



Report sent to the DG TREN
July 2008

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Message from the College



France assumes the Presidency of the European Union on 1 July 2008 for six months. Its mandate reflects today's thinking by making energy a key priority.

The second half of 2008 could well see the consolidation of a process that started in 1996, as the European Commission and the EU Member States succeed in developing an internal electricity and gas market that addresses security of supply, economic competitiveness and measures to combat climate change.

These three objectives are interdependent. Because it promotes the circulation of energies, the European internal market optimizes the complementary nature of the energy mix and boosts competitiveness. The market offers generating companies and suppliers freedom of establishment, thus encouraging the development of diverse sources of production, including renewable energy sources. It also offers market players opportunities for European development.

The European Council announced these objectives in March 2007, and has made the development of an "effective, fully-functioning and interconnected internal energy market" one of the conditions for a secure supply for the European Union.

The European Commission introduced the 3rd "Energy Package" on 19 September 2007, succeeding those of 1996-1998 and 2003, with the aim of speeding up the development of the internal market. To this end, it proposes three major initiatives: improve the operation of the networks that carry Europe's electricity and gas; harmonize and strengthen the national regulators, in terms of both their authority and of their independence; and set up an Agency for the Cooperation of Energy Regulators.

To establish the internal market, the barriers to trade between the various networks must be removed. Inadequate investment in the interconnections, resulting in congestion, slows the market's development.

This is also identified in the report "Energy Security and the European Union – Proposals for the French Presidency", submitted to the French Prime Minister by Claude Mandil on 21 April 2008. According to the report, "contrary to what is often claimed, complete and rigorous implementation of the internal market does not compromise security. Very much the opposite: it is essential for the Union's internal solidarity. And it must be a single, fluid market, not twenty-seven separate markets that may be liberalized, but remain segregated by contract practices, inadequate transmission infrastructures and unharmonized regulation."

A pragmatic approach is essential for progress. Regional cross-border markets must be established, and these depend on the use of developed and optimized interconnections.

In this context, the French Energy Regulatory Commission (*Commission de Régulation de l'Énergie – CRE*) is actively involved in four regional initiatives in the electricity sector and two initiatives in the gas sector.

Tangible progress has been made in this area.

In the electricity sector, this has focused mainly on changing the interconnection access rules and defining common mechanisms to manage congestion in Europe, as when coupling the French, Belgian and Dutch markets. These measures will be extended to the German and Luxembourg markets in 2009.

In the gas sector, transparency has improved, since regional initiatives require network operators to publish data essential for market players. These initiatives also help to optimize the use of existing capacity and boost the growth of natural gas imports from Spain, Germany and Belgium.

As we develop regional markets we must not, however, forget our ultimate objective of combining them into a large European market. We now require a minimum level of harmonization between the various regions.

In France, the process of opening the gas and electricity markets to competition was completed on 1 July 2007, when the domestic markets were deregulated. Network operators' activities are now separated into separate subsidiaries under the French Law of 7 December 2006, so we can work on adapting network regulation that regards them as a natural monopoly.

As the tariffs for the use of the electricity and natural-gas networks come up for renewal after 1 July 2008, the CRE is starting to put in place mechanisms that encourage network operators to offer the most efficient service at the lowest price.

These include incentive-based cost regulation: changes to the tariffs are scheduled over a period of three to four years and include productivity objectives set by the pricing decision. This new regulatory framework has already been applied by some European regulators, and will increase the visibility of suppliers and network operators. The legislation requires that any changes to network-access tariffs should be passed on in the regulated retail prices for electricity and gas.

The CRE is also working to develop incentive-based quality regulation. From the information now available that supports the creation of a French electricity distribution network (*Electricité Réseau Distribution France – ERDF*), the CRE noted a deterioration, starting well before market deregulation, in the quality of electricity distributed on networks contracted to this operator. A very significant effort to improve quality must be made in the coming years.

Furthermore, as an interconnected and competitive market emerges, the electricity and gas infrastructures will require significant development.

Among the investments planned by the transmission-network operator (*Reseau Transmission Electricité – RTE*), electricity interconnections are seen as vital. The barriers to developing interconnections are not financial: they relate to local residents' environmental concerns and to the complexity of some of the administrative procedures.

It is essential to find a compromise between the legitimate concern to protect the environment and the requirement to complete rapidly the engineering work indispensable for developing trade, solidarity between EU Member States and the safety of the electricity system.

In the gas sector, planned investment on interconnections with Germany, Belgium and Spain will create new gas-entry capacities in France. Similarly, the planned LNG terminals will not

only permit more diverse sources of supply, but will also help to provide the surplus capacity required for market development.

The CRE has managed to meet all the technical and legal conditions for full market deregulation on 1 July 2007: any consumer who wishes to change supplier can now exercise this right in full knowledge of the facts, simply, free of charge and with the same quality and safety guarantees.

Establishing a competitive market is, however, a gradual process, and requires better-informed consumers: only one third of French households know that they can choose their gas and electricity suppliers. This demonstrates that, in both the gas and electricity sectors, introducing competition requires education and time.

Factors affecting the development of the competitive market include high energy costs caused by the rise in price of raw materials, environmental requirements and the scale of investment required for renovation and development in the areas of generation, transmission and distribution.

In France, the growth of competition is restricted because regulated retail tariffs are retained alongside market contracts.

Four years after being fully opened up to competition, the business market in the electricity sector is sluggish: the introduction of the transitional regulated tariff for market adjustment (*tarif transitoire d'ajustement du marché - TaRTAM*) has closed the large-business market; and alternative suppliers for SMEs/SMIs still suffer from a scissor effect in trying to match the regulated sales tariffs.

The electricity market for domestic customers still shows little sign of competition after one year of deregulation.

In all, 2.7% of sites - accounting for 31 % of French electricity consumption - have explored new suppliers. However, almost two-thirds of business customers' consumption via market contracts is based on the TaRTAM.

In the gas sector, competition is more dynamic: for both domestic and business customers, the number of sites buying gas via market contracts is rising consistently. In January 2009, the move from five to three balancing zones will create one large market area in the northern half of France. This will boost liquidity in the wholesale gas market within this zone. In addition, setting up a gas exchange should improve trading conditions for newcomers.

Readjustments to the regulated retail tariffs, that factor in gas import costs as defined in the legislation, are essential if alternative suppliers are to be competitive.

In all, 4% of delivery points, accounting for 43 % of French gas consumption, are supplied at market prices.

The CRE is responsible under the 2006 legislation for monitoring the wholesale markets, and hence investigated the spikes in electricity pricing observed on the Powernext Exchange in October and November 2007, when the balance between supply and demand was very unstable. No individual behaviour was found to be at fault. The CRE did, however, identify several anomalies which contributed to the price spikes. It has therefore issued

recommendations which are currently being implemented by players in the electricity wholesale market, generating companies, Powernext and the RTE.

Suppliers' business acumen should enable them to offer the consumer more innovative solutions in terms of controlled energy use and electricity from renewable resources.

The CRE is concerned to control electricity demand. For example, it recommends the general use of advanced metering systems developed by network operators. To this end, it is monitoring ERDF's pilot scheme to replace 300,000 meters with more sophisticated models in 2010, before installing them for all consumers. This sort of innovation will help suppliers to diversify their offers and network operators to improve the quality of their services. Consumers will understand their consumption patterns better, and thus be more able to rationalize them.

Advanced metering is only one example of many smart systems under development. They will be standard for future networks and will benefit the consumer by making it possible to improve infrastructure management and to implement new services. Systems using distributed load shedding to control electricity flows are one such example: they aggregate large numbers of small adjustments in consumption at sites connected to the public distribution networks. The CRE has approved the rules proposed by RTE for trialling the integration of such load shedding in the adjustment mechanism.

In its bid to meet the energy challenges of the 21st Century, Europe has opted for an open, competitive market. Implementing such a policy requires passing through a series of transitional stages, during which its principles may be challenged. One response to such challenges is strong, efficient and independent regulation of the gas and electricity markets. This is the CRE's objective, at both the national and European level.

Notice

The French Energy Regulatory Commission (*Commission de Régulation de l'Énergie – CRE*) has just published its annual report under Article 32 of the French Law 2000-108 of 10 February 2000, transposing articles 23.1 and 25.1 of Directives 2003/54 and 2003/55.

The European Commission's Directorate-General for Energy nonetheless wishes to receive additional information held by the national regulatory authorities. This report is therefore being sent to the DG TREN.

The Energy Regulatory Commission draws the DG TREN's attention to the fact that some of the information provided is not within its exclusive control. Thus as regards public service (article 3.9 of Directive 2003/54 and 3.6 of Directive 2003/55) and security of supply (article 4 of Directive 2003/54 and article 5 of Directive 2003/55), the Energy Regulatory Commission shares its responsibilities with the French Ministers for the Economy and Energy.

I. Introduction to the Energy Regulatory Commission

1 Organization of the CRE¹ and its Departments²

1.1 The Commission



Philippe de Ladoucette - Michel Lapeyre- Maurice Meda
Pascal Lorot – Hugues Hourdin - Eric Dyevre - Jean-Paul Aghetti - Emmanuel Rodriguez - Jean-Christophe
Le Duigou

¹ Article 28 of the French Law of 10 February 2000, as amended

² Article 30 of the French Law of 10 February 2000, as amended

The CRE's composition was changed by the French Law of 7 December 2006. It now comprises a College with 9 members, including a Chairman and two Vice-Chairmen, a Dispute-Settlement and Sanctions Committee (*Comité de règlement des différends et des sanctions - CoRDIS*), and Departments run by a Director General under the Chairman's authority.

Members of the College are appointed for a period of six years on the basis of their qualifications in the legal, economic and technical spheres. They cannot be dismissed and their mandate is not renewable.

Members of the Committee are appointed for a term of six years, which is not renewable.

The College and the Committee each define internal regulations in their own areas, and these regulations are published in the *Journal officiel (Official Journal) of the French Republic*³.

A. THE COMPOSITION OF THE COLLEGE OF THE COMMISSION

The College comprises:

- the Chairman, appointed by Decree based on advice from the Parliamentary Commissions responsible for energy matters;
- two Vice-Chairmen, appointed respectively by the President of the French National Assembly and the President of the French Senate;
- two members appointed respectively by the President of the French National Assembly and the President of the French Senate;
- a member appointed by the Chairman of the French Economic and Social Council;
- a member appointed by Decree;
- two representatives of electricity and natural gas consumers, appointed by Decree.

B. THE DISPUTE-SETTLEMENT AND SANCTIONS COMMITTEE (CoRDIS)

A Dispute-Settlement and Sanctions Committee (CoRDIS) was created by the French Law of 7 December 2006. It is distinct from the College of Commissioners and exercises the CRE's authority as regards dispute settlement and sanctions (Articles 38 and 40 of the French Law of 10 February 2000). It comprises two Councillors of State appointed by the Vice-President of the French Council of State, and two Councillors from the Supreme Court of Appeal, appointed by the First President of the French Supreme Court of Appeal. All four are appointed for 6 years. The Chairman of the Committee is appointed by Decree from among its members.

The College's Chairman and two Vice-Chairmen play a full-time role; the other College and Committee members are paid fees under terms and conditions laid down by Decree of the Council of State.

The offices of Chairman and Vice Chairman are not compatible with any other professional activity; or with any elected office at communal, departemental, regional, national or European level; or with any public-sector employment; or with any direct or indirect holding of interests in a company within the energy sector. The Chairman and Vice Chairman may not be members of the French Social and Economic Council.

³ Article 30 of the French Law of 10 February 2000

The role of other College and Committee members is not compatible with any other professional activity; or with any elected office at communal, departmental, regional, national or European level.

The functions of College members are not compatible with those of a member of the Dispute-Settlement and Sanctions Committee.

College and Committee members may not in their personal capacity take any public stance on subjects that are under the CRE's authority.

Any Commission member carrying on an activity or holding a mandate, position or interests that are not compatible with his function shall, after consultation with the Commission, be deemed to have resigned by Order of the French Energy Minister.

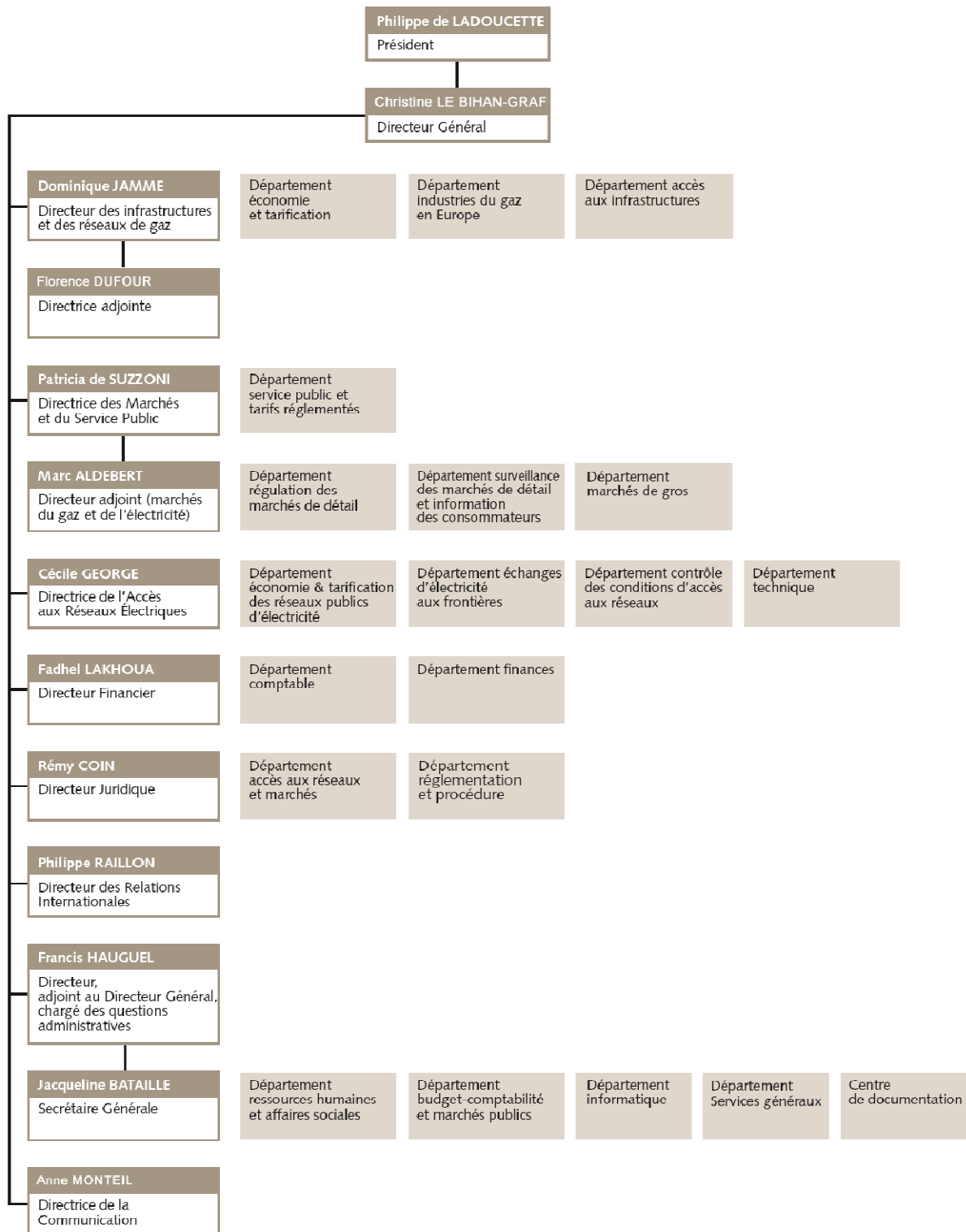
College members may also, in the case of serious neglect of duty, have their duties terminated by Decree of the French Council of Ministers, following representation either from the Chairman of a French Parliamentary Commission responsible for energy matters, or from the College.

1.2 The CRE's Departments

The Energy Regulatory Commission has Departments that report to the Chairman. The CRE may employ officers who are either already in post or seconded under the same terms and conditions as does the Energy Ministry. It may also recruit contract staff.

The CRE's departments are organised by Division:

- Operational Divisions (markets and public services, access to electricity networks, infrastructures and gas networks);
- Functional Divisions (finance, legal and international);
- Support Services (general administration and communication).



2 Principal tasks

Amendments to a number of French Laws, in particular Law 2000-108 of 10 February 2000 and Law 2003-8 of 3 January 2003 assign the following main tasks to the CRE:

- ensure the smooth running of the electricity and natural gas markets;
- guarantee access to the public electricity network, natural gas infrastructures, LNG facilities and natural gas storage facilities;
- ensure that the public electricity network, natural gas infrastructures and LNG facilities are properly operated and developed;
- ensure that operators of electricity and natural-gas transmission and distribution networks are independent;
- guarantee that expenditure on public electricity services will be financed;
- write and use requirements specifications for invitations to tender for new generating capacity, as part of the on-going planning for electricity generation;
- monitor both transactions on the wholesale markets, whether organized or not, and cross-border trading (Article 28, as amended, of the French Law 2000-108 of 10 February 2000).

3 Main powers

3.1 The College

The French Laws of 10 February 2000, 3 January 2003, 9 August 2004 and 7 December 2006, grant the CRE the following powers:

- propose access tariffs for public electricity and natural gas networks and for LNG facilities;
- approve the transmission-network operators' annual investment programme for electricity (Article 14 as amended of the French Law 2000-108 of 10 February 2000) and for gas (Article 12 as amended of the French Law 2003-8 of 3 January 2003)
- carry out enquiries and gather all the information required to fulfil the tasks entrusted to it;
- comment, particularly on all proposed regulation relating to access to or use of the public electricity network, natural-gas infrastructures and LNG facilities; on proposed regulated tariffs; and on terms and conditions for purchasing electricity that involve an obligation to purchase;
- make regulatory decisions in the electricity and gas sectors in a number of areas:

- the roles of operators of public electricity and gas transmission and distribution networks in operating and developing the networks;
 - the roles of operators of both LNG facilities and natural-gas underground storage facilities;
 - the terms and conditions for connecting to the public electricity and gas transmission and distribution networks;
 - the terms and conditions for access to and use of the networks;
 - the way planning schedules for energy tender, procurement and consumption are implemented and adjusted; and the financial compensation made for variances;
 - the way purchase contracts and protocols are finalized by operators of public transmission and distribution networks;
 - the scope of each activity that is accounted for separately, the book-keeping entries used to maintain the separate accounts and principles determining the financial relationship between these activities;
- calculate the charges associated with tasks carried out by the public electricity service;

3.2 CoRDIS

Articles 38 and 40 (as amended) of the French Law of 10 February 2000 give CoRDIS the responsibility of carrying out the following tasks assigned to the CRE:

- settle disputes between users and operators of the public transmission and distribution electricity grid; between operators and users of the infrastructures transporting and distributing natural gas; between operators and users of LNG and natural-gas storage facilities: this process is restricted to eligible customers;
- define the technical and financial terms and conditions for settling a dispute;
- order necessary precautionary measures, in particular those required to ensure network-service continuity;
- apply sanctions when rules, either in the legislation or regulation or those defined by the CRE, are violated. This relates in particular to rules for access to or use of the public electricity networks, the infrastructures transporting and distributing natural gas, and LNG facilities; to the principles for separate accounting; and to the rules for making accounts available. Sanctions are also applied when decisions on dispute settlement are not respected;

4 Guarantee of independence

The independence of CRE members is ensured by the statutes and by the method of appointing members.

Its budget is set by the College based on a proposal from the Director General. The CRE's expenditure is not audited, apart from a subsequent review by the French Revenue Court (*Cour des Comptes*) Where fitting, the CRE is remunerated for the services it provides.

The Chairman of the Energy Regulatory Commission reports on the CRE's activities to the permanent Parliamentary Commissions responsible for energy matters, at their request.

The Energy Regulatory Commission's Chairman and the Chairman of CoRDIS are empowered to take legal action in order to carry out the tasks entrusted to the Commission.

5 Shared authority

Directives 2003/54/EC and 2003/55/EC determine the minimum set of competences that must be held by the national regulatory authorities in the electricity and gas sectors. They do not, however, dictate how Member States should organize their administration. These competences may therefore be assigned to one or several separate authorities. In France, the CRE shares its functions with three other authorities.

5.1 The French Ministers for the Economy and Energy.

The Energy Regulatory Commission shares some of its competences with the Ministers for the Economy and Energy.

For example, as regards setting usage tariffs for the public electricity and gas networks, Article 4 of the French Law of 10 February 2000 (as amended) provides that "*the Energy Regulatory Commission shall send both justified tariff proposals for using the transmission and distribution networks and justified tariff proposals for additional related services imposed under the monopoly of operators of these networks to the Ministers for the Economy and Energy. Ministerial approval shall be deemed to be granted, unless the proposals are opposed by any of the Ministers within two months of their receiving the Commission's proposals. The tariffs shall be published in the Official Journal by the Ministers for the Economy and Energy*".

5.2 with the French Competition Council (Conseil de la Concurrence)

Article 39 of the law of 10 February 2000 defines mechanisms for cooperation between the CRE and the Competition Council: "*The Chairman of the Energy Regulatory Commission shall refer to the Competition Council any abuse of a dominant position or any practice that hinders the free exercise of competition of which he is aware in the electricity or natural gas sectors, particularly if he considers that such a practice is prohibited under Articles L. 420-1 and L. 420-2 of the French Commercial Code*". This referral may be made as an emergency procedure, under article L. 464-1 of the French Commercial Code. He may also submit any other matter within his area of responsibility to the Council for comment.

The Competition Council notifies the CRE of any referral falling within the CRE's remit. It may also submit to the CRE for comment any matter related to the electricity and natural gas sectors.

In any event, when exercising its powers to guarantee third-party network access, the CRE may stop any anti-competitive practices that are based on refusing network access.

5.3 with the Financial Market Authorities

The CRE monitors both transactions carried out on the wholesale electricity and gas markets, whether organised or not, and also cross-border trading. Powernext, the organized electricity exchange, is therefore monitored by both the Energy Regulation Commission and the Financial Market Authorities

*
* *

II . Regulation of the electricity market

Under Article 23 - § 1, points a) to g) of the Directive 2003-54-EC

Since 1 July 2007, all consumers have been free under Directive 2003/54/EC to choose their own electricity supplier. In France, the unregulated electricity market has 33.5 million consumers, consuming 435TWh each year. This is the second-largest market in Europe. As an extension to its role since 1 July 2004 in market deregulation for business users, the CRE is monitoring the opening of the markets to all consumers. It is therefore reviewing the procedures, the information systems, the means of informing and protecting consumers and all the other measures that will be implemented, in consultation with all parties involved.

1 Cross-border energy trading

The CRE is heavily involved in the process of market integration. It is active in four of the seven regional initiatives launched by the European Commission in 2006 (the Central-West, Central-South, South-West and France-UK-Ireland regions).

Three priorities have been defined for all seven regions:

- harmonizing and enhancing congestion management at interconnections (calculating the capacity of available interconnections and capacity-allocation processes);
- harmonizing market transparency;
- organizing the exchange of energy adjustments at the borders.

1.1 Towards a target model for managing interconnections

Apart from substantial progress with congestion management at interconnections, the main feature of the past year has been the growing consensus at European level on a common target model for calculating and allocating capacities at interconnections (see Inset 1).

An outline of this target model was defined in the first report from ERGEG, entitled the "Electricity Regional Initiatives (ERI) Convergence and Coherence Report", which was submitted for public consultation on 20 July 2007 and presented at the 14th Florence Forum on 24 and 25 September 2007.

As regards capacity calculations, the use by network operators of a common representation of the network is seen as an essential step in maximizing available capacity. Network operators should calculate capacity by measuring the impact of overall cross-border flows on the networks using Power Transfer Distribution Factors (a method known as *flow-based* or *PTDF-based*), and not bilaterally for each interconnection (the *ATC-based* method).

Interconnection capacities must be allocated for three different timescales: long-term (monthly and annual, or even longer-term capacity), day-ahead, and intraday.

The target mechanism for allocating long-term capacity is the explicit auction, harmonized across Europe, with:

- a single set of rules;

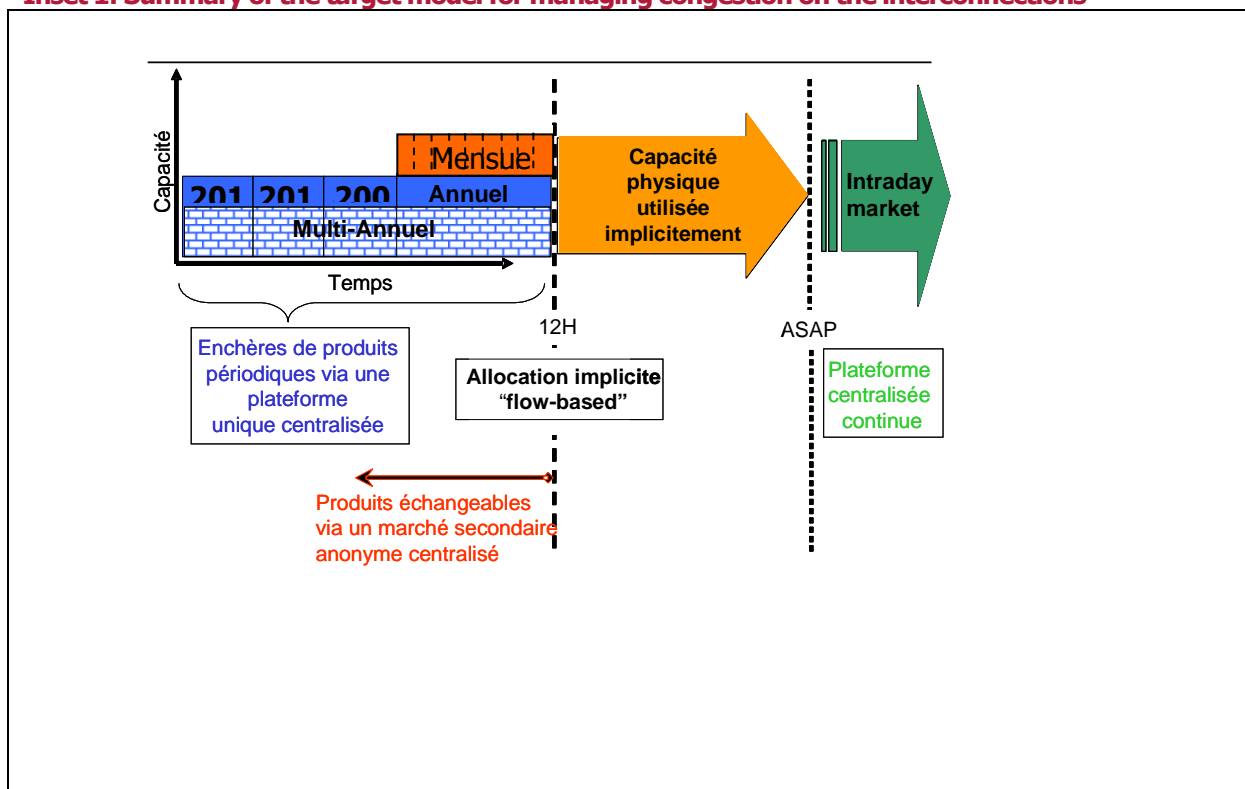
- identical capacity on all interconnections;
- a single interface for all participants.

Current discussion is focusing on the details of the rules and the nature of the capacity to be allocated.

For day-ahead capacity allocation, implicit methods allow optimal capacity usage based on prices on the different markets. Thus the target mechanism with European consensus uses coupling for day-ahead markets (*market coupling*), but merges these markets in the longer term, with separate price zones depending on congestion (*market splitting*).

For allocating intraday capacity, the mechanism with European consensus uses implicit continuous capacity allocation. This has a single platform which allocates capacity implicitly, matching an energy offer from one Member State with an energy demand from another.

Inset 1: Summary of the target model for managing congestion on the interconnections



1.2 Regional Initiatives: different rates of progress

Although each of the seven regional initiatives has the same priorities, they are not all progressing at the same rate (see Insets 2 to 5).

There are a number of reasons for the differences in progress:

- the inevitable limitations on network operators' human and financial resources. This problem is exacerbated when a single country is involved in several regional initiatives (as is the case for France and Germany, which are involved in four different regional initiatives). In its Third Legislative Package proposal, the European Commission is proposing to introduce incentives for the network operators to integrate markets;
- different national regulators with unharmonized powers: in some instances, a few network operators can block the introduction of measures that would improve market functioning;
- differences in market architecture within a single region;
- lack of agreement on the implementation timetable for the defined regional priorities.

Inset 2: Progress in the Central-West region

- The region's network operators are currently drafting a set of rules for allocating long-term capacities. This will come into force at the end of 2008. To the same timetable, the three interfaces the region currently uses for long-term auctions will be replaced by a single platform.
- Also under way is an ambitious regional flow-based market-coupling project. This will extend the trilateral market coupling between France, Belgium and the Netherlands to Germany, and should be in place from the start of 2009.
- France and Belgium have been making intraday exchanges using pro-rata allocation since May 2007. A project is also in progress on the Dutch borders with Germany and Belgium.

Inset 3: Progress in the Central-South region

- Significant effort was put into harmonization in 2007, so that in 2008, capacity can be allocated using a single set of rules, even though many local differences remain at each border. This effort to harmonize and enhance the rules is continuing in 2008.
- Discussions on the future introduction of market coupling are in progress.

Inset 4: Progress in the South-West region

- A project to construct a new line between France and Spain has been announced by the President of the French Republic and the Spanish Prime Minister, and is at the design stage. This will facilitate electricity exchanges, ease the integration of the Iberian market into the European electricity market and improve grid safety.
- Work to improve and harmonize the interconnection management rules within the region is continuing in 2008.
- A project to set up a real-time electricity exchange mechanism between France and Spain and a regional market-coupling project are at the design stage.

Inset 5: Progress in the France-UK-Ireland region

- The work carried out in 2007 has resulted in a defined adjustment-exchange development project within the region. The project is based on the following principles:
 - greater competitiveness and, for adjustment bidders, the use of an exchange between transmission-network operators of standardized adjustment bids that are compatible with the market architecture on either side of the interconnection. This gives operators' opportunities to have bids placed;
 - exchange between transmission-network operators of available reserves additional to those required to maintain system safety in each country;
 - no reservation of interconnection capacity, so that cross-border adjustment exchanges will only take place if the market players fail to use the interconnection capacity;
 - guaranteed transparency. The methods for calculating the bids exchanged by the transmission-network operators, the bids exchanged and the bids accepted (prices and volumes) will be published.

An interim configuration will be in operation from mid-2008, and the arrangement will be fully functional from mid-2009.

- New rules for allocating interconnection capacity that comply with European legislation and are harmonized with the rules in force on the French borders, will be introduced at the end of 2008.

1.3 Working towards market integration

A. ENSURING COHERENCE AND CONVERGENCE BETWEEN THE DIFFERENT REGIONAL INITIATIVES

The CRE continues to co-chair the Electricity Regional Initiative Task Force. This group is responsible for:

- monitoring the progress of the work of the various Regional electricity initiatives;
- ensuring coherence and convergence between the different regions;
- defining a shared vision of the future European energy market.

The Task Force is therefore identifying the barriers to introducing the target model within each region, and proposing action plans to overcome them.

It is also seeking to improve the coordination of the various tasks and thus avoid incompatibilities between different Regional projects (especially Regional market-coupling projects). The aim is constant, harmonious progress towards a European electricity market.

The second Coherence and Convergence Report, to be presented at the next Florence Forum, will discuss the current status of the action plans.

B. EVALUATING THE EFFECTIVENESS OF CONGESTION MANAGEMENT AT THE FRENCH INTERCONNECTIONS, AND THEIR COMPLIANCE WITH COMMUNITY REGULATIONS

As required by European regulation dated 26 June 2003, the CRE published in May 2007 its first annual report, on the management and use of electricity interconnections in 2006. The report assessed the progress of the congestion-management mechanisms introduced on 1 January 2006. The work has continued in 2008 and a second report was published on 18 June 2008, reviewing changes arising in 2007 (see Inset 6). The objectives of this second report are to:

- assess interconnection management during 2007;
- review the target mechanisms that have gained consensus within Europe,
- list the key issues that still require resolution in order to reach the targets. Even though the general principles for these target mechanisms have been clearly established (see Inset 1), implementing them in practice is raising many questions that still require answers.

The five regulators for the Central-West Regional initiative also carry out a similar assessment, and the first joint report is due for publication before the end of 2008.

Inset 6: Use of interconnection capacity in 2007 and assessment of the introduction of coupling in the French, Belgian and Dutch markets

- Price differentials have generally been poorly exploited for daily capacities that are sold by explicit auction, as compared to capacities traded on the day-ahead markets. Explicit auctions are used by the energy and transmission markets, the separation of which involves multiple stages. This has prevented price differentials being utilized to the full when buying capacity: sometimes, buying is even against the differential.

		Capacity bought against the direction of the price difference (MW)	<i>Proportion of hours involved</i>	Unused capacity in the direction of the price difference (MW)	<i>Proportion of hours involved</i>
Germany	Export	298	80%	843	83%
	Import	732	86%	2159	88%
England	Export	317	69%	612	73%
	Import	110	27%	1150	97%
Spain	Export	350	97%	86	28%
	Import	13	13%	127	42%
Italy	Export	336	81%	91	13%
	Import	24	9%	849	94%

- On the other hand, the interconnection between France and Belgium, which currently uses the implicit-allocation method (trilateral market coupling including also the Netherlands), exploited capacities to the full. In addition, the price on the three organised markets converged strongly, with the three prices perfectly matched for 60% of the year.
- The welfare loss associated with the absence of market coupling on the other borders was enormous:

		Estimated welfare loss (€M)	Total (€M)
Germany	Export	45	110
	Import	65	
England	Export	22	57
	Import	34	
Spain	Export	3	21
	Import	18	
Italy	Export	18	47
	Import	29	
Switzerland	Export	30	97
	Import	62	
Total:		332	

- Details of these analyses are shown in the CRE's Annual Report on interconnections, published in June 2008.

The Energy Networks and Markets Task Force within the ERGEG began in 2007 to review barriers to developing cross-border exchanges caused by differences in the market architectures of the various Member States (including the amount of information accessible to market players, rules for exchanges, and the reapportionment of expenditure required to fulfil security-of-supply obligations). This work is continuing in 2008, and a second Compliance Report will be published, reviewing in detail the compliance of congestion-management mechanisms at the interconnections with the provisions in the European Community legislation.

C. PREPARING INTEGRATION GUIDELINES FOR THE ADJUSTMENT MARKETS FOR SUBMISSION TO THE EUROPEAN COMMISSION

As part of ERGEG and the Electricity Networks and Markets Task Force, the CRE is working to define ways to integrate the adjustment markets. Its conclusions were submitted for initial consultation in 2006, and many of those involved agreed that the way the adjustment markets interacted with the intraday market and the automatic reserves should be taken into account. As a result, in 2007, ERGEG and the European Commission commissioned consultants to review this area. The results of the review are expected at the end of August 2008. They will be taken into account in the new version of the guidelines, which will again be submitted to public consultation before being sent to the European Commission. The Commission may then make the guidelines legally binding via its committee process.

D. INITIATING DISCUSSION ON INTRODUCING INCENTIVE MECHANISMS FOR MARKET INTEGRATION

Discussions are in progress on introducing incentive mechanisms, particularly for investment in infrastructure, optimization of existing networks and the implementation of target mechanisms.

In particular, the CRE is taking part in a review of the electricity infrastructure initiated by the European Commission with the aim of identifying barriers to investment in new interconnection infrastructures.

2 Regulating access to transmission and distribution networks

France has a single transmission-network operator, RTE, and a major distribution-network operator (EDF Réseau Distribution, which undertakes 95% of the electricity distribution) and around 160 local distribution companies (*Entreprises Locales de Distribution - ELD*).

2.1 Pricing for network access

The CRE proposes network-access tariffs to the government, which may only accept or refuse them, not amend them. The French Law of 13 July 2005, amending Article 4 of the French Law of 10 February 2000 on the scope of the CRE's powers as regards price setting, provides that the CRE's proposal comes into force two months after being sent to the Ministers responsible for the Economy and Energy, unless one of the Ministers objects within that time.

A. THE PRESENT NETWORK-ACCESS TARIFF

The present network-access tariff came into force on 1 January 2006 and resulted from the decision made on 23 September 2005 (see Table 1 below). Its expected period of application is around two years. The average charges for network access are expressed excluding taxes and applicable deductions⁴.

The tariffs currently in force for using the public electricity networks are as follows:

TABLE 1: NETWORK ACCESS TARIFFS

Average charges for network access	
Dc*	41.9 €/MWh
Ib*	40.2 €/MWh
Ig*	12.6 €/MWh

(*) Eurostat classification:

Dc: Household: consumer with an annual consumption of 3,500 kWh/yr.

Ib: Commercial business with an annual consumption of 50 MWh/yr and a maximum contracted load of 50 kW.

Ig: Industrial business with an annual consumption of 24 GWh/yr and a maximum contracted load of 4,000 kW.

The CRE sets both the level of pricing and the pricing structure. Experience from the application of the first set of pricing rules highlighted the need to enhance the transparency of the tariff to users. Thus the tariff distinguishes clearly the components of contract management and metering, and components related to the use of network infrastructures, each of which corresponds to one of the network operator's specialized activities. Again with the aim of improving information for network users, the CRE decided it was necessary to make it easier for them to simulate new tariff calculations and choose prices most suited to their situation. It has therefore put a network-tariff calculator on its website ([http://www.cre.fr/fr/acces aux reseaux/reseaux publics d electricite/calculatrice des tarifs](http://www.cre.fr/fr/acces_aux_reseaux/reseaux_publics_d_electricite/calculatrice_des_tarifs)).

B. LEVEL OF NETWORK-OPERATOR CHARGES

The tariff currently in force takes account of findings from audits conducted on EDF's unbundled accounts for the financial years 2000 and 2002, and on the accounts for 2003. In

⁴ Excluding the tariff-based contribution for the electricity transmission and distribution services, set by the [French Decree 2005-123](#) of 14 February 2005 and the Order of 29 December 2005.

setting these prices, the CRE also took into account changes in sector organisation that occurred when competition for non-domestic customers was introduced from 1 July 2004

- network operators bear 20% of customer-relationship-management costs, and suppliers who have signed a "single contract" pay the balance;
- users may request the installation of metering devices that are better suited to their needs, and may own their metering devices;
- network operators cover the costs associated with mechanisms for setting up a balance-responsible entity and profiling users with a connection point;
- public network operators are responsible for invoicing additional services according to a public pricing structure, which is transparent and applied without discrimination. These costs were previously partially included in charges based on regulated tariffs, so that the legal status of these services was not clearly defined.

The tariffs also take into account changes made by Regulation 1228/2003 of 26 June 2003 and the Law of 9 August 2004. These changes relate to assets used within transmission and distribution, financing for pension costs borne by network operators, and revenue from the congestion-management mechanisms at interconnections. Revenue from the network-capacity auctions at interconnections reduces the level of transmission tariffs, and thus benefits all users.

C. THE BALANCE BETWEEN INCOME AND CHARGES

The tariff levels are set to take into account not only operating and capital costs but also the revenue forecast for each regulated activity of the network operators. For this purpose, the CRE assessed the forecast income and expenditure for the public transmission network for the period 2006 to 2007. However, forecasts for the public distribution networks were prepared only for 2006. This method was adopted because of the changes to the organisation and operating methods expected in 2007, when supply to residential customers was opened to competition.

Figures for the years 2007 and 2008 are currently being assessed in order to prepare the new access tariffs.

Capital charges comprise asset remuneration and depreciation, in the case of the distributor after deducting external aid during the year.

D. REMUNERATION OF ASSETS

For transmission networks, the value of the RTE's regulated asset base corresponds to the net book value of its assets on 1 January in the year, reduced by investment grants during the accounting period. Its average value for 2006-2007 was €10,937M. For distribution networks, the regulated asset base reflects the book value of the franchised assets, and takes into account special features associated with the existence of public-distribution franchise schemes. At 1 January 2006, it amounted to €26,324M, and this is the value used as the basis for asset remuneration for the tariff period currently in force.

Figures for the years 2007 and 2008 are currently being assessed in order to prepare the new access tariffs.

The method used to calculate the asset remuneration rate is based on the weighted average cost of capital (WACC). The rate for the tariff validity period has been fixed at a nominal pre-tax rate of 7.25% for RTE and ERD, compared with 6.5% for the previous period.

E. REQUIRED PRODUCTIVITY GAINS

Under Article 4 of the regulation of 1228/2003 26 June 2003, the CRE must take account of costs “*corresponding to those of an efficient network operator*” It therefore asks network operators to make productivity gains during the period for which its proposed pricing structure applies. For the tariffs currently in force, these productivity gains take the form of an overall reduction of 3% in the network operators’ forecast charges. The cost base used to calculate this global reduction is defined by summing personnel costs and external consumption; capital charges consequent on investments are therefore not included.

F. A NEW INCOME AND EXPENDITURE EQUALIZATION ACCOUNT (*COMPTE DE RÉGULARISATION DES CHARGES ET PRODUITS - CRCP*)

The pricing structure implemented during the latest proposal includes a memorandum trust account, called the Income and Expenditure Equalization Account (CRCP) Its purpose is to manage the uncertainty in particular income and expenditure categories that cannot be controlled by public network operators. The CRE considered that expenditure related to compensation for losses on public electricity networks, income related to congestion-management mechanisms at points where the transmission grid interconnects with those of neighbouring countries, and profit from the supply of additional services are difficult for network operators to control and forecast, and that this justifies their inclusion in the CRCP. Furthermore, capital charges included in the tariff reflect investments made under the investment procedures and regulations that apply to public transmission and distribution networks. Thus such capital charges, but excluding the part provided initially by CRE in calculating depreciation and remuneration for the regulated asset base, are also eligible for inclusion in the CRCP.

2.2 The quality of service of the electricity networks

A. QUALITY OF THE DISTRIBUTION NETWORK

Since December 2003, the CRE has prepared activity reports containing a set of indicators that must be supplied periodically by network operators Because the volume of information to be processed posed particular problems, the work was carried out primarily with the distributor EDF (ERD, later ERDF), the principal French operator of public electricity distribution networks. The content of the activity report was defined in October 2005 and the monitoring indicators have been broken down into five groups:

- information about the assets used in distribution, including a description of the status of the network and of the customer base; and physical developments to the network infrastructures;
- continuity of supply and power quality;
- the quality of the distributor’s service, including connection conditions, day-to-day management of contracts and commitments related to the quality approach, and monitoring of metering activities;
- line losses;
- changes to income and expenditure, including the distributor’s income and expenditure, fixed assets and investments in the network.

These indicators are not meaningful on a national scale, and so most of them are provided for an appropriate area (region or franchised area). This makes it easier to identify areas where the service quality could be improved, and such findings are used to encourage

investment in these areas. The activity report is sent annually to the CRE in mid-year, and has been since the 2004 accounting period.

From the 2006 accounting period, the CRE has also used data for the main non-nationalized distributors in this report.

Since ERDF has not yet sent the 2007 activity report, only data from 2006 is analysed.

B. QUALITY OF THE TRANSMISSION NETWORK

The CRE has gathered performance data for the public electricity transmission network since 2001. The RTE's activity report was improved during 2005, by including indicators monitoring the seven regions in its territorial organization. It now includes details of significant system events (*événements système significatifs - ESS*), classed by severity. During 2006, and at its request, the CRE was also supplied with additional information on load shedding.

Data collected by the CRE on the performance of the public electricity transmission grid can be grouped in the following categories:

- description of the customer base;
- continuity of supply and power quality;
- the operator's quality of service, including complaints management and undertakings in relation to the quality approach;
- monitoring users' obligation to exercise caution and in particular the number of disruptive users.

C. IMPROVED QUALITY-OF-SERVICE ANALYSIS

The activity reports provide a practical and reliable means for the CRE to improve its overall knowledge of the overall quality performance of the public grid, and of changes to performance over time. The results will be included in international quality-of-service comparisons of European networks.

Using this information, the CRE:

- monitors changes to the indicators for each concession, and hence anticipates any local deterioration in quality from one year to the next;
- determines the parameters for incentive-based quality regulation for network operators;
- assesses the quality objectives in the regulatory texts submitted to the CRE for comment;
- includes the results of international comparisons carried out by the CEER (*Council of European Energy Regulators*). The 4th Benchmarking Report on Quality of Electricity Supply is scheduled for publication at the end of 2008 and will include 2006 performance data. This report follows the first three reports, published in 2001, 2003 and 2005.

The mean annual down time in 2006 from all causes taken together was 98.9 minutes per customer connected to high voltages (HTA) and 94.2 minutes per customer connected to low voltages (BT), as against 64.0 minutes in 2005 and 63.7 minutes in 2004.

A significant number of climate events in 2006 meant a deterioration in the quality of the electricity supply. The CRE will pay particular attention to operators' decisions on investment in the distribution networks, and to the upkeep and maintenance work: these are what drive improvements to the electricity supply.

2.3 The adjustment

A. ADJUSTMENT MECHANISMS APPROVED BY THE CRE

Under the French Law of 10 February 2000 on the modernisation and development of the public electricity service, "*the Energy Regulation Commission shall approve before implementation both the rules for presenting adjustment schedules and proposals and the criteria for choosing between the proposed adjustment mechanisms that are submitted to the public transmission network operator*".

Following the CRE's decision on 23 January 2003, on 1 April 2003, the RTE implemented a market mechanism operating in real time to manage network balancing, and to absorb technical operating constraints not covered by system services.

The adjustment-mechanism rules are revised annually, after consulting those involved and with the CRE's approval. The purpose of the changes is to improve the way the mechanism functions by increasing its effectiveness and robustness, and to fine tune some of the parameters in order to ensure that when adjustment offers are paid or when the variances of balance-responsible entities are settled, the associated financial flows are balanced.

B. THE FUNCTIONING OF THE ADJUSTMENT MECHANISM

The adjustment mechanism is a market mechanism, open to French generators, to major interruptible consumers and to foreign operators. The RTE is the only counterparty to the adjustment offers on this market. There is a single adjustment zone in France, corresponding to the RTE network.

Traders on this market use a system of upward and downward offers, and indicate the technical and financial conditions under which the RTE may change their generation or consumption programmes. The RTE organizes offers in order of economic precedence and considers the technical constraints reported by the traders, before selecting offers that correct imbalances. In their adjustment-mechanism proposals, generating companies must

by law offer all unused power technically available in each generation facility connected to the public transmission network to the network operator. Thus when generating companies send their day-ahead generation schedules to the French transmission-network operator, they submit implicit adjustment offers at the same time, equal to the difference between the maximum power available and the power defined in the generation schedule.

At the same time, major consumers and foreign traders may participate in the adjustment mechanism by submitting explicit adjustment offers to the RTE.

The balance between generation and consumption at a frequency of 50 Hz is maintained using three successive types of resource:

- the automatic primary reserve, shared across the entire UCTE network. Its purpose is to prevent the frequency deviations that could result from a generation variance or an unexpected change in consumption;
- the automatic secondary reserve particular to the area controlled by each transmission-network operator. Its purpose is to restore the frequency to 50 Hz and the interconnection exchange schedules to their planned level;
- the manual tertiary reserve, or adjustment mechanism. Its purpose is to absorb persistent imbalance between generation and consumption at as low a cost as possible, to restore the ready capacity in the primary and secondary reserves.

The primary and secondary reserves are grouped together as “frequency-regulation system services”, and are defined in contracts with the generating companies. The contracts provide for a fixed charge and, in the case of the secondary reserve, a variable part proportional to the net energy injected; the charges are recovered by the RTE in the tariff for the use of public electricity networks.

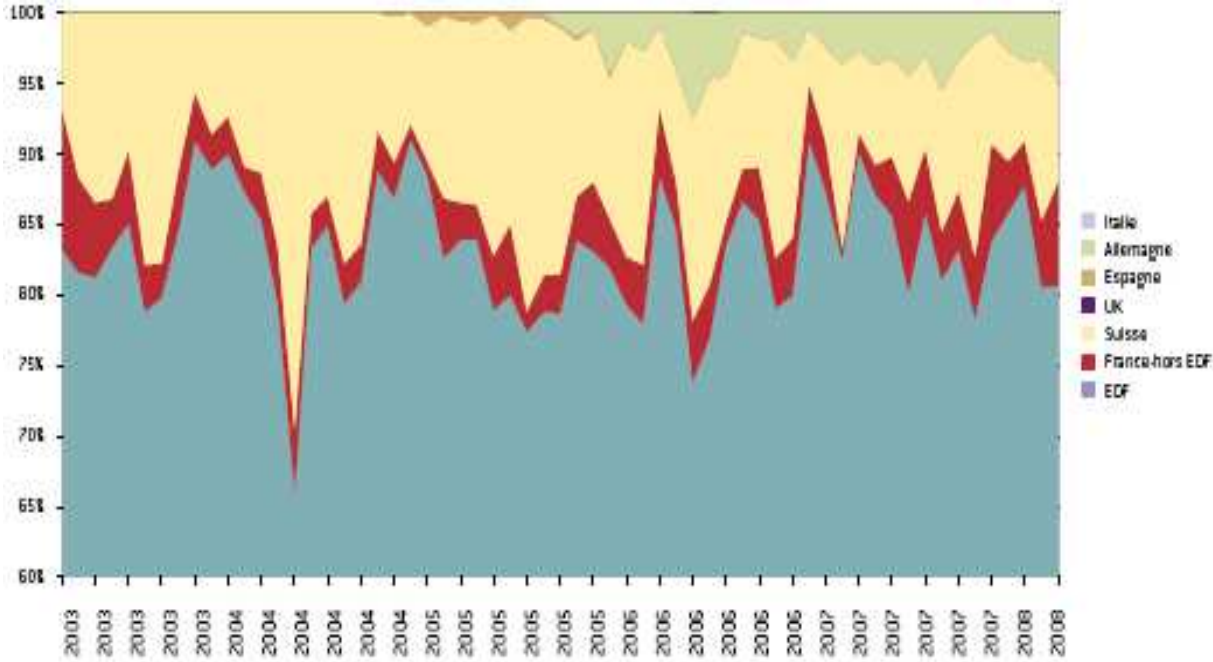
As regards the tertiary reserve, 1,500 MW of power (1,000 MW of fast reserve deployable in less than 13 minutes and 500 MW of additional reserve deployable in less than 30 minutes) is covered by contract, and costs are recovered by a payment from the balance-responsible entities proportional to the actual amount of power they take;

The remaining capacity offered via the adjustment mechanism is not remunerated simply because it is available. Providers of this part of the adjustment energy are paid according to the energy actually supplied. The costs of the adjustments are recovered by invoicing for the variances.

C. TOWARDS ENHANCED COMPETITION ON THE ADJUSTMENT MARKET

The CRE is committed to increasing the competition associated with the adjustment mechanism. Since the mechanism was introduced in April 2003, the CRE has sought to ensure that market traders in border areas or countries can participate in the adjustment market in competition with French traders. Thus the adjustment mechanism has been open to operators from Switzerland (since April 2003), England and Spain (since November 2004), Germany (since September 2005) and Italy (since April 2006). Swiss and German players participate actively in the mechanism, providing significant volumes (their market share of the volume of upward offers is around 25%). The participation of Spanish, British and Italian players is infrequent, because either the processes for interconnection access or the national rules for generation planning conflict with the RTE’s need to use flexible offers in order to balance its system as far as possible in real time (Figure 1).

FIGURE 1: UPWARD ADJUSTMENTS ACTIVATED IN THE FRENCH ADJUSTMENT MECHANISM, SHOWING PROPORTION FROM EACH SOURCE



Although English generators have been able to participate in the French balancing mechanism since October 2004, the volumes exchanged have always been low and no offer coming from England has been taken up since early 2006. This is explained by the lack of flexibility in the current system, and this finding prompted a review in 2007 as part of the regional initiative involving France, the UK and Ireland.

The review resulted in the specification of an exchange-adjustment development project, which should enable reciprocal adjustment exchanges to take place between France and England.

The past year was also marked by initiatives to extend consumer participation in the adjustment mechanism. On 5 December 2007, the CRE approved short-term rules for implementing distributed load shedding. Distributed load shedding works by combining small adjustments to consumption at sites connected to the public distribution networks. There are many potential benefits, including a better-secured supply, enhanced competition and economic efficiency, and reduced energy demand.

Lastly, on 2 April 2008, the CRE approved a provision waiving Section 1 of the rules relating to scheduling, the adjustment mechanism and the balance-responsible entities. The waiver will enable consumers connected to the public transmission network to reserve interruptible power under a contract. RTE will remunerate them for this service, passing on the costs to the balance-responsible entities. The RTE's trial invitation to tender will extend over one year, and will check the potential for consumption load shedding, and its impact on the system's safety and economic efficiency.

D. MECHANISM FOR CALCULATING VARIANCES AND THEIR ASSOCIATED PRICES

Any trader who wishes to use the RTE network to enter into energy transactions must sign an affiliation agreement with a balance-responsible entity. This entity is responsible for paying the variances identified within its area.

Variances for balance-responsible entities are calculated over every half-hour of the day, and defined as the difference between the total injected and the total withdrawn within their areas. This means firstly the difference between physical injection and the measured physical withdrawal, and secondly the difference between the national purchase/sales transactions and the declared import/export transactions at interconnections.

The price of variances is calculated as follows:

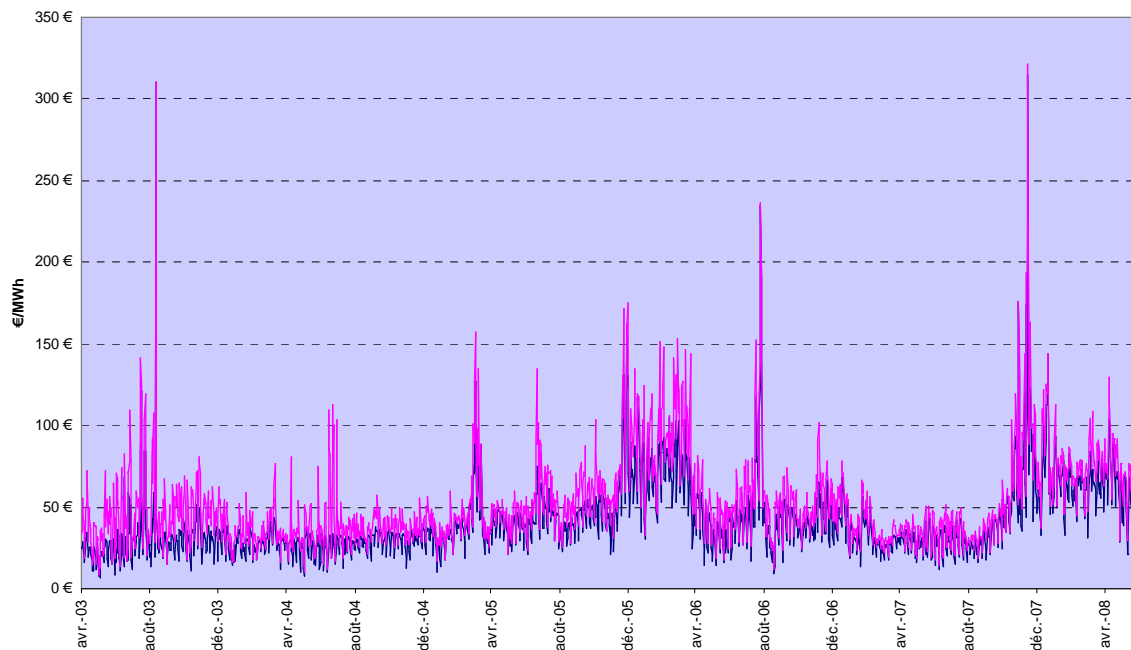
TABLE 2: PRICE OF VARIANCES

	Case where the overall system variance is positive	Case where the overall system variance is negative
Price of positive variances	$\text{Min}(P_{\text{powernext}}, \text{PMP Downward} / (1+K))$	$P_{\text{powernext}}$
Price of negative variances	$P_{\text{powernext}}$	$\text{Max}(P_{\text{powernext}}, \text{PMP Upward} * (1+K))$

- Powernext represents the exchange price (or spot price) for the half-hour concerned;
- PMP Upward represents the average weighted price by volume of upward adjustments that RTE has had to activate during the half-hour concerned
- PMP Downward represents the average weighted price by volume of downward adjustments that RTE has had to activate during the half-hour concerned
- K is a parameter used to balance out over a year the financial flows associated with paying adjustments and settling variances. The value of K was reduced from 0.15 to 0.05 on 1 July 2006 and has remained stable since.

The formulae are set so that the price of negative variances is always higher than the Powernext price, and the price of positive variances is always lower.

FIGURE 2: CHANGES IN THE SETTLEMENT PRICE FOR NEGATIVE VARIANCES AND IN POWERNEXT MARKET PRICES SINCE THE ADJUSTMENT MECHANISM WAS INTRODUCED



— Moyenne journalière du prix Spot Powernext
 — Moyenne journalière du prix de Règlement des écarts négatifs

Source CRE d'après RTE et Powernext

E. RELATIONSHIP BETWEEN THE GENERATION SCHEDULE, THE INTRADAY MARKET AND THE ADJUSTMENT MECHANISM

The adjustment market is a market of last resort that enables the RTE to balance flows in real time. It is not intended to substitute for the intraday market or for the generating companies' efforts to self regulate. The CRE therefore tries to ensure that the balance-responsible entities are encouraged to balance their areas (see the previous Section D - Mechanism for calculating variances and their associated prices) and have some room to negotiate to achieve that balance.

The CRE's decisions have established increased flexibility for market players, without jeopardising the safety of the electricity system.

The maximum time a French generator needs to modify its power plants' generation schedules was around 7 hours in 2003, when the balancing mechanism was implemented. It is now 3 hours, or even 2 hours in the case of problems with a generating unit, since following a CRE decision on 18 July 2007, the neutralization period was reduced to 1 hour from 31 March 2008.

The 1-hour neutralization period should be general by 2010. At this time, operating schedules for power stations will no longer be provided by the RTE, but by the generating companies themselves, under the CRE decision of 22 March 2006. Once this responsibility is transferred, the RTE will no longer issue orders related to generating-station operation. The transfer will also reduce RTE's work when generating schedules are redeclared, making it possible to reduce the neutralization period to 1 hour.

For some interconnections, the scheduling of commercial exchanges at borders is now more flexible:

- at the border with Belgium, a pro-rata mechanism for allocating intraday capacity, with six gates, was set up in May 2007, and the number of gates was increased to 12 in February 2008;
- at the border with Germany, coordination between network operators has been improved to facilitate access to interconnection capacity on an intraday basis: intraday export capacity is now allocated by RTE using a pro-rata mechanism, while intraday import capacity is allocated by the German network operator RWE on a "first come first served" basis.

The situation at the other borders still offers little scope for flexibility. Nonetheless, a consensus is developing in Europe in favour of setting up a continuous centralized hub to manage intraday commercial exchanges at borders.

This hub would enable:

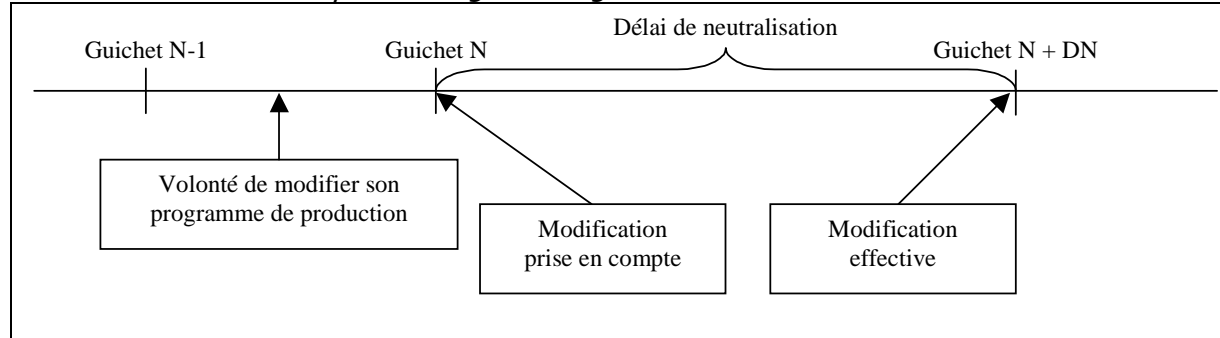
- the implicit allocation of interconnection capacity (market players would acquire interconnection capacity and energy simultaneously);
- transactions to be agreed at any time, with a delay close to real time;
- matching of offers to buy and sell from a number of countries that do not necessarily share borders.

Inset 7: Changes in generation-scheduling constraints

Two constraints inhibit generation scheduling:

- "gates", the time intervals in which generating companies can submit changes to their generating schedule,
- a neutralization period when the gate closes, to allow for the practical impact of technical operating constraints. Changes to the generating schedule only take effect after the neutralization period.

Gates and neutralization period for generating schedules



Changes to the number of intraday gates and to the neutralization period

	Nombre de guichets infra-journaliers	Délai de neutralisation
Avril 2003	6	3h
Juillet 2004	7	3h
Avril 2005	12	2h
Mars 2007	24	2h
Mars 2008	24	2h / 1h en cas d'aléa de production

F. TRANSPARENCY OBLIGATIONS

The transparency of the adjustment mechanism has significantly increased since its implementation, so that in particular it is now easier for small operators to understand how the mechanism functions, and hence facilitate their access.

The RTE publishes the following information on its Web site:

- each half-hour: upwards and downwards adjustment volumes taken up for any reason (such as overall balancing, congestion management, re-establishing system services and operating margins)
- each half hour: upward and downward adjustments to average and marginal prices;
- each half hour: prices of positive and negative variances;
- the level of operating margins at peak consumption times, published the previous day for the next day;
- graph of cumulative upward adjustment offers available at peak consumption times;
- monthly adjustment status report, with statistics on the following:
 - characteristics of frequently accepted offers,
 - proportion of adjustments for each technology type,
 - quality of published indicators,

- status of the adjustment/variance account,
- reliability rate for the planning notification systems, adjustment offers and block exchanges,
- status report per border and per day of energy volumes taken up under reserve-exchange contracts between RTE and other transmission-network operators;
- message dispatch notice indicating alert and move to "*degraded mode*" where the offers are inadequate;
- additional adjustment costs involved in resolving network congestion, broken down by geographical area.

2.4 Principles of account unbundling

The Directives of 1996 and 1998 and the French transposition Laws of 10 February 2000 and 3 January 2003 imposed an obligation on vertically-integrated businesses within the electricity sector to keep separate accounts for regulated activities and competitive activities, as if "*the activities in question were carried out by separate businesses, in order to avoid discrimination, cross-subsidization and distortions in competition*".

Under the provisions of Article 25 of the French Law of 10 February 2000, the principles used to separate accounts (i.e. the posting rules for the profit-and-loss account and balance sheet, the accounting boundaries for activities and the principles determining the financial relationships between them) must be approved by the CRE after referral to the French Competition Council.

The CRE has an additional power under the regulation, enabling it to define the rules that apply to account unbundling.

In its decision of 11 January 2001, the CRE noted that the principles proposed by the operators did not allow it to make valid judgements. On 15 February 2001, the CRE therefore used the provisions in Article 37 § 6 of the Law quoted above to define the account-unbundling principles that have applied to accounts since the year 2000.

A. GENERAL PRINCIPLES OF ACCOUNT UNBUNDLING

The general principles of account unbundling are as follows:

In the electricity sector, separate sets of accounts are prepared for the activities of generation and distribution (for those ELDs concerned), and also, where it applies, for natural-gas trading. All other activities are included in an additional set of accounts. In addition, separate supply-activity accounts must also be kept for customers who have exploited their eligibility and those who have not.

Account unbundling is a way of ensuring that costs are allocated correctly between regulated and competitive activities, and more generally, it is a means of governing the financial relationships between these activities. It is also one way to guarantee that the networks function independently within vertically-integrated groups. It is part of a gradual process that has gained momentum with the requirement for networks to be legally separate. This was provided in Directive 2003/54 and transposed in France by the French Law of 9 August 2004 (for the legal separation of transmission networks), and the Law of 7 December 2006 (for the legal separation of distribution networks).

Operators of public transmission and distribution networks who are part of an integrated business thus benefit from an independence that enables them to work under conditions that are not discriminatory.

The transmission activity within the ambit of the operator of the public electricity transmission network (RTE) became a separate subsidiary on 1 January 2005.

Article 13 ff. of the French Law of 9 August 2004 relating to the public electricity and gas service and to the electricity and gas companies, as amended by the French Law of 7 December 2006, provided that the legal separation of distribution-network operators supplying more than 100,000 customers within Metropolitan France should be in place at the latest by 1 July 2007. This legal separation applies in the electricity sector to EDF, Électricité de Strasbourg, Usine Électrice de Metz, Sorégies and Régie du Sieds.

EDF's distribution subsidiary (ERDF) was created on 1 January 2008, but for accounting purposes ERDF was effective retrospectively, from 1 January 2007.

The electricity transmission and distribution companies (RTE and ERDF) prepare separate accounts, but each maintains a financial relationship with its parent company and may also bear costs it shares with other entities in vertically-integrated groups.

These financial relationships between dissociated activities are governed by internal protocols, some of which are provided in law (infrastructure access for instance). The protocols impose the same conditions on dissociated entities as those that were imposed on third parties under the rules prohibiting discrimination and cross-subsidization between unbundled activities.

Once the subsidiary is formed, the conditions are defined in contracts or included in the general protocol between parent company and subsidiary (for instance, as regards remitting dividends). Nevertheless, ensuring the independence of the networks and avoiding cross-subsidies remains a major challenge. In this respect, the CRE will continue to monitor compliance with the principles, in particular by its regular audits of the accounts of network operators under the provisions in Article 27 of the French Law of 10 February 2000. Audits are carried out either by accredited CRE employees, or by external audit firms selected by competitive tender.

Since 2005, electricity operators have no longer been required to publish their unbundled accounts, but they send them each year to the French Regulatory Commission.

If these rules are breached, CoRDIS may issue the formal notice provided in paragraph 3 of Article 40 of the French Law of 10 February 2000 and impose the sanctions on the operator provided in paragraph 1 of the same Article.

B. SUPPLY UNBUNDLING

The French Law of 9 August 2004 required operators from 1 July 2004 to keep separate accounts for supplies made to eligible and non-eligible customers. This was, however, not a perfect separation, since it did not distinguish eligible customers who had, or had not, exploited their eligibility.

These rules for separating supply-activity accounts have been amended under the French Law of 7 December 2006, which from 1 July 2007 requires the operator to present accounts for the supply activity separately for customers who have exploited their eligibility from those who have not.

The operators affected by this new classification are EDF and the local electricity and natural-gas distribution companies. The principles used to separate supply-activity accounts according to this classification will be sent to the CRE.

The CRE will review the separation principles that the companies affected by the amended classification propose, taking into account its own previous observations on separating eligible and non-eligible customers, and will submit the principles to the French Competition Council before they are approved.

In its decision of 14 June 2006, the CRE approved the principles proposed by EDF for keeping separate accounts for supplies to eligible and non-eligible customers, with the proviso that the costing of the energy transfer price should take generating costs into account.

Costing the energy price and calculating the generating costs will be central for new unbundling principles to be approved. EDF has informed the CRE of the way in which it calculates its generating costs in Metropolitan France, known as C3P (*Coût Comptable Complet de Production - Total Generating Cost*). This cost is based on the items in EDF's accounting cost of production (such as operating costs and fixed assets), but also includes items that do not appear in the books. The CRE started the review process for this method during the first half of 2008.

2.5 Independence of public network operators⁵

- Independence of the transmission network operator

Under the French Law of 9 August 2004, the operator of the public transmission network has, since 1 September 2005, been a legal subsidiary, separate from the vertically-integrated business, and has demonstrated genuine independence in terms of its organization and decision-making.

However, after its 2007 audit, the CRE identified some anomalies remaining in the transmission-network operator's organization, and is recommending the following:

⁵ The summary Table 8 on page 82 presents figures on the separation of electricity and gas network operators.

- more attention to communication with groups forming part of its organization, as regards their tasks and their independence. The CRE has specifically requested EDF not to communicate on subjects relevant to the work of the RTE, to avoid any communication linking competitive activities and regulated activities, and to implement a procedure to manage any joint communications;
- guaranteed independence for the RTE on its Supervisory Board, in particular by ensuring that representatives of EDF as a shareholder on RTE's Board of Directors are not also members of EDF's decision-making bodies. The CRE is therefore recommending that the list of Supervisory-Board members is published on RTE's Web site, showing any office each holds within the Group.

- Independence of the distribution-network operators

Distribution-network operators (*gestionnaires de réseaux de distribution - GRD*) who supply more than 100,000 connected customers must, under the Directive of June 2003, be legally separate by 1 July 2007. However, because the transposition of this provision was delayed until the French Law of December 2006, businesses were not able to set up subsidiaries and define their detailed organization within the prescribed time.

For instance, EDF's distribution subsidiary was created only on 1 January 2008.

As at 1 July 2008, all the local distribution companies apart from Electricité de Strasbourg are either legally separate or are in the process of becoming so.

EDF and some local distribution companies have chosen to separate by creating a subsidiary responsible for all distribution-network activities.

The CRE does, however, question whether EDF is genuinely committed to providing the conditions necessary for an independent distribution subsidiary. EDF has given ERDF a name and a corporate identity that has too much in common with those of long-standing businesses.

Électricité de Strasbourg plans to create a supply subsidiary on 1 January 2009, while retaining the network operator within the parent company. This arrangement may comply with the French Law of 9 August 2004, but it breaches the Directives of 26 June 2003. The CRE had already reviewed all the distribution-network operators to ensure that their equipment, financial and human resources were sufficient to enable them to operate completely independently, but it has re-reviewed Electricité de Strasbourg to verify that its proposed legal separation and its method of operation could guarantee true independence for the network operator.

- Compliance with codes of good conduct

Under the French Law of 9 August 2004, transposing the European Directive of 26 June 2003, the CRE published its 3rd annual report in December 2007 on compliance with codes of good conduct and on the independence of the network operators.

The codes of good conduct include measures to guarantee that all discriminatory practices are banned. They are applied both by RTE, the operator of the public transmission network, and by all operators of distribution networks that supply more than 100,000 connected customers. The codes have been issued to all the network operators' staff and are published

on operators' Web sites. They cover non-discrimination and transparency, and also the security of commercially-sensitive information. The CRE monitors the application of these codes, and checks that the operators carry out audits.

In its latest report, the CRE was thus able to confirm not only that the codes were distributed (e.g. sent to agents and published on network operators' Web sites), but also that their provisions were being applied in practice. None of its checks identified deliberate practices discriminating a particular supplier, or the disclosure of any commercially sensitive information. In addition, all the documentation required for equitable access to the network is available to users.

Some weaknesses were, however, apparent, particularly during the "mystery customer" investigation initiated by the CRE:

- sometimes the information a network operator gives a customer encourages the customer to look to long-standing providers and not to choose alternative providers;
- details of the network operators' drop-in centres can be hard to find.

Another similar investigation started at the beginning of 2008 to assess the progress made.

Following the good-conduct audit it carried out in 2007 the CRE drew up a list of requirements, in particular:

- devising appropriate indicators of discrimination, to measure improvement. To move this forward, the CRE will set up a working group responsible for defining the criteria to be included in such indicators;
- improving initiatives to train and inform personnel, particularly agents who encounter network users.

*
* *

III . Operation of the French electricity market

Under Articles 23 - § 8 and 1, point h) of the Directive 2003/54/EC

The CRE issues a quarterly Market Survey of quantitative indicators, providing the public with reference data on the deregulation of the electricity and gas markets. It is available from the CRE's Web site (www.cre.fr) in French and English, and describes the wholesale and retail markets in Metropolitan France.

1 The wholesale market

1.1 Generation and consumption

According to the RTE, internal consumption in 2007, including losses in the distribution and transmission networks, amounted to 480.3 TWh, an increase of 0.4% on 2006. The maximum rate of consumption in 2006 was 89,000MW on 17 December 2007. This is currently the highest recorded figure.

Again according to the RTE, generating capacity in France was 115,900 MW in 2007 (115,500 MW in 2006).

EDF has 83 % of the generating capacity (88% of the energy produced), and was the only company to exceed the threshold of 5% of available installed generating capacity. The other two significant generating companies are:

- Electrabel-Suez. This manages 4% of the generating capacity (3% of the energy produced) via CNR, SHEM and its holdings in nuclear power plants;
- SNET (part of the ENDESA Group). This manages 2% of the generating capacity (and produces 1.5% of the energy at national level).

These three generating companies account in total for 93% of the generating capacity. The HHI for the electricity-generating market, calculated on the basis of generating capacity, is over 7000 (over 7900 if calculated based on power generated).

The table below analyzes the French market with production ranked in order of importance:

TABLE 3: STRUCTURE OF THE FRENCH MARKET

Order of importance	Number of generating companies	List of generating companies
Base	2	EDF, Total
Semi-Base	3	EDF, SNET, Gaz De France
Peak	2	EDF, SNET
Hydroelectric	3	EDF, CNR, SHEM
Small decentralized generation	Several thousand	Small independent generating companies, local distribution companies, manufacturers (self-generated)

1.2 Organized markets

As regards electricity volumes marketed on Powernext in 2007:

- volumes traded day-ahead (hourly products or blocks quoted a day ahead) have increased by 49% in the year, rising from 29.6TWh in 2006 to 44.2 TWh in 2007;
- forward-traded volumes remained lower until September 2007, when activity increased sharply. However, taking 2007 as a whole, activity generally was down slightly on the previous year: 79.4TWh was traded on Powernext Futures in 2007 compared with 83.1TWh in 2006.

There has been no activity on the German exchange EEX (which was launched in August 2005 and exchanges forward products for delivery in France) since August 2006.

In July 2007, Powernext introduced a trade in both day-ahead continuous contracts and day-ahead intraday contracts (also with continuous quotation). Activity on the intraday platform grew strongly until the end of 2007.

- the volume of 64 transactions between 11 July 2007 and 19 December 2007 (the date of the last transaction) traded as day-ahead continuous contracts was 0.027 TWh;
- the volume of 10 transactions between 11 July 2007 and 31 December 2007 traded as day-ahead intraday contracts was 0.23 TWh;

1.3 The OTC market

Most transactions on the French market are over the counter.

In 2007, deliveries from OTC transactions remained relatively stable. Their total volume amounted to 262 TWh, a slight increase of 2.2% on 2006 (256 TWh).

1.4 Integration of the French market into markets in border states

The Belgian, Dutch and French electricity markets are already coupled, causing prices in the three organised markets to converge strongly, as illustrated by Powernext and Belpex prices, which were the same throughout 90% of the year. The prices on the three organized markets were the same for 63% of the year, compared with 2006, when the APX and Powernext prices were aligned for only 10% of the time.

TABLE 4: CONVERGENCE OF HOURLY PRICES FOR POWERNEXT, BELPEX AND APX IN 2007⁶

	Proportion of hours in 2007	<i>Memo from 2006: APX – Powernext convergence⁷</i>
All three prices the same	63%	10%
Only Powernext and Belpex prices the same	27%	
Only APX and Belpex prices the same	9%	
No prices the same	1%	

Source: Powernext, Belpex and APX – CRE Analysis

There is no market coupling on any of the other borders. The value of the welfare loss associated with the absence of market coupling on the German, English, Spanish, Italian and Swiss borders can be interpreted as an indicator of the “poor” integration of the organized markets.

This welfare loss is calculated as follows: for each hour, it is the product of the positive part of the price differential between the exchanges and the daily capacity that either remains unused or is bought against the price differential. The calculation should be treated with circumspection, but it nevertheless gives some idea of the magnitude of the welfare loss at each border.

TABLE 5: WELFARE LOSS ASSOCIATED WITH LACK OF MARKET COUPLING IN 2007

		Estimated welfare loss (€M)	Total (€M)
Germany	Export	45	110
	Import	65	
England	Export	22	57
	Import	34	
Spain	Export	3	21
	Import	18	
Italy	Export	18	47
	Import	29	
Switzerland	Export	32	97
	Import	65	
Total:		332	

Sources: RTE, Powernext, EEX, OMEL, IPEX, SwissIX and Platts – CRE Analysis

⁶ Apart from the two days for which the three exchanges were uncoupled (so the three prices were never aligned).

⁷ Proportion of hours during which the price differential between APX and Powernext was below €1/MWh, in the period from 1 January 2006 to 21 November 2006 (when the market coupling started). No similar comparison is possible for Belgium since the Belpex exchange was created when coupling started.

2 The retail market

2.1 Consumers

The deregulation of the French electricity market has taken place in a number of stages:

- all sites with an annual electricity consumption of over 16 GWh became eligible from June 2000.
- all sites with an annual electricity consumption of over 7 GWh became eligible from February 2003.
- all businesses and local authorities became eligible from July 2004.
- all consumers, including residential customers, became eligible from July 2007.

Since 1 July 2007, all consumers, including residential customers, are free to choose their electricity supplier. Today, approximately 34 million sites are eligible, representing an annual electricity consumption of around 435 TWh.

The annual consumption of end consumers is split as follows:

	2007 consumption in TWh
Residential sites	138
Non-residential sites	290

Data supplied by network operators is segmented using technical criteria, not by the consumers' activity. Thus within non-residential consumption, it is not possible to distinguish manufacturing consumption from the consumption of service companies (or of other types of customer).

Customers have a choice of three types of contract:

- regulated-tariff contracts (offered only by long-standing suppliers)
- contracts at market price (offered by both long-standing and alternative suppliers).
- TaRTAM contracts. These are only available to consumers who have already taken out a market-price contract.

The French Law of 7 December 2006 introduced an additional choice for the customer. Those who had already taken out a market-price contract could ask their supplier for a contract at the transitional regulated tariff for market adjustment (TaRTAM), for a maximum period of two years. They could make this request until 1 July 2007. The TaRTAM is equal to the regulated selling tariff excluding taxes for a consumer site with the same characteristics, increased by 23% for large sites, 20% for medium-sized sites and 10% for small sites⁸.

⁸ The segments to which these percentage increases apply are given as a rough guide only.

Inset 8: Segmentation of the eligible customer base

The CRE has classified eligible customers in categories appropriate for retail-market monitoring:

Major non-residential sites: sites connected at high voltage with a contracted load of 250 kW or more. These sites are major manufacturing sites, hospitals, hypermarkets, and large buildings (annual consumption generally over 1 GWh). This group represents 0.1% of sites by number, but 42% of total electricity consumption.

Medium-sized non-residential sites: sites connected at high voltage with a contracted load of less than 250 kW, and low-voltage sites with a contracted load of 36 kVA or more. They are typically SME sites (annual consumption generally between 0.15 GWh and 1 GWh). This group represents 1% of sites by number, and 15% of total consumption.

Small non-residential sites: sites connected at low voltage with a contracted load of less than 36 kVA. These sites represent the professional market (freelancers, tradesmen, etc.). Their annual consumption is generally below 0.15 GWh. This group represents 13% of sites by number, and 10% of total consumption.

Residential sites: sites with a contracted load of less than 36 kVA. Their annual consumption is generally below 10 MWh. This group represents 86% of sites by number, and 33% of total consumption.

2.2 Market shares

At 31 December 2007, alternative suppliers held a market share of 1.3%, measured as a percentage of the total number of sites, or about 8% of total consumption. This figure does not indicate the different performances in the different segments: in fact, the penetration of alternative suppliers into the medium-sized non-residential segment is limited:

TABLE 6: MARKET SHARES OF ALTERNATIVE SUPPLIERS (BY NUMBER OF SITES AT 31 DECEMBER 2007)

All sites	Major non-residential sites	Medium-sized non-residential sites	Small non-residential sites	Residential sites
1%	4%	1%	8%	0.1%

A. ANALYSIS BY NUMBER OF SITES

Only one supplier (EDF) has an overall market share exceeding 5%, and this holds true in each of the four market sub-segments defined above.

The market shares of the three largest suppliers in each segment are:

- 98% (over all segments)
- 95% (major non-residential sites);
- 98% (medium-sized non-residential sites);
- 95% (small non-residential sites);
- 99% (residential sites).

Foreign suppliers in France include suppliers subject to foreign law active on the French market, and suppliers subject to French law whose principal shareholder is a supplier under foreign law. Market shares of foreign suppliers in France are:

- 0.002% (over all segments)
- 2% (major non-residential sites);
- 0% (medium-sized non-residential sites);
- 0% (small non-residential sites);
- 0% (residential sites).

B. ANALYSIS BY CONSUMPTION VOLUME

Only one supplier (EDF) has an overall market share that exceeds 5%. The market share of the three largest suppliers is around 94%. Foreign suppliers hold a market share of 2 %.

C. COMPETITIVENESS OF MARKET CONTRACTS

The contracts of alternative suppliers vary depending on their customers' segment. For large and medium non-residential sites, offers are generally priced based on wholesale prices. Small non-residential and residential customers have two types of contract:

- contracts where the price is defined with reference to the regulated sales tariff. These are more numerous. The subscription charge is usually that in the regulated sales tariff, and the energy price is lower;
- contracts where the price is not defined with reference to the regulated sales tariff. These contracts are built up by adding the price of network access to the wholesale price. They are often more expensive than those set using the regulated sales tariff.

The CRE has no formal knowledge of contracts agreed between major-site customers and their suppliers. By contrast, the French Law 2000-108 of 10 February 2000 requires suppliers of customers with a contracted load of 36kVA or less to publish an accurate description of both their trading offers and their pricing structures.

Alternative suppliers of small non-residential and residential customers sometimes offer innovative packages which may include some of the following:

- fixed prices for a period of one to two years
- contracts with no standing charge
- fixed-price contracts
- electricity certified as renewable or "green" energy
- a reduction in the unit price of energy if consumption drops
- energy-saving light bulbs and other gifts offered when the contract is taken out
- donations paid to environmental organizations

2.3 Suppliers

At 31 December 2007, 18 alternative suppliers each had at least one customer in its order book. Six alternative suppliers are offering services to residential customers. In areas served by local distribution companies, there are virtually no alternative suppliers. As things stand in French market, alternative suppliers are focusing on ERDF's territory.

A. LONG-STANDING SUPPLIERS THAT ALSO GENERATE ENERGY

There are more than 160 long-standing suppliers in France, who in the past have supplied and distributed energy in particular geographical areas:

- EDF, which also generates energy, supplied 95% of French consumer sites;
- around 160 local distribution companies (ELDs) supplied the remaining 5%; of these 160, 56 also generated energy (2002 figure).

B. ALTERNATIVE SUPPLIERS THAT ALSO GENERATE ENERGY

At 31 December 2007, 3 alternative suppliers, active since the start of market deregulation, had generating capacity in France: the Endesa Group, the Suez Group and Gaz de France.

A total of around 60 suppliers in France have some generating capacity.

C. SUPPLIERS THAT ALSO OPERATE NETWORKS

Only one supplier (EDF) in France is a transmission-network operator (*gestionnaire du réseau de transport - GRT*).

EDF and the 160 ELDs are distribution-network operators (*gestionnaire de réseau de distribution - GRD*).

In addition, suppliers that have neither a transmission-network nor a distribution-network activity have entered the market since deregulation. At 31 December 2007, around twenty were active in France.

2.4 Switching supplier

Standard procedures have been drafted to arrange for a change of supplier. They are not defined in law, but are the result of cooperative working among the different sector players (end customers, suppliers, distribution companies, transmission companies and administration services). The objective set by the CRE was that switching supplier should be simple, quick and cost-free. The resulting rules have been accepted both by users and by network operators and include normal industry practices, which in this context have a certain normative value.

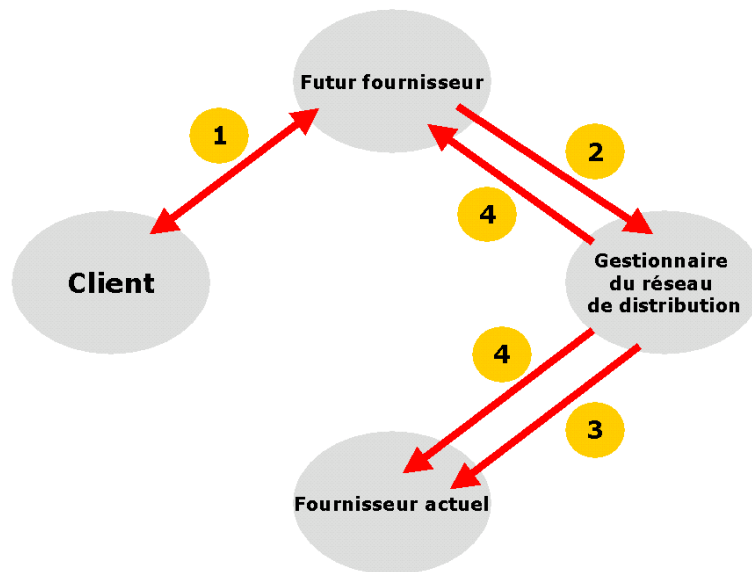
A. STAGES IN THE PROCEDURE

Where a single contract covers the terms and conditions for both supplying electricity and for distributing it (by the public distribution-network operator)⁹, the process of changing supplier is as follows:

- the customer agrees a contract with its future supplier, and, importantly, signs an "*attestation of change of supplier (attestation de changement de fournisseur)*", which forms part of the contract;
- the future supplier must ensure that the consumer is fully aware of the terms and conditions defined in Section 12 of the French Consumer Code (*Code de la Consommation*);
- the future supplier informs the distribution-network operator that the customer wishes to change supplier. For private customers, the Consumer Code provides for a cooling-off period of 7 days if the changes results from cold calling or distance selling. Information about the change is thus only given to the network operator after this time. If the consumer has taken his own meter reading, the future supplier may send it to the network operator;
- the distribution-network operator acknowledges receipt of the request:
 - it checks that the request is in order (the technical data is consistent with the customer's reading, if supplied);
 - it informs the customer's present supplier;
- the distribution-network operator calculates the customer's consumption figure at changeover (the customer's own reading, if supplied, substantiates the calculation):
 - it sends the present supplier the figures at the date of change of supplier, and the invoice for the corresponding balance;
 - it sends the future supplier the same figures and the first invoice for the fixed portion of the network price.

⁹ The vast majority of contracts agreed are of this type (around 828,500 at 31 December 2007).

FIGURE 3: PROCEDURE FOR CHANGING SUPPLIER



B. GROUNDS FOR REFUSAL

The distribution-network operator may refuse a request to switch supplier if:

- a change of supplier following a previous request is already in progress;
- the metering installations have been used fraudulently.

C. MEANS OF TERMINATION AND TIME PERIODS

The French Law of 7 December 2006, which inserts Article L.121-89 into the Consumer Code, states that for residential customers, "if the supplier changes, the contract is automatically terminated on the date the new energy-supply contract comes into effect".

If neither the contracted load nor the metering structure changes, the switch of supplier must take place within the following times, at the choice of the supplier and the customer:

- for requests made before the 10th of the month, by the 1st of the month following the request;
- for requests made after the 10th of the month, by the 1st of the 2nd month following the request.

After July 2008, the switch may take place on a "date selected" by the supplier and customer, but not before at least 21 days have elapsed.

D. COST ASSOCIATED WITH SWITCHING SUPPLIER

Article 83 of the French Law 2005-781 of 13 July 2005 (from the programme defining energy-policy guidelines) modifies the payment rules for services carried out at the time the supplier changes.

Article 83 provides that, when an eligible customer exercises its right to change supplier for a site, *“its current contracts for the supply of electricity at the regulated tariff to that site are automatically terminated. This termination does not trigger any compensation whatsoever”*.

However, *“when this termination occurs within one year after a change to the contracted loads specified in the contract has been initiated by the customer, Electricité de France or the non-nationalized distributor concerned has the right to compensation equal to the fixed charge due in respect of the electricity that has actually been used”*.

Lastly, *“when a customer which has already exercised its eligibility again changes supplier, it alone is liable for the costs incurred in the change, and in particular those of the network operator to which it is connected”*.

However, in the case of residential customers, the French Law of 7 December 2006, which inserts Article L.121-89 into the Consumer Code, states that *“the supplier may invoice the consumer only for amounts related to the costs it has actually borne, directly or via the network operator, in connection with the termination, and subject to those costs having been explicitly set out in the offer. These costs must be supported by evidence, and no other expenses may be claimed from the consumer simply because it is changing supplier”*.

Some distribution-network operators (GRD) invoice the change of supplier to the requesting supplier, even for residential customers.

E. ANALYSIS OF RATES OF CHANGE OF SUPPLIER

The switching rates shown below do not include changes of supplier for customers who revert to their original supplier (switch back), since the network operators cannot distinguish sites that re-negotiate their contracts with a long-term supplier from those who change their existing supplier back to the original one. However, this limitation has no significant impact on the calculated switching rate.

The switchback rate was negligible in 2007, evident because long-term suppliers renegotiated very few contracts that year. On the other hand, it is not possible from the cumulative value of switchbacks and contract re-negotiations for previous years to determine whether the switchback rate, when taken in isolation, is high or not.

For this reason, it has not been possible to calculate a value for the switchback rate.

TABLE 7: RATES OF SWITCHING TO ALTERNATIVE SUPPLIERS

Segment	2007
Major non-residential sites	1.2%
Medium-sized non-residential sites	0.03%
Small non-residential sites	2.2%
Residential sites*	0.1%

*Rate calculated only for the last half of 2007.

For small (residential and non-residential) sites, the main barriers to changing supplier are:

- a lack of understanding of market deregulation
- consumer-association campaigns that support regulated tariffs
- psychological barriers because of its irreversibility (up to January 2008)
- complex conditions for exercising reversibility (since January 2008)
- small price difference between regulated tariffs and market offers.

For other customers (medium-sized and large non-residential sites), market offer price is based on wholesale price, and high prices on the wholesale market make market offers less attractive than the regulated tariff.

2.5 Retail prices

Taxes included in the network charges relate mainly to pylon taxes, and are not identified in the invoices for using public networks.

Since 1 January 2006, pension costs for employees in the electricity and gas industries have been funded by a pricing levy (CTA). This levy is separate from the tariff for using the public electricity networks, but is nevertheless always included in the regulated sales tariff for electricity, and is not shown on the invoice.

The following table shows the breakdown of invoices for customers at regulated electricity sales tariffs at 31 December 2007

	Dc ¹⁰	Ib ³	Ig ³
Network portion of the invoice (€/MWh)	41.9	40.2	12.6
Supply portion of the invoice (€/MWh)	48.6	42.8	33.7
CTA (€/MWh)	2.6	3.8	0.7
CSPE(*) (€/MWh)	4.5	4.5	4.5
Local taxes (**) (€/MWh)	8.2	2.9	0.0
VAT (***) (€/MWh)	17.5	18.5	10.1
Invoice total including all taxes (€/MWh)	123.3	112.6	61.6

(*) The CSPE (*contribution to the public electricity service - contribution au service public de l'électricité*) finances the support systems for cogeneration and renewable energies, cross-subsidies at national level, social systems, and also a portion of the charges associated with the transitional regulated tariff for market adjustment.

¹⁰ Eurostat classification, see definitions p.16.

(**) Local taxes amount to 11% nationally (13.2% for Paris), applied to 80% of the tax-exclusive invoice amount, if the contracted load is less than 36kVA, and to 30% of the tax-exclusive invoice amount, if the contracted load is between 36kVA and 250kVA. If the load is greater than 250kVA, no taxes are payable.

(***) For loads less than or equal to 36kVA, VAT is charged at 5.5% on the standing charge shown on the invoice excluding CSPE, at 19.6% on the remaining invoice amount excluding CSPE, and at 19.6% on the CSPE. For loads over 36 kVA, VAT is charged at 19.6% both on the tax-exclusive invoice amount and on the other taxes.

Notes on the assumptions used in the calculation:

- the portion of the invoice relating to the network is calculated by applying the network usage tariff for customers, following the Eurostat classification (annual consumption: c , off-peak hours of consumption for residential customers; contracted load (*puissance souscrite*): ps ; and time of use: $c/(ps*8760)$);
- the portion of the invoice relating to supply is calculated as the difference between the amount of the total invoice excluding taxes (as published by Eurostat in July 2006, increased by the rises on 15 August 2006 and 16 August 2007) and the amount of the network invoice plus the distribution pricing levy (*contribution tarifaire d'acheminement - CTA*).

A. REGULATED TARIFFS AND COMPETITION

The supply portion of the regulated sales tariff is obtained by deducting the transmission portion (calculated from the tariff for using the public electricity networks). It includes generating and marketing costs, as well as the supplier's profit margin.

The pricing of the supply portion of market contracts for large and medium-sized sites is based on wholesale-market price. Since January 2004, the supply portion based on such contracts has been more expensive than the supply portion based on the regulated sales tariffs. For some large and medium-sized sites, the supply portion of the regulated sales tariff does not reflect the true costs of supply, and may be negative, thus increasing the discrepancy.

For small residential and non-residential sites, the supply portion of the regulated sales tariff is also cheaper than wholesale market prices, but to a lesser extent. This variance between energy prices on the wholesale market and contract prices on the retail market (also called the scissor effect) prompted the company Direct Énergie to refer EDF to the Competition Council (see III.1.2 Abuse of dominant position).

The detailed procedure for setting and updating tariffs described in Section VII, Public service, 2.1 Electricity (p.117).

2.6 Consumer queries and complaints

When the markets became fully deregulated on 1 July 2007, the CRE, in conjunction with the public authorities (the Ministry of the Economy and the Ministry of Ecology) and the French Energy Mediator, set up the "Energie Info" service. This is an information system targeted at individual and business consumers accessible via a Web site (www.energie-info.fr), via a call centre (phone number from within France 0810 112 212) and a postal address (Service Information Consommateurs de la CRE (*the CRE Consumer Information Service*)). The system enables users to ask a question or make a complaint, either orally or in writing (by e-mail, fax or letter).

It covers both the electricity and natural gas markets, and deals with questions relating to electricity, natural gas, and even both types of energy at the same time.

During the second half of 2007, the Energie Info Service was in contact with 200,000 consumers. (About two thirds of the calls were to obtain contact details for various suppliers, and these handled via interactive voice mail). In addition, the Web site had 165,000 visitors over the same period.

A. QUESTIONS

The questions addressed to the Energie Info Service concerned the procedure for starting the energy service, choosing a supplier, the various types of contract available (regulated tariffs and market contracts), whether or not it was possible to return to the regulated tariff after leaving it, cold calling and the right to cancel, the terms and conditions under which a contract is validly agreed (orally or by signature, depending on the circumstances) and the procedure for connecting a home to the electricity and natural-gas networks.

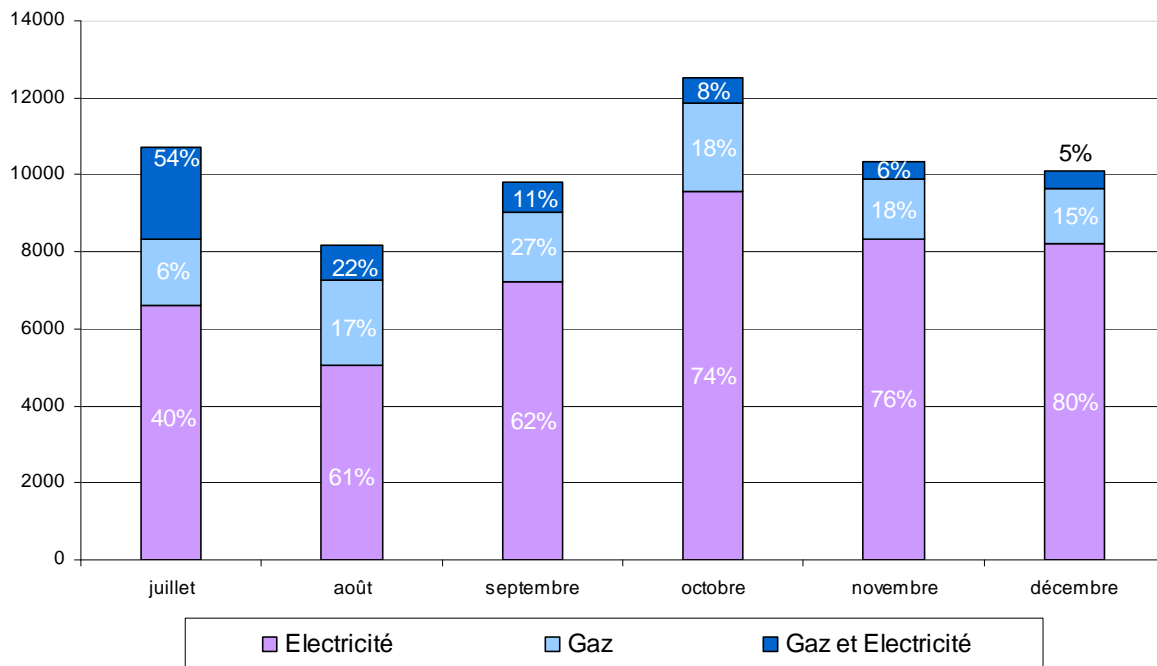
B. COMPLAINTS

The Energie Info Service has an incomplete picture of consumer complaints in the electricity and natural-gas markets.

1.3% of the consumer requests received by the Energie Info Service relate to complaints. In the second half of 2007, the Service handled around 2,700 complaints.

- **Disputes between a consumer and a supplier.** The CRE has no legal authority in this area. When it receives a complaint, the CRE informs the consumer of possible courses of action and of his rights, and may direct him towards the National Energy Mediator (the body facilitating the amicable resolution of disputes between suppliers and consumers) or to the Department for Competition, Consumption and the Repression of Fraud in the Ministry of the Economy (which is able to penalize infringements of the Consumer Code). Note that the National Mediator processed complaints received in 2007 during 2008, the year in which the service started.
- **Disputes relating to network access or use:** If means of settling a dispute amicably have proved unsuccessful, a consumer may in some circumstances call on the CRE's Dispute-Settlement and Sanctions Committee (CoRDiS). Such instances are very rare: most disagreements are resolved amicably without reference to CoRDiS.

FIGURE 4: CONSUMER QUESTIONS & COMPLAINTS BY ENERGY TYPE (ELECTRICITY / GAS / ELECTRICITY & GAZ)
 (scope: customer contacts handled individually, not via voice mail)



3 Abuse of dominant position: countermeasures

3.1 Wholesale market

The French wholesale market has no specific rules to prevent situations where the dominant generating company abuses its dominant position.

A. VIRTUAL POWER PLANTS

Virtual Power Plants (VPP), which EDF has been required to sell since 2001, are a key component of the French wholesale market. These are virtual generating stations that have been auctioned regularly by EDF since the European Commission's decision¹¹ authorizing it to take a 34.5% stake in the German electricity company EnBW.

In 2007, VPPs represented 67% of the supplies required by alternative operators to cover the consumption of their eligible customers and their commitments to RTE and the distribution operator (EDF) to cover network losses.

B. GENERATING TRANSPARENCY

Information on power generation must be transparent if wholesale markets are to function correctly.

¹¹ Decision of 7 February 2001.

This condition is particularly important in France, where EDF controls most of the generating capacity. It is essential that other players have the information that enables them to anticipate how the balance of physical supply/demand will vary on the French market.

The French Electricity Union (*Union Française de l'Electricité - UFE*) publishes both projected and actual information on the availability and use of the plant run by the principal French generating companies. This information has been updated more frequently since February 2007. RTE uploads the data to its Web site, but does not guarantee its accuracy.

Its publication improves the transparency of the French market:

- the information covers all large French power stations, representing around 91% of production by volume;
- the forecast information relates to time periods extending from the following day to the next three years. It thus includes the principal settlement dates used on the French market.

The UFE system could still be improved, particularly as regards the recommendations made by the ERGEG in its *Guidelines of Good Practice on Information Management and Transparency in Electricity Markets*:

- it publishes only the resources of generating companies that choose to participate;
- it covers only generating plant with a production capacity of over 20 MW;
- the data is grouped in heterogeneous production categories such as "Coal and gas", "Oil and peak", and "Others";

Published data is not updated in real time, for example after incidents that occur at generating stations.

C. WHOLESALE-MARKET MONITORING

a. MONITORING ISSUES

Market monitoring is assigned to the CRE under Article 28 of the French Law of 10 February 2000, and as defined in the French Law of 7 December 2006. It provides that the CRE "*shall, for the electricity and natural-gas sectors, monitor transactions between suppliers, traders and producers; transactions made on the organized markets; and all cross-border trading. It shall ensure that bids made by suppliers, traders and producers are consistent with their financial and technical constraints.*" The Law also provides that if the CRE detects any criminal practices, its Chairman shall refer the matter to the Competition Authority.

The purpose of market monitoring is to detect any anti-competitive behaviour. It confirms that dominant players are not abusing their market powers, and that market transactions are not being agreed for the purpose of altering the price mechanism.

In practice, the wholesale market price determines:

- the gross sales income made by operators who control the physical sources of supply (generating capacity and long-term import contracts);
- the procurement cost charged to suppliers who do not have such sources of supply.

Examples of the targeted malpractices are:

- holding back generating capacity in order to create an artificial shortage and hence raise prices;
- setting abnormally low sales prices, in order to bring prices below their normal level, and hence reduce competitors' income;

- (by one or more players) placing purchase or sales orders on the trading platforms that are intended to provide the market with erroneous information on anticipated future prices.

b. REVIEW OF THE PEAKS IN PRICE IN OCTOBER AND NOVEMBER 2007

During October and November 2007, the Powernext Day-ahead Auction trading platform registered record high prices. Even though during the first nine months of the year, prices for delivery between 6.00pm and 8:00pm averaged €36 /MWh, rising to a maximum of €118 MWh, they peaked at:

- €1,236 /MWh for delivery on Monday, 29 October 2007 between 6:00pm and 7:00pm;
- €2,500 /MWh for delivery on Monday, 12 November 2007 between 8:00pm and 9:00pm;
- €1,762 /MWh for delivery on Thursday 15 November 2007 between 6 pm and 7 pm.

The CRE completed its investigation into these price peaks on 17 April 2008, when it issued a formal statement and published a detailed report.

The CRE concluded at the end of its enquiry that throughout the period under review, the balance between supply and demand had been one that favoured high prices. Players had anticipated the impact of unstable French market forces by reducing supply and/or increasing demand on the Powernext Day-ahead Auction, and the price peaks resulted from this behaviour. The CRE did not identify any individual behaviour as culpable, in the sense of being deliberately aimed at causing these price peaks.

However, the CRE has identified several factors that encouraged the peaks:

Factor 1: the EDF Group, via EDF Trading, did not offer its entire available production capacity (notably hydroelectricity) on the Powernext Day-Ahead Auction on 12 November 2007 between 8:00pm and 9:00pm.

The CRE's analysis shows that the Group's daily decision-making processes led to this course of action.

Factor 2: the working practices of some members of the Powernext Day-ahead Auction reduce their responsiveness, especially at weekends. When fewer trading teams work at weekends, the trader may not adjust to market changes. This can influence the market prices on the following Monday, when incorrect decisions are more likely to be made.

Factor 3: the forecast production data published by the French Electricity Union (UFE) does not enable traders to plan properly for the risk associated with unscheduled unavailability. In fact, under the UFE rules, the published projected availability for all power stations takes only scheduled shut-downs into account. This principle may increase the objectivity of the published data, but it means that the published availability is systematically higher than actual.

The UFE's publication process is also not sufficiently reliable. Lastly, not enough history is provided alongside the published data.

Factor 4: the Request-for-Quote (RFQ) procedures initiated by Powernext to attract additional bids are flawed. Our review of the procedure followed by Powernext on 11 November 2007 shows that it was not applied in a way appropriate to the market situation. The procedure is insufficiently precise and too few market traders have been consulted. Furthermore, the Powernext's preliminary check to decide whether or not to issue an RFQ could be improved. Lastly, even though import capacity was available from Belgium, the RFQ

procedure has not been arranged jointly with the other exchanges involved in market coupling.

Factor 5: The mechanisms currently used to allocate interconnection capacities do not permit efficient interconnection management. At the time of the three price peaks on the French market, and although prices on the neighbouring organized markets were all, with the exception of Belgium, very much lower than those of Powernext, a significant volume of import capacity remained unused at the borders. Efficient allocation methods, and in particular market coupling for all French interconnections, would have helped lower the prices on the French market.

As a result of its investigation, the CRE asked:

- the main traders in the wholesale electricity market (and especially EDF) to enhance their internal market-trading procedures, so that they act in a way that best reflects the state of their portfolio;
- the UFE, and those of its members that generate electricity, to improve the reliability of the forecast production figures published on the RTE site; and, in collaboration with the CRE, to supplement the information so that market traders can anticipate properly the situation on the French market;
- Powernext to improve the procedure followed when the Powernext Day-ahead Auction price does not appear to reflect the market position, and in particular to harmonize with the Belgian and Dutch exchanges.
- RTE to speed up the implementation of efficient methods of allocating transmission capacities at interconnections.

The investigation demonstrated that monitoring can identify clearly ways in which market operation can be improved.

3.2 Retail market

A. CONTRACTUAL RELATIONS BETWEEN CUSTOMERS AND SUPPLIERS

C. RELATIONS WITH PROFESSIONAL CUSTOMERS

Electricity suppliers are, in their relations with professional customers, subject to the common law of the *Civil Code* and *Code of Commerce*.

Suppliers are subject to an obligation of transparency as regards these customers. They must clearly explain their obligations, and any obscure or ambiguous contractual provision will be interpreted to their disadvantage.

The structure and contents of contracts concluded with professional customers are in principle free, providing that they do not go against applicable regulations.

For small commercial customers¹², a list of pre-contractual and contractual information is laid down in legislation¹³. For this category of customers, the supplier is required to offer the option of a 'single' contract, for both supply and grid access.

Grid access contracts are sent to CRE. Their contract provisions must be transparent and non-discriminatory. Where necessary to settle a dispute referred to CoRDIS, CoRDIS may set the methods of access to grids, structures and facilities or the terms of their use in an objective, transparent, non-discriminatory and proportionate manner.

The duration of the contract is also free. It may be of long duration if the customer so wishes and if the supplier makes the customer an attractive offer. CRE has declared itself in favour of establishing long-term contracts, in which suppliers commit to prices whose trends over the contract duration would be linked to transparent indexes. These contracts must nevertheless comply with the competition law, particularly regarding operators in a dominant position. The aim or effect of concluding long-term electricity supply contracts should not be the eviction of competitors. Furthermore, customers must be able to terminate their contract in advance with related fines being of a reasonable amount.

In application of article L. 441-6 of the Code of Commerce, which applies to all suppliers as regards their contractual relations with professional customers, suppliers are obliged to send their general terms of sale to any professional customer upon request. These form the basis for commercial negotiation and contain the sales terms, unit price scale, price reductions and payment terms.

¹² Subscribing to a rated power of 36 kVA or less

¹³ Article 43 of the Law of 7 December 2006

Article 22-VI of the Law of 10 February 2000 also stipulates that suppliers are obliged to send their price scales and a precise description of the commercial offers to which these prices apply to customers subscribing to demand of ≤ 36 kVA, upon request. These price scales must be identical for all eligible customers in this category connected to the continental electricity grid.

As is the case for the contract, the format of the invoice is free except for small commercial customers¹⁴.

Any bill issued by an electricity supplier must contain a minimum of the following information:

- Line concerning consumed energy billed. The Law of 10 February 2000 (article 22-VII) stipulates, firstly, that the energy invoiced for contracts of a rated power ≤ 36 kVA must be invoiced "*on the basis of energy consumed*" and, secondly, that each kWh consumed must be invoiced "*at the minimum [...] of the amount specified by the tariff for grid use*" if the supplier invoices the consumer for both the energy supply and use of public transmission and distribution grids. If the supplier has concluded a '*single*' contract with a customer covering the supply and transportation of electricity, the customer is billed for both the energy supply and use of the public grids. The bill identifies the amount corresponding to the use of public grids by the customer (article 5-I of Decree 2001-365 of 26 April 2001 governing tariffs for use of public electricity transmission and distribution grids);

The supplier applies the regulated retail tariff to customers who have not exercised their eligibility. For the tariff category concerned, the bills indicate the proportion corresponding to the costs for use of public grids. The supplier pays the grid operator the sums received for use of this grid (article 5-I of the Decree of 26 April 2001);

- Line for the public electricity service contribution (CSPE) in accordance with CRE's Communication of 12 February 2002;

- Line concerning value added tax (VAT) in accordance with Decree 2003-632 of 7 July 2003;

- Line for local taxes (of *départements* and *communes*) in accordance with Decree 2004-1210 of 15 November 2004;

- Information on the origin of the electricity supplied in accordance with Decree 2004-388 of 30 April 2004 (article 5).

Other lines may be added freely by suppliers (for example to detail other services provided by the supplier).

For small commercial customers, the Order of 2 July 2007 went further, clearly defining the information to appear on invoices. Each item of information is described in detail and the supplier must inform the customer of the amount of notice required to terminate the contract.

¹⁴ The Order of 2 July 2007 governing invoices for the supply of electricity or natural gas concerns bills for small businesses and households.

d. RELATIONS WITH RESIDENTIAL CUSTOMERS

Electricity suppliers are, in their relations with residential customers, subject to the common law of the *Civil Code* and *Code of Commerce*.

Article 42 of the Law of 7 December 2006 provided for the creation of a new section of the consumer code, governing energy supply contracts.

As stipulated in article L. 121-87 of the consumer code, supplier offers must include sixteen types of pre-contractual information to enable customers to compare before they make their final choice.

Suppliers must offer residential customers the possibility of entering into a 'single' contract covering both transportation and supply.

The supplier's contract must meet certain rules. In particular it must:

- re-state the information contained in the offer;
- be written on or available in a permanent medium;
- state the date of validity of the contract, the procedures for exercising the retraction right, the contact details of the grid operator (...).

Certain aspects are regulated:

Contract duration: suppliers have an obligation to include one-year contracts among their offers to residential customers;

Contract termination: the aim is to prevent any interruption of supply when switching supplier and to limit the costs that can be billed to customers.

B. ACTION AGAINST THE ABUSE OF A DOMINANT POSITION

e. THE KALIBRAXE CASE

On 22 January 2007, the company KalibraXE referred EDF to the Competition Council for abuse of a dominant position, and in particular the existence of exclusivity clauses in EDF contracts.

KalibraXE operates as an additional electricity supplier to sites already supplied by a main supplier. Its customers are large sites (rated power of ≥ 250 kW), which have subscribed to market based offers for supply separate from grid access ('access to distribution grid' or 'access to transmission grid' contracts, for example industrial sites, hospitals, large supermarkets or large housing blocks). It sells 'electricity blocks' to its customers, exploiting the opportunities offered by the wholesale markets. KalibraXe's offer allows customers to choose on a daily basis between the use of their main fixed price contract and the short-term price of the wholesale market.

KalibraXE was reporting the existence in some EDF contracts of exclusivity clauses – or clauses that lead in effect to exclusivity – in exchange for commitment to fix prices throughout the contract duration, generally 2 to 3 years. It believes the consequence of this was to prevent new suppliers offering additional contracts from entering the market.

The Competition Council pointed out that to decide whether exclusivity clauses produced an anti-competitive effect, it was necessary to take account of whether customers could terminate the contract early and the conditions that would be imposed on this. Challenging established commercial positions as often as possible actually encourages the development of competition, particularly when it concerns an activity recently opened up to competition and dominated by one company with very significant power over the market.

To deal with the serious and immediate threat to the economy of the sector, the Competition Council, in Decision 07-MC-01 of 25 April 2007, ordered EDF to define in its general terms of sale the rules applicable if a customer decides to terminate a contract early, at least for electricity supply contracts for customers who have exercised their eligibility.

The decision did not deal with the concerns of KalibraXE, which lodged an appeal with the Appeal Court of Paris. The appeal was lost. The judgement on its merits has not yet been given.

f. THE DIRECT ENERGIE CASE

On 22 February 2007, the company Direct Energie referred EDF to the French Competition Council for abuse of a dominant position and the existence of a price squeeze between wholesale and retail prices.

In 2005, Direct Énergie, which does not have its own generation capacity, signed a wholesale supply contract with EDF to supply its customers. The price of this contract did not allow it to offer small commercial customers prices that were competitive with those of EDF, which matched the regulated tariffs.

Direct Énergie therefore reported the existence of a price squeeze, characterised by the fact that it could not compete with EDF's retail prices without selling at a loss if it was buying wholesale from EDF.

Having referred the matter to CRE for its opinion, the Competition Council ruled that EDF was "likely to have used a practice that constituted an abuse of the dominant position it occupies on the electricity generation and wholesale supply markets" and that it should quickly remedy the serious and immediate threat both to Direct Énergie and to the sector.

The Competition Council ordered EDF to offer a price for the "wholesale supply of electricity or any other technically and economically equivalent solution enabling alternative suppliers to compete effectively with EDF's retail contracts with electricity customers on the deregulated market, without experiencing a price squeeze."

In the same decision, the Competition Council imposed interim measures on EDF.

EDF responded to the Competition Council's injunction by proposing a series of commitments, which were published by the Commission on 19 July and tested in the market, with 21 companies and organisations taking part. In its Decision 07-D-43 of 10 December 2007, the Competition Council agreed to EDF's proposal, with some alterations, and closed the case.

The main characteristics of EDF's supply commitment of 10 December 2007 are:

- an offer destined exclusively for the mass market (connection voltage less than 36 kVA), limited to 10 TWh per annum;
- a long-term contract, divided into two periods of five and ten years;
- an energy price in the first period starting at €36.8/MWh in 2008 and increasing each year until it reaches €47.2/MWh in 2012;
- an energy price in the second period at least equal to the development cost of the Flamanville 3 EPR (€46/MWh), indexed to costs in the nuclear sector;
- quantities allocated to the highest bidder by an auction system based on a price added to the price paid during the first period;
- an additional price clause designed to prevent windfall benefits;
- a product that is not a 'base' or 'ribbon' product, supplied seasonally in line with the availability of EDF nuclear power plants.

EDF also made a commitment to implement a sales policy for its portfolio of market based supply offer customers – approximately 400,000 sites – which would entirely eliminate the price squeeze effect.

EDF proceeded with the first auctions, planned for 12 March 2008. Five suppliers shared the 500 MW on offer at an additional cost of around €2.50/MWh above the fixed prices for the first period.

Direct Énergie appealed against Decision 07-D-43 at the Appeal Court of Paris, which has not yet given its ruling.

IV . Regulation of the natural gas market

In application of Article 25(1) of Directive 2003/55/EC

In accordance with Directive 2003/55/EC, since 1 July 2007, the gas market has been open to competition for all customers. The open gas market has 11 million customers, making it the fourth largest market in Europe. Building on what was done for the opening of the markets to professional customers on 1 July 2004, CRE is monitoring the opening of the markets to all consumers. As part of this, it is conducting discussions on the procedures, information systems, methods for informing and protecting customers and any other measures to be taken, in consultation with all the parties concerned.

1 Development of the Gas Regional Initiative

The development of cross-border exchanges is a decisive factor in the creation of a competitive European gas market. Consequently, in the spring of 2006 ERGEG launched the Gas Regional Initiative, set up to deal with the problems unique to each area. It aims to facilitate the integration of regional markets, a first concrete step in setting up the internal gas market. There are several crosscutting themes being addressed within the Initiative, such as interconnections, interoperability, transparency and investment. CRE attaches particular importance to cooperation with its European counterparts and is participating in the North-West and South Regional Energy Markets within the Initiative. CRE is also co-chair with Ofgem, the British regulator, of the Gas Regional Initiative Task Force (GRI TF), an ERGEG working group responsible for coordinating the regional initiative.

There are currently 3 gas Regional Energy Markets (REMs) within the Initiative:

- The North-West region, grouping together Belgium, Denmark, France, Germany, Great Britain, Ireland, the Netherlands and Sweden;
- The South region, grouping together Spain, France and Portugal.
- The South-East region, grouping together Austria, Greece, Italy and the Member States of Central and Eastern Europe (Czech Republic, Hungary, Poland, Slovakia and Slovenia).

As insets 9 and 10 show, the REMs in which CRE was a participant in 2007 are not all making progress at the same rate.

Inset No. 9: State of progress of work by the North-West REM (Belgium, Denmark, France, Germany, Great Britain, Ireland, the Netherlands and Sweden)

In the North-West Regional Energy Market, CRE co-chairs the working group on cross-border interconnections with BNetzA, the German regulator. The group selected three priority interconnection points in 2007:

- Taisnières/Blarégny (Franco-Belgian border);
- Mendelsheim/Obergailbach (Franco-German border);
- Bunde/Oude Statenzijl.

At the kick-off meeting in May 2007, then the meeting in February 2008, the TSOs concerned made a number of firm commitments aimed at improving the way these interconnections function, such as cutting reservation times, coordinating congestion management procedures and harmonising capacity products.

The most notable progress in 2007 was:

- An improvement in transparency: the publication of more precise information on capacities and flows by the German and Belgian TSOs;
- A proposal by Fluxys to bring in an interruptible transit product in the second half of 2008;
- The coordinated launch of two open seasons by Fluxys and GRTgaz, which is a European first.

A consultation with the shippers at the end of 2007 revealed some of their difficulties and provided some orientations for the 2008-2012 roadmap. This now provides for the development of short-term and long-term capacities and reservation procedures that are compatible on both sides of the interconnection points. It also demands the development of principles for the coordination of open seasons, the preferred way of valuing and allocating new capacity. Finally, it sets itself the target of further improving transparency. In 2007, eleven TSOs in the North-West region, including GRTgaz, Fluxys, EGT and GTS, made a commitment to improve significantly the quality and amount of information made available and, at the latest by the end of 2008, they should be publishing daily flows, interruptions and their history and aggregate day-ahead nominations.

Inset No. 10: State of progress of work by the South Regional Energy Market (Spain, France, Portugal)

Progress has been recorded in the five areas of work decided on by ERGEG in February 2007:

- As part of the development of the interconnection points (IPs) between France and Spain, at the start of 2007 the three TSOs in the region (Enagas, GRTgaz and TIGF) presented a joint investment plan to reinforce the IPs at Larrau and Biriadou and to create a new IP, MidCat, in the eastern part of the Pyrenees. In November 2007, TIGF and Enagas put forward an allocation procedure proposal, which was approved by CNE (the Spanish regulator) and CRE.
- Spain has begun the process of adopting the European standards for network interoperability and a royal decree authorising the use of open subscription periods on the Spanish side should be adopted.
- CNE and ERSE, the Portuguese regulator, began a consultation at the end of 2007 aimed at preparing for the creation of their own hub on the Iberian peninsula (Mibgas). The aim is to permit gas exchanges with the other European virtual hubs and the creation of a proper gas market in southern Europe.
- Transparency levels and the application of Regulation (EC) No 1775/2005, the fourth and fifth work areas of this regional initiative, were judged satisfactory by the surveys conducted among shippers.

2 Management and allocation of interconnection capacity

2.1 Congestion on the transmission system

The activity of shippers on the French network developed further during 2007 allowing a significant increase in competition in the various geographical areas. As at 1 April 2008, there were 44 shippers operating on the GRTgaz network and 13 on the TIGF network, compared with 30 and 10 respectively in April 2007.

There is still substantial congestion between northern and southern France. While marketable transmission capacity from the GRTgaz North zone to the South zone remains limited to 230 GWh/day in total, demand from shippers during the allocation of marketable capacity from 1 January 2009, which closed on 15 January 2008, was:

- firm 4-year capacity: 224 GWh/day, i.e. seven times the volume on offer;
- firm 3-year capacity: 192 GWh/day, i.e. six times the volume on offer;
- firm 2-year capacity: 192 GWh/day, i.e. six times the volume on offer.

This congestion results not only from the limited capacity of the structures close to the edge of both zones, but also, above all, from a lack of capacity for transporting the gas within the North and South zones, from the entry points (Fos or Taisnières) to the connection points.

In its 10-year investment plan for the period 2008-2017, GRTgaz plans to create 200 GWh/day of extra capacity between the North and South zones. Other projects aimed at increasing the connection capacity between the zones and fully resolving some congestion are also planned (cf. 'infrastructure projects' below). According to this investment plan, the ratio of energy transmissions to entry capacity could fall from 293 days per year in 2008 to

184 days in 2017 (so nearly 80% of extra capacity could be created over the period 2008-2017). When making these forecasts, GRTgaz uses an average annual growth rate of 1.6% for French consumption over the period 2008-2017.

2.2 Mechanisms aiming to resolve congestion

Different mechanisms for managing this congestion are currently in place.

A. RELEASABLE CAPACITIES

At all the entry, exit (except for Oltingue) and GRTgaz network interface points, a releasable capacity system is in place and is used by new shippers.

At each entry point, shippers holding a total firm annual capacity greater than 20% must release a fraction R of their firm annual or seasonal capacity on to the market in the form of releasable capacities so that other shippers can benefit from them. The fraction R of releasable capacity is shown in the table below

Point concerned	Dunkirk	Obergailbach	H Taisnières	L Taisnières	Hérault	Dordogne	Links
R	20 %	20 %	0 %	15 %	20 %	20 %	20 %

The price of the releasable capacity is 90% of the price of the corresponding firm annual or seasonal capacity. Releasable capacity is considered to be firm. It is allocated using the capacity subscription and allocation rules and is marketed for periods of 1 to 4 years.

Since the first quarter of 2007, 12 shippers participating in the mechanism have benefited from the new subscription opportunities and bought 2-, 3- or 4-year capacity for use from 1 October 2007.

B. INTERRUPTIBLE SHORT-TERM 'USE-IT-OR-LOSE-IT' (UIOLI) MECHANISM

The short-term UIOLI mechanism is used on the networks of the two French TSOs. It allows a shipper to apply for extra capacity in addition to its subscriptions (firm and interruptible). It may be allocated this capacity (totally or partially) if another shipper is not using all its capacity for a particular day.

UIOLI capacity is applied for daily on a day-ahead basis. Consequently, capacity for day D is applied for by means of nominations (in addition to rights) from 2 p.m. on day D-1 until 3 a.m. on day D. Where demand for capacity under the UIOLI mechanism cannot be met in full, capacity is allocated pro rata to the applications received.

The tariff includes a term proportional to the UIOLI capacity used, which is 1/500th of the price of the firm annual subscription for the entry point or 1/1500th of the sum of the firm summer and winter seasonal subscription prices.

During 2007, a total volume of 275 GWh was transported using the short-term UIOLI mechanism.

C. LONG-TERM 'USE-IT-OR-LOSE-IT' (UIOLI) MECHANISM

GRTgaz and TIGF are able to use the long-term UIOLI procedure, the purpose of which is to re-market unused subscribed capacity. The procedure has not been used so far.

A shipper A can ask the TSO to use the long-term UIOLI procedure at a network interconnection point if:

- The TSO has been unable to satisfy its demand, for which evidence is given, for annual capacity on a network interconnection point,
- Shipper A making the request informs the TSO that it has contacted all the third party shippers on the list published on the GRTgaz website and has not been able to buy from them the capacity required at the price charged by the TSO for that capacity, or less.

The TSO then looks at whether one or more shippers can transfer capacity back to the network interconnection point. If it can identify a shipper B that has used less than 80% of its reserved capacity for a period of six consecutive months (including one winter month), the TSO can ask B to give back daily entry or exit capacity equivalent to the amount requested by shipper A.

Shipper B can refuse to give back the capacity requested by the TSO if it can give one of the following reasons: public service obligation, provisions of a supply or procurement contract currently in force or the existence of exceptional circumstances. The TSO then gives shipper B its final decision.

Shipper B can appeal to CRE regarding this request. If CRE finds against shipper B, shipper B must pay the TSO an additional amount equal to 10% of the price of the disputed capacity over the period for which the TSO asked for it to be handed back.

D. SECONDARY CAPACITY MARKET AND CROSS-BORDER CAPACITIES

Shippers have the possibility of exchanging capacities (entry capacities and exit capacities at the network interconnection points, connection capacities and entry and exit capacities at the transport storage interface points).

As a general rule, only the right to use the capacity is transferred; the original owner retains its obligations towards the TSO. The exchanged usage right can be for as little as a daily time step, regardless of the duration of the original subscription. However, when the transfer relates to annual subscriptions in their entirety, the acquirer takes on all the rights and obligations associated with these subscriptions.

In the case of GRTgaz, capacity exchanges take place on its website. When an application for a monthly capacity subscription exceeds the capacity available, GRTgaz tries to find the corresponding capacity from other shippers and may propose an anonymous exchange of capacities.

The TSO does not charge for sales on the secondary market.

E. PROCEDURES FOR RESERVING CAPACITIES

The range of transmission capacity subscription periods is a tool for additional flexibility to facilitate access to capacities. Capacity can be firm and, where applicable, interruptible.

It is possible to make:

- annual subscriptions with long notice (more than seven months)
- annual subscriptions with short notice (between one and seven months)
- monthly and daily subscriptions.

GRTgaz and TIGF use the following allocation rules:

- **GRTgaz**

GRTgaz fulfils applications for long-notice annual capacity bands on a first come, first served basis, except where they involve the release of capacity by another shipper.

Applications for short-notice annual capacity bands are allocated first (between the 11th and the 20th day of month M-7) in accordance with the Open Subscription Period (OSP) principle. If there is a shortage, rights are then distributed pro rata to applications. If, following the previous allocation, all the firm and released capacity has been allocated, GRTgaz opens an OSP concerning annual reservations of interruptible capacity. Further applications arriving between the 21st calendar day of month M-7 or the 1st day of month M-6 (if the OSP is for interruptible capacity applications) and the last day of month M-2 are allocated on a first come, first served basis.

Applications for monthly capacities are allocated between the 21st calendar day of month M-2 and the 15th calendar day of month M-1. GRTgaz opens an OSP for all applications received between the 21st day of M-2 and the last day of M-2. All applications received between the 1st and 15th calendar days of month M-1 are allocated on a first come, first served basis. If there is no more firm monthly capacity available, GRTgaz will try to find capacity from shippers with sufficient capacity to meet demand.

Daily subscriptions of capacity for each day are made using an online reservation system (on a day-ahead basis).

- **TIGF**

TIGF allocates capacities on a first come, first served basis.

For the allocation of capacities at the interface between the GRTgaz South balancing zone and the TIGF zone, a GRTgaz OSP procedure allowing coordinated, joint selling between TIGF and GRTgaz has been introduced. The multi-year capacity was marketed in January 2008 and the annual and seasonal capacity was marketed from May 2008.

Regardless of the entry point or connection, 20% of capacity is marketed with short notice, making it possible to sell some capacity for short-term needs. This rule was intended to help newcomers who are less able than incumbent operators to make long-notice subscriptions. Its effectiveness could be strengthened if it were valid for all Member States, which is currently not the case.

Rules for allocating transmission capacities are posted by every TSO on their website.

The regulations currently in force stipulate that transmission capacities on the GRTgaz network should be automatically allocated at the interface points with LNG terminals,

depending on regasification capacities subscribed, and at interface points with storage facilities, for the storage capacities subscribed.

They also stipulate that, in the event of congestion on the TIGF network, applications for entry capacity allocation on the main network to supply end customers in the TIGF zone should be processed within the framework of a capacity reallocation procedure set up by TIGF.

F. OBLIGATION OF TRANSPARENCY

The development of a competitive gas market requires access for all market players to detailed information on capacities, flows, prices and main contractual terms, under transparent and non-discriminatory conditions. This information must be published by the transmission system operators (TSOs).

In its deliberations published in 2003, CRE asked transmission system operators to publish, as from 1 September 2003, firm, marketable capacities, which are subscribed and available, along with daily flows for the past month for entry and exit points and for connection points between the balancing zones. In June 2006, fresh deliberations strengthened these measures.

In 2007, the two TSOs published all the information requested for capacities at entry and exit points, at connections between balancing zones and at interfaces with LNG terminals (historic and current data).

This data was as follows:

- consumption, presented by balancing zone or all zones together, accompanied by reference temperatures;
- the amounts of gas exchanged and the number of transactions on the Gas Exchange Points;
- contractual flows by interconnection point and connection;
- price of the natural gas, resulting from the balancing market in the GRTgaz zones.

The TSOs also publish their programme forecast, for the coming six months, of capacity reductions caused by maintenance and repair work, with at least one update every month.

It is worth mentioning that on the whole the two French TSOs comply with all the provisions in Regulation (EC) No 1775/2005¹⁵ governing transparency. Both TSOs sometimes go further than these legal provisions, especially concerning flows and capacities.

G. SWAP AS AN INSTRUMENT FOR MANAGING CONGESTION

Not applicable

H. LONG-TERM TRANSIT CONTRACT

There are two gas flows that transit through France:

- One runs between northern France and the Franco-Spanish border (Larrau): this historic agreement has not been challenged and has therefore excluded 77 GWh/day per year of the marketable capacity between North and South.

¹⁵ Regulation (EC) No 1775/2005 of 28 September 2005 on conditions for access to the natural gas transmission networks.

- The other runs between northern France and the Franco-Swiss border (Oltingue)

These two services are provided by Gaz de France Négoce (B3G). The TSOs do not have any specific transit product offers.

The tariff scheme applicable to gas transit is no different from that defined for national transmission.

I. CALCULATION OF TECHNICAL CAPACITY

TSOs determine the levels of marketable, firm and interruptible capacities at different points of their network. Their methodology is based on hypotheses of network flows depending on procurement sources and consumption forecasts.

3 Regulation of transmission and distribution companies' activities

3.1 Number of network operators

Since 1 January 2005, there have been two transmission system operators (TSOs) in France:

- GRTgaz, a subsidiary of Gaz de France, which operates a network of around 32,000 km of pipelines, divided into four balancing zones (to be combined into two zones as of 1 January 2009);
- TIGF, a subsidiary of Total, which operates a network of around 6000 km of pipelines in southwest France, which constitutes a single balancing zone.

There are 23 distribution system operators (DSOs):

- Gaz Réseau Distribution France (GRdF), which held 96% of the market share in terms of quantity of gas distributed in 2007 (i.e. around 330 TWh per year).
- The other networks are granted as concessions or state-run by 22 local distribution companies (LDCs), which distribute about 14 TWh per year, with 10 TWh distributed by the two largest LDCs, Régaz (Bordeaux) and Gaz de Strasbourg.
- A concession contract was signed on 10 March 2007 by Antargaz, the 24th natural gas DSO, in order to serve the municipality of Schweighouse in the department of Haut-Rhin. Prior to that, Antargaz operated only propane networks. This is the first network for which the DSO is not linked to a supplier and where the regulated retail tariffs do not apply. The transportation tariff was presented to CRE in June 2008.

The French transmission and distribution networks measure approximately 38,000 km and 190,715 km in length respectively.

FIGURE NO. 5: NATURAL GAS TRANSMISSION NETWORKS, LNG TERMINALS, UNDERGROUND STORAGE FACILITIES AND LOCAL DISTRIBUTION COMPANIES



3.2 Network access tariffs

A. PROCEDURE

Under Article 7 of the Law of 3 January 2003, decisions concerning tariffs for the use of transmission networks, distribution networks and LNG terminals must be jointly made by the Ministers for the Economy and Energy, upon CRE proposal.

In order to draw up its tariff proposals, CRE systematically consults market players concerning the main changes envisaged. Hearings are also held with the parties contributing to CRE's consultations.

The national legal and regulatory framework defines the main categories of costs to be taken into account by CRE. Such costs include operating costs and capital costs, which are themselves made up of depreciation of equipment and return on fixed capital. These two components are calculated from the valuation and evolution of assets exploited by the operator: the Regulated Asset Base (RAB). The calculation of the RAB value and the capital costs for the lifetime of the tariff takes account of the investment forecasts supplied by the operators.

The method adopted to evaluate the remuneration of assets is based on the weighted average cost of capital (WACC) for a normative financial structure. The operator's rate of return must allow him both to finance the interest charges on his debt and provide a level of profitability on his shareholders' equity comparable to that otherwise obtainable for investments bearing similar levels of risk. The cost of shareholder's equity is estimated using "Capital Asset Pricing Model"(CAPM) methodology.

a. TRANSMISSION

The current tariffs for the use of natural gas transmission networks, in force since 1 January 2007, will apply until 31 December 2008. They have been designed to keep the overall structure of 5 balancing zones, along with the 'entry-exit' tariff principle on the main network.

The tariffs for use of the transmission networks are determined on the basis of all the operating and investment costs, particularly the depreciation of capital assets and the return on invested capital.

Calculation of these two components is based on the Regulated Assets Base (RAB), which is worked out using a 'current economic costs' method, the main principles of which were decided by the Special Commission set up pursuant to article 81 of the Corrective Finance Law of 28 December 2001 and responsible for determining the price of the State's transfer of its natural gas transmission networks.

The real rate of return before tax on the RAB used for the current tariffs was 7.25%. Regarding the investment incentive system, any investment put into operation since 1 January 2004 benefits from a premium of 125 points. An additional premium of 300 points – amounting to a total return of 11.5% – is added on a case-by-case basis (by decision of CRE after analysing the operator's application) for a period of 5 or 10 years to investments likely to make significant contributions to improving gas market operation.

These tariffs were accompanied by an expenses and revenues clawback account (CRCP), for carrying over all or part of projected-actual discrepancies for certain hard-to-predict revenues and costs. Since 1 January 2008, the tariffs have included a single main network exit price, regardless of the exit zone on the regional network.

Changes envisaged

With the merger of the balancing zones from 1 January 2009 (merger of the West, North and East zones), there will only be three balancing zones in the tariff structure for GRTgaz. The North zone will be broken down into two physical balancing perimeters linked respectively to H gas and L gas.

CRE intends to put forward new tariffs in the summer of 2008. It is thinking of extending the tariff period to 4 years. Changes are also being considered to the method of regulation, so it incorporates incentives which include a productivity objective for operating costs on the one hand and a mechanism for improving the quality of services provided by transmission system operators (TSOs) on the other.

To offer the TSOs better visibility, CRE is considering changing the incentive scheme for investing in the gas transmission networks, as announced in its decision on 14 February 2008. In particular it is thinking of removing the 125-point premium and extending the 300-point premium over 10 years for all investments in the main network that allow additional capacity to be created or the number of balancing zones to be reduced.

The structure of the French network is such that 'pipe-to-pipe competition' – competition between transmission infrastructures – is not possible.

b. DISTRIBUTION

Tariffs for the use of GrDF distribution networks

Since 1 July 2008, GrDF (96% of the French distribution network) has been applying new tariffs for the use of its distribution networks.

The new tariffs introduce a regulatory framework that encourages GrDF to improve efficiency, by both controlling costs and improving quality of service (cf. B. Quality of Service). The main changes have been the introduction of:

- a long-term tariff over 4 years, from 1 July 2008 to 30 June 2012, with a review of the tariff structure each year on 1 July according to predefined rules;
- an expenses and revenues clawback account (CRCP), which permits the correction of disparities between actual and projected costs and revenues for certain predefined items used for this tariff proposal;
- a cost control incentive;
- an incentive to improve quality of service.

This new regulatory framework gives all the market players better visibility and also reduces the risks for GrDF.

For the preparation of its proposal, CRE organised a public consultation from 9 October to 9 November 2007 and heard evidence from natural gas suppliers.

It conducted detailed analyses of the projected costs presented by GrDF to support its request for a tariff increase. It commissioned several audits and external studies:

- an audit of the unbundled accounts for Gaz de France's distribution business for the 2006 financial year;
- an audit of GrDF's information system costs;
- a study of the weighted average cost of capital (WACC) for gas infrastructure;
- a study of the regulations providing incentives for the quality of the service offered by DSOs.

On the basis of the information gathered, CRE chose a 1.3% productivity target to be applied to the tariff structure. This corresponds to a productivity target of 2.7% on the operator's controllable operating costs.

CRE also reviewed the various parameters involved in calculating the weighted average cost of capital (WACC).

For its latest tariff proposal, CRE adopted a real rate of return of 6.75% before tax. GrDF's Regulated Asset Base is estimated to be worth €13,174 billion in 2008.

The tariff structure was retained with four principal options. For a given delivery point, the choice of the tariff option is left to the shipper. The tariff applies by delivery point.

In accordance with the provisions of article 7 of the Law of 3 January 2003, as amended, the tariff for use of GrDF's natural gas distribution networks, other than those granted pursuant to Article 25-1 of the aforesaid Law, is amended within the zone served by GrDF.

Tariffs for the use of the LDCs' distribution networks

CRE is working on a new tariff for the LDCs and aiming for it to enter into force on 1 July 2009.

C. LEVEL OF TARIFFS FOR TRANSMISSION AND DISTRIBUTION

As at 31 December 2007, the average transportation costs on the national network for the standard customers defined by Eurostat were as follows:

Profile		Transportation costs in €/MWh
I4-1	Transportation transmission	0.99
	Transportation distribution	1.3
I1	Transportation transmission	1.98
	Transportation distribution	7.2
D3	Transportation transmission	2.38
	Transportation distribution	10.9

D3 customer = Household with an annual consumption of 23.26 MWh (hot water, cooking and heating, hypothesis of a P12 consumption profile)

I1 customer = Industrial company with consumption of 11.63 GWh with 115 days' flexibility, hypothesis of a P16 consumption profile

I4 customer = Industrial company with consumption of 116.3 GWh with 250 days' flexibility, hypothesis of a P14 consumption profile

B. QUALITY OF SERVICE

The development of relations between the transmission and distribution system operators and customers (shippers and end consumers) requires closer definition of certain aspects of the monitoring of their activity.

CRE worked in partnership with operators to set up indicators to provide regular monitoring of various aspects of their activities.

a. FOR THE TRANSMISSION SYSTEM OPERATORS

Various indicators are monitored to evaluate the quality of service provided by the TSOs, such as:

- Delivery incidents occurring on the networks, by indicating the date of the event, type of incident, delivery station concerned and cause of the incident;
- access refusal, by indicating the points on the network and the shippers concerned.

As part of the new tariff proposed by CRE, quality-of-service monitoring will be introduced for the two TSOs in the key areas of their activity, notably data quality, portal availability and the environment. This monitoring will consist of indicators sent to CRE by the TSOs on a regular basis, and published. Some indicators, which are particularly important for the proper functioning of the market, will be subject to a system of financial incentives.

The indicators for monitoring quality of service sent to CRE must be certified by an external body. Furthermore, the monitoring system for the quality of service provided by the TSOs may be subjected to any audit that the CRE may deem useful.

b. FOR THE DISTRIBUTION NETWORKS

Various indicators used to be monitored by CRE to evaluate quality of service on the distribution networks, such as repair work, interruptions to supply, applications to switch supplier, applications to cut off a supply because of failure to pay, reconnection requests and complaints/claims by end customers.

Since 1 July 2008, as part of the new tariff for third-party access to the GrDF distribution network, CRE has introduced a regulation system with incentives, designed to ensure a good quality of service is maintained and to prevent deterioration resulting from the productivity improvements demanded of the operator.

This system concerns the following areas: environment, quality of service calls, quality of customer and supplier relations, and quality of allocations and meter reading. Safety is not included, since it is subject to regulatory obligations for GrDF and oversight by other public authorities.

There are two types of indicator:

- indicators monitored by CRE, where the results are published and there is a financial incentive if predefined targets are not met or are exceeded.
 - quality of daily readings sent to the TSOs for daily allocations to the Transmission Distribution Interface Points (PITDs);
 - delay before transmission to the TSOs of daily estimates of the quantities loaded by the suppliers at the PITDs;
 - supplier portal availability rates;
 - number of planned appointments not kept by the DSO;
 - response rate to supplier complaints within 30 days.

These financial incentives result in fines and/or bonuses paid via the CRCP, apart from those relating to the keeping of appointments, which are paid directly to the suppliers.

- indicators monitored by CRE, with publication of the results:
 - one indicator relating to the environment (greenhouse gas emissions into the atmosphere);
 - 9 indicators relating to quotations and call-outs;
 - 3 indicators relating to relations with end consumers;
 - 2 indicators relating to relations with suppliers;
 - 9 indicators relating to meter reading and billing.

If it sees fit, CRE will propose to the Ministers for the Economy and Energy changes to the system for regulating quality of service, based on feedback.

Data approved by CRE on transportation continuity in terms of duration per customer will be available from September 2008.

C. TARIFF FOR USE OF LNG TERMINALS

Two LNG terminals, managed by Gaz de France's Direction des Grandes Infrastructures are currently in service in France, one at Fos-sur-Mer in the Port of Marseille (Fos Tonkin) and the other at Montoir-de-Bretagne, in the Port of Saint-Nazaire.

A third terminal is under construction at Fos-sur-Mer (Fos-Cavaou). This is managed by Société du Terminal Méthanier de Fos Cavaou (STMFC), owned jointly by Gaz de France (67.7% of shares) and Total (30.3%). Its commercial startup is currently planned for the first half of 2009.

In 2007, the Fos Tonkin LNG terminal received 147 vessels and put 60.4 TWh of gas into the gas transmission network. The Montoir-de-Bretagne terminal received 98 vessels and put 84.3 TWh of gas into the network.

The current tariffs for use of the Fos-Tonkin and Montoir LNG terminals, proposed by CRE on 26 October 2005, came into force on 1 January 2006. They were designed to apply until the Fos Cavaou LNG terminal started up.

The rate of return on assets consists of the basic rate applied to gas transmission infrastructure, currently 7.25%, plus an additional premium of 200 points to take account of the specific risks associated with LNG activity. For assets put into operation since 2003, a premium of 125 points is given.

This tariff allows a reduction of around 20% in the access charge for spot cargoes and contains special clauses on the operation of terminals when several shippers are present at the same time.

Three distinct regasification services are included in CRE's tariff proposal:

- A continuous service for shippers unloading more than one cargo per month. The operator provides a continuous output over the contractual period and one that is as regular as possible for the user, depending on the overall unloading programme of the terminal;
- A band service for shippers unloading a maximum of one cargo per month. Each cargo is released in the form of a constant band, for a 30-day period as from the end date of unloading;
- A spot service, for shippers subscribing from the 25th day of month m for a cargo unloading in month $m+1$, has been introduced. Each cargo is released in the form of a constant band, for a 30-day period as from the end date of unloading.

In July 2007, CRE consulted the market on the principles for setting tariffs for the use of the LNG terminals with a view to proposing new tariffs in October 2007. The delay in starting up Fos Cavaou has meant that CRE has postponed its tariff proposal. The Fos Cavaou terminal was originally set to start up on 1 April 2008, but following a significant construction delay and an accident during a hydraulic test, which damaged the pipes between the regasifier and the network outlet, the projected startup date is now during the first half of 2009. CRE should propose new tariffs for use of the LNG terminals in October 2008, for implementation during the first half of 2009.

In these new tariffs, the plan is to keep:

- The definition of tariffs on the basis of the operating and capital costs incurred by the operators;

- The tariff structure, which is identical for all three terminals.

However, the plan is for the level of the terms to be individual from now on for each LNG terminal. The planned duration of these tariffs would be three years.

D. TARIFF FOR ACCESS TO UNDERGROUND STORAGE FACILITIES

In accordance with the Law of 9 August 2004, the French government opted for negotiated access to underground storage facilities. The tariffs are published on the storage operators' websites.

The cost of access to storage is determined according to the type of end customer served by the supplier. As at 31 December 2007, the cost of storage for the three customer types at the regulated tariffs were as follows:

Eurostat customer definition	D3 Euro/MWh	I1 Euro/MWh	I4 Euro/MWh
Storage cost	2.8	2.0	0.04

D3 customer = Household with an annual consumption of 23.26 MWh (hot water, cooking and heating, hypothesis of a P12 consumption profile)

I1 customer = Industrial company with consumption of 11.63 GWh with 115 days' flexibility, hypothesis of a P16 consumption profile

I4 customer = Industrial company with consumption of 116.3 GWh with 250 days' flexibility, hypothesis of a P14 consumption profile

3.3 Balancing

The detailed methods for the way balancing operates are defined by each TSO, sent to CRE and published on the TSOs' websites. Each shipper is subject to a balancing obligation on a daily and monthly basis, for each of the balancing zones in which capacities have been reserved.

Each shipper must therefore balance its gas injections on the networks (imports, production, gas exchange point (PEG) purchases, withdrawals from storage facilities) with its withdrawals (consumption by its customer portfolio, exports, gas exchange point (PEG) sales, injections into storage facilities).

During 2007, two consultations were held with TIGF and GRTgaz to look into the possibilities of moving the balancing rules towards a system based on market transactions.

A. GRTGAZ BALANCING MECHANISM

Since 12 April 2007, GRTgaz has been using the market to cover some of its balancing needs (approximately 20%), i.e. 2.7 GWh/day for the North zone (day-ahead and within day) and 1.8 GWh/day for the South zone. An exchange platform (Balancing GRTgaz) operated by Powernext has been set up.

Each day, GRTgaz carries out network scheduling for the next day and updates the schedule for the current day. Chiefly through a comparison of the forecast consumption of GRTgaz and the nominations of the shippers, this schedule makes it possible to work out the network situation on day D, for each of the future balancing zones (the Great North zone and the South zone). For each balancing zone, if the network is expected to be 'long' (have excess gas), GRTgaz intervenes by selling on the balancing market. Conversely, if the network is expected to be 'short' (have a gas deficit), GRTgaz intervenes by buying on the balancing market.

The amount of gas GRTgaz can buy or sell is restricted to a maximum number of lots per balancing zone, the size of a lot being 150 MWh (at 25°C). The maximum number of lots for the North is 18 and for the South is 12.

a. DAILY IMBALANCE

Each day, for each shipper and balancing zone, a daily imbalance is calculated, which is the difference between the total amount brought in by the shipper in the balancing zone in question and the total amount taken out by the shipper in that balancing zone. GRTgaz communicates the daily imbalance to the shipper each day.

The maximum permitted daily imbalance consists of:

- a standard tolerance, included in the transportation service, of:
 - $\pm 20\%$ of total daily delivery capacities subscribed by the shipper in the balancing zone in question, up to 1 GWh/day
 - $\pm 5\%$ for the share of this total exceeding 1 GWh per day.
- an optional tolerance subscribed by the shipper, which is added to the standard tolerance and can be as much as $\pm 3\%$ of the total daily delivery capacities

subscribed by the shipper in the balancing zone in question. The price of this optional balancing tolerance is €15/MWh/day per annum.

For a given day, GRTgaz uses a retrospective imbalance management method for each shipper. Its purpose is to distribute the daily imbalances (purchases/sales) and cumulative imbalances according to the daily quantities moved by the shipper in the different balancing zones, while minimising the quantities moved on the interzone links.

b. MID-RANGE OF CUMULATIVE IMBALANCES

The gradual introduction of the daily balancing price into the management of imbalances by the shippers is made by setting up a mid-range of cumulative imbalances, within daily tolerances (standard + optional). This mid-range is expressed as a percentage of the daily tolerance.

For the period from 1 September 2007 to 31 December 2008, the mid-range was fixed at 70% of the basic tolerance.

c. CUMULATIVE IMBALANCE

For each balancing zone, the maximum permitted cumulative balance is fixed at five times the mid-range of cumulative imbalances.

d. MANAGING IMBALANCES AND DAILY REFERENCE PRICES

The shipper's daily imbalance, less than or equal to the mid-range of cumulative imbalances, is written into a cumulative imbalance account. At the end of each month, the cumulative imbalance is carried forward to the next month.

The share of the daily imbalance that lies between the mid-range of cumulative imbalances and the maximum permitted daily imbalance is bought or sold by GRTgaz, as necessary, at the daily balancing price, known as P1.

Reference price P1: For a given day D, in the South balancing zone or great North balancing zone (the aggregation of the East, West and H North balancing zones), the daily reference price P1 is the average price for transactions made by GRTgaz, for delivery on day D in each zone, as part of its gas selling/purchasing activity via the Powernext platform to cover some of the daily physical balancing needs on the network.

In the L North balancing zone, for a given day D, the daily reference price P1 is the same as the daily reference price P1 in the H North balancing zone plus €0.16/MWh.

When the shipper has a daily imbalance that exceeds the maximum permitted daily imbalance, the shipper must buy from or sell to GRTgaz, as necessary, the quantities that exceed the tolerances at a penalty price known as P2.

Reference price P2:

If GRTgaz is purchasing, price P2 is the daily reference price P1 minus 30%, or the 'Zeebrugge' daily reference price minus 50%, if this is higher.

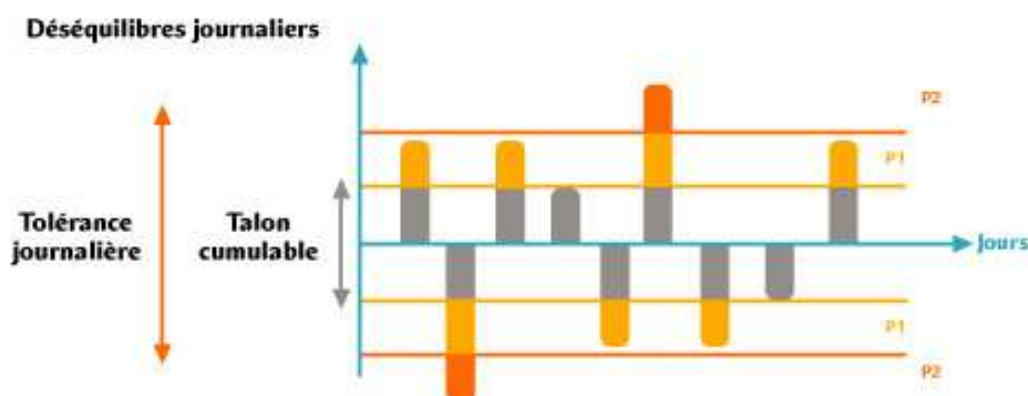
If GRTgaz is selling, price P2 is the daily reference price P1 plus 30 %, or the 'Zeebrugge' daily reference price plus 50%, if this is lower.

For a given day D, the 'Zeebrugge' daily reference price for a balancing zone is the sum of:

- the average of the day-ahead 'bid' and 'ask' prices for the Zeebrugge hub, published in €/MWh;
- and an extra amount specific to each balancing zone, as shown in the table below:

Balancing zone	North (H gas)	North (L gas)	East	West	South
Additional amount (€/MWh)	0.7	0.86	0.7	0.7	1.3

Illustration of the application of prices P1 and P2



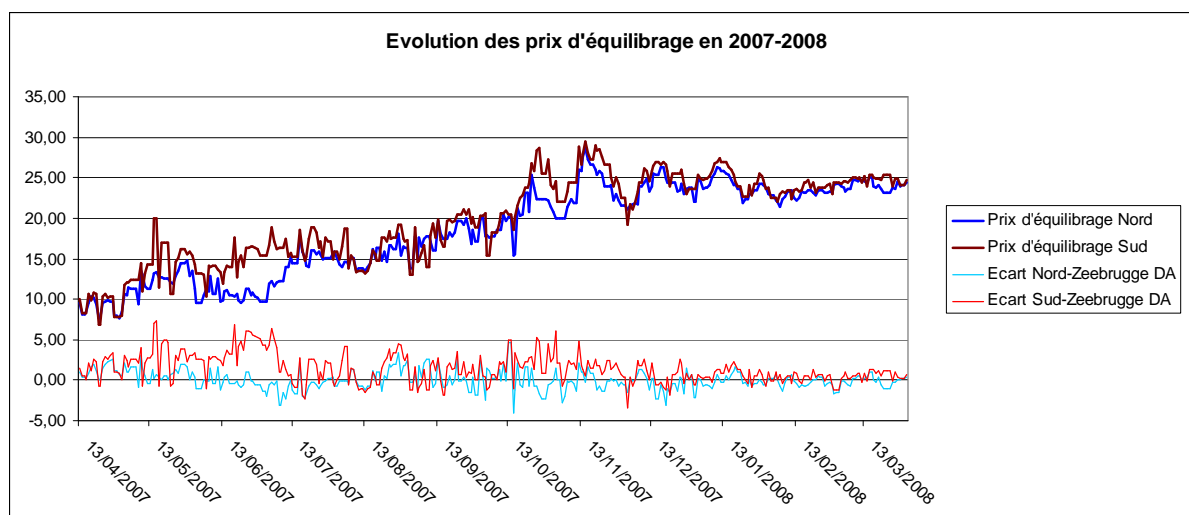
The quantities in excess of the maximum permitted cumulative imbalance are penalised at a price known as P3. No sales or purchases are made in respect of these excess quantities.

Reference price P3: Price P3 is 30% of the daily reference price P1 or 50% of the 'Zeebrugge' daily reference price if this is lower.

e. BALANCING PRICE

In 2007, the average balancing prices were:

- North zone: €16.66/MWh
- South zone: €18.25/MWh



Source: CRE

In June 2008, 12 companies were registered on the Balancing GRTgaz exchange platform. The balancing market has significantly deepened. The balancing price remains close to the Zeebrugge day-ahead price index. Consequently, the new system has the advantage that it gives shippers information on the cost of their imbalances based on economic data rather than a standardised reference.

B. IMPROVING THE GRTGAZ BALANCING MECHANISM

The GRTgaz balancing mechanism does not yet contribute to the liquidity of the French wholesale market because the corresponding transactions are carried out on a specific platform. The emergence of a gas exchange, with which the Balancing GRTgaz platform could converge, would add liquidity to the wholesale market.

At present, shippers do not make nominations to the connections between the four balancing zones in the GRTgaz network. The quantities allocated to the shippers on these connections are determined retrospectively by GRTgaz, in order to optimise the shippers' imbalances between balancing zones within the limits of the capacities they have subscribed. In the next tariff regime, the plan is to introduce rules for nominations to the North-South connection. This change will be accompanied by measures to make balancing easier for shippers in the GRTgaz South zone.

The GRTgaz balancing mechanism continues to evolve.

C. BALANCING ZONE MERGER FROM JANUARY 2009

Since 1 January 2005, the natural gas transmission networks in France have had five balancing zones: four on the GRTgaz network (North, East, West and South zones) and one on the TIGF network. On 1 January 2009, the North, East and West GRTgaz zones will merge to form a single zone (Great North zone).

The merger of the East, North and West balancing zones will bring improvements to the way the market functions. It will facilitate balancing for shippers, by making it possible to group balancing portfolios and by improving the quality of daily allocations of gas quantities. The risks of exceeding tolerances and the associated penalties will be reduced accordingly.

D. TIGF BALANCING MECHANISM

Regarding the TIGF balancing mechanism, during 2007 shippers asked TIGF to maintain the operation of its balancing system, which allows them to correct their imbalances on the transmission network with their own gas, through the retrospective correction of their injection and withdrawal nominations. TIGF has agreed to improve the management of allocation imbalances – once the complete overhaul of its gas accounting system is finished – by transferring them to an imbalance account whose management conditions will be defined in collaboration with the shippers.

3.4 Market model

A. ENTRY/EXIT MODEL

The French transmission network is divided into entry/exit zones (also known as balancing zones) which guarantee the functioning of the market, i.e. access for gas suppliers to their customers, and exchanges of gas between the suppliers. It is within each of these zones that shippers have to balance their gas inputs and withdrawals.

The entry/exit model without restrictions offers the following functionalities:

- any customer in the zone can be supplied with gas from any entry point in the zone and, reciprocally, any supplier at an entry point can supply any consumer in the zone;
- gas volumes, once present in the zone, can be exchanged without indicating the source or destination, and the subscribed capacities can also be exchanged between shippers without constraints;
- capacities applied for can be subscribed, as long as the capacity is available, regardless of the planned purpose.

In each balancing zone, the shippers can use other services in addition to the entry and exit functionalities, to optimise transportation:

- an access service to a gas exchange point (PEG) where gas purchase/sale transactions can be recorded; this will soon be complemented by the setting up of a gas trading exchange associated with each of these zones;
- conversion services to convert H quality gas to L and L to H;
- management of shippers imbalances (difference between inputs and outputs), based on market mechanisms;
- access to storage services run by the storage operator.

There is no difference in treatment between a transportation contract to a domestic customer and a contract concerning a transit flow.

B. CAPACITY ALLOCATION RULES AND THE REGULATOR'S ROLE

On the GRTgaz network, applications for capacity are initially allocated in accordance with the Open Subscription Period (OSP) principle. If there is still capacity available, applications are allocated using the first come, first served principle. This principle is used only by TIGF to allocate capacity on its network. The capacity allocation procedures and congestion management mechanisms are explained in more detail in section IV.2.

Major investment decisions are taken as part of open season procedures, which enable new infrastructure facilities to be dimensioned in accordance with market needs and allow the

allocation of new transmission capacities. CRE is responsible for ensuring the open seasons are conducted transparently and in a non-discriminatory manner.

Within the framework of the open seasons, a firm period of commitment by the shippers is required by the TSOs to cover the development risk of this new capacity. The minimum period is 10 years. Similarly, a minimum percentage of the capacity (communicated at the time of the open season) validates the investment decision.

In the case of LNG terminals, entry capacities are automatically allocated at the same level as regasification capacity and over the same period.

Investment plans identify the need for new transmission capacities and present the projects planned by the transmission system operators for the next ten years. However these plans are only indicative.

In accordance with article 21 of the Law of 3 January 2003, as amended by the Law of 7 December 2006, the annual investment programmes of GRTgaz and TIGF are submitted for approval by CRE.

Article 6 of the Law of 3 January 2003 governing gas and electricity markets and public energy service stipulates that: "If an operator refuses access to a natural gas transmission or distribution facility or a liquefied natural gas installation, including to their installations providing auxiliary services, because of a lack of capacity or difficulty with connection of the applicant's installation to the network, the Commission de régulation de l'énergie can ask the operator or, if necessary, serve the operator with notice that it must make the necessary improvements if they are economically justified or if a potential customer indicates that it agrees to pay for them."

3.5 Principles of account unbundling

In application of article 8 of the amended Law of 3 January 2003, the rules for allocating headings in profit and loss accounts and balance sheets, accounting scopes of activities and principles determining their financial relations must be approved by CRE after opinion from the Competition Council. The principles proposed by operators were approved by CRE in its deliberations of 23 October 2003. The first unbundled accounts were drawn up as from 2002.

The Law of 7 December 2006 extended to the natural gas sector the additional regulatory powers given to CRE for the electricity sector with the entry into force of the Law of 10 February 2000. These powers enable it to stipulate the allocation rules used, the scope of each unbundled account activity and the principles determining the financial relations between these activities.

A. GENERAL PRINCIPLES OF ACCOUNT UNBUNDLING

All companies in the natural gas sector carrying out one or more of the activities concerned must now keep unbundled accounts within their internal accounting system for natural gas distribution (for the LDCs concerned), transmission (for TIGF), and storage, and for the operation of liquefied natural gas facilities. If necessary, companies must keep an unbundled account for electricity trading activity and an account for all their activities outside the natural gas sector.

In addition, unbundled accounts must also be kept for supply activities to customers who have exercised their eligibility and those who have not. CRE has additional regulatory powers that allow it to stipulate for the operators the rules applicable to account unbundling.

Account unbundling is a way of making sure costs are correctly allocated between regulated and competing activities and, more generally, of managing financial relations between these activities. It is also one of the tools for guaranteeing that the networks operate independently within vertically integrated groups. It is part of a gradual process that has been reinforced by the requirement for legal unbundling of networks provided for in the Directives of 26 June 2003 and implemented in France with the Law of 9 August 2004 for the legal unbundling of transmission systems, and with the Law of 7 December 2006, for the legal unbundling of distribution systems.

GRTgaz and TIGF were divided up into subsidiary companies in 2005.

In application of article 13 and subsequent articles of the Law of 9 August 2004 on the public electricity and gas service and electricity and gas utilities, as amended by the Law of 7 December 2006, the legal unbundling of distribution system operators serving more than 100,000 customers within mainland France should take place by 1 July 2007 at the latest. This legal unbundling requirement affects GDF, Gaz de Strasbourg and Régaz in the gas sector. GDF's distribution subsidiary (GrDF) was created on 1 January 2008.

The gas transmission and distribution networks (GRTgaz and GrDF) produce unbundled accounts, but they maintain financial relationships with their parent companies and can also share costs with other entities in the vertically integrated groups.

The policy used for allocation of headings in balance sheets and expense accounts is the direct allocation principle. If an asset component is useful for several activities, it is allocated to the activity which is its main user. Expenses and revenues are directly allocated to the expenses and revenues account. If direct allocation is not possible, expenses and revenues must be broken down according to applied costs.

Financial relations between unbundled activities are covered by protocols, the establishment of some of which is provided for by law (for example, access to infrastructures). The protocol terms applicable to unbundled entities must be the same as those applicable to third parties, in compliance with the rules governing non-discrimination and prohibition of cross-subsidies between unbundled activities. Therefore, if terms applicable to third parties result from a public tariff (access to regulated infrastructures) or regulations, these public rules constitute the reference standard for rules applicable across unbundled activities.

Since the division into subsidiaries, they are now stipulated by contracts or are part of the general protocol between parent company and subsidiary, regarding upward flow of dividends for example. Nonetheless, it remains a sizeable challenge to ensure the independence of the networks and to avoid cross-subsidies. Consequently, CRE will continue to monitor compliance with these principles, particularly through regular audits of the system operators' books, in application of the provisions of article 27 of the Law of 10 February 2000. These audits are carried out either by CRE employees accredited for this purpose, or by external audit firms selected after call for tender.

Gas operators are not obliged to publish their unbundled accounts. These accounts are sent to CRE each year.

In the event of failure to comply with these rules, CoRDIS may issue a warning as provided for in article 40(3) of the Law of 10 February 2000 and apply the penalties provided for in paragraph 1 of the same article to the operator.

B. SUPPLY UNBUNDLING

In application of the provisions of the Law of 9 August 2004, companies operating in the electricity and natural gas sectors had to keep unbundled accounts of their supply activity to eligible and ineligible customers. This scope was still heterogeneous as it did not distinguish eligible customers according to whether they had exercised their eligibility or not.

In the gas sector, in the same way as in the electricity sector (cf. 'Regulation of the electricity market' below), the Law of 7 December 2006 now imposes on operators the obligation of supply unbundling between customers who have exercised their eligibility and customers who have not, to take effect as from 1 July 2007.

The operators affected by this new scope are GDF and the electricity and natural gas LDCs. Unbundled accounting principles for supply activities used within this scope will be sent to CRE.

In its deliberations on 20 July 2006, CRE approved the principles proposed by GDF for keeping unbundled accounts for supply to eligible customers and for supply to ineligible customers, with certain reservations. CRE asked for the scope of "other activities" to be split into eligible customers, ineligible customers and operations not related to supplying end customers. It also asked for the delivered gas cost to be allocated based on the accounting cost price, amending remarks it made in a document released on 28 February 2006 on the

audit of Gaz de France's procurement costs. These deliberations were not amended in 2007.

3.6 Independence of public network operators

- Independence of the transmission system operators

In application of the Law of 9 August 2004, natural gas transmission system operators (TSOs) have been separate legal subsidiaries of vertically integrated undertakings since 2005, and are demonstrating genuine independence in terms of organisation and decision-making.

During audits carried out in 2007, CRE found that there were still a number of problems with the transmission system operators, and is encouraging:

- the improvement of communication about their missions and independence from the integrated groups;
- greater independence as regards purchasing policy and personnel management. TIGF and GRTgaz still use GDF and Total's cash flow management, human resources and accounting services. This use should be restricted to cases where it is impossible for the subsidiary to provide these services itself under financially acceptable conditions.

- Independence of the distribution system operators

The legal unbundling of distribution system operators serving more than 100,000 customers within mainland France should have taken place on 1 July 2007 in accordance with the June 2003 Directive. However, the delayed transposition of this provision into French law, in December 2006, meant that companies were unable to begin the legal formalities in time to complete the division into subsidiaries by the deadline laid down in law.

The situation therefore appears very mixed:

- the distribution subsidiary of Gaz de France was only created on 1 January 2008. The legal unbundling of Gaz de Bordeaux and Gaz de Strasbourg, by splitting off the supply activity into a subsidiary, had still not come into effect as at 30 May 2008. For Gaz de France and some LDCs, legal unbundling has led to the creation of a subsidiary in charge of all network activities.
- in contrast, the strategy adopted by Gaz de Strasbourg is to create a subsidiary in charge of supply while keeping the transmission system operator within the parent company. Although this is consistent with the Law of 9 August 2004, it does not comply with the Directive of 26 June 2003 since the distribution system operator is then an integral part of the parent company, which controls the subsidiary responsible for supply. At the request of CRE, this LDC has agreed to present new plans for its operation to guarantee real independence for the network operator.

Although the independence of the distribution system operators can be judged by looking at the corporate structures adopted, decision-making mechanisms and links with the parent companies, it is also dependent upon communication strategies. Brand image confusion (name, commercial logo, corporate identity, corporate logo, etc.) between regulated and competitive activities is harmful. During its audits, CRE noticed that Gaz de France had opted for a similar visual identity for its competitive supply activities and

regulated distribution system operator activities. Confusion may lead customers to believe that they run risks in terms of quality and continuity of supply if they switch supplier.

- Adherence to codes of good conduct

In accordance with the Law of 9 August 2004 transposing the European directive of 26 June 2003, CRE published its 3rd Annual Report on the observance of good conduct and system operator independence in December 2007. All transmission and distribution system operators have drawn up a code of good conduct and submitted it to CRE. These codes deal with non-discrimination and transparency, as well as the protection of commercially sensitive information.

In its latest report, CRE was able to check that these codes had not only been distributed (given to employees, published on the network operators' websites), but that their provisions were actually being complied with: none of the checks revealed any deliberate discriminatory practices with regard to suppliers or the disclosure of commercially sensitive information. Furthermore, all the documentation necessary for fair access to the network is available to users.

Some problems were noted all the same, particularly during 'mystery customer' investigations by CRE:

- information given to the customer by a network operator sometimes encourages the customer to go to the incumbent suppliers and dissuades the customer from opting for alternative suppliers;
- the contact details of the network operators' customer service centres were sometimes difficult to find.

A new investigation of this kind will be undertaken in 2008 to assess progress made.

The audit of good conduct carried out in 2007 led CRE to make recommendations, particularly concerning:

- the creation of relevant indicators for compliance with non-discrimination, to report on progress made. Accordingly, CRE will set up a working group responsible for defining the criteria that should make up these indicators;
- better staff training and information, particularly for employees in contact with network users.

TABLE NO. 8: SUMMARY OF INFORMATION REQUESTED BY DG TREN

	Electricity	Gas
Number of TSOs	1	2
DSOs	169	23
Application of the 100,000 customer rule	yes	yes
Unbundling of TSO/DSO ownership	none	none
Number of DSOs with fewer than 100,000 customers	164	20
Legal unbundling of TSOs	yes	yes
Number of system operator employees:		
TSOs	RTE: 8 300	GRTgaz: 2 650 TIGF: 300
DSOs	ERDF: not sent	GrDF: 46 000 22 other DSOs: fewer than 800 in total
Application of legal unbundling		
TSOs	yes	- GRTgaz/TIGF: yes
DSOs	yes	- GrDF/GDF: yes
	- Electricité de Strasbourg on 01/01/09	- Gaz de Bordeaux/Régaz: no - Gaz de Strasbourg/GRD: no
Ownership of:		
TSOs	RTE: 100% EDF	GRTgaz: 100% GDF TIGF: 100% Total
DSOs	ERDF: 100% EDF	GrDF: 100% by GDF Others: various
Unbundling as regards generation/production and supply entities of the group		
TSOs	complete	complete
DSOs	complete (except Electricité de Strasbourg)	complete
Presentation as a separate entity		
TSOs	yes	GRTgaz and TIGF: yes
DSOs	ERDF: in progress	GrDF: yes
Publication of unbundled accounts		
TSOs	yes	yes
DSOs	yes (except Electricité de Strasbourg)	yes
Detailed rules adopted by the regulator concerning account unbundling	yes	yes
Consequences of rule violation	Possibility of fines	Possibility of fines
Specific audit of unbundled accounts	no	yes
Role of compliance officer	none	none
Possible sanctions on the regulator's part	yes	yes
Market share of the main TSO (as % of total network in kilometres)		GRTgaz: 86.6%
Different location and/or access restrictions for subsidiaries dedicated to production or supply		
TSOs	RTE: yes	GRTgaz/GDF: yes TIGF/Total: yes
DSOs	yes	GrDF/GDF: in progress

V. French gas market operation

1 The wholesale market

1.1 State of play

For the bulk of its supplies, the French gas market relies on long-term contracts signed between incumbent suppliers and national companies from the producing countries. The share of alternative suppliers¹⁶ in imports is nonetheless on the rise.

The table below shows the imports, exports and generation per transmission system operator zone measured over 12 months from 1 January to 31 December 2007. For data on storage, cf. section VI, subsection 2.1, on p. 102.

TABLE NO. 9: GAS IMPORTS, EXPORTS AND PRODUCTION PER ZONE

(Quantities in bcm)	All suppliers		Alternative suppliers ⁽¹⁾	
Gas flow, per TSO zone (including transits and exports)				
<u>Gaz de France réseau Transport zone</u>				
Imports	54.98		4.06	7.38%
including overland imports (Belgian, German and Swiss borders)		41.70	3.90	9.3% ⁵
including Liquefied Natural Gas (Fos, Montoir)		13.28	0.16	1.22%
Exports (Belgian, German and Swiss borders)	8.00		0.57	7.17%
Production	0.02		-	-
<u>TIGF zone</u>				
Supplies from Gaz de France réseau Transport zones	4.71			
Imports (Spanish border)	0.11		0.04	37.52%
Exports (Spanish border)	2.43		0.01	0.51%
Production	0.99		-	-

Source: CRE, based on data provided by Gaz de France réseau Transport/Total Infrastructures Gaz France

The two incumbent suppliers, Gaz de France and Total, manage around 89.9% of imports alone. The three largest market suppliers account for 92.6% of imports. Fourteen foreign companies operate on the wholesale market.

The Gas Exchange Points were set up at the beginning of 2004 by GRTgaz and TIGF. These are virtual points, connected to each balancing zone, where a shipper can deliver gas to

¹⁶ Alternative suppliers are suppliers other than incumbent suppliers (Gaz de France, Tegaz and LDCs).

another shipper. Transactions are carried out at Gas Exchange Points on a day-to-day basis and may result from longer-term commitments.

The gas sold under the temporary gas release programme is delivered to the South gas exchange point by Gaz de France and to the southwest gas exchange point by Total.

1.2 The OTC market

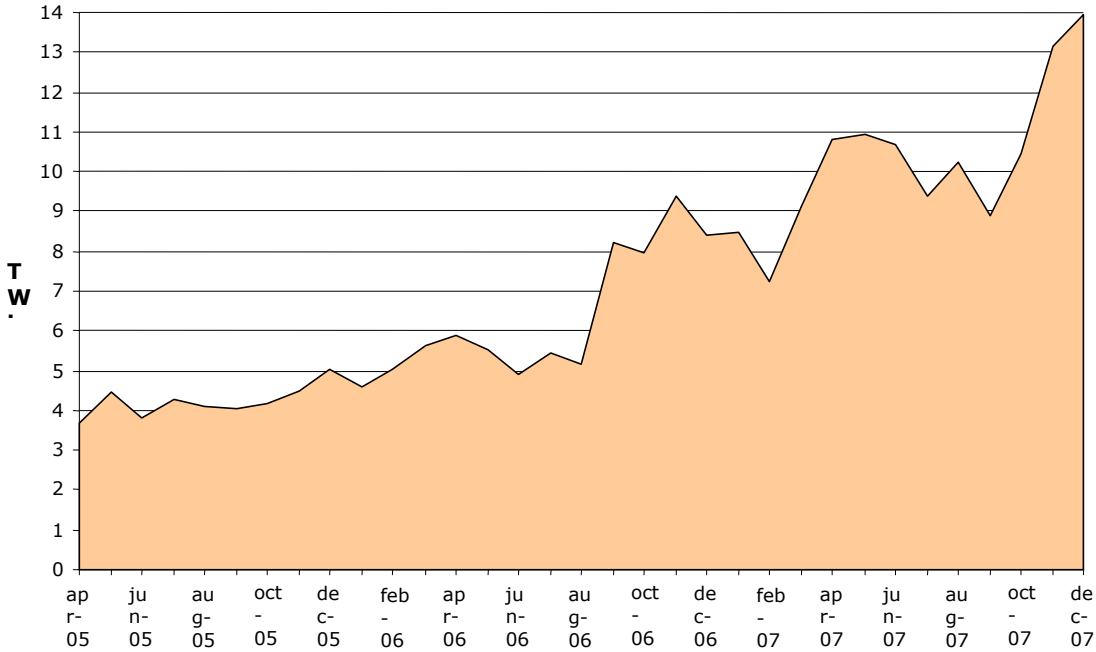
In the absence of an organised gas market in France, the wholesale trade in gas operates exclusively using the over the counter (OTC) method, by means of direct transactions or through intermediaries (brokers or trading platforms). The volume of OTC transactions is not made public.

Deliveries resulting from bilateral transactions are made at the Gas Exchange Points, virtual points allowing gas to be exchanged in each tariff zone. The deliveries to the Gas Exchange Points result from:

- OTC transactions concluded between suppliers;
- deliveries under temporary gas release programmes;
- gas procurements by network operators for their own requirements.

The graph below shows the daily nominations by the parties with the TSOs. It does not show the volume of transactions observed over the period, but the net physical deliveries between players.

FIGURE NO. 6: NET GAS DELIVERY VOLUMES ON THE FRENCH WHOLESALE MARKET



Sources: CRE, based on data supplied by the TSOs

In 2007 the net volume of gas deliveries resulting from transactions on the OTC market increased by 62.3% compared with 2006. During 2007, 123.4 TWh of gas were supplied to the Gas Exchange Points.

2 The retail market

2.1 Customers

Opening of the French gas market underwent several stages:

- since August 2000, eligibility of all sites with annual gas consumption greater than 237 GWh, and all electricity generators or simultaneous generators of electricity and heat, whatever their level of annual consumption;
- since August 2003, eligibility of all sites with annual consumption higher than 83 GWh;
- since July 2004, all non-residential end customers have been able to choose their gas supplier;
- since July 2007, eligibility of all customers, including residential customers.

As at 31 December 2007, the entire market represented 11.5 million sites and annual gas consumption of approximately 523 TWh¹⁷.

Customers have a choice between two types of contract:

- contracts at regulated tariffs (offered only by incumbent suppliers);
- contracts at market prices (offered by incumbent suppliers and alternative suppliers). Access to this type of contract means that eligibility has been exercised.

There are two types of contract:

- regulated retail tariffs, offered only by incumbent suppliers (Gaz de France, Tegaz and the 22 LDCs) in their respective areas. The area of an incumbent supplier is defined by a concession contract or the regulations applying to a State-run supply service. Subscription to these tariffs is subject to conditions;
- market based supply offers, offered by incumbent and alternative suppliers, which set the prices themselves. Market based supply offers vary according to customer segment. For sites connected to transmission networks, prices are generally based on European wholesale market prices. For other customers, prices are either decided in relation to the regulated tariffs, or worked out by totalling the suppliers' costs.

Some market based supply offers offered by alternative suppliers to small customers have innovative pricing structures (contracts without a fixed part, system of fixed prices, etc.) or guarantee fixed prices throughout the contract duration (1 to 3 years).

¹⁷ In the rest of the document, the scope of study is limited to consumption by customers connected to the main network operators, which represent 533 TWh.

Inset No. 11: Segmentation of eligible customers as at 31 December 2007

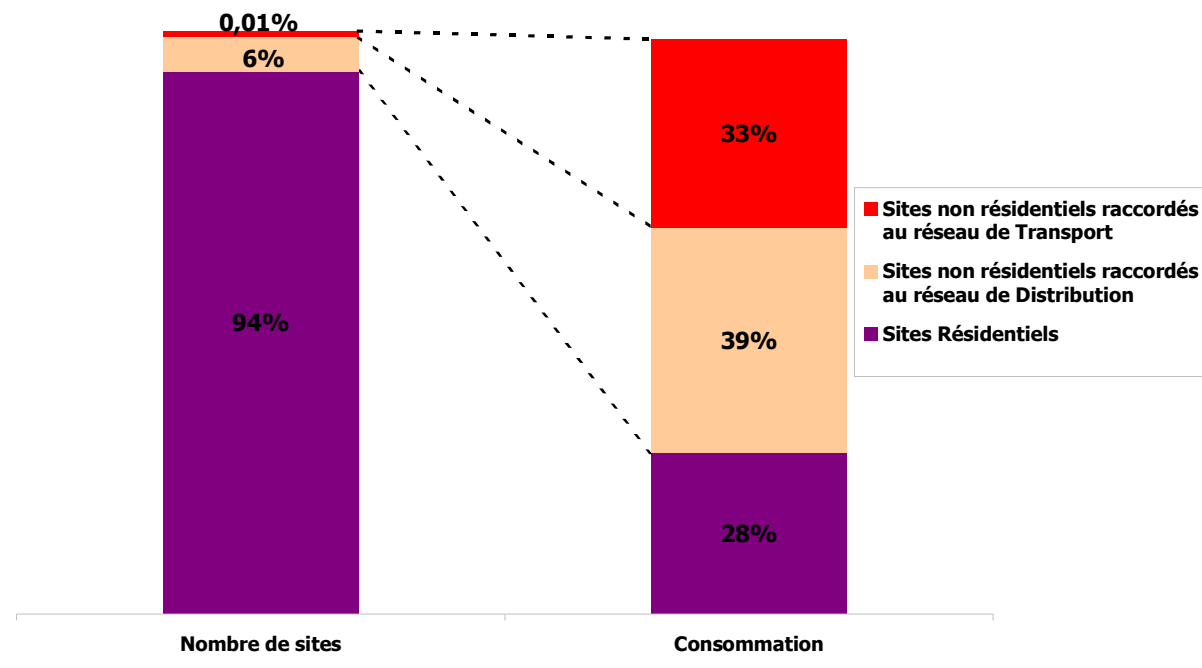
To ensure monitoring of the retail market, CRE has defined a segmentation of eligible gas customers:

Non-residential transmission sites: large-sized industrial sites connected to the transmission network.

Non-residential distribution sites: mass market of non-residential sites and large-sized industrial sites connected to the distribution network.

Residential sites: private customer consumption sites. As electricity generators account for insignificant volumes (33.2 TWh in 2007¹⁸), they are not distinguished from other customers.

Site types



2.2 Market share

As at 31 December 2007, alternative suppliers' market share, compared to the number of eligible sites, was 1.1% (or around 11.7% of consumption volume). This figure hides a disparate reality in the various segments. Penetration of alternative suppliers is greater in the non-residential transmission sites segment than in the residential sites segment, which has been open since 1 July 2007.

¹⁸ Data without climate correction, Source: DGEMP

TABLE NO. 10: ALTERNATIVE SUPPLIERS' MARKET SHARE (IN NUMBER OF SITES, AS AT 31 DECEMBER 2007)

All sites	Non-residential transmission sites	Non-residential distribution sites	Residential sites
1.1 %	18.7 %	10.6 %	0.5%

A. ANALYSIS IN TERMS OF NUMBER OF SITES

The market share of the three most significant suppliers in each segment is:

- 98% (all segments);
- 88% (segment of non-residential transmission sites);
- 96% (segment of non-residential distribution sites);
- 99% (segment of residential sites)

The number of suppliers with a market share greater than 5% is:

- 1 (all segments);
- 4 (segment of non-residential transmission sites);
- 2 (segment of non-residential distribution sites);
- 1 (segment of residential sites)

Foreign suppliers in France include all suppliers governed by foreign law who operate on the French market as well as suppliers governed by French law whose main shareholder is a supplier governed by foreign law.

As at 31 December 2007, eight foreign suppliers were supplying 12% of the sites connected to the transmission network compared with less than 0.02% of professionals connected to the distribution network. No residential sites were supplied by foreign suppliers as at 31 December 2007.

B. ANALYSIS IN TERMS OF CONSUMPTION VOLUME

The market share in terms of volume of the three most significant suppliers in each segment is:

- 89 % (all segments);
- 84 % (segment of non-residential transmission sites);
- 92 % (segment of non-residential distribution sites);
- 99 % (segment of residential sites)

Foreign suppliers supply 21% of the consumption of sites connected to the transmission network and 2% of the consumption of sites connected to the distribution network.

2.3 Suppliers

As at 31 December 2007, 12 alternative suppliers have at least one customer in their portfolio. Three alternative suppliers offer contracts to residential customers. In areas served by local distribution companies, alternative suppliers are virtually non-existent. In the French market in its current state, alternative suppliers are focusing on the area covered by GrDF.

Types of supply contracts can be broken down as follows: 87% long-term contracts, 6% short-term contracts and 7% swap contracts (gas coming from Nigeria for Italy) or unknown types of contract. The origins of the long-term contracts are as follows: Norway (31.9%),

Netherlands (18.8%), Algeria (18.1%), Russia (13.8%), Egypt (2.7%), Nigeria (1.1%) and Qatar (0.7%)¹⁹.

A. INCUMBENT SUPPLIERS

In France there are 24 incumbent suppliers, which originally ensured supply and distribution:

- Total for gas transmission (great southwest);
- 22 local distribution companies (LDCs) (in their own distribution zones);
- Gaz De France (in the rest of France).

B. SUPPLIERS ALSO WORKING AS NETWORK OPERATORS

In France, two suppliers (Gaz de France and Total) work as transmission system operators (TSOs).

Along with the 22 LDCs, Gaz de France is also a distribution system operator (DSO).

C. SUPPLIERS WORKING IN THE FIELD OF EXPLORATION AND PRODUCTION

As at 1 April 2007, five alternative suppliers in addition to Gaz de France and Total were working in the exploration-production field. These activities are mostly located abroad.

2.4 Switching supplier

Standard procedures have been drawn up to organise the methods for switching supplier, but not defined by law. They have resulted from discussion between various players in the sector (end customers, suppliers, distributors, TSOs and administrative authorities). The rules that came out of this discussion are accepted both by users and by network operators, and constitute the commonly adopted practices of the profession and therefore have some normative value.

CRE's objective was for the process of switching supplier to be easy, quick and free of charge.

A. THE VARIOUS STAGES IN THE PROCEDURE

Within the framework of a single contract covering the conditions both for natural gas supply and for its transportation by the public distribution system operator, suppliers can be switched in the following way:

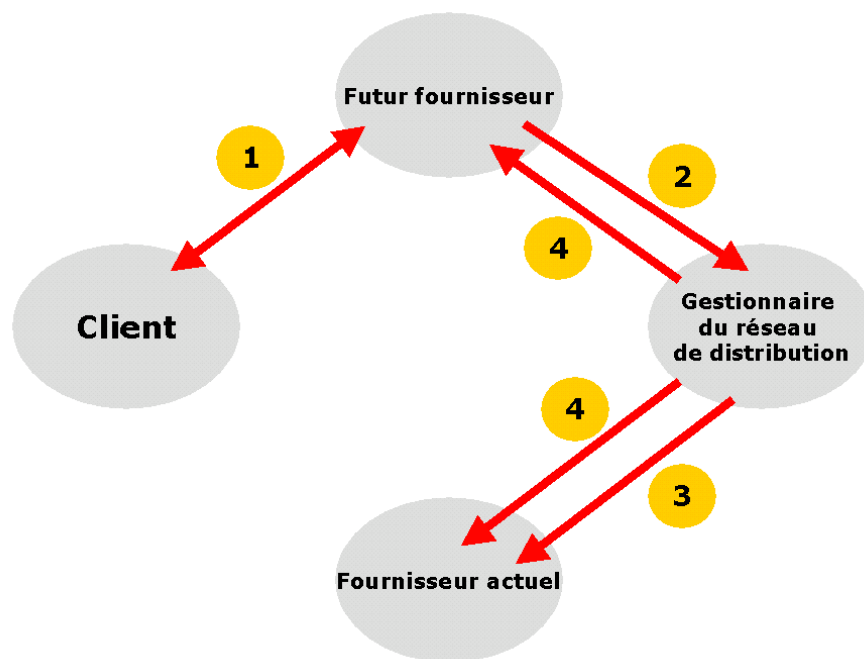
- Customers conclude a contract with their future supplier and sign a 'certificate for switching supplier' (included in their contract);
- The future supplier must provide the customer with information in compliance with the conditions of section 12 of the French consumer code;
- The future supplier informs the distribution system operator of the customer's desire to switch supplier. For residential customers, the consumer code provides for a retraction period of 7 days in the case of canvassing or distance selling. Information on switching supplier is only given to the network operator once this period has elapsed; the future supplier may send an automated meter reading (if the customer has provided one) to the network operator;
- Distribution system operators acknowledge receipt of the application:

¹⁹ Source: DGEMP

- they check the admissibility of the application (consistency of the technical information, of the automated reading index if it has been supplied);
- they inform the customer's current supplier;
- distribution system operators estimate the customer's index for switching (the automated reading index, if provided, is used as a cross-check for the estimate):
 - they send the indexes to the current supplier on the date suppliers are switched along with the invoice for the corresponding amount;
 - they send the same indexes and the initial invoice corresponding to the fixed part of the network tariff to the future supplier.

In the case of customers with monthly or daily readings, distribution system operators (DSOs) impose a special meter reading invoiced to the future supplier.

FIGURE NO. 7: PROCEDURE FOR SWITCHING SUPPLIER



B. REASONS FOR REFUSAL

The distribution system operator may object to an application to switch supplier if:

- a previous application to switch supplier is already under way;
- fraud has been observed on the metering equipment.

C. METHODS FOR TERMINATION AND TIMEFRAMES

The Law of 7 December 2006 inserting article L.121-89 in the consumer code indicates for residential customers that *"in the case of switching suppliers, the contract is legally terminated on the date that the new energy supply contract takes effect"*.

The supplier must be switched within 21 days providing that this does not entail any change to meter reading frequency or metering equipment.

D. COSTS RELATED TO SWITCHING SUPPLIER

Article 3 of Law 2003-8 of 3 January 2003 governing electricity and gas markets and public energy service, transposing Directive 98/30/EC of the European Parliament and Council of 22 June 1998 concerning common rules for the internal market in natural gas, stipulates that *"if an eligible customer exercises eligibility for a site the supply contract [...] for this site, concluded at regulated prices, is legally terminated without giving rise to any compensation whatsoever"*.

In the case of residential customers, the Law of 7 December 2006 inserting article L.121-89 in the consumer code stipulates that *"the supplier may only bill the customer for the costs effectively borne for termination, either directly or by intermediary of the network operator, providing that these expenses were explicitly stated in the contract and are duly justified. No other costs may be claimed from the customer for the sole reason of switching supplier."*

E. ANALYSIS OF RATES OF SWITCHING SUPPLIER

Since the market was opened up for residential customers, 0.5% of residential sites have switched supplier or have chosen an alternative supplier when moving into a new house (flows observed between 1 July 2007 and 31 July 2007).

Switching rates for non-residential sites are not available because information for the whole of 2007 was incomplete.

In the residential sites segment, several factors have been identified that discourage customers from switching supplier. These are linked to negative communication from consumer associations about the opening up of the energy market and to the lack of information for customers.

However, in this segment, there are no long-term contracts binding customers to their supplier. Information about contract duration for the other customer segments is not available.

2.5 Retail prices

The following table presents the breakdown of billing for standard Eurostat customers²⁰ at the regulated retail tariffs for gas applied by Gaz de France as at 31 December 2007.

The bill does not show this breakdown, as regulated tariffs are integrated tariffs composed of a subscription and a variable part.

Since 1 January 2006, costs related to pension schemes for electricity and gas industry employees have been funded by a tariff contribution separate from the transportation tariff. This contribution is nevertheless always integrated in the regulated gas retail price and does not feature on bills.

TABLE NO. 11: BILL AT REGULATED RETAIL TARIFFS APPLIED BY GAZ DE FRANCE AS AT 31 DECEMBER 2007 (€/MWh)

	D3 customer	I1 customer	I4 customer
Supply part (average supply cost)	22.32	22.32	21.5
Transmission part	2.38	1.98	0.99
Distribution part	10.9	7.2	1.3
Storage part	2.8	2.0	0.04
Regulatory contributions to network costs (CTA)	0.9	0.2	0.02
Commercial costs ⁽²⁾	4.03	3.92	0.83
Bill excluding VAT at regulated tariffs as at 31 December 2007	43.33	37.62	24.68
VAT	7.74	7.16	4.73
Bill including VAT at regulated tariffs as at 31 December 2007	51.07 (B1 tariff)	44.78 (B2I tariff)	29.41 ⁽¹⁾ (STS tariff)

(1) STS tariff for a customer connected to the bulk transmission network

(2) obtained by working out the difference

A. REGULATED TARIFFS AND COMPETITION

The regulated retail tariffs for natural gas are applied by Gaz de France, Tegaz and the 22 local distribution companies (LDCs).

These suppliers submit their planned price scales to the Ministers for the Economy and Energy, with a copy to CRE.

The Ministers ask CRE for its opinion on each of the price scales, and can then ask the suppliers concerned to modify their proposed prices to take account of CRE's comments.

Additional information on the methods for increasing prices is given in section VII, Public service, subsection 2.2 Gas, p. 117.

The absence of a regulatory framework and lack of transparency surrounding the structure and increases in the regulatory tariffs for public distribution services applied by Gaz de France have a negative impact on the opening up of the market, constituting as they do a

²⁰D3 customer: Household with consumption of 23.26 MWh/year (hot water, cooking and heating)

I1 customer: Industrial company with consumption of 116.3 MWh/year

I4 customer: Industrial company with consumption of 116.3 GWh/year.

source of uncertainty for the alternative suppliers and potentially obstructing the entry of new suppliers.

2.6 Questions and complaints

When the markets were fully opened on 1 July 2007, in coordination with the public authorities (the Ministries for the Economy and Environment) and the national Energy Ombudsman, CRE set up an information service (the "Energie Info" service) for residential and professional customers, accessible via a website (www.energie-info.fr), a call centre (tel. 0810 112 212) and a postal address (Service information consommateurs de la CRE).

The service enables customers to ask questions or make complaints, either verbally or in writing (by email, fax or post). The service is common to the electricity and natural gas markets. It handles questions about electricity, natural gas or both at the same time.

In the second half of 2007, the Energie Info service gave out information to 200,000 customers (for those wanting the contact details of the various suppliers – approximately two thirds of the calls – it was through an interactive voice server). Over the same period, the website received 165,000 visitors.

A. QUESTIONS

The questions received by Energie Info covered the following subjects: the procedure for starting a supply, choice of supplier, the different types of contract available (regulated tariff and market based supply offers) and whether it was possible to go back to the regulated tariff after leaving it, canvassing and the right of retraction, the conditions of validity of a contract subscription (verbal or by signature), the procedure for connecting a home to the electricity and natural gas networks.

B. COMPLAINTS

The Energie Info service has a partial picture of customer complaints about the electricity and natural gas markets.

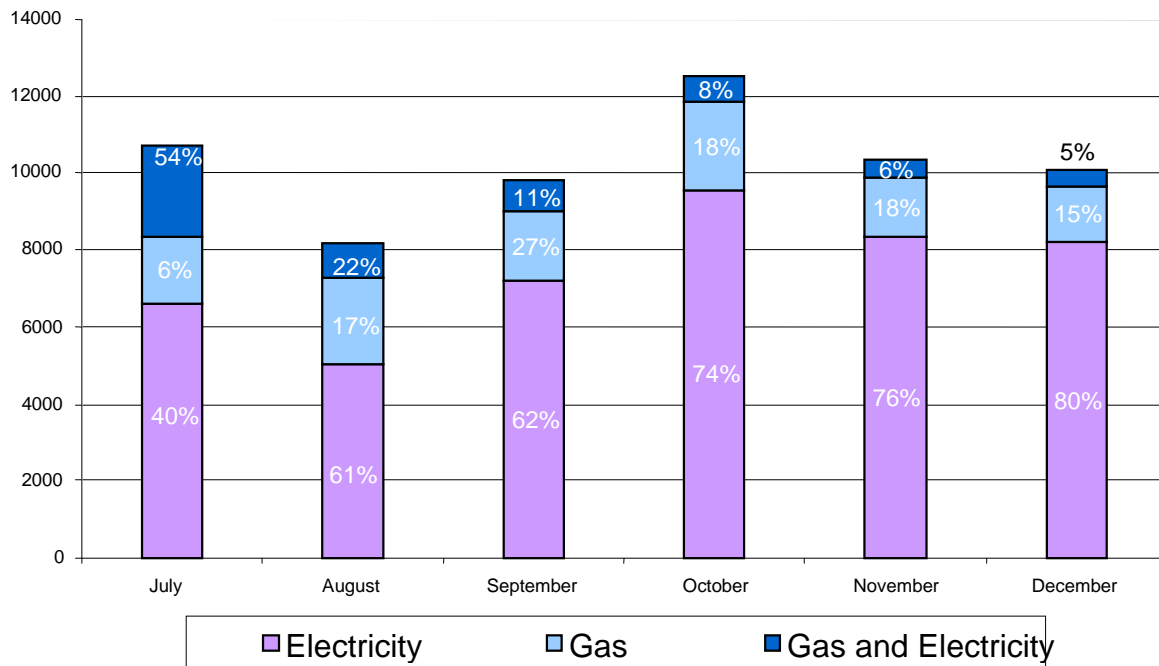
Complaints concern 1.3% of customer enquiries received by the Energie Info service. In the second half of 2007, the service handled approximately 2700 complaints.

- **Disputes between a customer and a supplier.** The law did not give CRE any powers in this area. When it responds to a complaint of this kind, CRE informs the customer of its procedures and rights and may direct the customer to the national Energy Ombudsman (a body that works for the amicable settlement of disputes between suppliers and customers) or the Ministry for the Economy's competition, consumer and anti-fraud department (which can impose penalties for breaches of the consumer code). It should be noted that the national Energy Ombudsman began operating in 2008, when it dealt with complaints that came in during 2007.

- Disputes concerning network access or use:** Once the avenues for settling a dispute amicably have been exhausted, the matter may in some cases be referred to CRE's Committee for settlement of disputes and sanctions (CoRDIS) by the customer. These cases are very rare, since most disputes are settled amicably before CoRDIS is brought in.

FIGURE NO. 8: ENERGY CONCERNED BY CONSUMER QUESTIONS AND COMPLAINTS (ELECTRICITY/GAS/ELECTRICITY& GAS)

(scope: customer contacts dealt with individually – not by the voice server)



3 Measures to avoid abuse of dominant positions

3.1 Wholesale market

A. GAS RELEASE SCHEMES

Although it has no regulatory power over the gas release programme, CRE consulted the French market players regarding the extension of the French gas release schemes beyond their scheduled end date of 31 December 2008.

In its deliberations on 22 November 2007, CRE recommended that new programmes should be quickly introduced by Gaz de France and Total in the south and southwest zones. It criticised the fact that Gaz de France and Total had not wanted to set up new gas release schemes.

CRE monitors the gas wholesale market on the same legal basis and using the same procedures as the electricity wholesale market (cf. section III French electricity market operation, subsection 3.1, p. 45).

B. WHOLESALE MARKET MONITORING

Article 28 of the Law of 10 February 2000, in the amended version introduced by the Law of 7 December 2006, gave CRE responsibility for market monitoring. It stipulates that CRE *“shall monitor, for electricity and natural gas, all transactions made between suppliers, brokers and producers, all transactions made on the organised markets and cross-border trading. It shall ensure that bids made by suppliers, brokers and producers are consistent with their financial and technical requirements.”* The law also stipulates that, if CRE detects unlawful practices, its president shall inform the Competition Council.

Market monitoring aims to detect any anti-competitive behaviour. It checks that operators are not abusing the power they have over the market, and that no transactions are being concluded with the aim of altering the mechanism by which prices are formed.

The price on a wholesale market determines:

- income from wholesale sales by operators controlling physical sources of supply (production, long-term import contracts);
- procurement costs for suppliers who do not control sources of supply.

The practices being targeted include:

- retention of production capacity with the aim of increasing prices by creating an artificial shortage;
- excessively low pricing with the aim of bringing prices down below their normal level and thereby reducing competitors' income;
- sending purchase or sale orders intended to give the market false information about price changes to the trading platforms, by one or more players.

3.2 Retail market

A. CONTRACTUAL RELATIONS BETWEEN CUSTOMERS AND SUPPLIERS

a. RELATIONS WITH PROFESSIONAL CUSTOMERS

Gas suppliers are, in their relations with professional customers, subject to the common law of the *Civil code* and *Code of commerce*.

Suppliers are subject to an obligation of transparency as regards these customers. They must clearly explain their obligations and any obscure or ambiguous contractual provision will be interpreted to their disadvantage.

The structure and contents of contracts concluded with professional customers are in principle free, providing that they do not go against applicable regulations.

For small commercial customers²¹, a list of pre-contractual and contractual information is laid down in legislation²². For this category of customers, the supplier is required to offer the option of a 'single contract', for both supply and access to the network.

Grid access contracts are sent to CRE. Their contract provisions must be transparent and non-discriminatory. Where necessary to settle a dispute referred to CoRDIS, CoRDIS may set the methods of access to networks, structures and facilities or the terms of their use in an objective, transparent, non-discriminatory and proportionate manner.

The duration of the contract is also free. It may be of long duration if the customer so wishes and if the supplier makes the customer an attractive offer. CRE has declared itself in favour of establishing long-term contracts, in which suppliers commit to prices whose trends over the contract duration would be linked to transparent indexes. These contracts must nevertheless comply with the competition law, particularly regarding operators in a dominant position. The aim or effect of entering into long-term gas supply contracts should not be to remove competitors from the market. Furthermore, customers must be able to terminate their contract in advance with related fines being of a reasonable amount.

In application of Article L. 441-6 of the Code of Commerce, which applies to all suppliers as regards their contractual relations with non-residential customers, suppliers are obliged to send their general terms of sale to any non-residential customer upon request. These form the basis for commercial negotiation and contain the sales terms, unit price scale, price reductions and payment terms.

As is the case for the contract, the format of the invoice is free except for small non-residential customers²³. For them, the order of 2 July 2007 went further, clearly defining the information to appear on bills. Each item of information is described in detail and the supplier must inform the customer of the amount of notice required to terminate the contract.

b. RELATIONS WITH RESIDENTIAL CUSTOMERS

Natural gas suppliers are, in their relations with residential customers, subject to the civil code and the consumer code.

²¹ Consuming less than 30,000 kWh per year

²² Article 43 of the Law of 7 December 2006

²³ The order of 2 July 2007 on bills for the supply of electricity or natural gas governs bills for small businesses and individuals.

Article 42 of the Law of 7 December 2006 provided for the creation of a new section of the consumer code, governing energy supply contracts.

As stipulated in article L. 121-87 of the consumer code, supplier offers must include sixteen types of pre-contractual information to enable customers to compare before they make their final choice.

Suppliers must offer residential customers the possibility of entering into a 'single' contract covering both transportation and supply.

The supplier's contract must meet certain rules. In particular it must:

- re-state the information contained in the offer;
- be written on or available in a permanent medium;
- state the date of validity of the contract, the procedures for exercising the retraction right, the contact details of the grid operator (...).

Certain aspects are regulated:

- Contract duration: suppliers have an obligation to include one-year contracts among their offers to residential customers;
- Contract termination: the aim is to prevent any interruption of supply in the event of a change in supplier and to limit the costs that can be billed to customers.

*
* *

VI . Security of supply

CRE draws attention to the fact that the bulk of the information given in this chapter comes under the jurisdiction of the Minister for Energy.

Security of electricity supply is mainly ensured by the scheduling of means of generation. This scheduling takes place every two years when the pluri-annual generation investment plan is adopted. Article 6 of the Law of 10 February 2000 stipulates that the "*Minister for Energy shall fix and make public the pluri-annual generation investment programme which sets the objectives for the distribution of electricity generation capacities by primary energy source and, if need be, by generation technique and geographical area*". In order to achieve these objectives, support measures, for example benefiting certain primary energies, may be adopted and possibly accompanied by calls for tender.

Moreover, the current context of market integration which is not yet effective and development of cross-border exchanges requires, in addition to the existence of sufficient installed capacity, generation capability to meet the demand.

For gas, CRE has no responsibility in terms of security of supply, which comes under the government's jurisdiction.

1 Electricity

In application of Article 4 of Directive 2003/54/EC

1.1 The current situation

A. PEAKS IN ELECTRICITY DEMAND

According to RTE, maximum consumption in 2007 reached 88,960 MW at 7 pm on 17 December 2007, which is also the record high for instantaneous consumption.

B. ENERGY MIX

According to RTE, maximum installed capacity in France amounts to 108.3 GW. This figure does not include the generation capacities definitively shut down or connected to distribution grids (7.6 GW). The energy mix is as follows:

TABLE NO. 12: ENERGY MIX IN FRANCE

Sector	Energy generated in 2007	Variation 2006/2007	Share in energy mix
Nuclear power	418.6 TWh	- 2.4 %	76.8 %
Conventional thermal power	55 TWh	+ 1.9 %	10.1 %
Hydropower	63.2 TWh	- 3.8 %	11.6 %
Other renewable energy sources	7.9 TWh	+ 43.6 %	1.5 %

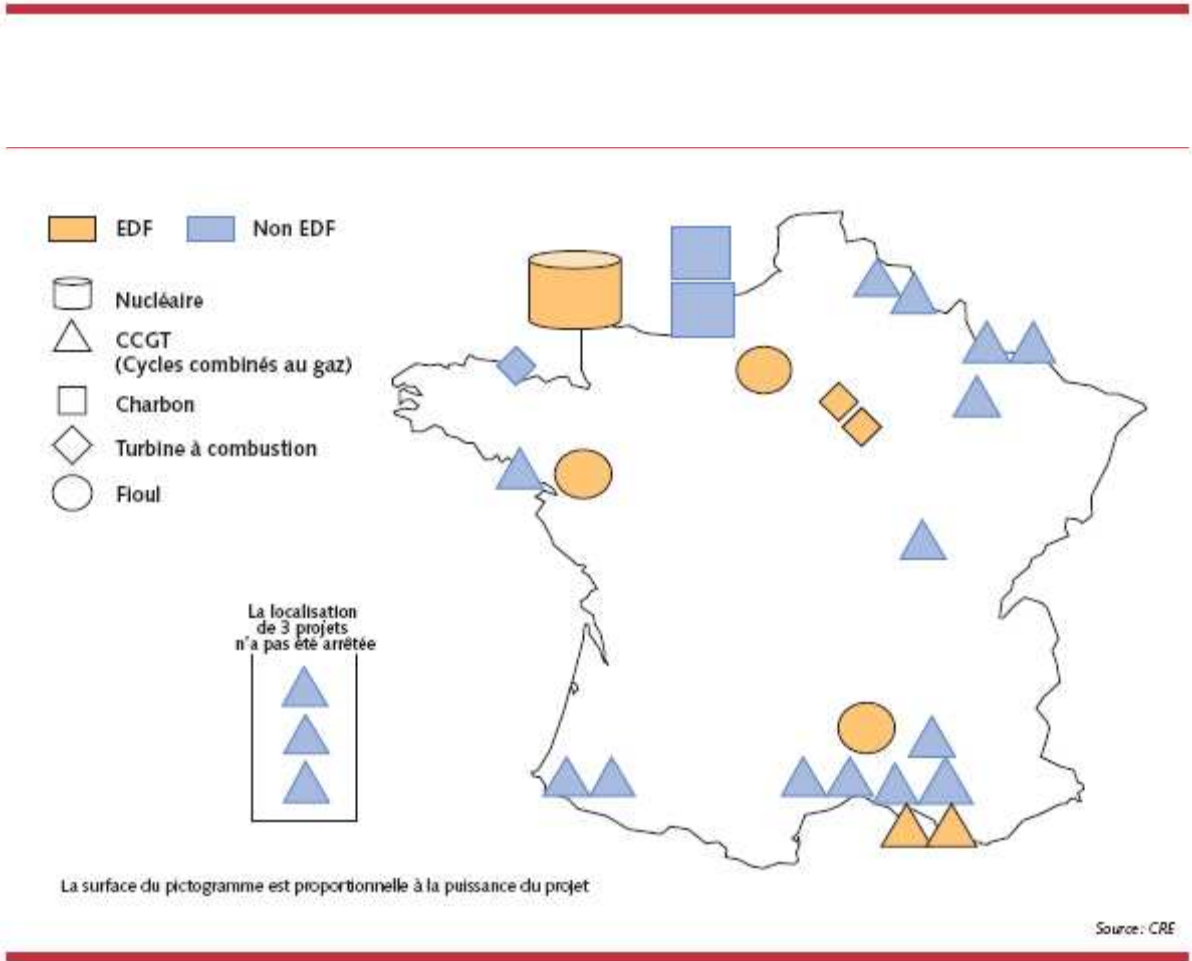
Source: RTE published data

According to RTE, 770 MW of wind power generation capacities were newly connected to the grid in 2007, as well as 175 MW of cogeneration capacities.

C. INVESTMENTS IN THE GENERATION SECTOR

The Law of 10 February 2000 on the public electricity service stipulates that new electricity generation facilities and modified facilities must obtain an operating permit or a declaration from the Minister for Energy.

FIGURE NO. 9: PROJECTS ANNOUNCED IN FRANCE FOR POWER PLANTS GENERATING OVER 100 MW



The figure above shows the main projects announced in France for new means of generation, to become operational in 2012 at the latest, and representing a total capacity of over 14 GW. For the most part, projects concern combined cycle gas turbines (CCGT), but projects for coal- and oil-fired plants are also planned. Although it is uncertain whether some of them will be completed, others are already at the construction stage. Over 9 GW are in the hands of alternative operators, all active on the retail market – Endesa, Poweo, Gaz de France and Electrabel. The alternative suppliers’ projects are for so-called ‘semi-base’ facilities.

Previously mainly managed by EDF, under the State’s control, the electricity generation investment programme (pluri-annual investment programme) has become a State prerogative, which is carried out under the terms defined by article 6 of the Law of 10 February 2000:

"The Minister for Energy shall fix and make public the pluri-annual generation investment programme which sets the objectives for the distribution of electricity generation capacities by primary energy source and, if need be, by generation technique and geographical area. This programme is drawn up so as to accommodate decentralised generation, cogeneration and new technologies and is the subject of a report submitted to Parliament by the Minister for Energy in the year following any re-election of the Assemblée Nationale. [...]
In order to define this programme, the Minister for Energy uses the energy collective services scheme in particular, along with a pluri-annual forecast report drawn up at least every two years, under the State's control, by the public transmission system operator. This statement incorporates trends in consumption, transmission and distribution capacities and exchanges with foreign grids".

The Government may launch a call for tender, implemented by CRE, if it considers that existing and planned means of generation do not fulfil the objectives set by the Minister for Energy within the framework of the pluri-annual generation investment programme.

Since the beginning of 2004, several calls for tender have been launched:

- A call for tender for a 40 MW combustion turbine in Martinique has led to an operating permit being issued for a power plant in Bois-Rouge;
- A call for tender for electricity generation facilities using biomass and biogas energy has led to an operating permit for 232 MW of capacity;
- A call for tender for offshore wind power plants has led to an operating permit for 100 MW of capacity (500 MW was requested);
- A call for tender for onshore wind power plants has led to an operating permit for 278 MW of capacity (500 MW was requested);
- A call for tender for electricity generation facilities using biomass energy was launched in 2006, targeting a capacity of 300 MW of which 80 MW was for facilities with a unit capacity of between 5 and 9 MW each inclusive, and 220 MW was for facilities with a capacity of more than 9 MW. Selected candidates will be awarded a contract for the purchase of the electricity generated at the price they propose, for a period of 20 years. 56 bids were submitted to CRE by the bidding deadline on 9 August 2007. The results are expected in 2008.

Furthermore, purchase obligations are intended to foster development of certain sectors and, as a result, EDF and the LDCs must, under certain conditions and at tariffs fixed by the State, purchase energy generated by:

- Facilities using renewable energy sources (small-sized hydropower facilities, wind power, photovoltaic, recycling of household waste, biomass/biogas and geothermal power);
- Cogeneration facilities.

Pursuant to the law of 13 July 2005, providing a new definition of purchase tariffs, the government has undertaken revisions to said tariffs. In July 2006, the Minister for Energy passed orders fixing new tariffs applicable to facilities using mechanical wind energy, solar energy, biogas and geothermal energy. Subsequently, on 3 April 2007, the Ministry referred a draft order to CRE for its opinion on the proposed modifications to purchase conditions of electricity generated by plants that mainly use energy from the combustion of non-fossil plant matter. CRE issued its opinion on 3 May 2007.

D. SYSTEMS DESIGNED TO GUARANTEE SUFFICIENT CAPACITY TO SATISFY DEMAND

Firstly, the balancing responsible system was set up, which is financially responsible for imbalances retrospectively observed in its balancing zone. Payment for imbalances is made on the basis of the price of balancing carried out to maintain generation/consumption balance and cannot be less than the latest available and credible reference market price, i.e. the hourly price defined the day ahead on the Powernext exchange. The purpose of this system is to encourage market players never to place themselves willingly in a position of negative imbalance – with a deficit of injection compared with planned withdrawal.

In order to complete this system, RTE publishes not only consumption forecasts and generation data but also the following information:

- A forecast analysis of supply-demand balance for summer and winter periods, published at the beginning of the period studied. The conclusions of these analyses are presented in the form of the authorised export level, related to the security criterion adopted²⁴, at every weekly consumption peak;
- The margin available for the following day's consumption peak is compared to the margin required for the security criterion adopted;
- Alert indicators are sent out if the risk of load shedding is significant. If the risk of load shedding is greater than 50%, an alert message is sent to the public authorities and generators. If the risk of load shedding is close to 100%, an alert message is sent to the general public.

Residual imbalance in the system, the sum of balancing responsible entity imbalances, is cleared using the balancing mechanism. French generators connected to the transmission grid must provide RTE with the total unused power technically available when submitting their offers for the balancing mechanism. French customers as well as foreign operators²⁵ can also submit offers to the balancing mechanism if they so wish.

In addition, RTE has signed assistance contracts with neighbouring TSOs²⁶, which may be used by RTE in the event of insufficient orders on the balancing mechanism to restore system balance.

The predictive management contracts between RTE and the generators establish a framework for the management and coordination of maintenance of generation units and facilities on the network.

Every two years, RTE draws up a pluri-annual forecast of the supply-demand balance. This forecast is used by the Minister for Energy to prepare the pluri-annual generation investment plan. When generation capacity does not meet the targets of the pluri-annual investment plan, the Minister for Energy can use a call for tender procedure.

1.2 Infrastructure projects

A. STRENGTHENING EXCHANGE CAPACITIES BETWEEN FRANCE AND SPAIN

Commercial transit capacity between France and Spain is currently around 1600 MW. The Iberian peninsula connection rate is one of the lowest in Europe. It is far from being in line

²⁴ 1% possibility of having to call on exceptional means, i.e. outside the normal field of balancing mechanism operations

²⁵ This possibility exists for operators at the borders with Germany, Spain, Great Britain, Italy and Switzerland,

²⁶ Elia, EnBW, National Grid, Swissgrid and Terna

with recommendations made by the European Summit in Barcelona in 2002 (10% of domestic consumption, i.e. 4000 MW).

The objective currently targeted by TSOs is to raise capacity to 2600 MW, and then to 4000 MW at a later date.

An underground solution using DC technology is currently favoured by the public authorities, in accordance with the announcement made by the Prime Minister on 30 April 2008, so more detailed studies of the network have been made by RTE relating to an HVDC2 link between the 400 kV posts at Baixas and Santa Llogaia.

The project is now expected to start in 2014 at an estimated budget on the French side of €245 million.

B. OPTIMISATION OF THE FRANCE-ITALY INTERCONNECTION

RTE and Terna have finalised the network and feasibility studies conducted as part of a European TEN project. Through four optimisation projects, which should go into operation between 2012 and 2014, the estimated gains in Italian import levels (from a reference of 7400 MW) are between 200 and 1300 MW depending on season and time of day. The gains provided by these reinforcements are still limited by congestion on the French-Swiss and Italian-Swiss borders.

C. REINFORCEMENT OF THE FRANCE-BELGIUM INTERCONNECTION

RTE and ELIA began the project to reinforce the 225 kV Moulaine-Aubange interconnection with the installation of a second circuit, and the replacement of the conductors. The improvement in maximum Belgian import levels has been estimated at 400 MW, at a cost of €9 million.

2 Gas

In application of article 5 of Directive 2003/55/EC and article 5 of Directive 2004/67/EC

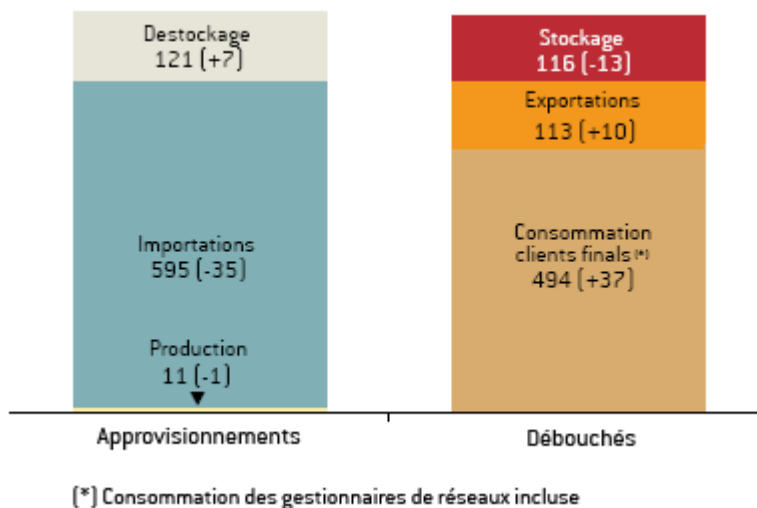
2.1 The current situation

Current levels of gas consumption and forecasts of future consumption constitute data coming under the jurisdiction of the Department for the Environment, Development and Sustainable Planning.

Procurement of gas in France relies on imports (98% of gas consumed), which amounted to 595 TWh²⁷ in 2007 (51.17 Mtoe), down 35 TWh (3.01 Mtoe) compared with 2006 (cf. Figure No. 10). Total import capacity in France is around 70 bcm/year.

FIGURE NO. 10: PHYSICAL PROFILE OF THE FRENCH MARKET IN 2007 COMPARED WITH 2006 (TWh)

Source: CRE, based on GRTgaz and TIGF data



²⁷ Data received and processed by CRE is in units of power (Wh with other prefixes). Consequently, all figures are given in Wh first and then converted into Mtoe. The conversion is calculated with the standard conversion factor used by the International Energy Agency (Cf. [IEA - unit converter](#)) and by Eurostat. Conversion factor: 1 GWh = 8.6 x 10⁻⁵ Mtoe.

Categories		2007	2006	Change
Imports	<i>In TWh</i>	595	630	(35)
	<i>In Mtoe</i>	51.17	54.18	(3.01)
Removal from storage	<i>In TWh</i>	121	114	7
	<i>In Mtoe</i>	10.41	9.81	0.60
Production	<i>In TWh</i>	11	12	(1)
	<i>In Mtoe</i>	0.95	1.04	(0.09)
Storage	<i>In TWh</i>	116	129	(13)
	<i>In Mtoe</i>	9.98	11.1	(1.12)
Exports	<i>In TWh</i>	113	103	10
	<i>In Mtoe</i>	9.72	8.86	0.86
Consumption of end customers	<i>In TWh</i>	494	457	37
	<i>In Mtoe</i>	42.48	39.3	3.18

Source: CRE, based on GRTgaz and TIGF data

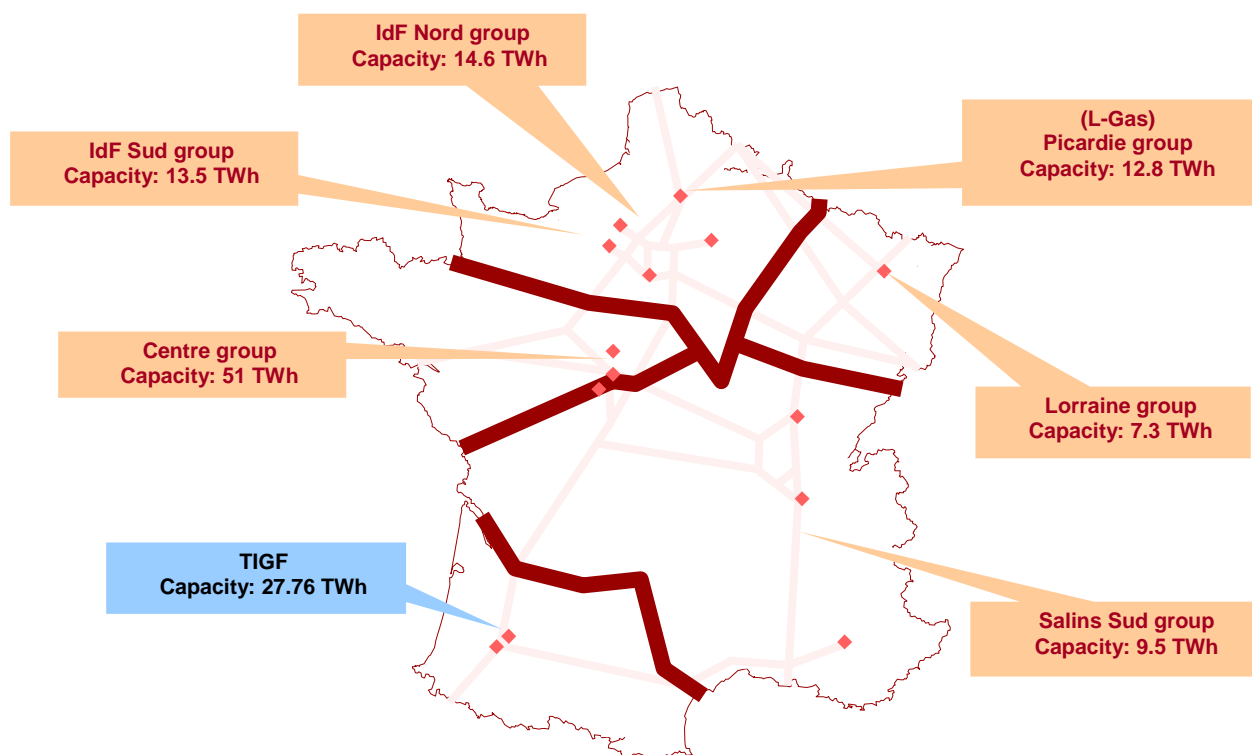
a. STORAGE CAPACITY

Storage capacity in France is 136.5 TWh (11.74 Mtoe), i.e. around 12 bcm (useful volume), accounting for 25% of annual natural gas consumption in France. Peak flow is nearly 200 million cubic metres per day, i.e. 2.3 TWh (0.2 Mtoe) per day. These storage capacities are divided among operators as follows:

- 108.7 TWh (9.35 Mtoe, i.e. 80% of total capacity) run by Gaz de France's Direction des Grandes Infrastructures (DGI);
- 27.8 TWh (2.39 Mtoe, i.e. 20% of total capacity) run by TIGF.

FIGURE NO. 11: LOCATION OF STORAGE GROUPS; CAPACITIES, INJECTIONS AND WITHDRAWALS

Source: CRE



Storage groups	Capacity		Withdrawal		Injection	
	TWh	Mtoe	GWh/d	ktoe/d	GWh/d	ktoe/d
IDF Nord group	14.6	1.26	140.4	12.07	127	10.92
IDF Sud group	13.5	1.16	321.4	27.64	217.7	18.72
Picardie group	12.8	1.10	272.3	23.42	93.4	8.03
Lorraine group	7.3	0.63	94.8	8.15	91.3	7.85
Salins Sud group	9.5	0.82	527.8	45.39	90.5	7.78
TIGF	27.76	2.39	341.6	29.38	234.4	20.16
Centre group	51	4.39	622	53.49	463.6	39.87

Source: CRE

FIGURE NO. 12: USEFUL VOLUMES OF GAS IN TWH FROM 1 APRIL 2006 TO 1 APRIL 2008 FOR ALL OPERATORS (GDF DIRECTION DES GRANDES INFRASTRUCTURES AND TIGF)

Source: CRE

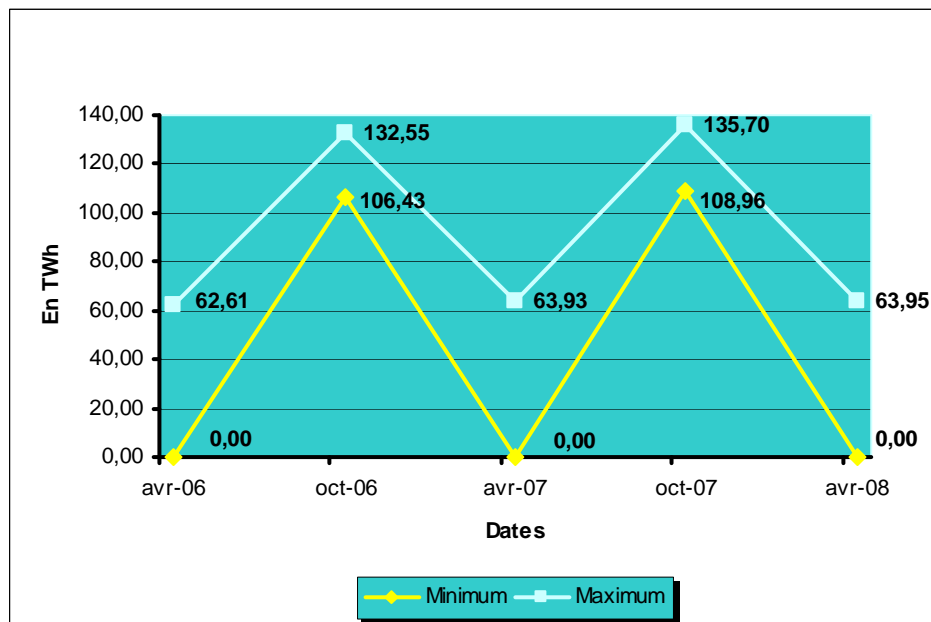


TABLE NO. 13: USEFUL VOLUMES OF GAS AS % AND IN TWH FROM 1 APRIL 2006 TO 1 APRIL 2008

Source: CRE

	1-avr.-06	1-oct.-06	1-avr.-07	1-oct.-07	1-avr.-08
mini en TWh	0,00	106,43	0,00	108,96	0,00
maxi en TWh	62,61	132,55	63,93	135,70	63,95
mini en Mtep	0,00	9,15	0,00	9,37	0,00
maxi en Mtep	5,38	11,40	5,50	11,67	5,50
mini en %	0,00%	80,30%	0,00%	80,32%	0,00%
maxi en %	47,23%	100,00%	47,13%	100,03%	46,82%
Quantité en stock en TWh	17,10	129,90	88,10	129,98	50,66
Quantité en stock en Mtep	1,47	11,17	7,58	11,18	4,36
Part du gaz en stock par rapport à la capacité totale *	12,9%	98,0%	64,9%	95,8%	37,1%

* Total storage capacities in 2006, 2007 and 2008 were on average over the year 132.5 TWh, 135.7 TWh and 136.5 TWh respectively.

b. MAINTENANCE PROGRAMMES

The transmission system operators inform shippers, affected DSOs and customers directly connected to the transmission system as quickly as possible of any network unavailability and how it is being dealt with, whether it occurs during planned maintenance periods or during incidents of any kind affecting entry, interconnection or exit capacities.

In the event of planned work, connections to the networks or maintenance of existing facilities, the following information is given:

- Before the summer, the schedule of work in year N+1 that may affect the level of capacity available at the entry points, and reductions in capacity (level, duration);
- The dates of the work and an estimate of the reduction in capacity at least two months in advance;
- This estimate shall become binding on D-5.

The TSOs also have a duty to make available to CRE all information on their maintenance and renewal policies and an evaluation of their application.

c. EMERGENCY MEASURES

The Order of 27 October 2006 on national emergency measures to guarantee the security of natural gas supplied in the event of a crisis stipulates that a national emergency plan for gas shall be implemented in the following cases:

- breakdown or insufficiency of gas supplies;
- temporary or permanent inability to balance supply with demand on the French market;
- local or national problem with networks or facilities or any other type of crisis.

The aim of this emergency plan is to introduce measures that can be quickly implemented to prevent or delay the consequences of a crisis.

Among the emergency measures, the Government has the right to requisition people, property and services and the right to control the distribution of energy resources and raw materials. The government can therefore decide certain exceptional measures, by decree, to cope with an energy shortage, even if localised. The measures in question may apply in particular to the production, importation, circulation, transmission, distribution, storage and removal from storage of gas, and may consist of mobilisation, rationing or the imposition of technical or financial conditions on the sale of products. If the crisis is such that not all needs within France can be satisfied, customers shall be supplied in order of priority.

A crisis unit shall be set up by the Directorate General for Energy and Raw Materials (attached to the Ministry for the Environment, Development and Sustainable Planning) bringing together the gas operators and other bodies concerned. It shall provide the necessary summary information to the Minister, handle external communication and coordination with the operators, decide appropriate measures and ensure they are implemented.

All gas operators have public service obligations aimed at preventing situations where the supply is cut off, in particular:

- suppliers must ensure continuity of supply and are therefore required to demonstrate sufficient diversification in their natural gas procurements;
- all TSOs, DSOs and shippers of LNG must ensure the security and efficiency of their networks or facilities at all times;
- concession holders for underground natural gas storage shall run their storage facilities in a manner compatible with the safe and efficient operation of the interconnected natural gas networks.

The suppliers have a public service obligation in the following difficult circumstances:

- disappearance for six months maximum of the main source of gas supply;
- cold winters, which occur statistically once every five years;
- extremely low temperatures during a period of three days maximum, which occur statistically once every five years.

If a crisis occurs, the first measures are taken by the gas industry within the regulatory framework and in compliance with existing contracts. These measures can be implemented without the crisis unit being set up. The administration must be kept informed in real time of developments in the crisis. If these measures prove inadequate, new measures shall be taken by the Energy Ministry.

2.2 Infrastructure projects

A. PROJECTS

In France, gas flows are currently mainly in the north-south direction. Given the high number of entry points, the north benefits from sufficient supply to enable different sources of gas to compete against each other.

On the other hand, the south has few gas entry points, which adversely affects competition. The construction of an interconnection with Spain and the commissioning of the Fos Cavaou LNG terminal will improve this situation in the medium term and allow the regional gas markets to develop.

Four investment projects in LNG regasification infrastructure are also being studied in France.

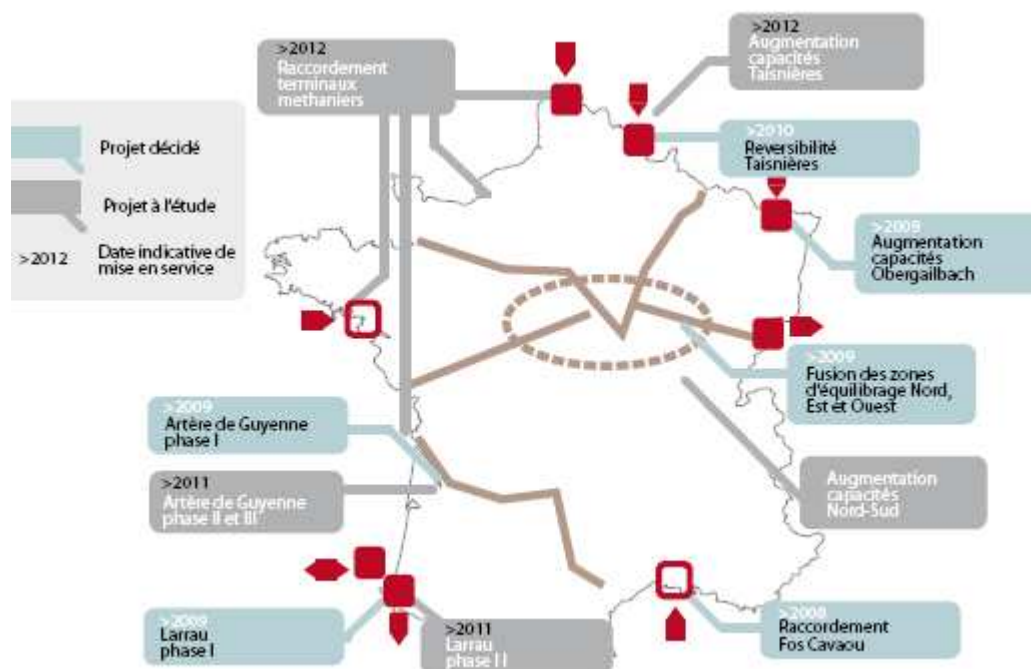
The main projects in the TSOs' pluri-annual investment programmes are as follows:

- A project to merge the North, East and West balancing zones;
- Connection of the Fos Cavaou LNG terminal and expansion of the capacity of the Montoir terminal;
- Projects to create LNG terminals on the sites at Dunkirk, Antifer, Verdon and Fos Faster;
- An increase in transportation capacity between the GRTgaz South zone and the TIGF zone ("artère de Guyenne" pipeline, phase III), planned for 2011;
- An increase in the import capacity at Obergailbach;
- An increase in the entry capacity at Taisnières, planned for 2012;
- Development of interconnection capacities with Spain.

The increased investment by GRTgaz and TIGF for 2008, compared to previous years, is part of a long-term trend illustrated by the TSOs' 10-year investment plans. For this period, these plans require around 5 billion euros of investment by GRTgaz, and 1 billion euros by TIGF.

FIGURE NO. 13: MAIN PROJECTS INCLUDED IN GRTGAZ AND TIGF INVESTMENT PROGRAMMES

Source: CRE



B. EXEMPTION PURSUANT TO ARTICLE 22 OF DIRECTIVE 2003/55/EC

Pursuant to the Law of 3 January 2003, LNG terminals are open to third parties and have regulated access conditions. Consequently, the tariffs for using these terminals are set by the Ministers for the Economy and Energy, based on CRE proposals.

By virtue of the same law, major new gas infrastructure (interconnections between Member States, LNG or storage facilities) may, in application of Article 22 of Directive 2003/55/EC, benefit from an exemption from third-party access.

Exemptions are issued by the Minister following the opinion of CRE.

C. RESOLVING CONGESTION IN THE NORTH ZONE

GRTgaz has launched an investment programme designed to resolve congestion in the north of France and enable the merger of the west, north and south zones on 1 January 2009 (the 'Great North' zone). This investment programme is worth €310 million and will permit the creation of a market zone with annual consumption of 350 TWh (around 30.1 Mtoe), generating competition between natural gas from northern Europe, natural gas from Russia and LNG regasified at Montoir.

D. CONNECTION OF THE FOS CAVAOU LNG TERMINAL

With the construction of a new LNG terminal at Fos Cavaou, France is helping to increase LNG import capacities in Europe. The terminal will be operated by Société du Terminal Méthanier de Fos Cavaou, whose shareholders are Gaz de France (70 %) and Total (30 %). With capacity of 8.25 bcm per year – almost 20% of French natural gas consumption – this new terminal will be commissioned in the first half of 2009.

Fos Cavaou's capacities have been reserved for a period of 20 years by the two shareholders, at 63% for Gaz de France and 28% for Total. The remaining 10% was allocated to third parties in June 2007, for a period of three years, with four companies subscribing to these capacities: Essent, Distrigaz, Eni and EDF. EDF has been appointed as the contract holder with the terminal operator.

The connection of the new LNG terminal to the GRTgaz transmission system requires transmission pipelines to be fitted between the terminal and the compression station at Saint-Martin-de-Crau (Bouches-du-Rhône) as well as reinforcement of the station, at a total cost of €78 million.

E. EXTENSION PROJECT FOR THE MONTOIR TERMINAL

In December 2006, Gaz de France also announced a project for extension of the Montoir LNG terminal, in accordance with commitments made by Suez and Gaz de France to the European Commission, as part of the merger project. Three scenarios were being examined:

- maintenance of the terminal's current annual capacity (10 bcm/year) beyond 2021 (Ext. 0);
- commissioning of a regasifier which would increase terminal capacity from 10 bcm per year to 12.5 bcm per year, in 2011 (Ext. 1);
- construction of a fourth tank which would increase terminal capacity to 16.5 bcm per year, in 2014 (Ext. 2).

The scenario was to have depended on market response at the end of the open season procedure, for which Gaz de France initiated a call for subscriptions on 27 December 2006. Potential subscribers had until 30 September 2007 to submit binding applications.

Having analysed the subscriptions, GDF approved the time extension (Ext. 0 until 2035) and allocated the capacities. At the end of the procedure, less than 5% of capacity was still available until 2021.

F. LNG TERMINAL CONSTRUCTION PROJECTS

In addition to increasing the capacity of existing terminals, France has four projects to develop new LNG terminals:

- Dunkirk, designed to have a capacity of 6 to 12 bcm per year, with potential for expansion to 16 bcm per year, or 350 GWh per day. The project owner is Dunkerque LNG, which is wholly owned by EDF. The final investment decision should be made by the end of 2009, and commissioning is planned for 2013;
- Antifer, designed with a capacity of 9 bcm per year, with potential for expansion to 18 bcm per year. The project owner is Gaz de Normandie, 34% of which is owned by

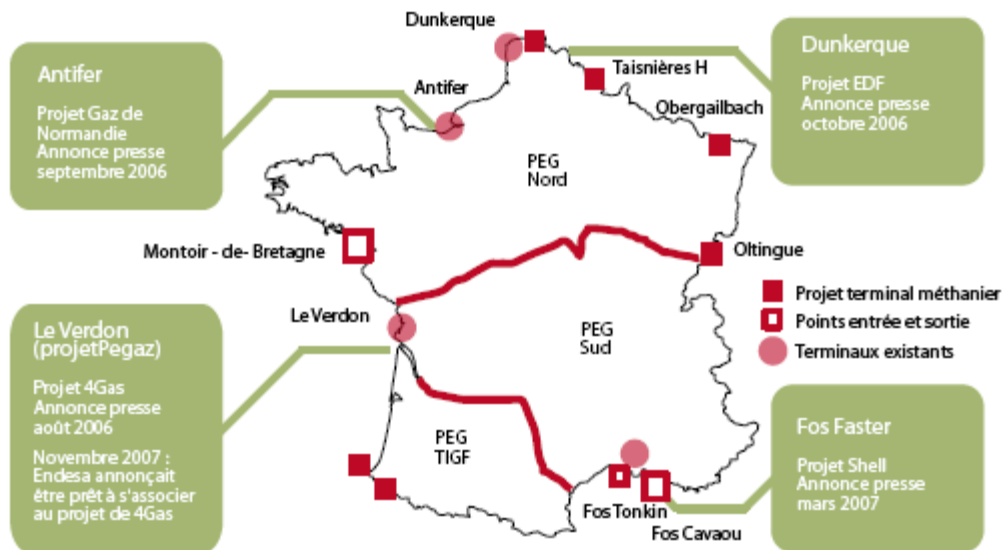
Poweo, 24.5% by E.ON Ruhrgas, 24.5% by Verbund and 17% by CIM. Commissioning is planned for 2013;

- Verdon, in the southern part of the Gironde estuary, with a capacity of 6 to 9 bcm per year, with potential for expansion to 15 bcm per year. The project owner is 4Gas. Commissioning is expected in 2013;
- Fos Faster, under the project ownership of Shell. The capacity should be of the order of 8 bcm per year and the year of commissioning has been set at 2014/2015.

The first three projects were the subject of a public debate conducted locally between September and December 2007. At the end of the debate, the three investors published their decisions to continue with their projects, proposing alterations in line with the recommendations of the Commission Nationale du Débat Public (CNDP).

FIGURE NO. 14: NEW LNG TERMINAL PROJECTS IN FRANCE

Source: CRE



G. REINFORCEMENT PROJECT FOR THE GUYENNE TRUNK MAIN (GIRONDE – LANDES)

The commissioning of the LNG terminal in Fos Cavaou and the development of interconnections with Spain and storage capacities in the southwest of France will change the system of dominant gas flows in France.

To deal with these new flows of gas, it is necessary to develop gas transmission capacities in the 'south to north' direction and to reinforce certain structures as a result. Reinforcing the Guyenne-Spain axis is one of the priorities defined for the South regional energy market by ERGEG.

The technical solution adopted for the overall optimisation of investments is to reinforce the Guyenne trunk main, part of which belongs to the GRTgaz network and part to the TIGF network. The project, worth a total of €433 million (€98 million of which is coming from GRTgaz and €335 million from TIGF), will be completed in three phases and will ultimately bring the capacity of the Guyenne trunk main up to 380 GWh per day (around 32.7 Mtoe per day) in the north-south direction.

Phase I is currently under way. The aim is to bring the physical capacity of the Guyenne trunk main in the TIGF to GRTgaz direction up to 180 GWh per day (15.5 Mtoe per day), of which 150 GWh per day (12.9 Mtoe per day) will be dedicated to transporting the LNG arriving at the new Fos Cavaou LNG terminal. The increase in transportation capacities to be brought about by phase I of the project should be effective from the start of 2009 and phases II and III by 2011.

H. EXTENSION OF IMPORT CAPACITIES AT OBERGAILBACH

Obergailbach is the interconnection point with Germany, and therefore constitutes the main entry point to the French market for Russian gas. At present, the firm entry capacity sold at Obergailbach amounts to 430 GWh per day (around 37 Mtoe per day). The upstream

pipeline, on German territory, is jointly operated by Gaz de France, Deutschland Transport and E.ON Ruhrgas Gastransport.

GRTgaz is developing entry capacity at Obergailbach in two stages:

- The first stage will increase firm annual capacity to 550 GWh per day (around 47.3 Mtoe per day) in December 2008;
- The second stage will increase firm annual capacity to 620 GWh per day (53.3 Mtoe per day) in December 2009, to which 30 GWh per day (2.6 Mtoe per day) of interruptible annual capacity will also be added.

This project follows the reinforcement of the network upstream and the launch of an open season by GRTgaz in May 2005. Beyond 2010, capacity development at Obergailbach will depend on shipper demand.

I. THE FLUXYS/GRTGAZ OPEN SEASON

Taisnières is connected to two gas pipelines located in Belgium and is used to import H gas from Norway and the Netherlands. Analysis of subscriptions and flows at this point highlights the access difficulties experienced by newcomers, even though the full capacity of the infrastructure is not reserved on the French side.

Consequently, on 26 April 2007, GRTgaz and the Belgian TSO Fluxys launched an open season on additional natural gas transmission capacity needs for north-south transit in Belgium and for the interconnection point between Belgium and France, as of 1 November 2011. These consultations were supervised by the energy regulators from the two countries and attracted interest from around 40 shippers in the first, non-binding phase. The phase involving the submittal of binding applications, originally planned for the end of 2007, was postponed due to a dispute between Fluxys and CREG over gas transit tariffs in Belgium.

J. FRANCE-SPAIN INTERCONNECTIONS (LARRAU AND BIRIATOU)

On 6 February 2007, as part of the ERGEG South Regional Energy Market project, Enagas, GRTgaz and TIGF presented a forecast investment plan for development of interconnections between France and Spain by 2010-2011.

This plan, indicative in nature, which assumes prior completion of phases 2 and 3 of the Guyenne trunk main, will enable gas exchanges between France and Spain to be developed. The proposed schedule calls for coordinated development of import capacity from Spain and transmission capacity in southern France.

Enagas and TIGF plan to launch an open subscription period in the autumn of 2008 in order to market capacity for which investment decisions have already been made. The capacity will be marketed over a four-year period starting on 1 November 2009.

In parallel, the TSOs will work with the relevant regulators to design transparent, non-discriminatory allocation methods for the capacity thus created.

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VII . Public service related issues

In application of article 3, paragraph 9 of the electricity directive

In application of article 3, paragraph 6 of the gas directive

1 Summary of provisions applicable

1.1 for implementation of a labelling system

Under article 5 of decree 2004-388 of 30 April 2004, suppliers are obliged to inform customers of the origin of electricity supplied. This information is provided in bills and documents enclosed as well as in the promotional material they distribute.

1.2 for application of criteria stipulated in appendix A of the directives

The provisions of appendix A of the directives are, for the most part, already transposed by existing texts, primarily in the consumer code.

Nevertheless, in order to finish off this transposition, the Law of 7 December 2006 introduced a new section on electricity and natural gas into the consumer code.

Article 42 thus defines the information that electricity and natural gas suppliers are obliged to provide their customers at the precontractual and contractual stages.

Article 43 extends the application of certain articles in the consumer code to small commercial customers defined in the following way: "*non-household consumers subscribing to electrical power equal to or less than 36 kilovolt-amperes*" or "*consuming less than 30,000 kilowatt-hours per year*", for natural gas.

In addition, article 7 appointed an Energy Ombudsman, responsible for recommending solutions to disputes between customers and suppliers of electricity and natural gas, and to help in drafting information on electricity and natural gas consumer rights.

Finally, concerning the fact that the procedure for switching supplier is free of charge, article 83 of the Law of 13 July 2005 states that if customers who have already exercised their eligibility switch supplier for a second time, they are solely liable for the costs generated by this change.

However, in the case of residential customers, the Law of 7 December 2006 inserting article L.121-89 in the consumer code stipulates that "*the supplier may only bill the customer for the costs effectively borne for termination, either directly or by intermediary of the network operator, providing that these expenses were explicitly stated in the contract and are duly justified. No other costs may be claimed from the customer for the sole reason of switching supplier.*"

1.3 for management of vulnerable customers

Social provisions regarding the protection of vulnerable customers (exclusively residential customers, and not companies) came into force in application of the Law of 10 February 2000 for electricity and the Law of 7 December 2006 for gas.

A. ELECTRICITY

Decree 2001-531 of 20 June 2001 sets up a system “*to preserve or guarantee access to electricity*” for people in precarious situations. This decree was completed by Decree 2005-971 of 10 August 2005 governing the procedure applicable in the event of unpaid bills. Customers in difficulty may benefit from an energy maintenance service (minimum rated power of 3 kVA) and assistance with paying bills together with social services, from the housing solidarity fund supplied by EDF and the LDCs. Furthermore, the Law of 5 March 2007 stipulates that between 1 November of each year and 15 March of the following year, electricity and gas suppliers cannot cut off supply in the case of bills unpaid by people benefiting or having benefited from a decision to grant aid from the housing solidarity fund within the last twelve months.

Decree 2004-325 of 8 April 2004 defines the “*special pricing of electricity as a staple*”: customers on low incomes (lower than a certain cap depending on household composition) may qualify for a discount on the regulated retail tariff for electricity, applicable to 100 kWh per month, depending on household composition.

Part of the cost borne by suppliers for this duty of public service is compensated for by the public electricity service contribution (CSPE).

B. GAS

The Law of 7 December 2006 stipulates that customers entitled to special pricing of electricity shall also benefit from a special price applicable to the supply of natural gas. This measure, which will provide a fixed annual reduction depending on household composition and consumption, needs to be stipulated by a decree.

The cost borne by operators supplying customers at this tariff is compensated by a contribution paid by all gas suppliers. The way the compensation mechanism works also needs to be stipulated by decree.

2 Regulation of prices applied to end users

All customers have been eligible since 1 July 2007.

Whether or not a customer can have a regulated contract for a site depends on the customer’s situation on that site:

For residential customers:

ELECTRICITY		
I am already using electricity in my home	If my current contract is at the regulated tariff	1) I can keep my current contract. 2) I can subscribe to a market based contract .
	If my current contract is a market based contract	1) I can keep my current contract. 2) I can subscribe to another market based contract . 3) 'Reversibility' principle: Until 30 June 2010, I can subscribe to another regulated tariff contract from EDF (1), a minimum of 6 months after subscribing for the first time, in this home, to a market based contract.
I am moving to a home that was previously lived in or is brand new		1) I can subscribe to a market based contract . 2) Until 30 June 2010, I can subscribe to a regulated tariff contract from EDF (1).

NATURAL GAS		
I am already using natural gas in my home	If my current contract is at the regulated tariff	1) I can keep my current contract. 2) I can subscribe to a market based contract . > Important: If I subscribe to a market based contract, it is no longer possible for me to subscribe to a regulated tariff contract in my name for this home.
	If my current contract is a market based contract	1) I can keep my current contract. 2) I can subscribe to another market based contract . > N.B.: I can no longer subscribe to a regulated tariff contract in my name for this home.
I am moving to a home that was previously lived in or is brand new		1) I can subscribe to a market based contract .

	2) Until 30 June 2010, I can subscribe to a regulated tariff contract from Gaz de France (2).
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(1) EDF or, in some towns (affecting less than 5% of customers), a local electricity supplier such as Electricité de Strasbourg, for example.

(2) Gaz de France or, in some towns (affecting less than 5% of customers), a local natural gas supplier such as Gaz de Bordeaux, for example.

For professional customers:

ELECTRICITY		
I am already using electricity on business premises	If my current contract is at the regulated tariff	1) I can keep my current contract. 2) I can subscribe to a market based contract .
	If my current contract is a market based contract	1) I can keep my current contract. 2) I can subscribe to another market based contract .
I am asking for electricity to be supplied to business premises that were <u>previously occupied</u>		1) I can subscribe to a market based contract . 2) Until 30 June 2010, if I have installed power of 36 kVA or less , I can subscribe to a regulated tariff contract from EDF (1).
I am asking for electricity to be supplied to business premises <u>that have just been connected to the electricity grid</u>		1) I can subscribe to a market based contract . 2) Until 30 June 2010, I can subscribe to a regulated tariff contract from EDF (1), regardless of my installed power

NATURAL GAS		
I am already using natural gas in my business premises	If my current contract is at the regulated tariff	1) I can keep my current contract. 2) I can subscribe to a market based contract . > Important: If I subscribe to a market based contract, it will no longer be possible afterwards to subscribe to a regulated tariff contract for these premises (either for myself or for the next occupants of these premises).

	If my current contract is a market based contract	1) I can keep my current contract. 2) I can subscribe to another market based contract .
	I am asking for natural gas to be supplied to business premises that were <u>previously occupied</u>	1) I can subscribe to a market based contract . 2) I can subscribe to a regulated tariff contract from Gaz de France (2) provided that the previous occupant of the premises had not subscribed to a market based contract for natural gas .
	I am asking for natural gas to be supplied to business premises <u>that have just been connected to the natural gas network</u>	I have to subscribe to a market based contract with the natural gas supplier of my choice.

(1) EDF or, in some towns (affecting less than 5% of customers), a local electricity supplier such as Electricité de Strasbourg, for example.

(2) Gaz de France or, in some towns (affecting less than 5% of customers), a local natural gas supplier such as Gaz de Bordeaux, for example.

Regulated retail tariffs (regulated contract prices) are set jointly by the Ministers for the Economy and Energy following CRE's opinion. In application of the Law of 10 February 2000 governing electricity and the Law of 3 January 2003 governing gas, tariffs must cover suppliers' costs – transportation and supply costs (procurement and marketing/customer management).

In application of the Law of 7 December 2006, customers holding a market based supply offer for electricity can request the transitional regulated tariff for market adjustment (TaRTAM) from their supplier between 5 January 2007 and 1 July 2007.

The tariff is legally applicable for a maximum period of 2 years as from the date of the request. It is equal to the regulated sales tariff exclusive of tax, increased by 23% for green tariffs, 20% for yellow tariffs and 10% for blue tariffs²⁸.

Like the regulated retail tariff, the TaRTAM covers supply and grid access.

Suppliers do not receive any compensation in return for the obligation of providing energy at regulated retail prices for gas and electricity. On the other hand, suppliers using the TaRTAM are compensated for the difference between their supply costs and the supply part of the TaRTAM (equal to the TaRTAM decreased by the tariff for grid use). CRE is in charge of assessing this compensation, based on suppliers' declarations. It is funded partially by part of the CSPE and partially by generators using nuclear and hydroelectric plants with a power rating greater than 2000 MW – EDF and Compagnie Nationale du Rhône (CNR).

As at 31 December 2007, around 3500 sites were being supplied using the TaRTAM.

²⁸ Blue tariffs: rated power $P \leq 36$ kVA – yellow tariffs: 36 kVA $< P \leq 250$ kVA – green tariffs: $P > 250$ kVA

2.1 Electricity

There are around twenty regulated tariffs, depending on the rated power, applied by EDF and the local distribution companies.

After an average drop of around 24% over 10 years in constant Euro value, regulated retail electricity tariffs:

- increased by 3% on average on 1 July 2003;
- fell by €1.2/MWh on 1 January 2004, an amount equivalent to the rise in the public electricity service contribution for 2004;
- increased by 1.7% on 15 August 2006;
- increased by 1.1% (for blue tariffs) and 1.5% (for yellow and green tariffs) on 16 August 2007.

They comprise:

- A grid part, equal to the total tariff for grid use set by the decision of 25 September 2005 (TURP2) and the transportation tariff contribution (CTA);
- A supply part, which must remunerate electricity generation and marketing activities.

An analysis by CRE shows that the supply part of blue tariffs current on 16 August 2007 covered the supplier EDF's costs for this segment in 2007 and 2008, with a reasonable level of profitability, calculated on the basis of an estimate of the accounted capital investment.

Conversely, the green tariffs current on 16 August 2007 do not provide reasonable profitability, calculated on the basis of an estimate of the accounted capital investment. The increase applied should have been much higher than the one used. The increase should also be more than 1.5% for the yellow tariffs and the increase for the green tariffs should be higher than the increase for the yellow tariffs.

Article 4 of Law 2000-108 of 10 February 2000 stipulates that decisions about the regulated electricity retail tariffs "shall be taken by the Ministers for the Economy and Energy, following the opinion of the Commission de régulation de l'énergie."

The public service contract between EDF and the State, signed in October 2005, stipulates that the rise in tariffs for residential customers shall not exceed inflation for the first five years.

No periodicity of tariff changes has been decided upon.

2.2 Gas

Regulated retail tariffs for natural gas are applied by Gaz de France, Tegaz and the local distribution companies and are specific to each supplier.

Without identifying them, these tariffs include:

- the cost of gas supply;
- the cost of use of the transmission and distribution networks (where applicable);
- the cost of load-balancing (use of storage facilities to meet seasonal consumption demand);

- marketing costs.

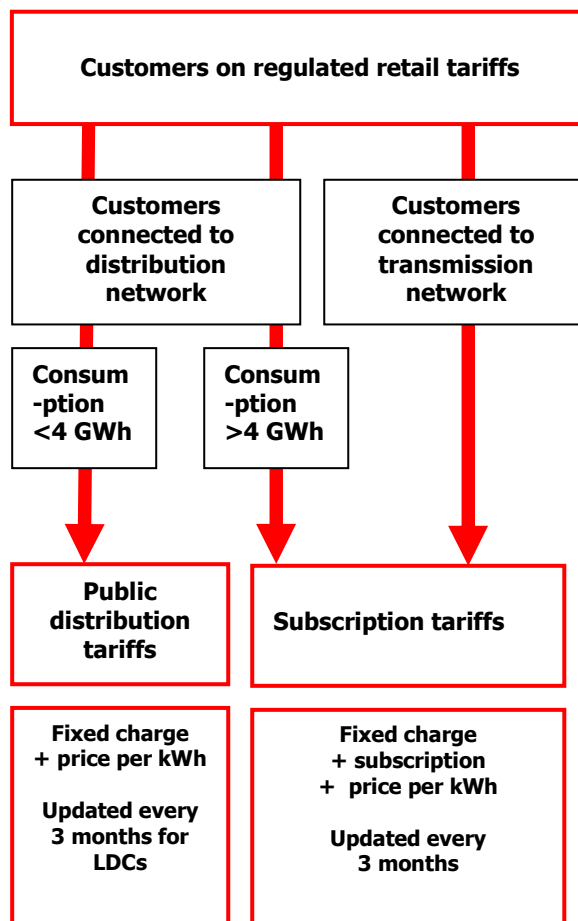
A. SUBSCRIPTION TARIFFS

Subscription tariffs apply to gas consumers connected directly to the gas transmission network and customers connected to a distribution network who consume more than 4 GWh a year.

B. PUBLIC DISTRIBUTION TARIFFS

Public distribution tariffs concern all customers connected to a distribution network consuming less than 4 GWh a year. Gaz de France accounts for around 96% of sales for these tariffs and local distribution companies of natural gas, around 4%.

FIGURE NO. 15: REGULATED RETAIL TARIFFS FOR NATURAL GAS



C. METHODS FOR CHANGING TARIFFS

There is no ministerial order defining the framework for changing the Gaz de France regulated retail tariffs.

In practice, the regulated retail tariffs for subscription from Gaz de France change every quarter. The public distribution tariffs of Gaz de France did not change in 2007.

The Ministerial Order of 21 December 2007 sets the changes in the regulated retail tariffs of the local distribution companies and TEGAZ. These tariffs change every quarter.

In 2007, CRE's opinions on changes to the regulated retail tariffs were followed by the Government, except for two disapprovals on 28 March 2007.

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