied under regulated tariff conditions (in gas, 93% of the 11,5 million customers, representing 55% of total consumption) (CRE 2008a).

Figure 1. French electricity and gas retail markets still dominated by end-user price regulation



Source: CRE from TSOs and DSOs data, December 2008 (CRE 2008a)

3.1.2. Low level of regulated prices jeopardises both security of supply and efforts to curb consumption.

Regulated end-user prices that do not result from a competitive process and do not reflect production costs will not give reliable price signals to the market and to the final customer (ERGEG 2007a). The low-level of regulated prices sends the wrong signal both to customers and to suppliers/generators.

Customers have no incentive to reduce their overall consumption nor to reduce consumption in times of peak-load demand, when interruptions might be necessary (for electricity). Suppliers/producers have no incentive to invest in new capacity (neither transmission and distribution nor generation and supply). Market prices are supposed to reflect time-related scarcity, available capacity and customers' willingness to pay. They should give an indication of when and what further investment is necessary. When regulated prices are set too low, investors (generally risk-adverse actors) are not able to recover the investment for the most expensive generation capacity, peak-load generators. By distorting the necessary price signals for investment in new generation capacity, regulated prices that are set too low are consequently damaging to security of supply[5].

Rapin and Vassilopoulos (Rapin and Vassilopoulos 2006)[6] went further and argued that the coexistence of low regulated prices and market prices could even lead to surging market prices due to more frequent periods of acute electricity supply-demand tension. This would be the result of no new investment in new generation capacity (lack of robust signals for newcomers and potential investors), and no price sensitivity on the part of customers, eliminating incentives for customers to enter into new interruption contracts.

These arguments are not purely theoretical. Many situations have been observed throughout Europe (barriers to entry, market foreclosures, state aid) that distorts the functioning of liberalised markets[7].

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[5] Yarrow (Yarrow 2008) synthesises this argument simply: "stated generally price control can be expected to have significant effects on supply-side incentives".
[6] A Eurelectric report came to the same conclusion: *…price regulation cannot co-exist with competitive markets and that setting retail prices for entire household segments or large categories of end-users does not conform to the Directive and cannot be justified under public service obligations* (Eurelectric 2006).
[7] It is worthwhile noticing these procedures mainly apply for industrial & commercial customers (vs. household customers).

3.1.3. Concrete examples are numerous that illustrate the difficulty in the coexistence of regulated prices and competition.

The European Commission procedures for failure to fulfil an obligation are among the strong indicators of those situations where regulated prices actually impede the development of the market.

The European Commission reported that in April 2006, it addressed letters of formal notice to Member States as a first step in the initiation of infringement proceedings.

The motivation behind some of these inquiries was that Member States had inexistent or inadequate justification for regulated tariffs – in particular for eligible customers. The EC explained that *taking into account the adverse effects of regulated tariffs for competition in particular for the non-household segment, it is recommended that these tariffs are discontinued without delay* (EC 2007).

One concern related to tariff regulations in new Member States, which, it alleges, lead *to cross-subsidies from industry to residential customers and prevents the reflection of real costs in gas prices* (EC 2007).

Another concern related to prices set below the wholesale market prices, that could lead to new suppliers not entering or being squeezed out of the market.

3.1.3.1. Spain

In Spain entrants were concerned that government-set tariffs bear little relevance to the real cost. However, it was pointed out that these regulated prices should disappear by 2008. Entrants were particularly concerned about Spanish regulations which determine that supply of the regulated market is made preferentially from pipeline gas purchased from Algeria. The entrants pointed out that the incumbent faces no risks with this contract -if it overshoots the required quantity it gets to keep the excess and sell it on the market at inflated profit; if it undershoots it gets to buy more on the spot market for which it is compensated (the regulated price includes an element of spot price in the calculation).

In May 2006 the UK operator Centrica, which had gained significant market share in the eligible customer segment in Spain, lodged a formal complaint to the Commission *concerning the regulated electricity tariffs in Spain, and the corresponding tariff deficit system (compensation scheme for loss making local distributors supplying on the basis of public tariffs). In the view of Centrica, the Spanish system has squeezed out their Spanish subsidiary and other newcomers from the electricity supply market. The Commission is currently analysing whether any violations of state aid or antitrust rules have taken place.* (EC 2007).

3.1.3.2. France

Concerns were expressed by regulators and new entrants that although the principles underlying French tariffs do allow the possibility for competitive tariffs, the Ministry of Economy may set the tariffs lower than required to cover the increase in the incumbent's costs. This is a serious impediment to effective competition. Even the French incumbent gas supplier expressed concern that the maintenance of regulated tariffs could have negative effects on competition and considers that regulated prices should reflect costs.

This concern is shared by the French Conseil d'Etat, the highest jurisdiction in charge of settling disputes between the French administration and any individuals (natural person or legal entity).

In its order dated 10 December 2007[8], further to the referral from the Poweo company and the Féderation française des combustibles, carburants et chauffage, the Conseil d'Etat cancelled articles from the government order of 29 December 2005, thus deleting the initial change expected on the 1 January 2006 with regard to Gaz de France's public distribution tariffs, together with the mass recovery measures planned for the 1 April 2006 to compensate for losses resulting from costs that were not covered in the past by these tariffs.

The Conseil d'Etat considered that this order was seemingly unaware of the law of 3 January 2003 and of the decree of 20 November 1990 related to recovery of costs by regulated tariffs, which led to fixing tariffs clearly lower than the total average costs of Gaz de France. The French regulator's opinion dated 23 December 2005 concerning this order was unfavourable.

The order now specifies that the application of the law of 3 January 2003,

[8] Conseil d'Etat, Order # 289012,289776, 10 December 2007.
http://www.conseil-etat.fr/ce/jurispd/index_ac_ld0736.shtml

namely that the *[regulated sales] tariffs [for public distribution] cannot be lower than the total average costs incurred by each operator; that, to meet this obligation, it is the competent ministers responsibility, upon the date which they make their decision, firstly, to ensure that the tariffs recover at least the average total costs of operators as they have been assessed on this date, secondly, to take account of an assessment of changes in costs over the coming year, depending on the elements available on this date, and, thirdly, to adjust these tariffs if they observe any significant gap between tariff and costs, resulting from an undervaluation of tariffs, at least during the last year, with a view to compensating this gap within a reasonable timeframe* (CRE 2008b).

With regard to France, the grievances held by the European Commission related to various matters, including regulated sales tariffs for electricity and gas. Only the latter remains in dispute, which could lead the European Commission to refer the case to the Court of Justice of the European Communities, which it has not done for the time being.

Moreover, on 13 June 2007, the European Commission opened a formal examination procedure relating to state aid that would include, on the one hand, regulated sales tariffs for electricity in their yellow and green components (sites with power over 36 kVA) and, on the other hand, the TaRTAM (transitional regulated tariff for market adjustment) in its yellow and green components[9]. The inquiry opened by the European Commission is looking at possible state aid to companies and not at regulated tariffs applicable to low consumption sites, particularly residential consumers and small professionals.

The government presented its observations on 10 August 2007. It maintains that these tariffs do not constitute public subsidies to large and medium-sized companies. Since then, proceedings are pending.

If the level of regulated prices is such an issue, one may be tempted to conclude that higher regulated prices compared to wholesale prices, or

[9] French TaRTAM was set up by a government order based on the 6 December 2007 energy law. Eligible sites (i.e. industrial and commercial sites in France before the full opening up of the retail market on 1 July 2007) supplied under market price conditions were authorised to come back to a supply contract under regulated price conditions. A request had to be addressed before 1 July 2007 with no further opt-in. A special “intermediate” tariff was available for two years max. This tariff was set up at a level which is higher than other regulated prices but still below market prices. This tariff is made up of three components, one for each of reference regulated prices (yellow- green- blue-) applicable for three pre-defined categories of customers (large- medium- small- industrial and commercial customers).
The application time period was extended until end-June 2010 and conditions for opting-in were made more flexible by the 4 August 2008 law for modernising the economy.

regulated prices linked with costs of incumbent suppliers/producers would be the solution to the coexistence of regulated and market-based end-user prices on a liberalised market (CRE 2008b).

3.1.4. Higher regulated prices are arguably, by themselves, a solution to allow regulated prices and competition to coexist

Regulators' experience in Europe shows that the issue of setting regulated prices at an appropriate level is much more complicated that it appears at first sight. New entrants, who do not have power generation capacity or long-term gas contracts, buy energy on the wholesale markets (OTC, Exchanges). To be able to make competitive offers in open market segments with regulated prices, wholesale price levels must be lower than regulated energy price levels. Thus, the level of end-user regulated energy prices is not the only data taken into account for analysing obstacles to the market opening process. For instance, end-user regulated electricity prices can recover supply costs, including capital expenditure, although their level may still be lower than wholesale prices (ERGEG 2007a&b).

In this case, the scissor effect between incumbents with their own capacity and new entrants with no physical capacity nor long-term procurement solution cannot be avoided. It also implies that the authority responsible for setting the regulated prices is perfectly informed of the cost structure of the industry.

Information is at the core of network industry regulation; this has been widely developed in the literature[10]. Let us just remind readers that under asymmetric information, private information possessed by a utility in the regulatory process is partially available to the regulatory authority, especially as regards the utility's production function, and that only the distribution of the private information is available to the regulatory authority. For instance, the French regulator (in charge of providing non-binding advice on the level of regulated end-user prices to the government) has continuously complained about the impossibility of precisely assessing the exact cost structure of the main incumbent electricity supplier.

[10] See for example An Econometric Analysis of the Asymmetric Information, Regulator-Utility Interaction / WOLAK Frank A. Annales d'Economie et de Statistique, 04-06-1994, n° 34. – 57 p. The Quality and Quantity of Regulatory Information / GARCIA MARIÑOSO Begoña, HVIID Morten, WADDAMS PRICE Catherine. – Norwich, Centre for Competition & Regulation, 08/2002. – 25 p.

Raising the level of regulated prices may not be the solution, either because the costs to be recovered are nearly impossible to assess or because even regulated prices set at wholesale price levels will not ensure that incumbent suppliers can recover their costs. It could be that the nature of regulated prices itself is incompatible with the opening up of electricity and gas markets to competition.

3.2. The very nature of regulated prices might not be compatible with the proper functioning of electricity and gas markets

There are two main reasons explaining that despite their levels, regulated prices are deemed to be incompatible with a competitive market. First, methods for establishing regulated end-user prices are contrary to market price-setting mechanisms. Second, regulated prices are not designed for competitive markets – most are artefacts of state-run (centralised) economies which, in principle, are removed from the current market-driven energy sector.

3.2.1. Methods for establishing regulated end-user prices are opposed to market price setting mechanisms.

Regulated prices are set by an external authority, while market prices emerge when supply meets demand, i.e., in a perfectly competition situation, when suppliers' willingness to offer meets customers' willingness to pay, notwithstanding the serious specificities of the electricity and gas market[11]. Suppliers and customers are directly interested in finding a "fair price" to meet their needs, while an external authority may be motivated by reasons other than those of a well-functioning market.

Therefore, the process and methods for setting regulated prices are likely to have an impact on the market. Depending on the authority responsible for this task, the impact can, of course, be mitigated.

ERGEG (ERGEG 2007b) identified different methods for regulating retail prices in Europe. The overall picture is that there are considerable

[11] This is the reason why wholesale markets which directly influence retail markets have to be kept under constant scrutiny by an external authority, national regulators, in order to ensure the proper-functioning of both markets. Continuous monitoring is a prerequisite to gain the confidence of every stakeholder (end-users included) in the market.

differences between the regulatory processes concerning the legal basis of the tariff-setting methodology, the role of independent regulators, and the extent to which methodologies are published and auditable.

Table 1 Transparency of the regulatory process in electricity (EU-17, June 2007)

ELECTRICITY: 17 countries with end user regulated prices in at least one open market segment						
Not fully transparent process						
Transparent process						
Regulated price setting methodology is fully auditable if the regulator can access all confidential data concerning costs and contracts required for the calculation process						
A proposal can only be approved or refused						
Countries	Who sets end user regulated prices?	Role of the regulator(*)	End-user regulated price setting methodology is		Calculation process is fully auditable	Observations
			defined and published in legislation	published by the regulator		
Cyprus	The regulator	Sets regulated prices	Y	Y	N	
Denmark	The regulator	Defines and applies the regulated price-setting methods & sets regulated prices	Y	Y	Y	
Estonia	NA	NA	NA	NA	NA	
France	The Ministers of industry and energy	Gives a consultative opinion to the proposal of the Ministry	N	N	N	
Germany	Federal state price supervision authorities	Approves the end-user prices	Y	Y	Y	
Greece	The Minister of development	Gives a consultative opinion to the proposal of the Ministry	N	N	N	
Hungary	NA	NA	Y	Y	N	
Ireland	The regulator	Defines the methodology of calculation of regulated prices and sets regulated prices	N	Y	Y	
Italy	The regulator	Defines the methodology of calculation of regulated prices and sets regulated prices	Y	Y	Y	
Latvia	The regulator	Defines the methodology of calculation of regulated prices and sets regulated prices	Y	Y	Y	
Lithuania	NA	Approves weighted average price for electricity sold to non-eligible customers		Y	Y	
The Netherlands	The regulator	Sets the maximum reasonable en-user price	Y	Y	Y	The Maximum Reasonable end-user price is strictly confidential to prevent market distortions by the regulator

Poland	The regulator	Sets regulated prices	Y	Y	Y	
Portugal	The regulator	Sets regulated prices	Y	Y	Y	Published legislation only determines General Interest Costs, non-market related (**)
Romania	The regulator	Sets regulated prices	Y	Y	Y	
Slovak Republic	The regulator	Sets regulated prices	Y	Y	Y	
Spain	The Minister of industry	Draws up a consultative report	N	N	N	
(*) or independent public authority in charge of setting end-user regulated prices						
(**) Following of high price increases the government published new legislation concerning general interest costs (non-market based) that included: i) a decrease in some of the general interest costs ii) a dilution over a longer period of time for the payment of this general interest costs iii) a cap on the price increase, applicable in 2007 only, for the smaller of the domestic consumers.						

Source: ERGEG

In June 2007, in the 17 countries that were regulating retail prices for electricity and gas:

- responsibility for setting these prices lay with the regulator, except in France, Greece and Spain;
- the rules for calculating these prices were published, except in Cyprus, France, Greece, Hungary and Spain.

In France, on the advice of CRE, the competent ministers set the regulated retail prices for electricity. They approve the proposed regulated prices of the incumbent gas suppliers, except for Gaz de France, for which they fix the prices that apply to customers connected to the distribution networks.

In its recommendations, ERGEG says that regardless of considerations concerning the method of regulating retail prices, the very existence of regulated prices has an impact on the way retail markets function, and adds that the transparency of this process is, in itself, a concern for the proper functioning of the market.

The French experience will perhaps allow us to better understand the difficulty of setting the level of regulated prices in line with a well-functioning liberalised market. In principle, regulated prices in France and Spain should recover suppliers' costs. However, in practice, they may be set by the minister(s) without taking this requirement into account[12].

[12] This issue is quite sensitive in France. It is pointless to discuss the reasons why some political authority

Based on CRE's deliberation of 2006 and 2007[13], Rapin and Vassilopoulos (Rapin and Vassilopoulos 2006) highlight the fact that for electricity tariffs, the government[14] decision to raise regulated prices is not based on economic grounds. Increases in regulated prices have been in effect for a long time.[15] These increases have been applied in a similar manner for every customer category (largest industrial & commercial customers as well as SMEs and household customers). SMEs and household customers (every customer with a voltage connection below 36kVA) were more impacted by these raises compared to other customers. Green and Yellow tariffs are indeed "all-inclusive" tariffs but the energy supply part of the tariffs has often been residual and even negative to some customers supplied at Green and Yellow tariffs.

In most cases, regulated prices are not compatible with the functioning of liberalised markets, not only because of the tariff-setting process but mainly because they were not designed to coexist with market prices in a liberalised market.

3.2.2. Most regulated prices are not designed to coexist in a liberalised market

Some regulated prices (or price control mechanisms) were designed to regulate monopolistic electricity and gas sectors, and predominantly, vertically-integrated undertakings (production – transmission – distribution).

Monopoly price control and its adverse effects (like the Averch-Johnson effect, i.e., the incentive for a regulated firm to over-invest in tangible assets) have been widely described in the literature. The purpose of this price regulation has often been the development of optimal capacity at the lowest possible cost for the whole of society.

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takes a particular decision. The fact that some decisions are legitimate or not is not at stake. It is simply argued that these decisions are not based on a market rationale and that they are even likely to have negative consequences on the functioning of liberalised markets.

[13] See CRE's deliberations of 9 August 2006 and 9 August 2007.

[14] There are no common rules for electricity and gas. The initiative of setting new levels of regulated end-user prices (or new methods to calculate the level of regulated prices) is the government's responsibility for electricity and the suppliers' responsibility for gas.

[15] The situation has tended to evolve since mid-2007 (see the following CRE deliberations: 9 August 2007 and 11 August 2008).

Yallow (2008) proposed a summary of the most common type of price control: classic cost of service regulation.

Classic cost of service regulation determines allowed prices on the basis of estimates of the costs to serve particular consumer demands, where costs are defined to include a reasonable rate of return on capital. This prevents the monopolist from exploiting the relatively constrained substitution possibilities available to consumers by setting prices that are substantially in excess of costs. Such excessive prices would be to the direct disadvantage of consumers, and would also have negative effects on economic efficiency by restricting output.

Alavoine and Veyrenc (Alavoine and Veyrenc 2008) stressed that these effects are not related to the normal functioning of liberalised markets arguing price control should no longer continue. It falls upon the suppliers to make offers to the consumers and upon the dynamics of the market to make the prices converge on the social optimum.

It is especially true for France. According to Marty (Marty 1999), quoted by Rapin and Vassilopoulos (Rapin and Vassilopoulos 2006) regulated prices were established to recover the development cost of nuclear power in a context of overcapacity of base-load generation. Regulated prices are "historic prices" thus reflecting the historic overcapacity in base, and not the current deficit in peaking capacity.

Not only are the levels of regulated prices likely to impede the development of liberalised markets, but the mere existence of these prices has effects on liberalised markets. These effects are only possible because of the (number) importance of regulated prices schemes (number of markets concerned, amount of consumption concerned for each market) and their varieties. This variety requires in-depth discussion in order to appropriately assess the effect of regulated prices on liberalised markets. This is not the purpose of this paper, although it will be worthwhile to present examples of some regulated prices which qualify the widely agreed position that regulated prices have adverse effects on the development of liberalised markets.

4. Facing the reality of price regulation helps us to better understand its scope and impact on the European electricity and gas markets

Debate over end-user price regulation and its effects on the market needs to be balanced by analysis. Studying the facts in greater detail shows us that this debate is not purely theoretical, since price regulation is in existence in the majority of Member States and more importantly, is applicable to the majority of consumers in Europe (A). It also teaches us that its effects depend upon the particular market context[16] and that there is no uniform price regulation, but a more diverse reality (B).

4.1. Despite the full opening of markets to competition (July 2007), price regulation remains the rule in Europe

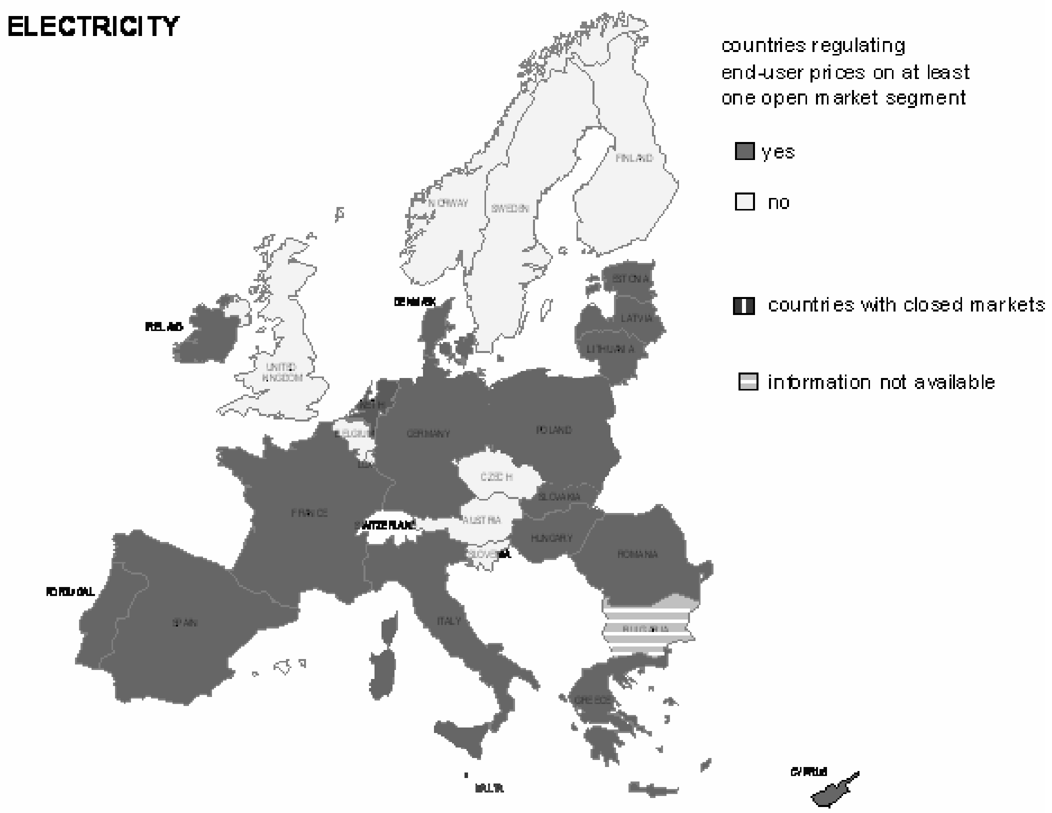
ERGEG found that (as of June 2007) 17 of the EU-27 Member States (concerning electricity) and 9 EU Member States (concerning gas) with partially or fully open markets, had end-user energy price regulation in at least one open market segment (i.e., not only to households and small business or to those large and industrial users who, since 1 July 2004, are eligible to procure energy on the competitive market). In most of these Member States, the share of eligible customers on regulated prices was more than 80 percent in each open market segment. In most cases, the type of price-regulation used is maximum price-setting.

In many EU Member States where there are incumbent electricity and gas companies, the state retains tight control over the electricity and gas prices charged to end-users, mainly arguing that they are doing so in order to protect customers. Price setting is declared as an instrument to meet public service obligations. In many countries, the co-existence of regulated and

[16] Disregard of markets' specificities would certainly be a mistake, even for European markets open to competition for a long period of time. For instance, a recent and highly documented memorandum from Pr Philip Wright and Dr Ian Rutledge (Wright and Rutledge 2008) pleads for re-introduction of regulated prices for household and small businesses (rate of return regulation as a better option than price-cap regulation) based on an analysis of the structure of UK's domestic gas and electricity markets as well as on their assumption of anti-competitive behaviour from various market operators. On the contrary, Yarrow (Yarrow 2008) described the situation of the Norwegian electricity retail market (opened to competition for quite a long time too) as very satisfactory: "significant amount of differentiation among the retail tariffs offered by electricity suppliers" and active customers in a context of high price increases and volatility for residential customers (+ 66% on average over the period 1997 to 2007).

market prices is clearly not a transitory measure. This situation has been in place for many years and there are no clear indications that Member States with regulated prices intend to progress towards market prices, despite ERGEG's continuous call on this topic. Poland may be an exception. Although it has no competence to impose such a measure, in February 2008, the Polish regulator (URE - Urzędu Regulacji Energetyki) has indeed proposed to the government a process – a road map – for removing price regulation from the Polish market[17].

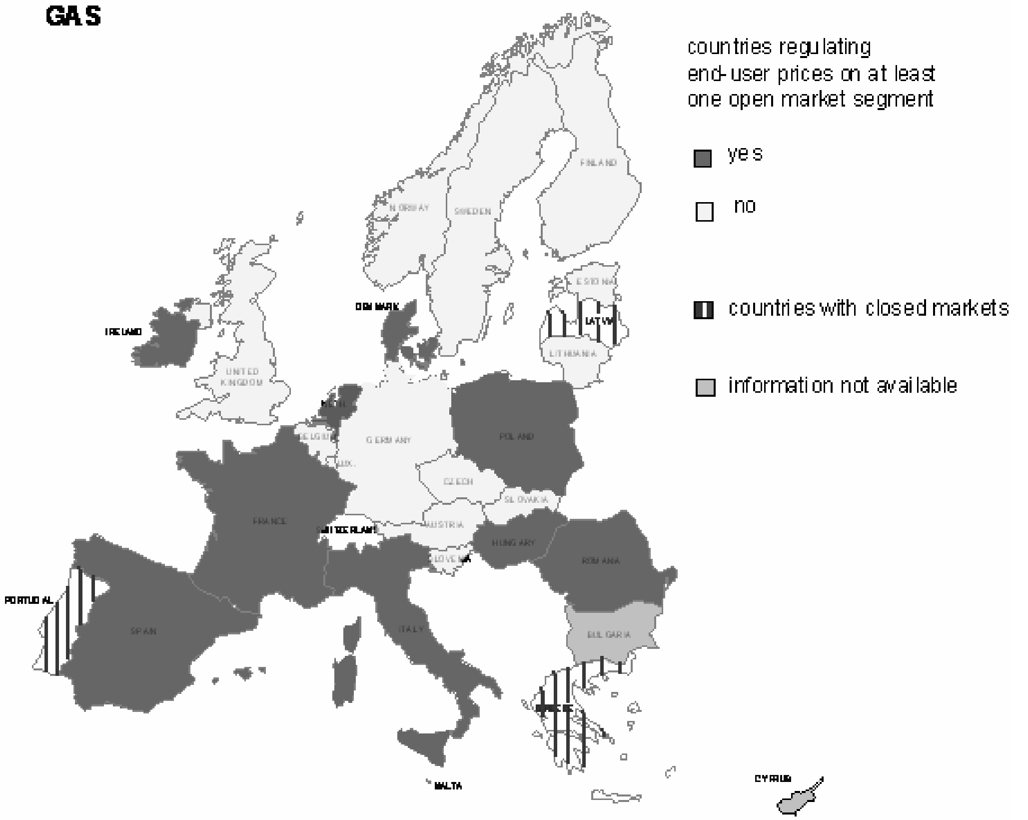
Figure 2: Electricity regulated prices in Europe (June 2007)



Source: ERGEG

[17] See Roadmap of Price Liberalisation for all Electricity Consumers – Towards the Customers' Rights and Effective Competition in the Power Industry Sector
http://www.ure.gov.pl/portal/en/1/18/Roadmap_of_prices_liberalisation_for_all_electricity_consumers.html

Figure 3: Gas regulated prices in Europe (June 2007)



Source: ERGEG

It should be noted that for most of the countries where energy markets coexist with regulated energy prices, all customer segments can be supplied at regulated prices. This means that, as a rule, price-regulation is not confined to small customers.

In cases where open market segments and end-user price regulation coexist, only a very limited number of customers, in general, have switched from regulated prices to competitive market prices. For most market segments, the share of customers remaining at regulated prices is more than 80% and in many segments nearly 100%.

However, for bigger customers there are examples of considerably fewer customers remaining at regulated prices. It should be noted that these share figures are also influenced by the fact that in some countries it is not possible to switch back to regulated prices, although in most countries it is[18].

In France, a "reversibility principle" was implemented[19] and seen as a prerequisite for customers' confidence in a liberalised market. Such a principle is not designed to make consumers move back to regulated prices at will, but it makes it possible for specific consumers, depending on their situation (i.e., to simplify the debate, household customers for electricity only), to access regulated tariffs for recently connected sites (before 1 July 2010) or to return to regulated tariffs until 30 June 2010 only after a 6-month period that cannot be cut down. Despite its somewhat complex nature, this system is likely to establish confidence in the market: any consumer who changes supplier for a market price contract is safe in the knowledge they may return to the familiar system.

The French TaRTAM (transitional regulated tariff for market adjustment) is based on the same concept, that the absence of reversibility could be perceived as a barrier to entry and could deter customers from switching to a new supplier under market price conditions. Yet, this principle produces adverse effects since it is not in line with the move towards a removal of price regulation. This may be the reason why these provisions are actually transitory; this principle runs up to 2010.

Because of the simple and broad definitions retained, price regulation appears to be a massive phenomenon in Europe. All the different European price regulation schemes certainly cannot produce the same effects on the market and, therefore, we are entitled to question whether there is a "market-friendly" form of price regulation.

[18] The question of whether there is a link between reversibility, (i.e. customers who return to end-user regulated prices) and the share of customers at regulated prices remains an open issue within ERGEG. Some regulatory authorities consider that the share of customers at regulated prices mainly depends on the level of regulated prices compared with that of market prices.
[19] By the law of 21 January 2008, which modifies Article 66 in accordance with the programme law of 13 July 2005.

4.2. Is there such thing as market friendly price regulation?

The French "reversibility principle" example clearly illustrates the concept that price regulation needs to be precisely assessed and that some price regulation could present benefits within a liberalised market and even be considered as necessary for the achievement of market opening, depending on the structure of the relevant market.

4.2.1. ERGEG has identified some examples of price regulation in line with liberalised market conditions

ERGEG (ERGEG 2007b) reported examples of best practices in the area of price regulation. Formulas with the most protective effect to some customers and the least distortive effect to the market are presented.

4.2.1.1. the Netherlands

In the Netherlands, for both electricity and gas retail markets, the regulatory authority (Energiekamer) sets the maximum reasonable price for household customers and SMEs per product (price capping). This price is not made public, so as not to distort the mechanisms for setting market prices, but the regulatory authority may oblige suppliers to comply with these regulated prices if their prices are above the regulated prices.

4.2.1.2. Denmark

In Denmark, in the electricity retail market, in order to minimise any negative impact on the competitive market and in accordance with Danish legislation, price regulation is linked to wholesale market prices. The regulatory authority (Energitilsynet) sets an upper limit on the suppliers' profit margins with supply obligation licences (which make these suppliers default, or last resort, suppliers – should other suppliers fail). These suppliers can adjust prices, as long as they remain below the upper limit. In other words, profit margins are capped at the same level as profit margins in the competitive market. In order to assess what the profit margins in the competitive market could be, the regulatory authority compares non-regulated prices with Nord Pool spot prices and taking profiling into consideration, a mark-up or gross margin of the competitive market is identified. This mark-up constitutes the cap of mark-ups identified for the notified "obligation to supply prices" of individual supply companies.

In Denmark, the regulatory method, as well as the setting of specific profit margin caps, are decided by the regulator within the legal framework of its energy Acts. Every quarter the Danish regulatory authority calculates the tariff cap for all "obligation to supply" companies and publishes it on its website. Each supply company sets its own tariffs and has to submit it to the regulatory authority ex-ante for each quarter. These are also published on the regulator's website. If this price exceeds the cap, it must be lowered when invoicing. If it is below the cap no adjustment needs to be made. The regulatory authority calculation principles are available on its website.

"Passive" customers (excluding electricity customers with a yearly consumption of more than 100 000 kWh), i.e., customers who do not actively choose a supplier, are automatically supplied by the supply company holding a licence for "obligation to supply" for that geographical region ("default supplier"). A customer having actively chosen another supplier can return to the supply company holding the licence for "obligation to supply" on normal "obligation to supply" terms if he does not renew his supply contract or does not engage in a contract with another supplier on the competitive market when his supply contract expires.

Any customer having lost his supplier, i.e., due to bankruptcy of the supplier, will also be supplied by the supply company holding the licence for "obligation to supply" for that geographical region ("supplier of last resort") on normal "obligation to supply" terms until he actively chooses another supplier.

Energy retailers apply for an "obligation to supply" licence for a certain geographical area over a fixed period - generally five years. The entire geographical area of Denmark is covered by such licences. In practice, only the incumbent retailers in each geographical area applied for and were granted such licences when the present Electricity and Gas Supply Acts came into force. Thus, the retail market for households and small business customers is dominated by incumbent suppliers.

4.2.2. Benchmarking with other network industry regulation might also prove useful in some cases, i.e., the French telecoms industry

The French example in the telecoms industry shows that some framework of price regulation could, under certain circumstances, be necessary for the completion of the market liberalisation process (if they are purposely designed to favour competition and are transitory).

In 1997, it was decided to open the telephone retail market to competition, a market where the French national operator had an overall dominant position (France Telecom – FT). The regulatory authority (Autorité de Régulation des Télécoms, then the Autorité de Régulation des Communications Electroniques et des Postes) was immediately empowered to control some of France Telecom's retail tariffs for the simplest but most demanded products (classical phone services – IP voice excluded).

A process was designed to review FT tariff proposals in light of their effect on competition in the downstream retail market. The regulatory authority's objective was to prevent FT from abusing its dominant position and forcing new entrants from the market by protecting, in the short-term, both customers and new suppliers.

Two kinds of price practices were targeted. First, eviction prices – too low for newcomers to effectively compete with (scissor effects); and second, excessive prices which abused captive customers.

The process was quite simple: FT proposed tariff changes to the regulatory authority. These changes were reviewed in light of the above objectives. The regulatory authority could then oppose the entry into force of the new tariffs. Until September 2005, this power was shared with the ministry in charge of telecommunication, but it is now totally vested upon the regulatory authority.

Price control was expected to last until the wholesale markets were sufficiently liquid to allow alternative suppliers to make competitive offers on the retail market. The regulatory authority judged there was sufficient liquidity at the end of 2006[20], and therefore decided to ease price control

[20] ARCEP's first decision to ease price controls in the retail market for basic phone services: 28

mechanisms. The objective of the regulatory authority is to suppress *ex ante* price control, to only focus on a competition policy assessment of *ex post* consequences of pricing policies not only from the main incumbent but also from its competitors.

One of the most important features of this telecom price regulation was its transitory aspect. Transitory price regulation may be tolerated, so long as it only resorts to necessary means i.e., means that do not exceed the end pursued.

Within the European Union, the deregulation process leading towards competitive markets varies in timing and in speed. The level of competition differs between Member States. According to the European Commission, *although price controls prevent suitable price signals being given to customers about future costs, targeted price regulation may be needed to protect customers in certain specific circumstances, for instance in the transition period towards well-functioning competition. Price regulation must, however, be balanced so as not to obstruct market opening, create discrimination among EU energy suppliers, reinforce imbalances in competition or restrict resale*[21].

That is why ERGEG (ERGEG 2007a) stated that transitory price regulation may be necessary to protect customers from the abuse of dominant positions, even if fully open markets with well-functioning competition cannot, in the long-term, coexist with regulated end-user energy prices.

5. The idea that end-user price regulation systematically favours household customers should be put to an end

When dealing with regulated prices in Europe, one has to face the argument that regulated prices (at a level below market prices) limit the influence of surging energy prices, thus protecting household customers.

Yarrow (Yarrow 2008) sums up this argument explaining that with artificially low prices there *can be no doubting that, other things equal, there (are) resulting benefits to consumers. The problems lay in the fact that other things (are) not equal.* Indeed we have already stated that supply-side incentives are reduced

September 2006 (Decision n° 07-0636), followed by another major decision on 26 July 2007 (Decision n° 06-0840).

[21] Communication from the Commission to the Council and the European Parliament – prospects for the internal gas and electricity market, COM(2006) 841 final, page 20.

and thus that the overall supply (reliability) is put in danger, which, without a doubt, does not benefit customers (A).

It is also true that household customers (compared to industrial and commercial customers) require specific treatment, as they can be considered as newcomers in many European markets (B). Any advantages they receive should be put into perspective, by considering some detrimental, while not often discussed, effects of regulated prices.

5.1. Regulated prices can have direct damaging effects for consumers in open electricity and gas markets

Yarrow (Yarrow 2008) argues that in addition to low prices, many other aspects have to be considered from the customer's point of view. Price regulation may impede customer's access to information, diversity in offers or it can provide the opportunity for the collusion of suppliers deciding to exert their market power.

Yarrow (Yarrow 2008) is of the feeling that price caps, price control, price setting and any forms of standardisation in prices reduce variety. Customer surplus is not reached. Some household customers would not find any suitable offers. Regulated prices are said to give centralised, thus relatively simple and clear, information that reduce customers' efforts to search for new offers, whereas customers actually need to seek better deals for their energy supply and not accept standardised offers. A sufficient level of information should allow customers to exert their choice in the market. The author also invokes a necessary learning curve for customers.

As indicated earlier, setting up a "proper" level of regulated prices is quite an issue in uncertain worlds with asymmetric information. There is no guarantee that regulated prices will be the better deal for customers (compared to market prices). However, the fact that the *price is 'endorsed' by reputable public bodies could plainly lead to it being considered to be a reasonable deal, such that there is no point searching for anything better. Similarly, in framing the evaluation of alternative tariffs relative to a standard offer, consumers may falsely believe that they are getting a very good deal if the alternative offers a significant discount, when in fact the discounted tariff may still be above the market clearing price. In these ways, the policy could harm the very people it is intended to assist.* Such prices can act as *focal points for pricing coordination* (Yarrow 2008). Suppliers collude (tacitly or not) to reach the level of the only publicly available prices. Competition is reduced and therefore the expected market benefits vanish.

The most tricky issue when it comes to household customers is making it clear that while everyone has a short-term interest in lower tariffs for fixed terms (certainty), household customers are not only individuals but also families (i.e. generations to come) and therefore can understand obvious long-term interests such as improved quality of service, reliability of supplies, as well as the fight against climate change.

According to Yarrow (Yarrow 2008), *in the energy sector the notion of consumer interests is under re-examination as a result of the increased priority being given to environmental policy in general, and to climate change policy in particular.*

It is therefore quite important to recognise again that consumers can also be harmed as a result of under-pricing, because under-pricing tends to restrict the supply-side of the markets: certainly in the longer-term by discouraging investment and innovation, and possibly also in the short-term by reducing reliability and security of supply.

If household customers, as a group, have a long-term interest in the success of market price mechanisms, specific individuals may need specific protection schemes. Most of them are not related to regulated prices. This is all the more true with the liberalisation process, which has never implied that protecting vulnerable customers is no longer an objective. European competition law has always been moderated by universal service obligations.

5.2. ERGEG recommends not confusing the two purposes: customer protection and protection of vulnerable customers and the effect of end-user price regulation

Both purposes are to be consistently borne in mind, even if regulatory authorities in Europe do not share the same competences in this respect. At least, most of them are responsible for providing customer information.

Informing customers of their rights and their ability to switch supplier is certainly the first step to promoting customer empowerment and to allowing them to benefit from the effect of competition on electricity and gas retail markets.

Protecting vulnerable customers is necessary in a competitive market. Under EU law, "vulnerable customers" are safeguarded under the liberalised market framework. This is because "vulnerable customers" are considered more susceptible to suffering in open markets and to becoming victims of misleading commercial practices. Vulnerable customers may be protected through specially established social schemes, like social aids ensuring their continuous access to electricity and gas.

Even after a transition period for the removal of regulated end-user energy prices, there may be a justification for protecting certain "vulnerable customers", using tools other than regulated end-user prices. The tools used for the protection of these customers must work in line with and support the prerequisites of open, competitive markets. ERGEG believes that, in general, issues of consumer protection and the needs of vulnerable customers are social issues rather than energy policy issues. It is the Member State governments' responsibility to define these tools. It is not a regulatory issue.

European law requires Member States to identify vulnerable customers. Different approaches have been adopted across the EU in defining vulnerable customers, for example:

- Low income households (Belgium, France) or otherwise unable to pay (Belgium, UK)
- Different climate zones within a country
- Urban versus rural population

ERGEG does not comment on these varying definitions of vulnerable customers. It is for each EU Member State to decide on the scope of their customer protection mechanisms and therein to define "vulnerable customers". However, protecting "vulnerable customers' should not be confused with maintaining regulated energy prices for all (or certain categories of) customers. ERGEG considers that regulated energy tariffs create market distortions and should be abolished.

It is ERGEG's view that any policy aimed at protecting vulnerable customers be brought into line with market conditions. It is of the utmost importance that any attempt to protect vulnerable customers does not hinder the efficient functioning of a competitive market. The following examples describe situations in which the formulation of the market price is not, or is minimally, affected:

- Tax discrimination such as different energy taxes or VAT-based on for example income, geographical conditions, industry situation, competitive situation etc., compatible with EU-legislation (state aid, etc.)
- Subsidies, either proportional or lump-sum, compatible with EU-legislation (state aid, etc.)
- Social benefits.

The above suggestions do not affect the market. All customers are exposed to price changes, although at different levels.

6. Conclusion

Our first conclusion as regards the initial and deliberately provocative/challenging question (*are regulated prices against the market?*) is that while they are in principle incompatible with a competitive market because of their rationale[22], the answer to this question has to be carefully considered. It depends upon each particular market, the methodology retained for setting these regulated prices, the level of these prices compared to market prices and the suppliers' cost structure, for whom these prices are intended and for what purpose they have been designed.

This paper was intended to be thought-provoking by drawing attention to some areas of thought and does not purport to be a comprehensive survey of all the impacts of price regulations.

However, a second conclusion can be drawn from the debate over the question of regulated prices. Regulated prices should not be such an issue at stake compared to the work to be done by market participants, especially regulatory authorities and consumer organisations, in favour of empowering consumers. It is certainly right to discriminate against household consumers themselves to specifically protect pre-defined vulnerable customers[23].

[22] Both systems (regulated and market-based) seek to allocate scarcity, one by establishing the equilibrium of price and demand, the other by considering other ends, and originally, the control of a monopoly.
[23] Definition of a category of consumer and of specific measures to protect them is left to Member State decision according to current European legislation (Article 3 of Directives 2003/54/EC and 2002/55/EC).

The true question about empowering consumers is how to make them active participants in the market and to allow them to make informed choices. ERGEG (ERGEG 2006a, b, c) has published a series of recommendations in this regard. In order to enable consumers to benefit from the market, there should be clear and accessible information on supplier switching procedures[24] (which should be clear, easy, reliable, and fast), on prices (not only on offer characteristics, but also on the modification of price indices, communicated well in advance, available current information on price changes during the contract period), on what can be expected in terms of quality of service, as well as specific schemes to help customers effectively resolve conflicts with the service provider.

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[24] ERGEG recently held a workshop (Paris, 23 September 2008) on this subject to establish direct contact with the main market participants concerned with this issue. ERGEG positions and recommendations, and the minutes from the workshop are available at
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