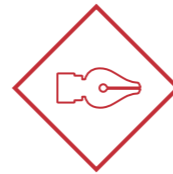




COMMISSION
DE RÉGULATION
DE L'ÉNERGIE

ACTIVITY REPORT 2015

15 years
of regulation



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The CRE: 15 years of history [8-9](#)

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“Since its creation 15 years ago, on 24 March 2000, the French Energy Regulatory Commission (Commission de régulation de l'énergie – CRE) ensures the proper functioning of the electricity and gas markets in France, for the benefit of end consumers and in accordance with the objectives of the energy policy.”

3 MINUTES TO UNDERSTAND CRE

STATUS

Independent administrative authority

PRINCIPLES

Independence

vis-à-vis the energy sector and the government (shareholder of companies in the sector) for the implementation of certain tasks defined by law

Transparency

of work and procedures for the preparation of decisions and opinions

TASKS IN CONTINUOUS DEVELOPMENT SINCE 2010

To participate in the construction of the European internal energy market

To ensure the proper functioning of electricity and natural gas markets for the benefit of the end consumer

To regulate the gas and electricity networks, which are monopolies: to fix their tariffs and ensure that they do not favour any user

To ensure proper consumer information

To implement certain support schemes for renewable energy, by initiating calls for tenders

OBJECTIVES

To guarantee system operator independence

To establish harmonised rules for the operation of networks and markets so that energy can flow freely between the Member States of the European Union

To develop competition between energy suppliers

To ensure that consumers get the best service and pay a fair price



The Board

From left to right: Catherine Edwige, Philippe de Ladoucette (Chairman), Christine Chauvet, Jean-Pierre Sotura, Yann Padova, Héléne Gassin

2 INDEPENDENT BODIES

The Board

6 commissioners, with parity between women and men, appointed based on their legal, economic and technical qualifications, define the broad guidelines and adopt decisions and opinions by relying on the expertise of the management, under the authority of the Chairman and the Managing Director.

The CoRDIS

4 members constitute the Dispute Settlement and Sanctions Committee: two state councillors and two councillors from the Court of Cassation. They are responsible for settling disputes between operators and users over the access to public electricity and gas networks and their use, and for penalising any infringements of the Energy Code.



15 public consultations

72 market players interviewed by the Board

83 consultation meetings of the CRE working groups

8 hearings of the Chairman and CRE departments before parliament



236 deliberations



15 referrals to CoRDIS

WORKFORCE

124 officers, comprising 54 women and 70 men



BUDGET

18.6 million Euros in 2015

Funds necessary for the functioning of the CRE are proposed by the commission to the Minister of Finance to be included in the Finance Act. Any allocations are entered in the general State budget. The CRE is subject to review by the Court of Auditors.



20 billion Euros

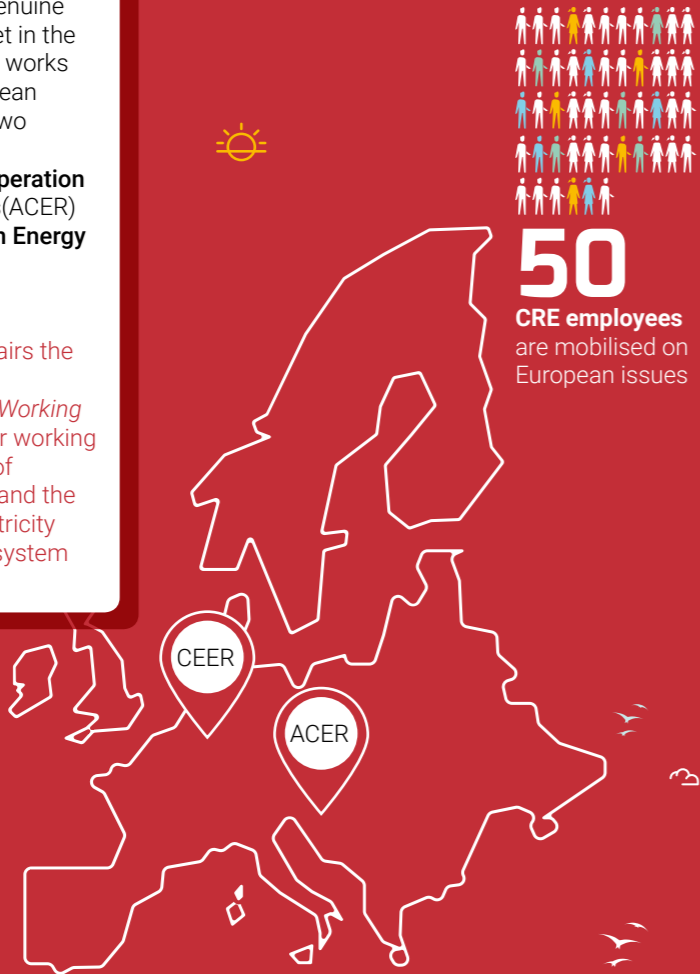
Charges fixed by the CRE relating to the pricing of electricity and gas transmission and distribution systems

IN EUROPE

In order to create a genuine internal energy market in the European Union, CRE works closely with its European counterparts within two organisations:

- Agency for the Cooperation of Energy Regulators (ACER)
- Council of European Energy Regulators (CEER)

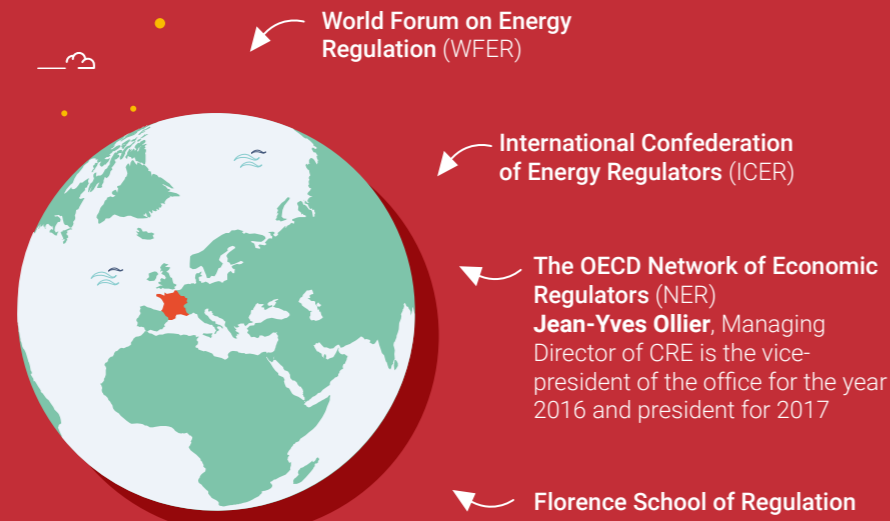
Hélène Gassin, CRE commissioner, co-chairs the CEER working group *Distribution Systems Working Group*, responsible for working on the development of distribution systems and the regulation of the electricity and gas distribution system operators



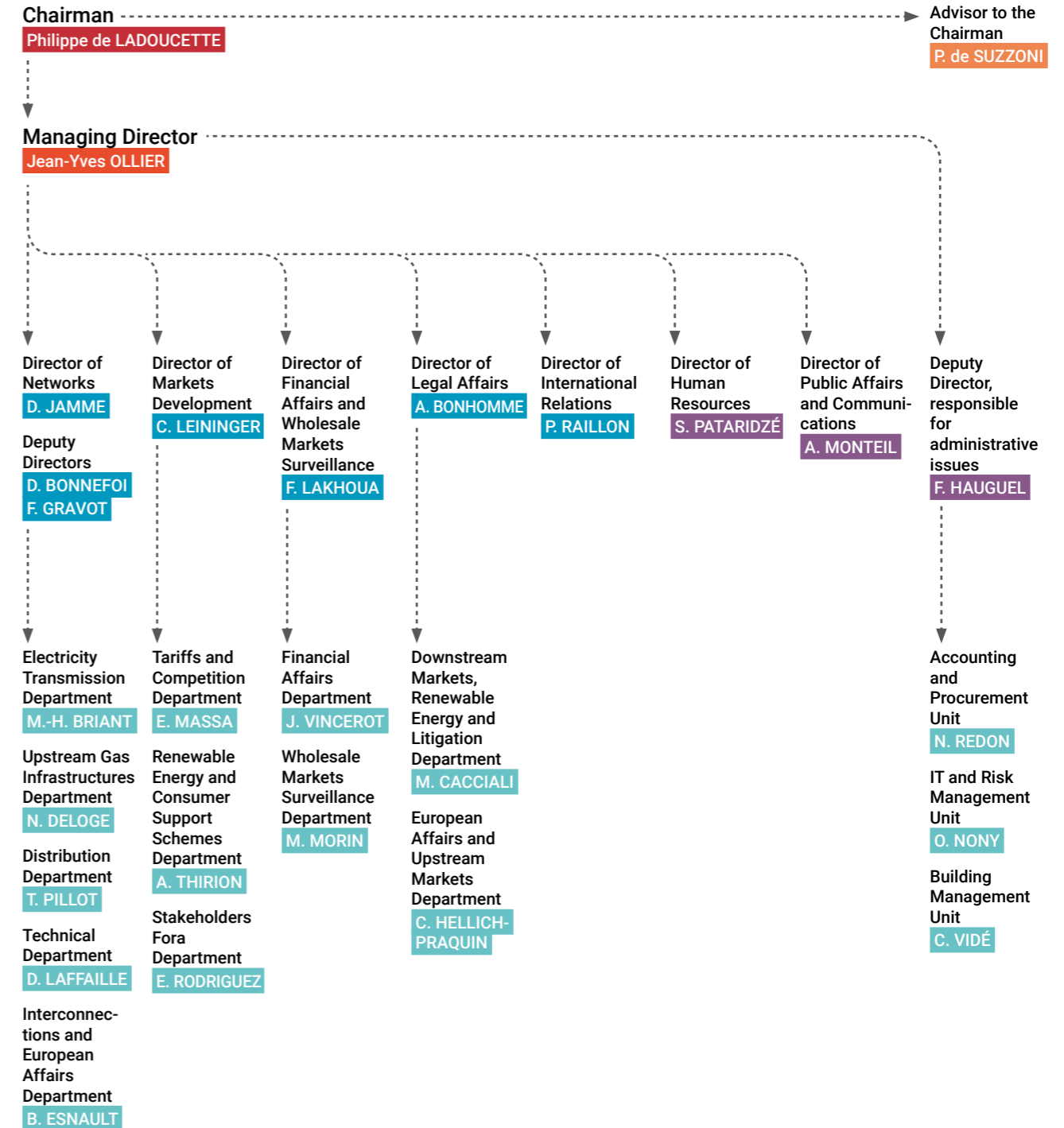
CRE has performed **303** short-term missions in order to participate in the work of European regulators in 2015.

IN THE WORLD

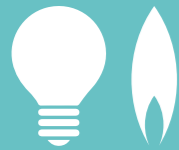
The energy regulators from different continents meet to discuss common challenges and problems



THE ORGANISATION OF THE CRE



THE CRE: 15 YEARS OF HISTORY



SKILLS AND TASKS WHICH REINFORCE AND EXPAND

2000

- proposes network usage tariffs
- advises on regulated electricity tariffs
- assesses public service charges, implements public calls for tenders for renewable energy
- resolves disputes for access to networks

2006

- monitors the wholesale electricity and gas markets

2010

- implements the Regulated Access to Incumbent Nuclear Electricity (ARENH) and the capacity mechanism

2011

- fixes the network usage tariffs
- certifies the transmission system operators
- oversees the deployment of Linky and Gazpar



March 2000

creation of CRE, with competence in the field of electricity

January 2003

CRE's competence expanded to include natural gas

December 2006

a body with the power to sanction and resolve disputes, CoRDIS is created for CRE

2013

- ensures that there is no wholesale market manipulation (REMIT)

2015

- 13 new tasks pursuant to the energy transition law (regulation of gas storage, smart grid experiments...)
- can have the information collected as part of its tasks audited at the expense of companies

2016

- proposes the regulated tariffs for the sale of electricity (blue tariffs)

GRADUAL OPENING UP TO COMPETITION

31 December 2008

- for electricity, 1 million residential customers under market offer by an alternative supplier

31 December 2011

- for gas, 1.5 million residential customers under market offer by an alternative supplier



A MARKET THAT STRUCTURES ITSELF

2005

- conversion of the transmission system operators into subsidiaries: birth of RTE, GRTgaz and TIGF

2007

- first coupling of electricity markets between France, Belgium and the Netherlands

2008

- conversion of the distribution system operators into subsidiaries: birth of ERDF and GRDF

TOOLS



February 2005: launch of the CRE retail and wholesale market observatory



January 2007: publication of the 1st edition of 'Décryptages', the CRE educational newsletter



June 2015: creation of a website dedicated to the end of regulated tariffs
www.tarifsreglementes-cre.fr



May 2007: creation of the site Energie-Info



publication of thematic reports on tariffs, the independence of system operators, the retail and wholesale markets, interconnections, renewable energy...

2011

- first coupling of the gas markets between the North and South zones of GRTgaz
- massive development of renewable energy calls for tenders

2012

- implementation of REMIT, a European regulation on the integrity and transparency of wholesale energy markets

2013

- reform of regulated gas tariffs: monthly changes in supply costs, systematic audits

2014

- reform of regulated electricity tariffs: pricing by stacking costs

2015

- GDF SUEZ becomes ENGIE
- reduction of the number of market places to 2

2016

- ERDF becomes Enedis

EUROPEAN UNION



1996, 1998 AND 2003

1ST ENERGY DIRECTIVES

Free choice of supplier for consumers / Freedom of establishment for producers / Non-discriminatory, transparent and fairly priced access right for all network users



2008

ENERGY-CLIMATE PACKAGE

To increase the share of renewables in the European energy mix to 20% / To reduce CO₂ emissions of EU countries by 20% / To increase energy efficiency from now till 2020 by 20%



2009

3RD ENERGY PACKAGE

Fixing of the transmission charges by the regulators / Creation of the Agency for the Cooperation of Energy Regulators (ACER) / Development of European network codes

FRANCE



DECEMBER 2010

NOME LAW

Creation of a purchasing right and a tariff for regulated access to incumbent nuclear energy (ARENH) for electricity suppliers / Removal of regulated tariffs for non-residential customers with contract power higher than 36 kVA by 31 December 2015 / Strengthening of the CRE monitoring powers



MARCH 2014

CONSUMPTION ACT

Removal of regulated tariffs for natural gas for non-residential customers consuming more than 30 MWh per year by 31 December 2015



AUGUST 2015

ENERGY TRANSITION ACT

To reduce emissions of greenhouse gas and final energy consumption / To raise the share of renewable energy in the French energy mix to 32% by 2030 / To reduce the share of nuclear in the production of electricity to 50% by 2025

HOW OUR ACTIVITIES CONTRIBUTE TO THE CONSTRUCTION OF THE INTERNAL ENERGY MARKET

European electricity market 12

Pioneer in launching market coupling and the flow-based market coupling to the French borders, CRE ensures support of projects beneficial for consumers

Retail markets 16

CRE has done its utmost to build a legislative and regulatory base that favours the emergence of competition

End of regulated tariffs for businesses 20

CRE has invested significant resources to address competitive challenges posed by this milestone achieved in the opening up of markets

Independence of system operators 24

CRE has taken the necessary measures to eliminate any risk of confusion between the brands of the electricity distribution subsidiary ERDF and its parent company EDF

Development of renewable energy 28

CRE pays particular attention to the correct dimensioning of support mechanisms and their impact on consumer bills

DEVELOPING EFFECTIVE TOOLS IN THE SERVICE OF THE ELECTRICITY MARKET

Building the internal energy market is part of CRE's DNA. It has worked for fifteen years to improve the flow of electricity exchanges between France and its neighbouring countries. The goal? To allow Member States to benefit from the complementarity of national production plants, diversify their supplies and reduce overall production costs.

— Coordination

The European Energy Union is based on the principle of interdependence. Thanks to the interconnections which join European transmission systems, the current flows continuously, for both import and export, enabling mutual assistance between neighbouring countries. The development of these exchanges allows Member States to benefit from the complementarity of national production plants, thus diversifying their supplies and reducing overall production costs at a European level.

One of the goals of the European Commission concerning energy has been to eliminate regulatory and technical obstacles to European market integration by promoting the harmonisation of national legislation while taking into account the technical characteristics of the energy systems of each country. As part of the

decision process between system operators and national regulators, and in consultation with market participants, reference models for market organisation were defined (the target models), and then translated into common rules (the network codes) adopted by the Member States.

As regulatory authorities are responsible for controlling the access rules and managing the interconnections developed by the transmission system operators, CRE is heavily involved throughout the target model and network code preparation process. It has also ensured that France implement in advance the anticipated provisions of these codes and, in particular, encouraged RTE and EPEX to participate fully in the development and implementation of market coupling with its neighbouring countries.

“
The regulators play a crucial role in the reflection on market organisation.”



Interconnectors, coupling, flow-based: creating a single exchange zone

The French electricity transmission system is connected to the networks of six other countries: Germany, Belgium, Spain, Great Britain, Italy and Switzerland. These electrical interconnectors are the means of cross-border commercial transactions, and they enable wholesale electricity market participants to source supplies in the country where the market price is the lowest for a given time. For example, in case peak consumption is reached in France, it is more appropriate to import German wind energy than to turn on costly and polluting thermal plants. Thanks to interconnectors, France imported 31.4 TWh and exported 93.9 TWh in 2015.

Market coupling covers 17 European countries, so that energy flows from countries where the wholesale price of electricity is the lowest to the countries where it is the highest. It matches the purchase offers of all these countries with the least expensive production means, and harmonises prices between the coupled zones.

This pooling of production means also depends on the physical characteristics of the network. In France, the transmission capacities available at the interconnectors are 13.5 GW for export and 9.8 GW for import.

Therefore, in order to make the most of the exchange interdependence on several borders, the flow-based was extended in 2015 to the Central Western European region (France, Germany, Austria and the Benelux states) and shall be extended in accordance with the provisions laid down in the network codes. This calculation method for cross-border exchange capacities based on flow enables the physical capacity of the interconnectors to be devoted to commercial exchanges of the greatest economic value, that is where the price differential is the largest.

— ASSESSMENT OF CONTRACTUAL EXCHANGES IN 2015

Export **93.9 TWh**
Import **31.4 TWh**

— TOTAL INTERCONNECTOR CAPACITIES IN 2015

Export **13,500 MW**
Import **9,800 MW**

France / Belgium
Export **17.9 TWh**
Import **1.4 TWh**

France / Belgium*
Export **2,300 MW**
Import **1,600 MW**

France / Germany
Export **4.8 TWh**
Import **14.2 TWh**

France / Germany
Export **1,800 MW**
Import **2,400 MW**

France / Great Britain
Export **15.9 TWh**
Import **1.8 TWh**

France / Great Britain
Export **1,800 MW**
Import **1,800 MW**

France / Switzerland
Export **25.9 TWh**
Import **12.0 TWh**

France / Switzerland
Export **3,100 MW**
Import **1,200 MW**

France / Spain
Export **9.3 TWh**
Import **2.0 TWh**

France / Spain**
Export **2,000 MW**
Import **1,800 MW**

France / Italy
Export **20.1 TWh**
Import **0.4 TWh**

France / Italy
Export **2,500 MW**
Import **1,000 MW**

* Average values until the introduction of flow-based on 21 May 2015
** Average values after the inauguration of the Baixas-Santa Llogaia interconnector

— Being a motor

Voluntarism and experience in the implementation of market coupling, and the European target model for the organisation of cross-border trade have enabled France and more generally the Central Western European region, which includes France, Germany, Austria and the Benelux states, to be thought of as a reference figure in the drafting of network codes.

CRE has been working for many years to implement the coupling of daily markets by price. The first coupling took place in 2007 between France, Belgium and the Netherlands. In 2010, Germany and Luxembourg joined, and they were followed in 2014 by Great Britain and Spain, and finally by Italy in 2015. In total, the exchanges of 17 European countries are connected today. To achieve this, CRE worked closely with the European system operators, electricity exchanges and its counterparts meeting within the Agency for Cooperation of Energy Regulators (ACER). For France, this means that its electrical interconnection capacities are allocated efficiently to five of its six borders: Germany, Belgium, Spain, Great Britain and Italy.

The generalisation of the coupling of daily markets has allowed a more efficient use of the complementarities between production facilities, especially to meet the demands of peak consumption. It allows France to contribute fully to the security of supply of its neighbours whilst benefitting from lower prices due to the development of renewable energy in Germany.

— Responding to market needs

Infrastructure development must also be assessed from a European perspective in order to ensure that planned investments are suited to the market needs. Transmission system operators therefore need to coordinate infrastructures planning by preparing ten-year European development plans for energy networks, published every two years by ENTSOE, the organisation uniting European system operators. Network strengthening needs are assessed based on various scenarios for trends in European production and consumption, with one important point: the development of wind farms and solar power stations, which are one of the cornerstones of lower greenhouse emission.

CRE ensures that the strengthening of French infrastructure is carried out in line with the developments anticipated in the rest of Europe, and that the energy infrastructure is developed in a manner that addresses needs. Furthermore, it believes that any decisions to increase interconnector capacity must be justified by a robust cost-benefit analysis.



EUR 100 million
Decrease in production costs across France, Germany, Austria and Benelux thanks to flow-based.

“
CRE ensures support of projects beneficial to consumers.”

In order to further improve the efficiency of cross-border mechanisms, CRE has been the motor in the establishment in 2015 of market coupling based on flows in the Central Western European region. This method involves using the flexibility allowed by the management of transmission systems to prioritise the allocation of interconnection capacity at the borders where the needs are the greatest. It has thus applied in advance the network code on capacity allocation and congestion management at interconnections. This development of market coupling, a truly innovative and sophisticated tool, is expected to play a role in reducing production costs by an estimated 100 million Euros per year across the Central Western region.



INTERVIEW WITH... PIERRE BORNARD

Former Vice-Chairman of the Board and former Deputy Managing Director of RTE, former Chairman of the Board of Directors of ENTSOE

which was considered extremely congested, significant capacity was ultimately unused. The idea of market coupling emerged at this period. Based on the model already tested in the Scandinavian electricity exchange, coupled markets permit automated exchanges of electricity as long as the transmission capacity is available and there is a price spread.

In 2001, when Powernext was established under the leadership of Euronext and RTE, RTE decided to invite its Belgian and Dutch counterparts, Elia and TenneT to join through a joint venture: the “French” exchange has expressed a European calling from the onset. November 2006 marks the first stage of market coupling with the implementation of the trilateral market coupling (TLC) between France, Belgium and the Netherlands.

States, which consult little or not at all with each other before making decisions, instead of viewing comprehensively the generating fleet (which would of course make use of local resources) for the sake of global optimisation. Besides the waste, this lack of coordination poses a real risk to the security of supply. My hope is that this threat, which is politically unacceptable, will be an effective lever for better coordination.

As former Chairman of the board of ENTSOE, what do you think of the cooperation between the European transmission system operators?

Transmission operators have a deep knowledge of the complexity of the



The internal electricity market was born from the failure to exploit the complementarity of the European production facilities.

How did the ideas of market coupling and flow-based emerge?

The idea of an internal electricity market was not born from – as it is often said – an ideological bias, but from the failure to exploit the complementarity of European production facilities. At the end of the 90s, the various country mixes were diverse, optimised separately, which resulted in wasting several hundred billion francs annually. An open market was the only tool from a political, cultural and certainly technological perspective, that was able to realise optimisation across the continent.

The challenge was the size and the necessary tools, which were still to be created. First of all, the first attempts at explicit auctions for smooth access to interconnections were soon proven ineffective, particularly for daily timeframes. At the French-Belgian border,

Capacity calculation was initially based on a frustrating transmission network modelling, a bilateral capacity between neighbouring countries without much physical sense, which gave rise to much controversy over the calculation methods. The flow-based method introduces a more detailed infrastructure modelling and it is not inconceivable that in future modelling will become even more sophisticated. Ultimately, this method enables the effective use of scarce and expensive infrastructure to achieve greater exchange capacity with the same infrastructure.

What are the challenges ahead for the networks? How does further European integration help to respond to these challenges?

The main challenge is the lack of a genuine European energy policy: the Treaty of Lisbon assigned the responsibility of the energy mix to the individual Member

immense and fragile electricity systems. Once the political ambitions and regulatory frameworks have been defined, all market architectures must rely on this expertise to build an electricity system as effective and robust as possible. Being physically interdependent, they have been working together for decades. The more integrated the market, the more they need to deepen their level of cooperation. Within ENTSOE, I was struck by the ease with which they cooperated on sensitive and complex issues and their capability to integrate long-term prospects into serving society. The few serious difficulties are limited to cases when someone receives threatening orders from their governments... The cooperation between electricity transmission system operators could well be a model for many other institutions.

MAKING THE DEVELOPMENT OF COMPETITION IN FRANCE A REALITY

The opening of the retail energy market – especially the electricity market – was slow to become reality in France. Within a national legal framework, which is now more supportive of this opening, CRE contributes to its advancement. It monitors the functioning of retail markets and ensures that regulated tariffs allow economic space for competitors of incumbent suppliers, and that the exit conditions of these tariffs for business clients do not disadvantage alternative operators.

— Electricity market: ensuring the establishment of a mechanism for effective market opening

Under the pressure of a State aid procedure initiated by the European Commission on the regime of regulated tariffs for companies, France adopted on 7 December 2010 the law on the new organisation of the electricity market (NOME law). This law provides for the removal of regulated yellow and green tariffs by 1 January 2016 and for a mechanism aimed at allowing alternative suppliers to compete with blue tariffs on the market for residential customers, with regulated access to incumbent nuclear electricity (ARENH) on the one hand and the pricing of these tariffs “by cost stacking”. CRE is one of the main players in the implementation of this mechanism.

The ARENH allows alternative suppliers, who have little or no own production capacity and therefore rely heavily on the purchase of electricity on the wholesale

market, to buy up to 25% of the production of EDF’s nuclear facilities. The purchase price amounts to €42/MWh since 1 January 2012. While the market price was close to €60/MWh in 2011, alternative suppliers were able to significantly reduce their energy purchase costs. The ARENH is no longer subscribed in the current situation, as market prices have fallen sharply (around €34/MWh at the end of 2015).

Another important point: pricing by stacking costs. Effective as of 1 November 2014, this method of setting electricity tariffs no longer reflects EDF’s costs, but those incurred by alternative suppliers for supplying the customers in their portfolio and for building their market offers. Regulated tariffs are now fixed in such a way that ensures that they are “debatable”, that is, a competing operator or a new entrant shall be free to make offers at prices equal to or lower than the tariffs.

24%
of sites among the 370,000 sites under market offer in January 2016 have signed a contract under market offer with an alternative supplier



↑
17,000 sites switched to a transitional service in January 2016, among the 110,000 sites affected in the last stage of the removal of regulated tariffs for natural gas sales in April 2014

Alternative suppliers are now able to offer residential customers prices up to 5% lower than the regulated tariffs. The share of market offers in the residential segment is developing, albeit at a more moderate pace: the number of people leaving EDF for an alternative supplier every month is equivalent to the population of a town like Chambéry (55,000 customers on average).

Finally, the removal of yellow and green regulated tariffs by 1 January 2016 was crucial. It allowed alternative suppliers to gain market shares with around 25% of the customers who subscribed to market offers with a competitor of EDF. Companies were able to save between 10% and 20% on their bill, as the market price was lower than the regulated tariffs. CRE ensured that incumbent suppliers do not reserve the use of data about their regulated tariff customers to make market offers to them, and make some of this information available to their competitors. It also monitors their pricing practices.

— Gas market: enjoying low market prices

The gas market – with 83% of volumes consumed under market offers, of which 50% is from alternative suppliers – is more open than the electricity market (with 46% and 22% respectively). The reform of the method for fixing the regulated tariffs, which occurred in May 2013, and the Consumption Act of 17 March 2014 removing the regulated tariffs for some businesses, helped reinforce this trend.

The tariff reform of 2013, implemented in a context of downward market prices, stimulated competition, simplifying tariff setting while giving visibility to alternative suppliers. Tariff adjustments were previously made quarterly by the ministers, and the refusal to raise tariffs under the regulatory framework had led to repeated cancellations by the Council of State. CRE now validates tariff movements each month based on ENGIE supply costs under the formula defining their mode of calculation. The formula has evolved gradually to better reflect ENGIE supply contracts which were previously predominantly indexed to oil prices. Since June 2015 the formula has included a share of 77.4% of the gas indices on the wholesale market. The formula and tariff scales are fixed each year by the Minister of Energy and the Minister of Economy after a thorough analysis by CRE.

The regulator, in cooperation with the Competition Authority ensures the conditions of market opening.

“
You have to capitalise on competition! Encouraging consumers to subscribe to offers at regulated prices is making them believe that these tariffs are protecting their purchasing power, while more competitive market prices exist.”

After Direct Energie referred to and CRE requested an opinion from the Competition Authority, it imposed precautionary measures on ENGIE. First on 9 September 2014, the Authority ordered ENGIE to make certain data relating to its regulated tariff customers available to its competitors (including data of residential customers not opposed to this, in view of its active

efforts to convert residential customers into its own market offers). Later, on 2 May 2016 the Authority made a decision concerning ENGIE's pricing practices within some off-catalogue offers for business customers.

Finally, like for electricity, the end of regulated tariffs for some businesses allowed for a sharp increase in competition: alternative suppliers saw their portfolio of clients grow by 15%. The group gas purchasing offers for individuals, organised by consumer associations or more recently by NGOs, have also increased in the past two years. Gains of around 13% were made compared to the regulated tariff.

— What's the future for the competition?

The installation of smart meters is a trump card for suppliers that can provide diversified commercial offers. CRE plays an important role right from the start in the supervision of these advanced metering devices, which, by giving more accurate and detailed information, enable suppliers to make offers for their customers, adapted to their consumption profile and their usage, allowing them to reduce their bills. 35 million Linky electricity meters will be installed by 2021 and 11 million Gazpar gas meters by 2022. Furthermore, 83% of electricity customers "at the high end of the portfolio" are already equipped with smart meters.

Moreover, since 8 December 2015, it is the CRE's responsibility to propose to the Minister of Economy and to the Minister of Energy the level of regulated electricity tariffs for customers with blue tariffs. CRE will be guarantor of the sustainability of their contestability by alternative suppliers. It will continue its work of transparency and pedagogy on tariffs.

Even if this advance provides enough visibility for competition to develop, will it be enough? Will individual consumers be more likely to create competition? As CRE has been reiterating for many years, EDF and ENGIE have a very favourable brand image among residential customers, due to their status as traditional suppliers, which – their knowledge of market opening is limited – has even more weight on their behaviour. The results of the Energie-Info barometer of October 2015 indicate that 60% of gas consumers and 52% of electricity consumers are aware of their right to switch suppliers and that only 28% of households know that EDF and ENGIE are two separate and competing companies.

The development of competition certainly depends on the future of regulated tariffs for residential customers. Regarding gas, the subject is currently before the Court of Justice of the European Union whose assistant public prosecutor stated in April 2016 that the regulated tariffs for gas sales constitute an unjustified obstacle to the realisation of a competitive natural gas market. This dispute could have repercussion on the regulated electricity tariffs, whose measures will in any case be reviewed before the deadline of the NOME law in 2025.



Interview with... FABIEN ROQUES

Associate Professor at the Paris Dauphine University, Senior Vice President at Compass Lexecon

generate gains in efficiency, to stimulate innovation and to lower costs for European consumers.

Moreover, the political developments over the last ten years (Russian-Ukrainian crisis, oil and gas shocks and counter-shocks) have reminded us of Europe's energy vulnerability. The integrated energy market aims to help maintain the security of supply.

Have European consumers benefited from the energy markets opening?

It's too early to make an economic assessment of the gains for consumers. Firstly, because the process remains largely unfinished, but also because some of the expected benefits will only materialise in the long term, given the long

significant enough, especially if tariffs are kept artificially below cost. Maintaining regulated tariffs does not help the development of competition.

How can consumers be encouraged to take advantage of the competition?

Although one can see more and more initiatives and ideas, energy – unlike other sectors, such as telecoms – has not yet seen the emergence of a momentum in innovating the provision of services related to energy that would stimulate the development of competition. I am convinced that competition in the retail market will take on a new impetus through



Energy has not yet seen the emergence of a momentum in innovating the provision of services that would stimulate the development of competition

How do the internal energy market, liberalisation of markets and competition overlap?

The creation of an internal energy market is part of a dual political and economic dynamic: it is a question of both sharing strategic resources, such as energy, and opening up to competition a sector, which until now was dominated by public monopolies.

Its origin can be found in the founding treaties of the EU: the European Coal and Steel Community (ECSC) in 1951, and later the Treaties of Rome in 1957 mark the start of the construction of a European free-trade zone, the "Common Market". From the 1980s, the five continents have been witness to the opening up of network industries, such as electricity and gas, to competition, in response to criticism of integrated monopolies. The goal was to

lifetimes of infrastructure which is typical of the sector.

The development of exchanges at the borders has already contributed to significant gains. It is estimated that the coupling of electricity markets would reduce the bill by about €1 billion per year across Europe. Studies show that more significant gains could be achieved by coordinating national energy policies more closely.

How do you explain the weak opening-up of the retail electricity market for domestic customers, even though financial gains are possible?

There are relatively few European domestic customers who switch suppliers. Certain barriers persist, such as lack of information or of the perception of great complexity. The price difference between public tariffs and market offers is not

the development of innovative offers enabled by new technologies (local production, distributed load shedding, storage...), which will put consumers at the heart of the system. In 20 years time, we will no longer buy energy, but a set of energy services.

Currently, one of the major challenges of governance and regulation is the establishment of a market framework that will accompany this transformation and stimulate innovation. While the wholesale market and retail market have so far been largely independent, we must now work towards ensuring the consistency of price signals conveyed to different consumers and network users. This requires deep reflection on the long-term development of the network usage tariff, but also on the evolution of energy taxation.



Measuring competitive activity and detecting any market malfunctioning

CRE has the task of observation and monitoring of the electricity and natural gas retail markets (art. L.131-1 of the Energy Code), which supports the prices and commercial practices of the operators. It carries these tasks out by collecting data on offers (market share of participants, cost and price data relative to certain offers or certain customer segments, promotion of new offers, commercial communication...) from participants (system operators, suppliers, consumers, wholesale market participants...). CRE in particular ensures that incumbent suppliers do not misuse the means related to providing customers under regulated tariffs for the benefit of their market offers, and the absence of cross-subsidies between the sales activities at regulated tariffs and those at market offer. It publishes quarterly monitoring reports and periodic reports on the operation of retail markets.

END OF PUBLIC TARIFFS: RESPONDING TO COMPETITIVE CHALLENGES

A small revolution has taken place in the energy sector. Since 1 January 2016, some business sites have been obliged to sign market offer contracts with the electricity or gas supplier of their choice. Regulated tariffs are over! CRE has invested significant resources to address challenges posed by this milestone achieved in the opening up of markets.

Thanks to purchasing associations, businesses have saved between 5 and 10% in electricity and between 15 and 20% in gas compared to regulated tariffs. These buying groups have an influence on prices and facilitate transactions.

— A French commitment vis-à-vis the European Commission

In 2007, the European Commission opened an investigation on regulated electricity tariffs applicable to large and medium-sized companies. The Commission suspected that these tariffs, offered exclusively by incumbent suppliers (ENGIE, EDF and local distribution companies) and fixed by the government, constituted disguised government subsidies for electricity suppliers, resulting in distortions of competition in the liberalised market.

In order to end the infringement proceedings against it, France adopted:

- article 14 of the law on the new organisation of the electricity market on 7 December 2010, which removes the regulated electricity tariffs for customers who have subscribed for power greater than 36 kVA;
- article 25 of the Hamon law on consumption on 17 March 2014, which ended regulated gas tariffs for sites consuming more than 30 MWh per year.

Public institutions (hospitals, schools, retirement homes...), restaurants, offices, industrial sites, condominiums, shops...: a total of 170,000 customers were affected for natural gas and 468,000 for electricity.

Three major stages marked this gradual opening to competition:

- 19 June 2014 for sites connected to the gas transmission system;
- 1 January 2015 for principally residential sites and buildings consuming more than 200 MWh per year of gas;
- 1 January 2016 for sites consuming more than 30 MWh of gas per year, for principally residential buildings consuming more than 150 MWh of gas per year, and finally for electricity sites with a contracted power greater than 36 kVA.

— Informing consumers to help them look ahead

CRE has repeatedly deplored the lack of communication by the public authorities on the removal of regulated tariffs. Many businesses and public purchasers were simply not aware of this. The regulator has therefore set up an information and support system:

- informational meetings bringing together companies and public purchasers. Between 2014 and 2015, CRE has stepped up the number of meetings on French territory, organising them in partnership with the Chambers of Commerce and Industry, or with professional associations for artisans and SMEs, and public authorities.
- an educational video and a dedicated website, created in October 2014 and June 2015 respectively.
- a working group dedicated to the preparation of the end of regulated tariffs. Established in January 2014 and comprising CRE, the French Energy Ombudsman, suppliers, system operators, consumer associations, energy unions and representatives of the DGEC and the DGCCRF, this group prepared practical guides and fact sheets.
- letters and phone calls to latecomers. 10,300 gas consumers still under transitional offers in May 2015 received a letter from CRE, and 243 shared ownership properties benefitting from a supply continuity device provided by GRDF were then contacted in a telephone campaign.

On 1 January 2016, 100,000 electricity sites and 17,000 gas sites have benefitted from a transitional mechanism preventing them from being cut off.



1 dedicated site:
www.tarifsreglementes-cre.fr

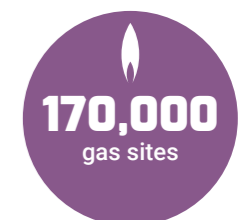
- a round table gathered together consumer representatives. Organised in September 2015, it was an opportunity for CRE to collect their feedback and identify their priorities in terms of retail market functioning.

— Access to customer files, a competitive challenge

The incumbent suppliers, sole holders of customer files due to their former monopoly, had a strong competitive advantage. In order to be able to make suitable commercial offers, alternative suppliers should have access to consumption data, the technical characteristics of sites or even contact information.

CRE made two decisions on 22 May 2014, requesting distribution system operators ERDF and GRDF to provide free access to consumers (or a designated third party) via an electronic platform so that they could retrieve their consumption information (reference annual consumption, profile, load curve, power...) and send them to the supplier they contact.

Number of sites affected by the end of regulated tariffs (on 30 May 2014)



In October 2014, CRE made an educational video on the end of regulated tariffs for businesses. The initiative was welcomed by energy suppliers who had the chance to watch and comment on the video before the premier during a meeting of the working group on communication and information about the end of regulated tariffs set up by the CRE.



Following this same logic, after having been referred to by CRE and Direct Energie, the Competition Authority directed ENGIE in its decision of 9 September 2014 to make the data in its regulated tariff residential and non-residential client file available to alternative suppliers. CRE transposed these measures in the case of electricity and sent a similar request to EDF.

— Avoiding bottlenecks

The constraints of the IT systems of the distribution system operators should not slow down the process of leaving regulated tariffs. CRE has integrated this issue very early on into the consultation groups under its auspices.

The processing of en masse requests to change suppliers represented one of the main challenges for system operators. For example, ERDF, which normally manages 2000 supplier changes each month, completed almost 270,000 supplier changes during the last quarter of 2015. The dedicated IT systems were adapted to accommodate the expected volumes. And changing to market offers went without a hitch.

— From anti-interruption mechanisms to price incentives

Transitional service

The deadline for signing a market offer contract was originally scheduled for 1 January 2015 and 2016. In order to avoid interruptions, the law provides for auto-

matic changing to a transitional offer, that is, a default market offer from the incumbent supplier, valid for 6 months. During this period, customers can change offers and/or suppliers without any cost or notice of termination.

CRE recommended fixing the price of transitional deals at a level which would encourage customers to look for a market offer. On 1 January 2015, the level of the transitional price ranged from 1 to 3% above the level of the regulated tariff. Nevertheless, 17,000 gas sites (about 57,000 in April 2014) switched to the transitional price. Therefore, by 1 January 2016, EDF and ENGIE applied an average increase of 5% compared to the level of regulated tariffs. Only 100,000 electricity sites and 17,000 gas sites (as of 1 January 2015 when twice as many sites were affected) have switched to transitional offers.

The GRDF mechanism

Noting the persistence of a significant number of gas clients with transitional offers as 30 June 2015 approached (more than 10,000 consumers), CRE took emergency measures. In its deliberation on 28 May 2015, the suspension of gas supply to the sites concerned on 30 September 2015 was postponed. They continued to be supplied by GRDF, but at a price 20% higher.

Call for tenders for the appointment of suppliers

The transitory prices disappear on 30 June 2016. In order to avoid interruptions, the order of 10 February 2016 provides for the appointment of a default supplier, selected after a tender procedure instructed by CRE.

CRE has written the specifications of the tender so as to encourage inactive clients to select a new contract. It also had to ensure that the tender does not end up with the majority of sites retained in the portfolio of incumbent suppliers. The price of the proposed offers was thus increased by 30% compared to the usual prices. The call for tender also enables the avoidance of any over-remuneration of designated suppliers, since they must return to the State part of the gap between their costs and the level of the applicable prices.



70 informational meetings organised between 2014 and 2015 in partnership with the Chambers of Commerce and Industry and professional organisations, gathering nearly 2,300 companies and public purchasers



10,300 letters sent to gas consumers still with transitional prices in May 2015



INTERVIEW WITH... PHILIPPE TESSIER

Director of the Energy and Environment project at the union of public procurement groups (UGAP)

Furthermore, it is clear that there is a gap between two universes and temporalities: on the one hand, public calls for tender in which the offer, and thus the price, usually remains valid for several weeks; on the other, an energy market where prices vary continuously. The ideal, therefore, is to award the contract on the day the offers are received and before the market closes in order to avoid the overnight risk. It is possible to see the difficulties that this short time for analysis poses for the majority of public purchasers.

In order to support public officers confronted with this complexity and suppliers overwhelmed by calls for tenders launched simultaneously to meet the deadlines for the end of regulated sales

How many group purchase offers did you launch? What were the results?

The beneficiaries of UGAP's gas and Electricity mechanism belong to three public sectors: the local authorities, the State and its operators and the health institutions. This is to date the largest public purchasing group mechanism.

The Gas mechanism gathered 3,800 beneficiaries in two waves for a volume of 7.6 TWh on 50,000 sites. The Electricity mechanism gathered 3,000 beneficiaries for 3.3 TWh on 52,000 sites. It should be noted that the electricity sites formerly with the "blue tariff" gathered 40,000 sites, representing a considerable volume.



Purchasing electricity and gas is both complex, counter-intuitive and full of pitfalls for public purchasers

Why and how was UGAP organised to offer joint purchase offers to customers about to leave regulated sales tariffs?

Electricity and gas are common supplies. However, the act of purchasing these goods is not. It is both complex, counter-intuitive and full of pitfalls for public purchasers. Normally, when a community purchases a good, it describes in the specification the qualities expected from the product and the supplier's services. In the network energy sector, the supplier that sells the molecule or the electron is not a guarantor of its quality since this is the responsibility of the distribution system operator. Moreover, the latter acts under monopoly of distribution: its procedures are standardised, a specification for buying the supply and transmission cannot go against its rules of operation.

tariffs, the UGAP created an Energy and Environment Department in 2013. Two territorial engineers, who have mastered the practice of energy management in communities and have participated in the creation of the first gas purchase group since 2004, were recruited (Nicolas Bisson, project manager and myself). This organisation has enabled the central purchasing body to adapt its processes and purchase procedure in order to be able to award contracts in less than two hours.

Public purchasers were able to realise savings of -20 % for gas and -15 % for electricity compared to regulated tariffs. All suppliers with public customers participated in these consultations.

What is your view on the liberalisation of energy markets?

In this sector the information processing chain from meter to bill is complex. It uses several operators. Consumers are therefore confronted with the problems of independent billing for procurement procedures. The challenge of opening up the markets for consumers thus lies in the quality of the information systems, whether their sites are situated within the territories of the local distribution companies or not.

CONFUSION OF BRANDS: AN OBSTACLE TO COMPETITION

This is the story of a name change. That of ERDF, which was renamed Enedis. Since the creation of the electricity distributor in 2008, CRE criticised the similarity of its name and logo with those of its parent company EDF. It considered it a source of confusion between its public service mission of supplying electricity and its activity as a competitive supplier. Retrospective.

— Independence: a principle serving consumers

The liberalisation of energy markets has led to the separation of production, transmission and energy supply activities into so-called "vertically integrated" businesses. This is how electricity transmitter RTE came into being in 2005 and electricity distributor ERDF in 2008, both 100% subsidiaries of EDF. The two system operators providing public service missions are regulated by CRE. The regulator ensures, amongst other things, that they are independent from their parent company in matters of governance, operation and means. This principle of independence aims to prevent them from distorting competition by favouring EDF at the expense of other suppliers.

In order to clearly establish this independence, article L.111-64 of the Energy Code states that no confusion should exist between the social identities, the communication practices and the brand strategies of the distribution system operators and those used by the supplier of the same group. By respecting this obligation, they contribute to preventing the general public from associating and confusing these two

categories of players, who provide different services independently of each other.

— Notable efforts but still deemed insufficient

And for good reason. While energy markets have been fully open since 2007, a survey conducted in April 2015 by the institute CSA on behalf of CRE shows that the French clearly confused ERDF and EDF. 76% of those surveyed think that EDF is responsible for reading meters and 43% attributed ERDF the role of operating nuclear power plants.

CRE has denounced this confusion since the creation of the distribution subsidiary in its successive reports on the independence of system operators. In addition to the very similar names, both logos use the same image of a turbine, with a different colour (blue for ERDF and orange for EDF), and the same typography. Despite communication and educational efforts undertaken by ERDF to develop its reputation, CRE repeatedly asked EDF and ERDF to eliminate these factors of confusion. Still nothing happens, at least regarding the confusion.



↑ System operators who do not respond to the requests of CRE are in breach of the energy code. They face a referral to the Standing Committee for Dispute Settlement and Sanctions (CoRDIS) by the Chairman of the CRE.

A key stage in opening up markets is taking shape: on 1 January 2016, the regulated tariffs of sales of electricity and natural gas were removed for some businesses. The affected consumers have to subscribe to a market offer with the supplier of their choice. In this context, ERDF presents to CRE a proposal for changing its visual identity at the end of 2014, with two logos. The proposed logos, filed at the National Institute of Industrial Property no longer include the turbine blades used by the EDF logo. However they still include in blue the ERDF initials in lowercase letters in a new typography.

In its report on the independence of system operators published on 6 January 2015, CRE considers that these change do not contribute to removing all confusion possible among consumers. It orders ERDF to send it within six months its proposals for changing the main components of its brand, otherwise being at risk of referral to the CRE Standing Committee for Dispute Settlement and Sanctions (CoRDIS). This latter may in particular decide to issue fines of up to 8% of sales. In addition, CRE requests ERDF and EDF to submit, by 1 June 2015, an action plan to be implemented in order



France is not an exception

The absence of confusion between the brands of a energy distribution subsidiary and its parent company is an obligation that applies to all Member States of the European Union.

The directive 2009/72/EC of 13 July 2009 provides that national regulators must monitor the activities of vertically integrated companies so that "vertically integrated distribution system operators shall not, in their communication and branding, create confusion in respect of the separate identity of the supply branch of the vertically integrated undertaking".

In Germany, Greece, the Netherlands or Italy, a certain number of vertically integrated European companies made major changes to differentiate their brands in order to end any confusion between their social identities and the branding of the companies in charge of supply and distribution respectively.

to eliminate the risk of association of the two companies by the general public, thus removing any possible confusion.

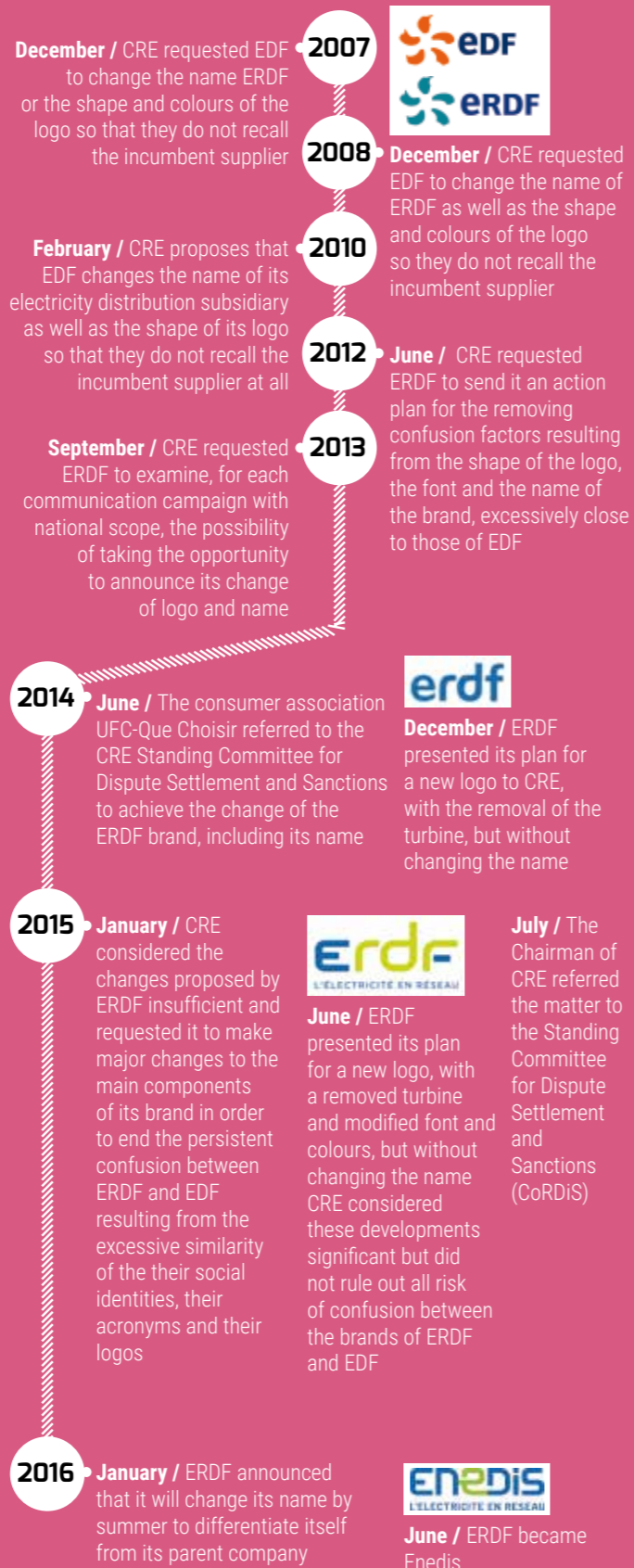
During a hearing on 3 June 2015, ERDF presents a new plan for the development of its brand: the turbine has disappeared, the font and colour combinations are different from those of EDF and a signature "l'électricité en réseau" ("electricity in network") appears. Although these are significant developments, CRE again considers this proposal insufficient. The confusion factors remain: phonetic and conceptual similarity, similarity of certain colours, similar acronyms and company names. The project presented by ERDF, lacking a modification of the EDF brand, still does not eliminate all risk of confusion.

ERDF nevertheless uses its new logo in summer 2015 across the whole of France, accompanied by a communication plan of 18 months. Furthermore, it declares in the press that the company will not change its name.

— ERDF changes its name

At this point the Chairman of CRE refers to CoRDIS in July 2015 because considering their respective brand strategies, system operator ERDF and its parent company EDF would have implemented practices contrary to the energy code.

This referral seems to have shaken things up. In January 2016, ERDF announces that it is going to change its name by the summer to differentiate itself from its parent. It declares in a statement that this new name "will allow the electricity distribution system operator to increase visibility and clarify its missions as desired by CRE". ERDF is now called Enedis.



INTERVIEW WITH... CAROLINE MARTI

Lecturer at CELSA Paris-Sorbonne,
Head of Brand Department and
researcher at GRIPIC

from what its competitors do. Company management does not choose the signs for its brands by accident.

What interest could a company have in changing its name? What are its goals?

Branding is an engaging activity that reflects a vocation, a history, a trade, but also a projection, as the brand is the bearer of a promise addressed to consumers.

The name change is an opportunity to rethink an organisation's strategy and to share it both internally and externally in order to make it stronger. The name change may be considered as both a management and a marketing tool.

Nevertheless, it presents a risk as to how it will be welcomed by the public, of which assumption can be made, but can never

be behind their previously acquired prerogative.

The voluntarism of dissociation allows real independence of the brands displayed. In this case, they need to stop showing an institutional posture in order to move to a logical communication based on the specific promise made to the public, shifting their focus to the offer. What does it mean specifically to the public, how can it symbolise its positioning, its market offer, the service it wants to supply long term? Brand identification is key in imagining its uniqueness.

Independence can be demonstrated by sudden branding with a strong, general



The voluntarism of dissociation allows real independence of the brands displayed.

What are the elements that identify a company?

A company needs to be identified by different audiences: employees, shareholders, customers and in some cases stakeholders that are the local authorities or the state.

If the goals of the messages addressed to these different audiences vary, the company must be able to integrate them all through mediation process. The brand consists of both fixed and evolving elements which constitute "brand identification":

- a name which covers offers and activities, which refers to a word or words and a sound or sounds;
- emblems (logos, slogans, jingles...);
- stylistic choices (typography, colour, etc.).

The elements which identify the company are supposed to symbolise its positioning on the market and this way differentiate it

be assured. Abandoning its name for another can be a huge opportunity, but also represents a risk of loss of reputation and confidence.

How can two companies which have a common history and become independent ensure that they are no longer confused?

This question leads to other questions: can it free itself from its origins in order to express its recent independence? Can it free itself from the reputation of its original activity such that it relies solely on the strength of its new offering?

The temptation to keep the common characteristics in both of the two entities is great. The case of the energy companies is actually very specific, as independence is the result of political and regulatory choices and it is both an opportunity and a constraint for the companies to leave

change of one of the brands in all media or by gradually changing the brand identification. In the first case, an own brand identity that the public can identify will be expressed, and recognised, if the means of building brand awareness are sufficient. In the second case, the brand benefits from the reputation of its original entity, but it will take longer to be identified as an independent entity with a unique offer. In the first case, the challenge is to make itself known to the public and to gain its trust. In the second case, the challenge is to remain visible to the public, who can easily get lost in unclear offers that describe missions vaguely.

GREEN ENERGY: FOR A SUSTAINABLE ENERGY TRANSITION

A sustainable energy transition involves paying a fair price for green energy. It requires the economic expertise of an impartial and independent player from stakeholders and the government. This is why CRE pays particular attention to the correct dimensioning of support mechanisms. This mission, however, requires it to strengthen its means of operation.

— Contributing to the proper development of renewable energy

The development of renewable energy is one of the priorities of the energy policy. In order to promote their rapid development, the government has, until recently, resorted to two support mechanisms: purchase obligation and calls for tenders. It guarantees to producers to sell their produce at a fixed price guaranteed for 15 to 20 years. In the first case, incumbent suppliers are obliged to buy the electricity production at a predefined tariff, which is higher than the market price and is fixed by ministerial decree after consultation with CRE. In the second case, tenderers propose the tariff at which they wish to sell their production to obligated purchasers. In this case the price is a criterion in selecting the offers. CRE participates in the development of the specifications – in the past by proposing the wording, nowadays by giving an opinion issued by the Minister of Energy the project –, issues the calls for tenders and gives its opinion on the selection process. However, it is nonetheless the minister, who selects the winner. The financing of public service costs and, in particular,



19.3 %
share of renewable
energy in French
electricity
consumption between
1 July 2014 and
30 June 2015

support for renewable energy was reformed in early 2016. CRE retains its roles of monitoring reported costs over the past year and making assessments for the current year and the years to come. In 2016, they amount to €7 billion, of which 67.1% are due to subsidising green energy. In a context of a large increase in costs related to the development of renewable energy, which are expected to increase by 70% by 2025 according to a prospective study by CRE made in October 2014 on renewable energy sources of electricity, CRE pays particular attention to the appropriate dimensioning of support mechanisms.

CRE thus formulates recommendations for the government. In a report published in April 2014 on the costs and profitability of renewable energy in Metropolitan France, it recommended in particular the use of tenders rather than purchase prices for all mature industries. It also recommended the more regular reviewing of the level of certain tariffs in order for them to reflect changes in costs, especially for onshore wind. In this regard, since its establishment, CRE has made more specific, sector by sector recommendations on 36 draft

“
The energy transition law of 18 August 2015 provides for a target of 32% renewables in the French energy mix by 2030.

tariff decrees, and has given 20 unfavourable opinions because of finding excessive profitability resulting from the proposed tariff.

The role of CRE is therefore essential, firstly in ensuring that public support of renewable energy does not lead to excessive remuneration; secondly in verifying that the tariffs applicable to purchase obligation are adapted to technological and industrial realities of production industries. In the future, as part of the recent reform of support mechanisms for renewable energy, CRE will strengthen its control over facility costs by conducting more systematic audits and recommend changes as a result.



Developing renewables effectively in the island zones

Historical choices in the territories not interconnected with the continental electricity system* have led to a more carbon-intensive energy mix than in continental France. The development of renewable energy has now become a priority for energy policy in these territories with a target of 50% renewable energy in the final energy consumption for 2020 in the overseas departments (30% in Mayotte), even though in 2014, electricity from fossil fuel represented 67%.

The development of green electricity can be supported by three measures: purchase tariffs, calls for tenders and over-the-counter contracts. The latter are subject to analysis by CRE and allow the determination of a level of support tailored to the specificities of the project and the territory it is connected to. CRE is in favour of this since there is no purchase tariff and the level of competition does not allow the organisation of calls for tenders.

The integration of variable energy sources is a significant issue in small electricity systems. CRE has proposed several routes in this direction – in particular the territory by territory definition of the threshold from which the system operator is authorised to disconnect those facilities or the inclusion of disconnection hours in fixing the support mechanisms –, and is working simultaneously on the development of a methodology enabling the exploitation of storage facilities.

* Corsica, overseas departments and regions (Guadeloupe, French Guiana, Martinique, Réunion, Mayotte), some overseas communities (Saint-Pierre and Miquelon, Saint-Barthélemy, Saint Martin), the Breton Islands of Molène, Ouessant, Sein, the Glénan archipelago and the island of Chausey in the Channel.



— **Accompanying producers to the market**

On 1st July 2014, the European Commission published new guidelines on State aid in the field of energy and environmental protection. They advocate that facilities of more than 500 kW sell their energy directly on the market benefiting from an additional premium, and that the benefit of the latter be granted for facilities of more than 1 MW following a call for tenders. To ensure the compatibility of French subsidy mechanisms with European standards, the energy transition law reformed them by introducing the additional remuneration.

Producers will now have to market their energy on the wholesale electricity market. A premium to compensate for the difference between the remuneration derived from this sale and a reference level of remuneration will be established based on the type of facility.

They will thus become full market participants.

CRE has been involved with the reform on several occasions. It responded to the public consultation of the Ministry of Energy in April 2014, contributed to the work-

ing groups set up by the latter in early 2015 and issued opinions on draft decrees relating to additional remuneration and on the first six draft tariff decrees.

In its mixed opinion of 9 December 2015, CRE made several recommendations to better support the development of the renewable sector, while minimising their impact on public service costs. Among these recommendations, CRE suggests that the dimensioning of management premium should strictly reflect the costs associated with sale on the market. It should also be



25
number of calls for tenders issued by CRE between 2004 and 2015, with **1,492** tender offer files received in 2015

noted, regarding the onshore wind sector, that calls for tenders constitute the development route to ensure the economic efficiency of public support.

— **Calls for tenders: creating competition to reduce costs**

More generally, CRE is in favour of a systematic use of calls for tenders for those sectors where the level of competition is satisfactory. As it recalled in its opinion of 3 February 2016 on the draft decree reforming the call for tender procedure, which can control the pace of development of sectors and reveal the level of support required for each facility. It also recommended making the level of support requested by the tenderers a major selection criterion, in order to ensure full competition and to reduce the development costs of renewable energy for the community. Finally, CRE called for a simplification of the tendering procedure and an increase in its means in order to be able to examine the applications on time, in an environment where the pace of tendering is intensifying.

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CRE has already given 6 opinions on the tariff decrees under the new aid scheme for green energy producers.



PUBLIC SERVICE COSTS

- + 400%:** rise in public service costs in 15 years
- €9.8 billion:** amount of CRE decisions on the CSPE (contribution to the public electricity service)
- 16%:** share of the CSPE on the bill of a residential consumer in 2016 (including taxes)

RENEWABLE ENERGY

- 6.192 GW:** photovoltaic park at end of 2015 (compared to 190 MW in 2009)
- Objectives for 2023** of developing renewable energy
 - solar: between 18,200 MW and 20,200 MW
 - onshore wind: between 21,800 MW and 25,000 MW



**INTERVIEW WITH...
JEROME DEFLESSELLES**

European Head of Advisory Activities and Financing for Renewable Energy Projects at Société Générale Corporate & Investment Banking, Member of the Board of Directors of France Energie Eolienne (FEE)

In this context of sustained growth, it is necessary to adapt the support mechanisms.

The law on the energy transition for green growth, adopted in summer 2015, introduced a new support mechanism for renewable energy, expected to come into force on 1 January 2016. This mechanism follows the European guidelines of 28 June 2014, which provide for the payment of additional remuneration to producers.

What is the additional remuneration?

It is a premium per megawatt hour calculated ex-post, which is added to the income generated by the direct sale of the production on the wholesale electricity market. This premium is proportional to the energy produced. From 2017, the

How should producers and financial players adapt?

The integration of renewable energy into the electricity market includes producers adapting to new constraints. For example, to the responsibility of balance and marketing of their production on the market. These new responsibilities lead to costs and risks they have not yet faced in connection with the purchase obligation.

For financiers and investors, this new regulatory environment is inherently more complex. It introduces many uncertainties:

“

In this context of sustained growth, it is necessary to adapt the support mechanisms

Why was a new support scheme for the development of renewable energy established?

The review of support mechanisms for renewable energy aims at better integration of the renewable energy production market and the electrical system.

While France signed the Paris Agreement on 22 April last year, the announcements of the Minister of Energy on the multiannual energy programming provide a proactive roadmap for renewable energy: 14.3 GW of onshore wind power by 2018, then between 21.8 and 23.3 by 2023. For solar, the intermediate target is from 10.2 GW then carried to 20.2 GW. As for offshore wind power, the forecast is greater than 3 GW by 2020.

Member States will be obliged to organise tenders for awarding the additional remunerations (with the exception of wind farms whose power is less than 6 megawatts).

The additional remuneration is gradually replacing the purchase obligation mechanism for certain renewable sectors and for facilities above a certain size (installed power greater than 500 kW). There is a period planned, when both support mechanisms will be in place.

exposure to market risks, solvency of purchasers... A period of adjustment is inevitable.

Note however that those financiers with a scope beyond France are already familiar with this type of regulatory schemes as they are operative in several other European countries (Germany and Great Britain for example).

In the discussions between businesses and public authorities on the proposed reform of support mechanisms, the banks have sought to offer options to reduce the uncertainties and therefore risks, thus ensuring that financing conditions do not deteriorate.

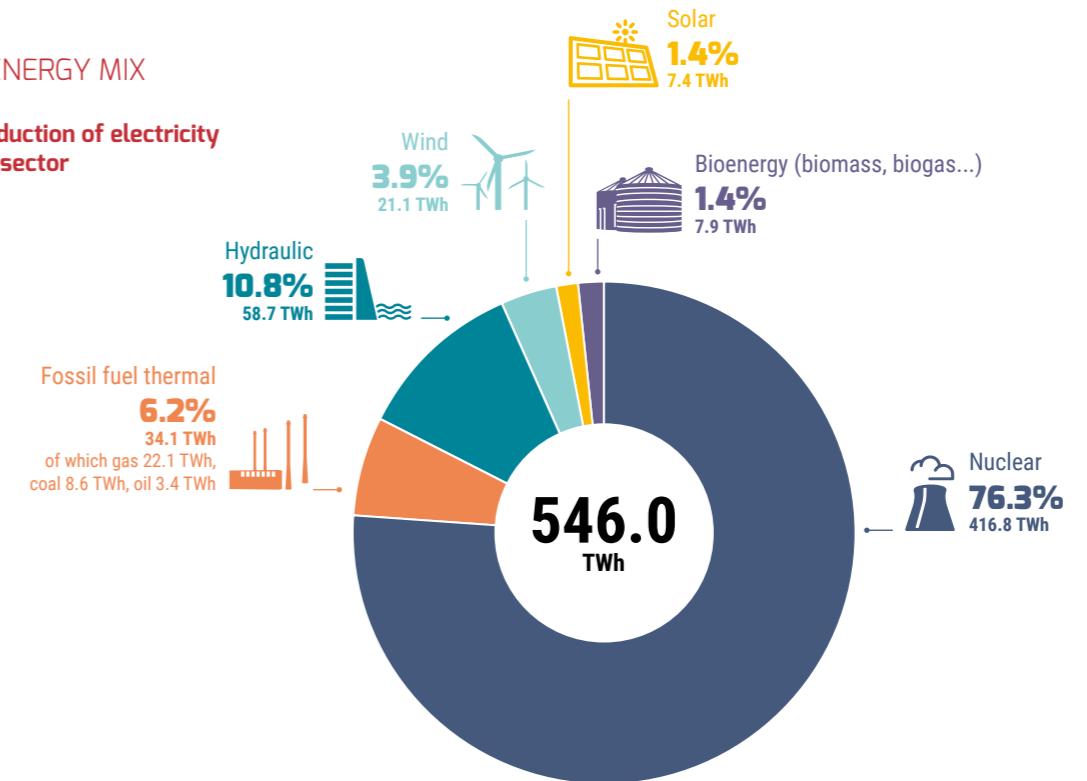
KEY FIGURES 2015



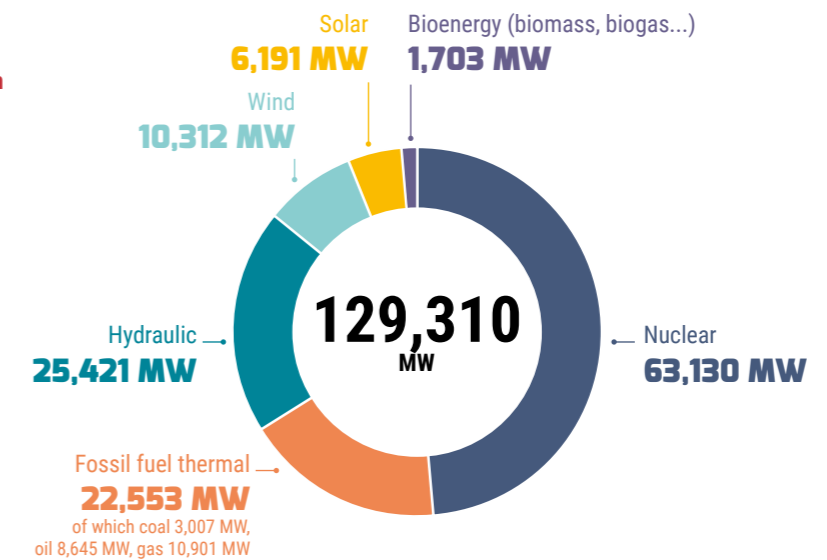
OVERVIEW OF ENERGY IN FRANCE

— ENERGY MIX

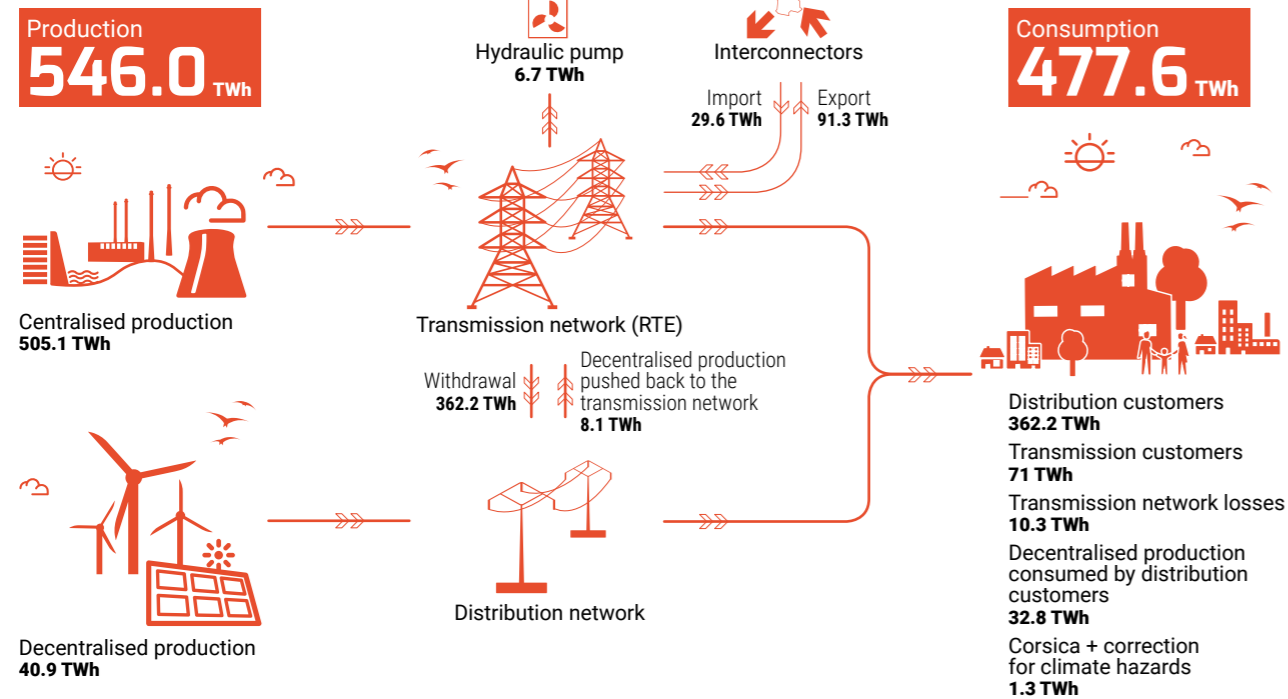
Production of electricity
per sector
→



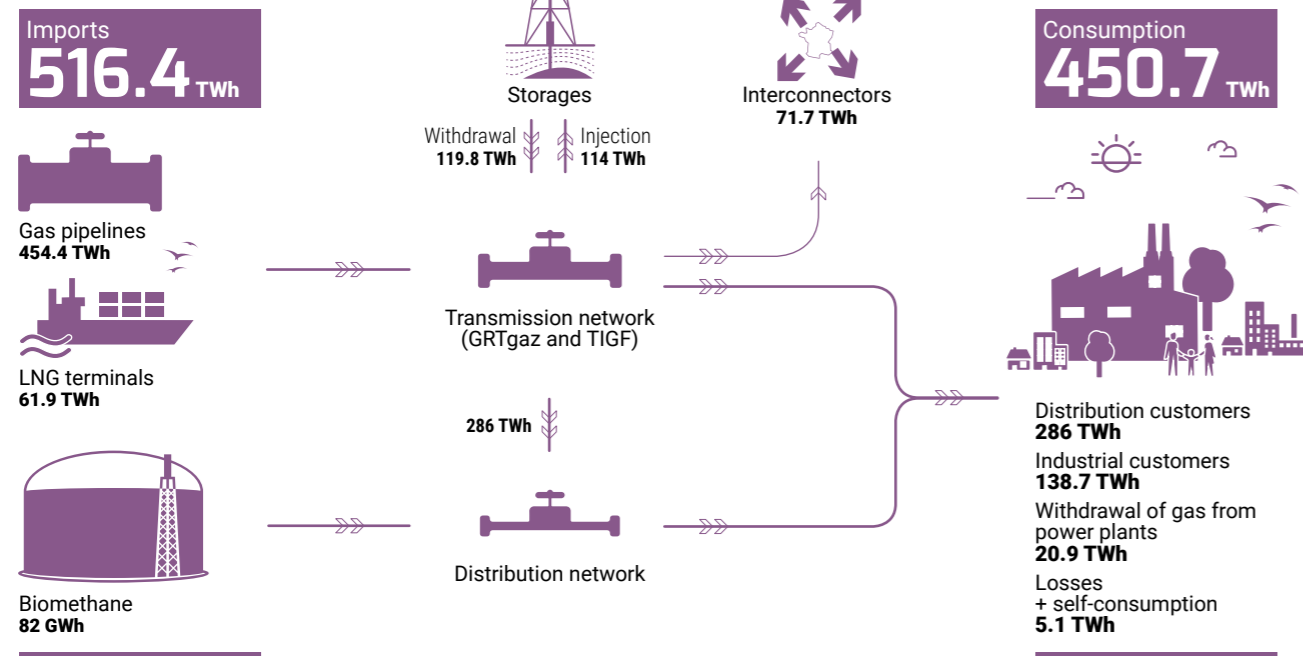
Electricity production
facility
→



— ELECTRICITY: FROM PRODUCTION TO CONSUMPTION



— GAS: FROM IMPORT TO CONSUMPTION



RESIDENTIAL CONSUMERS

NUMBER OF RESIDENTIAL SITES + CONSUMPTION VOLUME

Electricity
31.8 million sites, 151 TWh (34% of the total consumption in France)

Gas
10.6 million sites, 122 TWh (27% of the total consumption in France)

NUMBER OF RESIDENTIAL SITES WITH MARKET OFFERS

Electricity
3,689,000 sites of which 3,680,000 sites are with an alternative supplier (13.9 TWh vs 0.04 TWh supplied under market offer by incumbent suppliers)

Gas
4,360,000 sites of which 2,097,000 sites are with an alternative supplier (24.4 TWh vs 25.1 TWh supplied under market offer by incumbent suppliers)

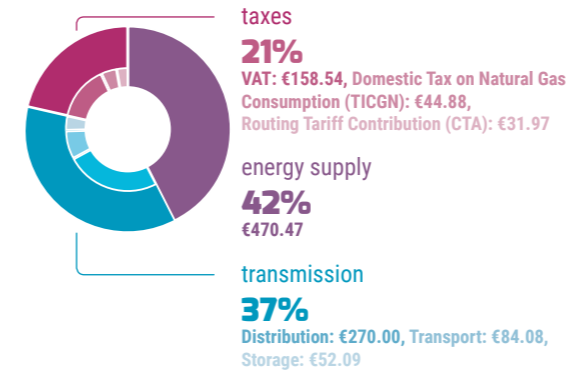
CHEAPEST MARKET PRICE RELATIVE TO THE REGULATED TARIFF

Electricity
-5% saving compared to the regulated sales tariff including taxes for a market offer indexed to the regulated tariff offered in Paris (for an average customer with tariff base 6 kVA consuming 2.4 MWh per year and for an average customer at peak/off-peak times 9 kVA consuming 8.5 MWh per year)

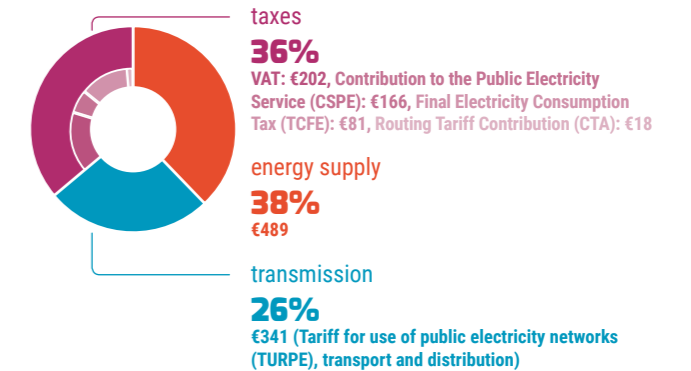
Gas
-5% and -8% savings compared to the regulated sales tariff including taxes for a variable market price offered in Paris, on the one hand to a customer type consuming 750 kWh per year and using gas for cooking, and on the other hand, a customer type heating with gas and consuming 17 MWh per year

— BREAKDOWN OF THE BILL

Gas
€1,112.03 inc tax/year for a customer with tariff B1 (used for heating, customer consuming 17,000 kWh)



Electricity
€1,297.00 inc tax/year for a 9 kVA customer (customer consuming 8,500 kWh, divided into 54% peak hours and 46% off-peak hours)



Transmission: part of the regulated sales tariff covering costs for transport, storage and distribution. Transport and distribution costs are determined by applying the usage rates of the electricity (TURPE) and gas network (ATRD for distribution and ATRT for gas) fixed by CRE. / **Biomethane contribution:** This enables the funding of public service costs for the purchase of biomethane injected into the natural gas networks. Its amount is fixed by decree after consultation with CRE. This contribution is included in the supply component. / **CSPE:** Contribution to the Public Electricity Service is used to finance the costs resulting from public service mission which the law imposes on suppliers, such as additional costs for electricity production in the non-interconnected zones, policies to support renewable energy and the social tariffs of electricity, the so-called basic necessity tariff (TPN). On 1 January 2016, this tax was changed to the Domestic Tax on Natural Gas Consumption (TICFE). / **CTA:** the Routing Tariff Contribution provides funding for special rights related to pension plans for staff in the electricity and gas industries. / **CTSS:** Contribution to the Special Solidarity Tariff funds the social costs of gas, the so-called special solidarity tax the amount of which is set by decree after consultation with CRE. This contribution is included in the supply component. / **Supply:** part of the regulated tariff covering the supply and marketing costs. / **TCFE:** Final Electricity Consumption Taxes are defined by each municipality and each department. They depend on the contracted power and a coefficient multiplier fixed and voted on by municipal and general councils each year before 1 October for the following year. / **TICGN:** the Domestic Tax on Natural Gas Consumption is collected on behalf of Customs. Since 1 April 2014, the TICGN applies to all natural gas consumers, in particular residential customers (certain industrial uses will however continue to benefit from the exemption). / **TVA:** Value Added Tax applies at the rate of: 5.5% on the fixed part (including the CTA); 20.0% on the proportional part.

THE NETWORKS

— TRANSPORT AND DISTRIBUTION OF NATURAL GAS

REGULATED LNG TERMINALS AND THEIR STORAGE CAPACITY

Montoir: regasification capacity of 10 billion m³ per year and storage capacity of LNG of 360,000 m³

Fos Tonkin: regasification capacity of 3 billion m³ per year and storage capacity of LNG of 80,000 m³

Fos Cavaou (Fosmax LNG): regasification capacity of 8.25 billion m³ per year and storage capacity of LNG of 330,000 m³

Dunkirk: regasification capacity of 13 billion m³ per year and storage capacity of LNG of 570,000 m³ (Commissioning planned for 2016)

TRANSMISSION SYSTEM OPERATORS (TSO)

GRTgaz

- **600 TWh** routed
- 32,000 km of networks
- 768 active industrial customers (12 gas-fired power plants)

TIGF

- **80 TWh** routed
- 5,000 km of networks
- 120 industrial customers (no gas-fired power plants)

DISTRIBUTION SYSTEM OPERATORS (DSO)

26 DSO

including GRDF (on 95% of the territory)

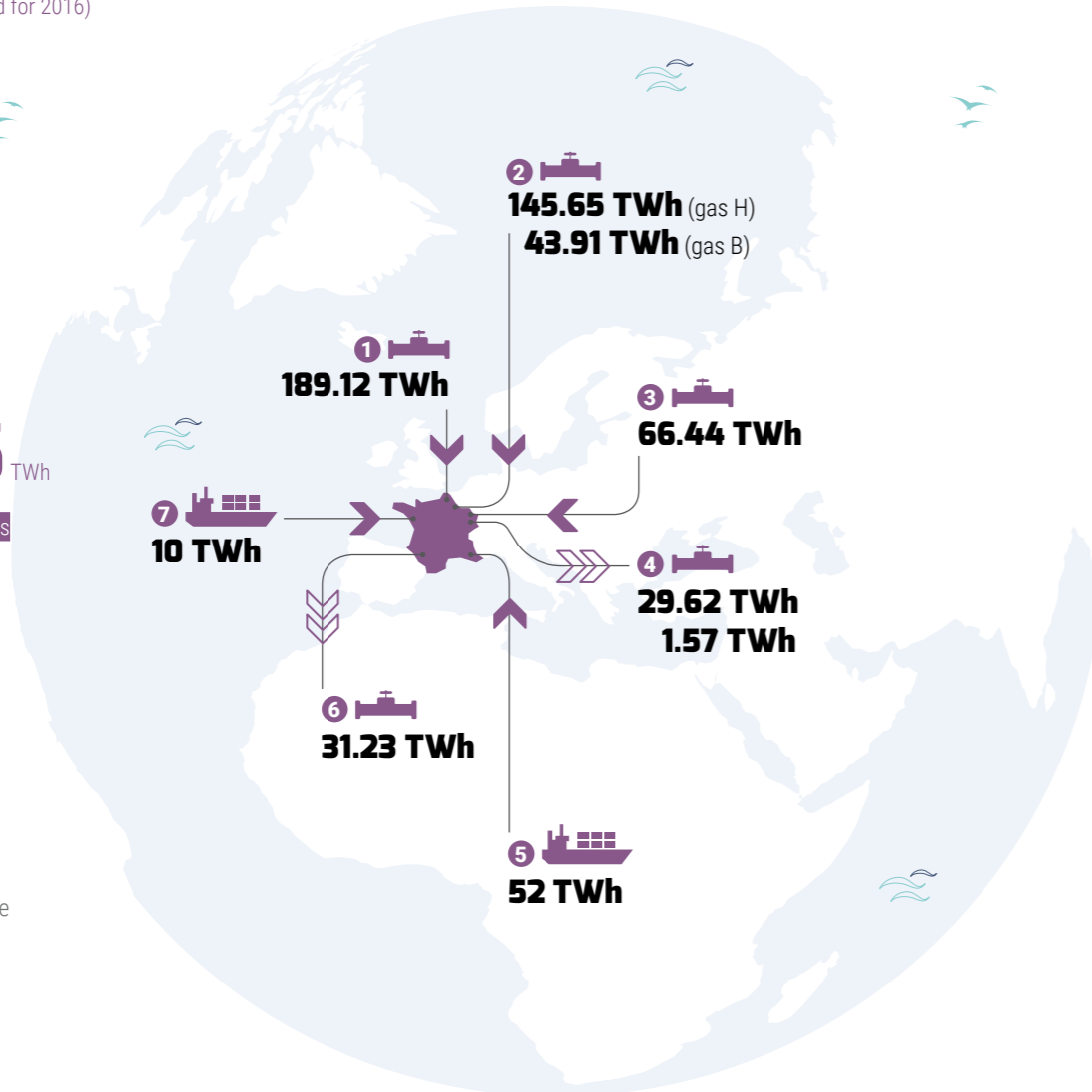
- **286 TWh** routed
- 205,000 km of networks
- **11.4 million** customers

— BALANCE OF IMPORTS AND EXPORTS

Net balance of trade
444.6 TWh

Interconnector capacities
3,585 GWh/j in input
658 GWh/j in output

- 1 Dunkirk
- 2 Taisnières
- 3 Obergailbach
- 4 Oltingue & Jura
- 5 Fos-sur-Mer
- 6 Larrau + Biriadou
- 7 Montoir-de-Bretagne



WHOLESALE MARKETS

— VOLUME EXCHANGES MONITORED BY CRE

Total electricity and gas
1,790 TWh
or 60.9 billion Euros

Electricity
1,400 TWh
or 53 billion Euros

Gas
390 TWh
or 7.9 billion Euros

— AVERAGE SPOT PRICE

Electricity
€38.48 /MWh

Gas
at PEG Nord
€20.1 /MWh

— TRANSPORT AND DISTRIBUTION OF ELECTRICITY

TRANSMISSION SYSTEM OPERATORS (TSO)

RTE

- **513.3 TWh** routed (excluding energy pumped by hydroelectric storage plants)
- 105,000 km of networks
- **258 industrial** customers

DISTRIBUTION SYSTEM OPERATORS (DSO)

196 DSO

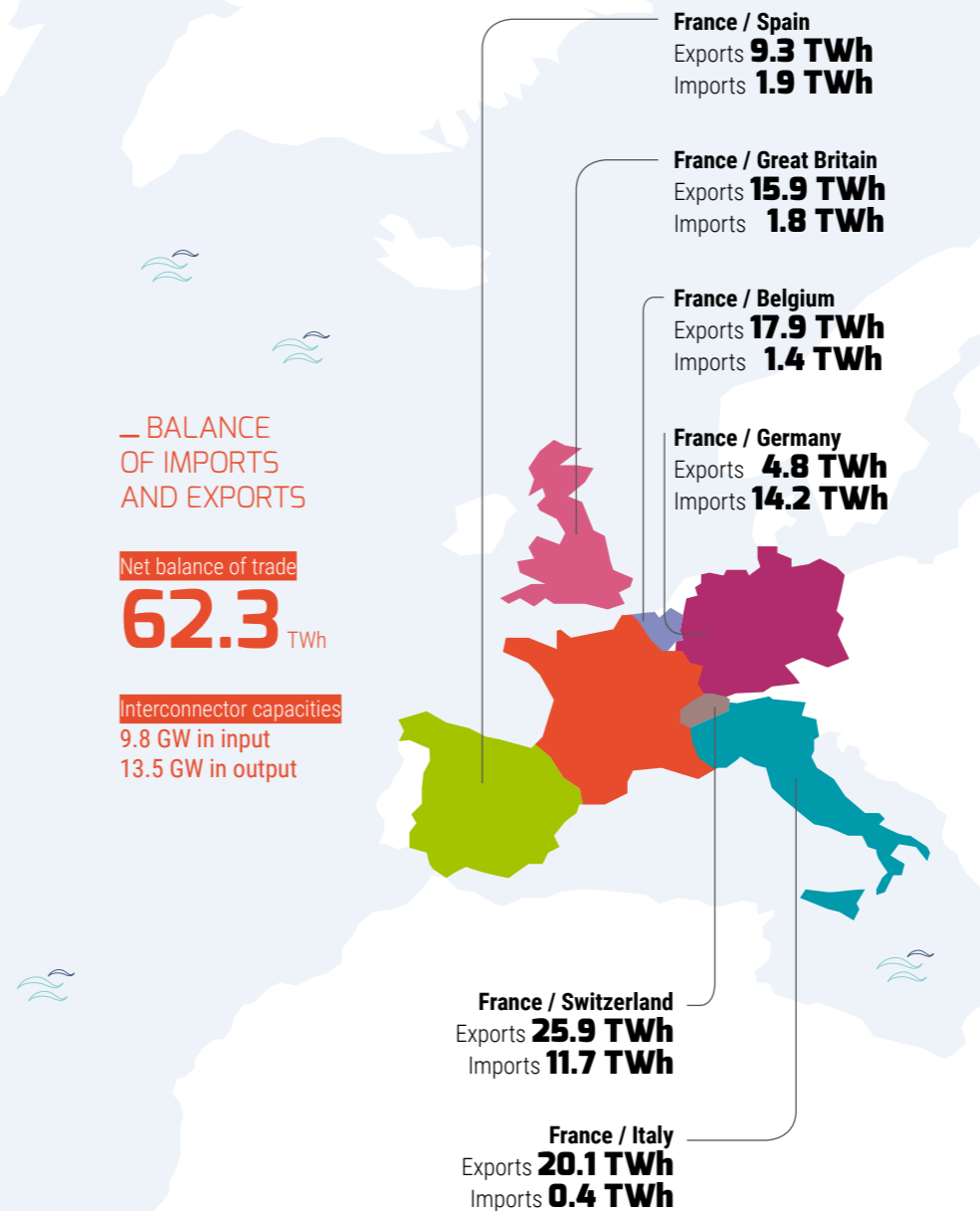
including ERDF (on 95% of the territory)

- **403.1 TWh** routed
- 1.4 million km
- **36.8 million** customers

— BALANCE OF IMPORTS AND EXPORTS

Net balance of trade
62.3 TWh

Interconnector capacities
9.8 GW in input
13.5 GW in output



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Graphic design and production:
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Illustrations pp. 15, 19, 23, 27, 31:
Bedouel Fabien

Printing:
Imprimerie Grafik plus



Completion of text editing in June 2016
Printed in August 2016
ISSN: 1771-3196



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