ERSE
ENTIDADE REGULADORA
DOS SERVIÇOS ENERGÉTICOS

ANNUAL REPORT
TO THE
EUROPEAN COMMISSION ON THE ELECTRICITY
AND NATURAL GAS MARKETS IN
2014
PORTUGAL

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ENERGY SERVICES REGULATORY AUTHORITY

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1 FOREWORD

This report was prepared by the Portuguese Energy Services Regulatory Authority (ERSE), the body in charge of regulating the sectors of natural gas and electricity supply, and is part of the provisions of Directives 2009/72/EC (electricity) and 2009/73/EC (natural gas) of the European Parliament and of the Council, both of 13 July 2009. These directives dictate that regulators must annually inform national authorities, the European Commission and the Agency for the Cooperation of Energy Regulators (ACER) on its activities and on any developments observed in electricity and natural gas markets.

National legislation, namely Decree-Law No. 215-A/2012, of 8 October, and Decree-Law No. 230/2012, of 26 October, also dictate that ERSE issues an annual report on the operation of electricity and natural gas markets and the degree of effective competition in those markets. Accordingly, ERSE must send such a report to the Government member in charge of the energy sector, to the Portuguese Parliament and to the European Commission. In addition, it must publish the report.

Accordingly, this report, whose structure was harmonised in the context of the Council of European Energy Regulators (CEER), presents the main developments of the electricity and natural gas markets in Portugal, including the issues of competition, network regulation, security of supply and consumer protection. The report also covers the regulatory measures adopted and the results obtained with regard to ERSE's annual activities.

The characterisation and statistical data presented essentially cover the year 2014. -It also includes the regulatory developments with an impact on future developments in the markets.

2 MAJOR DEVELOPMENTS IN THE ELECTRICITY AND NATURAL GAS SECTORS

In 2014, the electricity and natural gas markets in Portugal showed important developments in the field of retail market liberalisation and integration of Iberian wholesale markets. These dynamics in the commercial aspects of the market occurred within a context of weak economic growth and low energy consumption, continuing the downtrend in natural gas consumption and interest rates.

The transfer of customers from last resort suppliers (with regulated tariffs) to the market regime supplier occurred at a high rate due to the existence of positive differentials (benefits) in the transition to the open market and the legal mechanism of extinction of regulated tariffs for end customers. In late 2014, nearly 60% of residential electricity and natural gas customers had already changed to market suppliers. In terms of consumption, 83% of electricity consumption and 94% of natural gas consumption was contracted within the liberalised market. This outflow of customers to the market regime was accompanied by a growing number of active suppliers and commercial offers in the market.

With regard to wholesale markets, an evolution towards stronger Iberian integration was also observed, which reflects a scenario that is closer to the internal energy market goal, and thus, a positive market development.

In electricity, the price-coupling level in MIBEL (the Iberian electricity market) was 94%, with an average spread of only €0.28/MWh (about 0.5% of the average price), with the higher price in Spain. New regulatory measures were implemented to improve market integration and the risk management tools used by market players. Examples of this are the coupling of the MIBEL daily market with the markets of the Northwest Region of Europe, joint auctions of financial rights over the PT-ES interconnection capacity and the cross-border balancing services exchange platform (BALIT) between Portuguese and Spanish system managers.

In the sector of natural gas, demand continued to be strongly affected by the structural conditions of the electricity market, which reduced the capacity usage levels of combined cycle natural gas plants, with a resulting reduction in the total consumption of natural gas in 2014. In the year 2014, the trend towards a wider use of interconnectors as a way to import natural gas was even more pronounced, at the expense of the use of the LNG terminal. The interconnection was preferred by the market players and there were regulatory developments in terms of capacity allocation. The early implementation of the European network code on capacity allocation mechanisms continued to be developed by the South Gas Regional Initiative (SGRI), and the allocation of interconnection capacity at the virtual interconnection point was transferred to the PRISMA platform.

Also within the context of the South Gas Regional Initiative, Portuguese and Spanish regulators launched a public consultation on the models for the integration of the Iberian natural gas market. Works were also initiated for the implementation of the Network Code on Gas Balancing of Transmission Networks, which will represent an additional step towards regulatory harmonisation and market integration.

The year 2014 was also marked by the implementation of procedures for the planning of investments in electricity and natural gas transmission and distribution networks, in accordance with the provisions of national and European legislation, namely the holding of the first public consultation conducted by ERSE on the development plans of the various networks. In particular, ERSE finalised its opinion on the ten-year plan for the development of the natural gas transmission network (PDIRGN 2014-23), having also consulted and issued its opinion on the ten-year plan for the development of the electricity transmission network (PDIRT-E 2014-23). A public consultation was also launched on the five-year plan for the development of the electricity distribution network (PDIRD-E 2015-19). These planning tools were drafted within a context of structural changes in the supply and demand of natural gas and electricity in Portugal, as well as great uncertainty as to their evolution. This reinforces the importance of the procedure adopted for stakeholder consultation, which involved all the players in the planning of energy infrastructures.

In September 2014, the Portuguese regulator issued its Decision on the certification of natural gas and electricity transmission network operators as operators under a full legal and ownership unbundling. This Decision resulted from a proposal put forward by the operators, in compliance with the directives of the internal market and national legislation, and represents a milestone in the organisational structure of the two sectors and the role of the respective transmission network operators. The Certification Decision identified a few situations of noncompliance with the required status by some of the operators, and established a period of eight months for correcting those situations and subsequent evaluation by the regulator.

It should also be noted that the Portuguese State concluded, in 2014, the full privatisation of the share capital of REN SGPS, the holding that owns the operators of natural gas and electricity transmission networks.

Also in 2014, the regulations on the electric sector underwent a regulation revision process, in preparation for the new regulatory period, but also adopting several evolutions of the regulatory framework applicable to retailers in the market scheme and new legal schemes, such as that of production for own consumption. The evolution of the Portuguese electricity market into a new paradigm, of liberalised market, stronger Iberian and European integration and within a context of greater technological innovation in the sector's activities, as well as the strengthening of regulations protecting the interests of consumers, marked this process of regulation revision.

Lastly, with regard to the retail market prices of electricity and natural gas, the situation in 2014 reflected a strain on the costs of regulated access to the networks, both for natural gas (driven by a decreasing demand in recent years) and for electricity. In the case of the electricity sector, the strain on retail prices was mainly driven by general economic interest costs.

In 2014, the first report on the information collected by ERSE was published, following the issuing of Recommendation No. 2/2013, which addressed aspects of electricity and natural gas procurement with relevance for consumers. The information revealed that, in late 2013, both markets showed a tendency towards the absence of customer loyalty or contractual penalties for its breach. With regard to the availability of payment methods, the situation is uneven among the suppliers in the market; for some of them, practically all of the offers have only one payment method (which is not cash), and for others, at least half of the offers allow for several payment methods, including cash. With regard to price indexation, the most common practice is the lack of price indexation in the offers on the market.

In the case of natural gas, retail prices for end users benefited from a reduction in the wholesale price of natural gas, due to the evolution of oil prices. In both sectors, the liberalised market segment proved very dynamic, and throughout the year, it reflected the reductions in the wholesale cost of electricity and natural gas that occurred in Portugal. This factor contributes to the gradual transition of customers from last-resort suppliers to the liberalised market.

3 ELECTRICITY MARKET

3.1 NETWORK REGULATION

3.1.1 UNBUNDLING

CERTIFICATION OF THE TRANSMISSION NETWORK OPERATOR

The transposition of Directives 2009/73/EC (natural gas) and 2009/72/EC (electricity), both of 13 July, introduced new rules into the organisational framework of the natural gas and electricity sectors, such as the adoption of measures aimed at strengthening the discipline of the unbundling of generation and supply activities and the operation of transmission networks, in order to successfully establish an internal energy market in the EU.

These provisions include the procedure for the certification of the electricity and natural gas transmission network operator by the national regulatory authority, in this case, ERSE.

In September 2014, ERSE issued a decision that included the certification of REN - Rede Eléctrica Nacional as the operator of the National Electricity Transmission Network (RNT) and REN - Gasodutos as the operator of the National Natural Gas Transmission network (RNTGN) in full legal and ownership unbundling, contingent on the satisfaction, within a period of eight months, of a set of certification requirements intended to ensure the independence of these operators.
The conditions required by ERSE's decision include changing REN SGPS' Articles of Association so as to impose:

• Restrictions on REN SGPS' shareholders, namely:

a) shareholders exercising control in any undertakings dedicated to the generation or trading of electricity or natural gas shall be prevented from exercising any rights at REN SGPS, without prejudice to their right to receive dividends, except where the certifying entity recognises that there is no conflict of interests.

b) any persons exercising control or rights in any undertakings dedicated to the generation or trading of electricity or natural gas shall be prevented from directly or indirectly appointing any members of REN SGPS' management and supervisory bodies, except where the certifying entity recognises that there is no conflict of interest.

• Restrictions on the members of the boards of directors or supervisory bodies of REN SGPS and of Transmission System Operators (TSO), which shall be specifically prohibited from simultaneously integrating corporate bodies in any undertakings dedicated to the generation or trading of electricity or natural gas.

An obligation is also imposed for the timely reporting to ERSE of any changes in circumstances involving the conditions analysed in the certification process, as well as any changes occurring after the operator has been certified.

ERSE is currently assessing compliance with the certification requirements included in the decision issued, and REN - Rede Eléctrica Nacional S.A., as the concessionaire of the RNT, is subject to the satisfaction of the certification decision issued, with a view to its approval and designation as the transmission system operator by the member of Government in charge of energy.

IMAGE DIFFERENTIATION

With regard to image differentiation in the energy sector, the provisions of Directive No. 23/2013 of 22 November, applicable to the distribution network operator (EDP Distribuição) and to the last resort supplier (EDP Serviço Universal), which serve over 100,000 customers, shall remain in force.

3.1.2 TECHNICAL FUNCTIONING

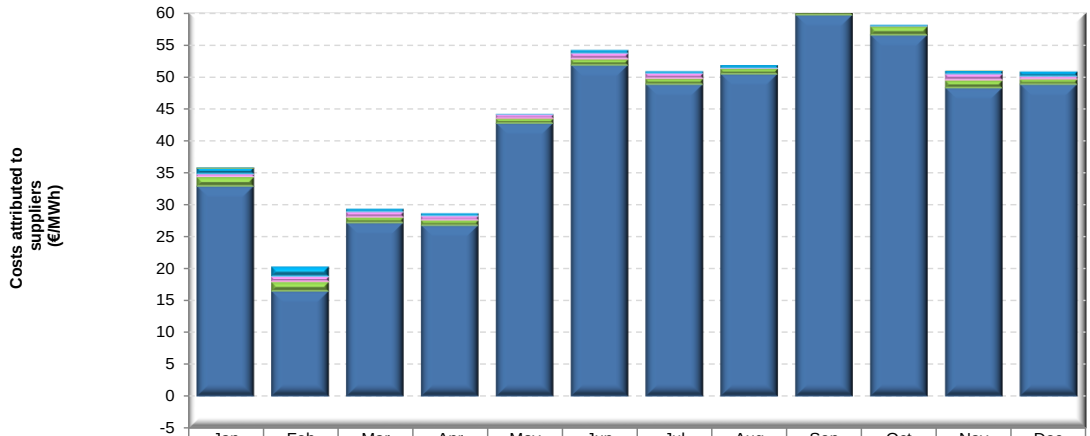
3.1.2.1 BALANCING

In 2014, as in the previous year, the service to compensate electricity generation and consumption imbalances and to resolve technical constraints was mobilised within the context of the ancillary services market, which REN is responsible for operating due to its role as Global Technical System Manager.

The energy mobilised to resolve technical constraints and the secondary regulation band contracted involve costs that are paid by all customers. Additionally, the costs of secondary regulation energy and regulated reserve energy mobilisation used to cancel the agents' imbalances in real time are paid by all the market agents that have deviated in a given period.

Figure 3-1 presents the impact of daily, intraday and ancillary services markets on the costs attributed to demand in 2014. Therefore, in addition to the portion related to the daily and intraday market, another portion is shown, which corresponds to the ancillary services market and presents its main components.

Figure 3-1 - Impact of daily markets and ancillary services markets on the costs attributed to suppliers operating in Portugal, in 2014

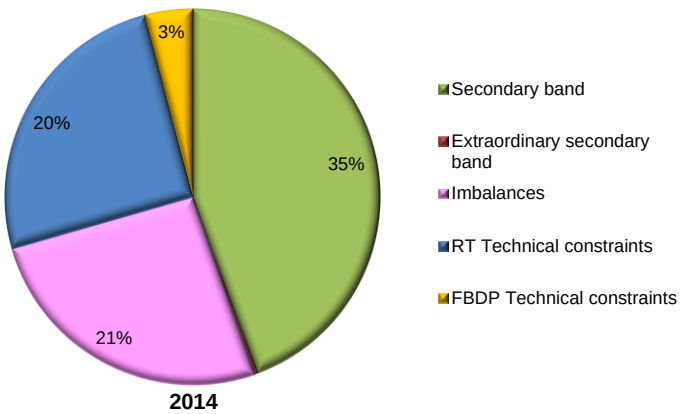


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total ancillary services markets	3,08	3,87	2,22	1,89	1,53	2,43	2,07	1,45	2,69	1,64	2,76	2,05
FBDP Technical constraints	0,15	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,02	0,00
RT Technical constraints	1,02	1,58	0,49	0,41	0,14	0,52	0,32	0,50	0,89	0,19	0,52	0,79
Imbalances	0,43	0,76	0,84	0,61	0,58	0,89	0,82	0,06	0,61	0,02	0,94	0,39
Extraordinary secondary band	0,00	0,02	0,00	0,00	0,00	0,03	0,01	0,00	0,00	0,00	0,01	0,00
Secondary band	1,48	1,52	0,89	0,87	0,79	0,99	0,92	0,89	1,18	1,43	1,27	0,87
Daily and Intraday Market	32,92	16,51	27,19	26,79	42,72	51,80	48,84	50,44	59,66	56,51	48,25	48,83

Throughout 2014, the ancillary services market represented an average weighted cost of €2.31/MWh, against the weighted marginal price in the daily and intraday market of €42.23/MWh.

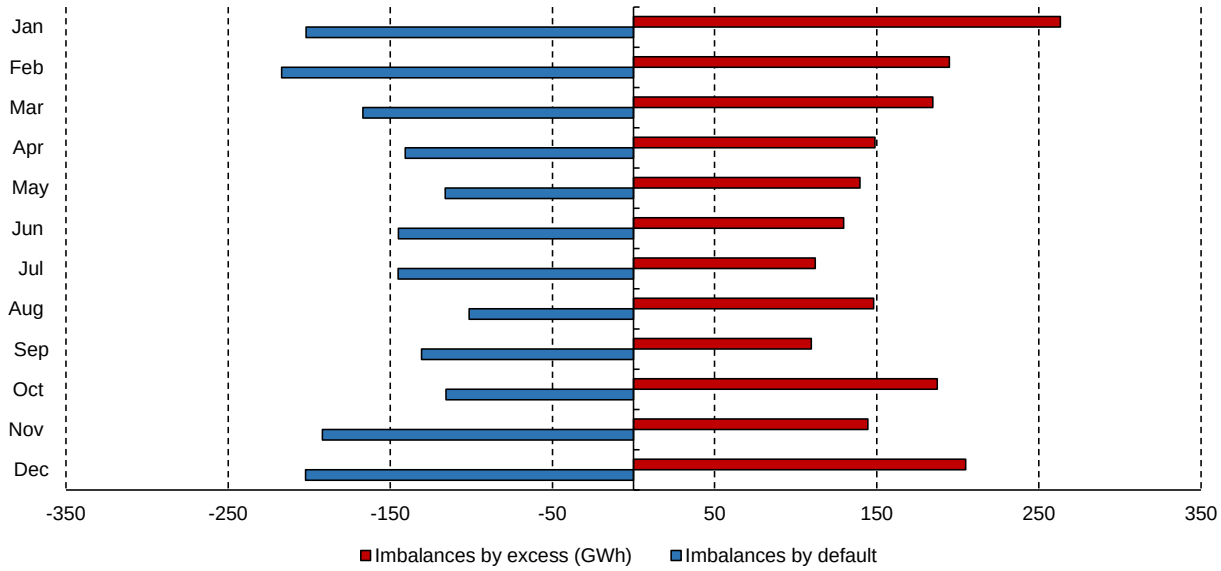
Figure 3-2 presents the ancillary services market cost breakdown and shows that the most important components relate to imbalances and secondary band contracting.

Figure 3-2 - Breakdown of the ancillary services market costs in 2014



The valuation of the imbalances for each hour corresponds precisely to the variable costs of regulation payable to agents that rectify the imbalance by participating in the ancillary services market. Figure 3-3 shows the evolution of the energy imbalances throughout 2014, including the representation of under- and over-imbalances.

Figure 3-3 - Evolution of imbalances in 2014



3.1.2.2 QUALITY OF SUPPLY

In Mainland Portugal, both the Tariff Code (RT) and the Quality of Supply Code (RQS) include provisions for regulating the continuity of supply.[1].

INCENTIVE TO IMPROVE CONTINUITY OF SUPPLY

The RT establishes an incentive to improve the continuity of supply with repercussions on the allowed revenue for the MV and HV distribution networks operator in Mainland Portugal.

This incentive is aimed, on the one hand, at promoting the global continuity of electricity supply ("Component 1" of the incentive), and on the other, at encouraging the improvement of the continuity of supply level among worst served customers ("Component 2" of the incentive).

[1] In addition to this topic, the RQS also establishes obligations related to the voltage quality and the commercial quality.

"Component 2" was introduced by a regulatory change in 2014 and shall only apply to the performance of the network in 2015.

The value of "Component 1" of the incentive depends on the value of energy not distributed annually and is determined using a function established by regulations. Interruptions classified by ERSE as Exceptional Events are excluded from the calculation of this value of energy not distributed[2].

In 2013, the value of energy not distributed was below the reference value set for the regulatory period, and the incentive represented approximately 526,000 euros. For the year 2014, according to the information available to date, the value of energy not distributed in the MV and HV distribution networks will give rise to an incentive amount of about 279,000 euros.

CONTINUITY OF SUPPLY

The transmission and distribution networks are described in terms of continuity of supply, based on indicators for each system (transmission and distribution):

- TIE – Equivalent Interruption Time: indicator applying to the transmission network. This expresses the system's downtime (applicable to long-term interruptions[3]), based on the average value of the expected annual capacity (Pme);
- TIEPI – System Average Interruption Duration Weighted by the Installed Capacity: Indicator applying to the MV distribution network. This shows the duration of the downtime (applicable to long-term interruptions) of the installed capacity in transformer stations;
- SAIDI – System Average Interruption Duration Index: indicator applying to the transmission and distribution networks;
- SAIFI – System Average Interruption Frequency Index: indicator applying to the transmission and distribution networks;

[2] The RQS approved in 2013, which entered into force in 2014, establishes the concept of Exceptional Event as an incident complying with all of the following requisites:

- Low probability of occurrence of the event or its consequences;
- The event is responsible for a significant decrease in the quality of supply provided;
- Is not reasonable, from an economic perspective, that network operators, suppliers, last-resort suppliers or, in the case of the Autonomous Regions of the Azores (RAA) and Madeira (RAM), producers avoid all of its consequences;
- The event and its consequences are not attributable to network operators, suppliers, last-resort suppliers or, in the case of RAA and RAM, producers.

An incident shall only be considered an Exceptional Event after approval by ERSE, following a request by network operators, suppliers or last-resort suppliers.

[3] Interruptions lasting more than 3 minutes.

- MAIFI – Momentary Average Interruption Frequency[4] Index: indicator applying to the transmission and distribution networks.

Delivery points (PdE) are the points on the network which are delivered to customers' premises or to another network. The transmission and distribution network indicators are calculated taking into account all long interruptions (lasting more than 3 minutes).

From the year 2014 onwards, the number of short interruptions is also monitored in the transmission network and in the MV and HV distribution networks, through the MAIFI indicator.

Table 3-1 shows the figures for the continuity of supply indicators recorded in Mainland Portugal in 2014.

Table 3-1–Continuity of supply indicators in Mainland Portugal, 2014

Voltage Level	Indicator	Interruptions		
		Planned	Unplanned	
			Only Networks	Exceptional events
Transmission	TIE (min)	-	0.020	-
	SAIFI (int)	-	0.030	-
	SAIDI (min)	-	0,100	-
	MAIFI (int)	-	0.040	-
HV Distribution	SAIFI (int)	0.008	0.283	0.042
	SAIDI (min)	1.291	34.212	17.716
	MAIFI (int)	-	1.339	0.017
MV Distribution	TIEPI (min)	1.162	69.689	18.360
	SAIFI (int)	0.001	1.837	0.494
	SAIDI (min)	0.401	87.306	30.505
	MAIFI (int)	0.003	13.053	0.197
LV Distribution	SAIFI (int)	0.011	1.560	0.332
	SAIDI (min)	2.585	74.890	19.856

Source: REN, EDP Distribuição

[4] Interruptions with a duration between 1 second and 3 minutes, inclusive.

The RQS sets individual standards of continuity of supply, which constitute a commitment to the customer by the network operator, concerning the acceptable annual number and duration of interruptions. Failure to comply with these standards by the network operator originates the right to monetary compensation (which is not intended to have the nature of indemnification for damages), which is discounted from electricity bills, without need for a request from the customer. The payment of said compensation must take place during the first quarter of the year following that in which the failure occurred.

In comparison to 2013, in 2014, there was a 19.7% reduction in the number of instances of non-compliance with individual standards of continuity of supply. In 2014, there was a 23.7% decrease in the total value of the monetary compensations paid to customers, in comparison to 2013.

3.1.2.3 CONNECTIONS

The regulatory framework for the commercial conditions governing connections to the network includes, among others, the following aspects:

- Obligatory connection to the network;
- Type of charges that can be levied;
- Rules for calculating network connection charges;
- Budget content and submission deadlines;
- Connection charge payment terms;
- Construction of the network connection elements;
- Provision of information.

Network operators are required to provide network connection to customers who request it in accordance with the commercial conditions approved by ERSE.

Electrical installations cannot be connected to networks without the prior issuance of a licence or authorisation by the relevant administrative bodies.

Networks are paid by electricity consumers as follows:

- Network connection charges in accordance with the rules approved by ERSE.

- Network use charges, which constitute a portion in the electricity bill. Charges borne by connection requesters (co-funding) are excluded from the calculation of these tariffs.

Commercial conditions include incentives for the appropriate economic signalling of the installation that will be connected to the network (the further away from the network, the higher the co-funding), they promote an efficient allocation of resources, particularly in terms of the requested power (the higher the requested power, the higher the costs to be borne by the requesters) and are based on rules that are simple and easy to apply, in order to ensure that requesters fully understand the connection charges, thereby reducing the level of conflicts in the sector.

The physical infrastructures that allow connecting an electrical installation to the network are considered network connection elements, and are classified in the following two types:

- Connection elements for exclusive use - part of the connection expected to exclusively transmit electricity generated or consumed at the installation in question (it has been established that it corresponds to the closest section of the connection between the consumer's installation up to its full length (Lmax = 30 metres) approved by ERSE).

- Connection elements for shared use – part of the connection through which electricity may travel to power more than one installation (corresponds, in LV, to the length that exceeds the maximum length of the connection element for exclusive use).

The network operator may choose to oversize the connecting element for shared use, so that it may be used for powering other installations in the future. In MV networks, connection elements are all intended for shared use.

With the revision of the RRC in 2012, the applicant for a connection became responsible for the construction of the sections for exclusive use, and the obligation of the distribution system operator (DSO) to present a budget was eliminated. However, in geographic areas where there are no service providers, the DSO must handle the construction of the connection.

Once built, the connecting elements will form an integral part of the networks, as soon as they are deemed to be in proper technical operating conditions by the operator.

The DSO must send ERSE the data related to its activity in this area.

3.1.2.4 SAFEGUARD MEASURES

In the event of a sudden crisis in the energy market or a threat to the safety and physical integrity of people, equipment, installations and networks due to a serious accident or other event of force majeure, the

member of the Government in charge of energy may take any transitional and temporary safeguard measures necessary[5].

In 2014, there were no incidents that required the implementation of safeguard measures[6].

3.1.2.5 RENEWABLE ENERGY SOURCES

Decree-Law No. 215-B/2012 of 8 October, which amended Decree-Law 172/2006 of 23 August and completed the transposition of Directive No. 2009/72/EC of the European Parliament and of the Council of 13 July, laying down the common rules for the internal electricity market, consolidated the legal framework for the production of electricity from renewable energy sources, also completing the transposition of Directive No. 2009/28/EC of the European Parliament and of the Council of 23 April, on the promotion of the use of energy from renewable sources, and altering the concepts of ordinary-regime and special-regime generation, so that the latter is no longer distinguished from the former merely due to being subject to special regimes related to incentive policies, now also integrating the generation of electricity from locally-generated resources in a market remuneration regime.

Indeed, the concept of renewable energy sources is related to the special-regime generation (SRG). Electricity generation activities subject to special legal regimes, such as the generation of electricity through cogeneration and from renewable and non-renewable endogenous resources, distributed generation and generation without the injection of power into the network are considered to be SRG. Similarly, the generation of electricity through renewable and non-renewable endogenous resources, not subject to a special legal regime is also considered to be special regime generation[7]. Therefore, the SRG concept now includes all renewable energy sources for the generation of electricity, including all hydropower generation.

Also with regard to SRG, it should be noted that Decree-Law No. 153/2014 of 20 October established, on the one hand, the legal regime applicable to the generation of electricity intended for self-consumption in the usage installation associated with the respective generation unit, with or without connection to the public power grid, based on renewable or non-renewable generation technologies and, on the other hand, the legal framework for the generation of electricity entirely sold to the Public Service Electricity Grid, through small, renewable-source power plants. The framework established for small-scale generation maintains the general features of the previous regime of mini-generation. For its part, the regime established for generation for self-consumption introduces several innovations, especially in comparison with the previous regime of micro-generation. First off, in terms of the power and voltage levels involved, but also in the creation of installations that are both consumers and producers, sharing the connection to the grid and, in

[5] Article 33-B of Decree-Law No. 215-B/2012, of 8 October.

[6] As set out in Article 42 of Directive 2009/72/EC of the European Parliament and of the Council of 13 July.

[7] Decree-Law No. 215-A/2012, of 8 October, Article 18(1).

some cases, sharing the very measuring equipment, which can serve both purposes: the measurement of the power consumed by the installation and the measurement of the power injected into the network.

In Portugal, the energy generated by SRG, subject to a special legal regime, with guaranteed remuneration, must be bought by the last resort supplier, with the application of feed-in tariffs. The differentiation of the remuneration of this SRG, in the current legal framework, depends on the generation technology.

The sales price to the last resort supplier may be one of the following:

- The price which results from the application of the tariff published by the Government;
- The price which results from the bid submitted during tenders for the allocation of interconnection points for wind and biomass energy facilities. In these tenders, the discount on the tariff published by the Government is one of the weighted factors.

The prices published by the Government, currently in force, are based on an avoided cost approach, seeking to quantify them in terms of power (investment in new facilities), energy (cost of fuel) and environment (giving value to CO_2 emissions avoided) and also a logic of differentiation in accordance with the generation technology or primary source of energy used. Therefore, the remuneration of the producer depends on the following factors:

- Delivery period of the electricity to the network;
- Shape of the generation diagram for the generation of electricity;
- Primary energy source used.

The last resort supplier makes the SRG sales offer in MIBEL explicit (since the end of 2011) and operates in a similar manner to that of an SRG aggregating agent in Portugal[8].

The European Directive[9] is incorporated on a national level in order to establish the priority of renewable energy sources in relation to generation in the ordinary regime, both for access to the network and in the dispatch of generating units[10], unless this would put the security of the supply at risk[11]. There are, however, limitations to the nominal power of each SRG facility that can be connected at each point of the network, depending on the availability of the network itself to accommodate these connections.

[8] Recent legislation on cogeneration states that co-generators may decide to offer the energy produced in the organised market, and receive a premium for this.

[9] Directive 2009/29/EC of the European Parliament and of the Council of 13 July.

[10] Hydroelectric plants with an installed capacity greater than 30 MW do not have priority in the dispatch.

[11] Decree-Law No. 215-B/2012, of 8 October, Article 33-W.

In the case of Portugal, it is worth noting that the SRG with guaranteed remuneration does not directly assume the payment of the imbalances (costs associated with the balance of the system) and so no explicit valorisation of the corresponding costs is performed[12]. Costs due to imbalances in the dispatch of this SRG in the market, calculated by the difference between the real dispatch and the market program of the SRG, are covered by the instrumental buyer of the SRG, the last resort supplier, and are incorporated into the network access tariff paid by all consumers.

3.1.3 NETWORK TARIFFS FOR CONNECTION AND ACCESS

PROCEDURES AND METHODOLOGY FOR CALCULATING ELECTRICITY NETWORK ACCESS TARIFFS

In 2014, the methodology for calculating electricity network access tariffs was generally maintained.

ERSE is responsible for preparing and approving the Tariff Code which establishes the methodology to be used for calculating tariffs, as well as the economic regulation methodologies for calculating the allowed revenues. The approval of the Tariff Code is preceded by public consultation and an opinion from ERSE's Tariff Board. The tariff fixing process by ERSE, including its time frame, is also defined in the Code.

For the purpose of contextualising the tariff calculation methodology for network access tariffs, the following is a brief explanation of the current Portuguese tariff system.

Network Access Tariffs are charged to all electricity consumers for the use of the infrastructure. Generally speaking, these tariffs are paid by suppliers on behalf of their customers. In addition, they may be paid directly by customers benefiting from the status of Market Agent, which means customers buying energy directly on the markets, and who are responsible for managing their programming imbalances.

The revenue awarded to regulated activities is recovered through specific tariffs, each with its own tariff structure and characterised by a given set of billing variables.

The following tariffs were approved, by regulated activity: Global Use of the System, Use of the VHV Transmission Network and Use of HV, MV and LV Distribution Networks.

Tariff prices are established in each activity so as to ensure that their structure follows the structure of the marginal costs and also enables the recovery of the allowed revenues in each activity.

[12] In Spain, the SRG answers directly for the costs from imbalances, which is not the case in Portugal, although the respective generation volumes are integrated in the same market reference. A study prepared in 2012 by the MIBEL's Board of Regulators identified this specific issue as being one of the aspects to be harmonised in the MIBEL framework.

Tariff charging and billing are based on the principle of non-discrimination of the energy's end use. All tariff options are available to all consumers.

Network access paid by all electricity consumers includes the following tariffs: Global Use of System, Use of Transmission Network and Use of Distribution Network. Prices of access tariffs for each billing variable are determined by adding up the corresponding tariff prices per activity.

Insofar as the tariffs making up this sum are based on marginal costs, cross-subsidisation between consumers is avoided and an efficient use of resources is promoted.

This tariff calculation methodology allows for detailed knowledge of the various tariff components by activity or service. Therefore, each customer can know exactly how much they pay, for example, for the use of the MV distribution network, and how that amount is considered in terms of billing. The transparency in the formulation of the tariffs, which is a consequence of the implementation of this type of system, gains special importance for customers who have no experience in selecting suppliers and in particular for customers who are less informed.

NETWORK ACCESS TARIFF PRICES

The average price of the Network Access Tariffs forecasted for 2014 (0.0717 €/kWh), corresponded to a tariff increase of 6.3% between 2013 and 2014, and to the variations per voltage level presented in the following table:

Table 3-2 – Network Access Tariff Variation between 2013 and 2014

	2013 tariffs €/kWh	2014 tariffs €/kWh	Variation
Network Access Tariffs	**0,0674**	**0,0717**	**6,3%**
Access to VHV Networks	0,0219	0,0225	3,0%
Access to HV Networks	0,0269	0,0277	3,2%
Access to MV Networks	0,0456	0,0482	5,8%
Access to SpLV Networks	0,0745	0,0815	9,4%
Access to StLV Networks	0,1008	0,1073	6,5%

* Application of 2013 tariffs to the demand forecast for 2014

The following table presents the structure (revenue from regulated activities) and the level of consumption forecasted for 2014. Maintaining the 2013 tariff prices, the evolution of the consumption structure results in a 0.4% decrease in the average price.

Table 3-3– Evolution of the average price of Network Access Tariffs between 2014 and 2013

Characteristics and average price	Tariffs 2013, consumption 2013 (1)	Tariffs 2013, consumption 2014 (2)	Tariffs 2014, consumption 2014 (3)
Revenue (10^6 Euros)	3 072	3 002	3 192
Consumption (GWh)	45 399	44 533	44 533
Average price (EUR/kWh)	0,0677	0,0674	0,0717
Variation		(2)/(1) = **-0,4%**	(3)/(2) = **6,3%**

The main factor in the variation of access tariffs seen in 2014 is related to the reduction in demand, whose level came close to the 2006 figure, due to the economic crisis. The existence of structural factors, namely measures for the promotion of energy efficiency and the increase in VAT on electric energy, which led to the worsening of the trend for a reduction in consumption, especially in the residential segment, should also be noted.

The figures below show the breakdown, by regulated activity, of the average price of the Network Access Tariffs in 2014 and the structure of the average price per regulated activity for each voltage level.

Figure 3-4 – Breakdown per activity of the average price of Network Access Tariffs in 2014

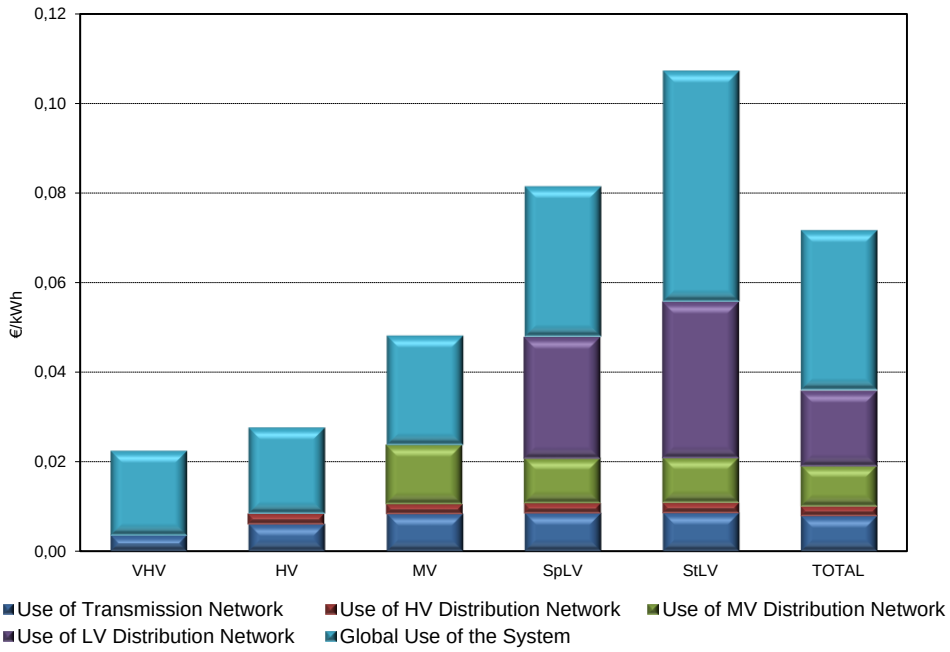
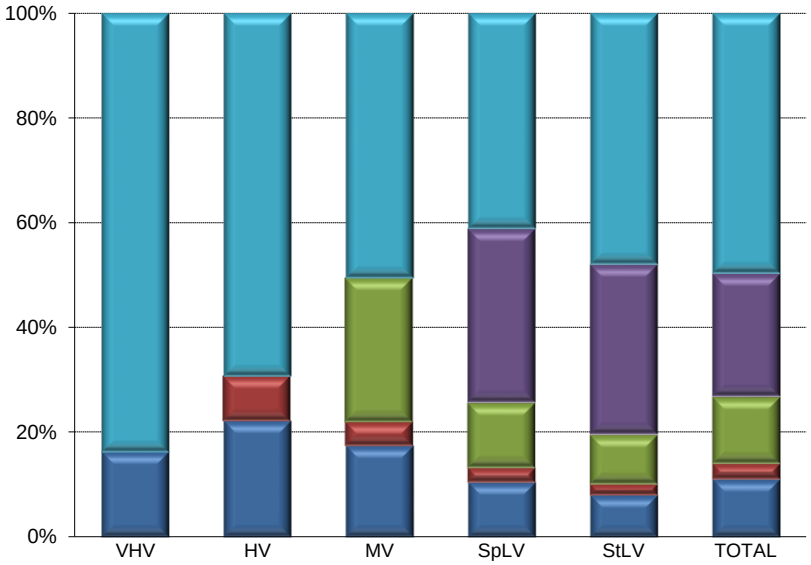


Figure 3-5 – Structure of the average price of Network Access Tariffs in 2014



	VHV	HV	MV	SpLV	StLV	TOTAL
Global Use of the System	83,8%	69,4%	50,6%	41,2%	48,0%	49,7%
Use of LV Distribution Network				33,2%	32,4%	23,5%
Use of MV Distribution Network			27,4%	12,4%	9,4%	12,7%
Use of HV Distribution Network		8,6%	4,7%	2,9%	2,2%	3,1%
Use of Transmission Network	16,2%	22,0%	17,3%	10,4%	8,0%	11,0%

2014 REGULATION REVISION

ERSE launched a review process of the regulations applicable to the electricity sector in 2014, which covered the Commercial Relations Code (RRC), the Tariff Code (RT), the Access to Networks, and Interconnections Code (RARI) and the Network Operation Code (ROR).

In the case of the Tariff Code[13], which was published in late 2014, the review addressed several aspects, of which the most important regarded network access tariffs:

- Decision to implement pilot projects involving dynamic tariffs;
- Widening of the bi-hourly and tri-hourly tariff options to a larger customer universe, in segments that were restricted to the simple tariff.

The code review process also included a discussion of possible changes in the Transmission Network Use Tariff applicable to producers.

Regulation changes shall apply to network access tariffs from 2015 onwards.

[13] Regulation No 551/2014 of 15 December.

REGULATION METHODOLOGIES FOR ALLOWED REVENUE DETERMINING

2014 was the last year of the 2012-2014 regulation period and it was also the year for the preparation of the 2015-2017 regulation period. In order to remember the methodologies applied to each regulated activity, the following is a summary of the regulatory models underlying the regulatory period still in force:

- Transmission network operator - Model based on economic incentives: (i) application of a price cap methodology[14] with efficiency targets for operating costs (OPEX[15]); (ii) incentive for efficient investment in the transmission network through the use of reference prices in valuing new equipment to be incorporated into the network, whose greater risk is offset by a differentiated rate of return; (iii) incentive to increase availability of the elements of the RNT; (iv) incentive for maintaining equipment in operation at the end of its useful life.
- Distribution network operator –Price cap methodology[16] applied to unit operating costs (OPEX) and costs accepted on an annual basis in the case of investment costs[17] (CAPEX), taking into account the investment plans proposed by the companies. Other incentives also apply: (i) incentive for investment in smart networks; (i) incentive to improve quality of service and (ii) incentive to reduce losses;
- Last resort supplier - Price cap[18] regulation plus a remuneration which is aimed at compensating the working capital needs arising from the differential between the average payment period and the average billing period.
- Companies with electricity transmission and distribution concessions in the Autonomous Regions of the Azores and Madeira - application of regulation through economic incentives: (i) regulation of the electricity Distribution and Supply activities via a price cap[19] methodology for calculating allowed

[14] The fixed component has a significant weight and cost drivers that determine the evolution of revenue to recover by application of the transmission network usage tariff have low volatility, which aligns this methodology with the *revenue cap*. The drivers are the kilometres of power lines of the network and the number of panels in substations. The efficiency factor was set at 3.5%.

[15] Operational expenditure

[16] The cost drivers are the distributed and injected energy and the number of customers. The efficiency factor was 3.5%.

[17] Return on net assets and amortisations.

[18] The cost drivers are the number of customers and the number of service processes. The annual efficiency factor was 3.5%.

[19] The cost drivers in the distribution activity in both Autonomous Regions are distributed power and the number of customers. In the supply activity, the cost driver is the number of customers. In the Azores Autonomous Region the average efficiency target applied to each of the activities was 3.5%. In the Madeira Autonomous Region, efficiency targets range from 2.5% in the transmission activity and 5% in the distribution activity.

revenues; (ii) definition of reference costs of fuel oil consumed in electricity generation[20] and (iii) incentive for the promotion of environmental performance.

The allowed revenue for Transmission and Distribution System Operators in their Global System Management activities, Trading of Electricity of the Commercial Agent and Transmission Network Access Trading include costs that mainly result from legislative decisions, called General Economic Interest Costs (CIEG).

The most significant CIEG, either in terms of value or their impact on the functioning of the market, are related to generation. Market liberalisation has led to the need to anticipate the termination of the long-term Electricity Acquisition Contracts (CAE). Two of these contracts remained in force, and the energy generated by those two plants is now managed by a supplier. The remaining contracts were terminated and the respective power plants were included in a legal concept - Costs for the Maintenance of Contractual Equilibrium (CMEC) - which gives producers the right to receive financial compensation intended to grant them equivalent economic benefits as those provided by the CAE. There is also a very significant portion that relates to the remuneration of energy generated from renewable sources or CHP (SRG, with the exception of large hydropower), which is determined administratively. The costs considered in these tariffs, and which reflect the foregoing, are:

- The costs of the remaining CAE, which correspond to the difference between the costs for the acquisition of electricity defined in the CAE and the revenue from its sale in the wholesale market;
- Costs of CMEC, difference between the economic benefits provided by CAE and revenue from the sale of energy associated with these contracts in the market;
- Overcost of SRG, with the exception of large hydropower, which is the difference between the average price of the energy acquired from those producers and the average sales price of that energy in the wholesale market by the LRS.
- Apart from these, the concession fees paid by the Distribution Network Operator to municipalities and compensation amounts paid to companies in the Azores and Madeira for the application, in these regions, of the same tariff level in force in the mainland.

[20] Electricity generation in the Autonomous Regions of the Azores and Madeira is regulated, and it is not liberalised because these regions have benefited from a derogation of the application of Directive 2003/54/EC.

REVISION OF THE REGULATION METHODOLOGIES FOR DETERMINING THE ALLOWED REVENUE AS PART OF THE REGULATION REVISION

The year 2014, as previously mentioned, was also the year for the preparation of the 2015-2017 regulatory period. To this effect, the regulation methodologies applicable to each of the regulated activities were evaluated and new control parameters were set. The main changes resulting from the new regulatory period were as follows:

- The last resort supply activity regulated by a price cap methodology depending on the evolution of the number of customers in the regulated market and the inclusion of a non-controllable cost component, in order to incorporate extraordinary costs resulting from changes in the level of activity and the profile of the customer portfolio underlying the tariff extinction process. This cost component must be analysed and calculated annually, on a case-by-case basis and shall only be considered when justified.
- In the distribution activity, the incentive to invest in smart grids is now calculated based on actual, audited investment values and will have a duration of 6 years. Thus, in the calculation of allowed revenues for the electricity distribution activity, there is no longer a separation of assets pertaining to the conventional network and the smart network. The factor of additional efficiency was also eliminated.

In the new regulatory period, reference costs were set for the supply activity, based on questionnaires conducted to suppliers in the liberalised and regulated markets. This exercise, along with a standardisation of items accepted for determining cost bases, aimed at harmonising the regulatory rules for determining supply costs in the last resort supply activity in mainland Portugal and the Autonomous Regions.

The regulatory review also introduced a mechanism to control return on assets, in order to ensure an alignment between the actual rate of return of these assets as a result of the methodology set for the regulatory period, and thus avoid excessive gains that may result from effects that do not depend on the companies' performance. This *ex post* limitation mechanism for the remuneration rate is applied to activities that are subject to remuneration of fixed assets and is symmetrical.

With regard to the cost of capital, the calculation methodology did not change significantly from that of the previous regulatory period.[21]. However, the following aspects may be worth noting: (i) the reference rate fordetermining the cost of capital for the 2015-2017 regulatory period was removed and replaced by the yields of 10 years Government Bonds (instead of CDS[22]).

[21] Rates of remuneration of assets for 2014 were: transport activity – 9% and distribution activity – 9.5%. For the Autonomous Administrative Regions: transmission – 9% and distribution – 9.5%.

[22] *Credit Default Swaps*

NETWORK CONNECTION COSTS

The rules and costs for connecting installations to the networks[23]take into consideration criteria of economic rationality (adherence to the connection construction costs) and the need to ensure consumer access to electricity. The rules are approved by ERSE following public consultation processes in which all interested parties participate.

DEVELOPMENT AND INVESTMENT PLAN FOR THE ELECTRICITY TRANSMISSION NETWORK

As was mentioned in last year's report, in 2013, the Directorate General for Energy and Geology (DGEG [Direção Geral de Energia e Geologia]) submitted to ERSE, for an opinion, the proposal for a Development and Investment Plan for Electricity Transmission for the 2014-2023 period (PDIRT-E 2013), which was prepared by the National Electricity Transmission (RNT) operator. In 2013, ERSE conducted a public consultation on the PDIRT-E 2013 proposal and, taking into account the result of this public consultation, as well as the comments resulting from consultations to the Advisory Board and the Tariff Board, ERSE analysed the PDIRT-E 2013 proposal and issued its opinion in early 2014.

The period for the application of the plan that was subject to ERSE's opinion is in progress.

DEVELOPMENT AND INVESTMENT PLAN FOR THE ELECTRICITY DISTRIBUTION NETWORK

Pursuant to Article 40-A(1) of Decree-Law 172/2006 of 23 August, in the wording amended by Decree-Law No. 215-B/2012 of 8 October, EDP Distribuição SA, as the National Electricity Distribution Network Operator (RND Operator) submitted to DGEG a Plan for Development and Investment in the Distribution Network for the period 2015-2019 (PDIRD-E 2014 proposal). In turn, DGEG sent ERSE the PDIRD-E 2014 proposal received, with the regulator being responsible, pursuant to the terms of article 40-A(5), for organising a public consultation on its content, with a duration of 30 days.

Already during 2014, within the powers legally assigned to it, ERSE submitted to public consultation, in the period from 14 October to 24 November, the Plan for Development and Investment in the Distribution Network for the 2015-2019 period, prepared by the RND Operator, and issued its opinion on 7 January 2015.

3.1.4 CROSS-BORDER ISSUES

In 2014, no significant changes were made to the management of the interconnections between Portugal and Spain, namely regarding the model for the daily and intraday capacity allocation, which was assigned

[23] Also see section 0.

exclusively to the MIBEL daily and intraday market. Congestion is resolved through the application of a market splitting mechanism.

It should be noted that MIBEL began operating officially on 1 July 2007, based on a single daily market (OMIE) which sustains the Mechanism for Joint Management of the Portugal-Spain Interconnection, with the latter being regulated by the rules and principles defined in the following legal/regulatory instruments:

- EC Regulation no. 714/2009 of the European Parliament and of the Council;
- Access to Networks and Interconnections Code;
- Procedures Manual for the Mechanism for Joint Management of the Portugal-Spain Interconnection;
- Joint Rules for Contracting Capacity in the Portugal–Spain Interconnection.

Pertaining to the forward trading of the Portugal-Spain interconnection capacity, at the end of 2013, following the joint proposal from the MIBEL's Board of Regulators, the regulators in Portugal and Spain agreed to approve the rules and principles governing harmonised allocation of financial rights for the use of the interconnection capacity, taking effect as of the 1st of January 2014. To this end, ERSE changed its Access to Networks and Interconnections Code (RARI), as well as the Procedures Manual for the Mechanism for Joint Management of the Portugal-Spain Interconnection.

Following this regulatory change and the publication by ERSE of the Procedures Manual for the Mechanism for Joint Management of the Portugal-Spain Interconnection, auctions came to be the method for the allocation of financial rights over the interconnection capacity between Portugal and Spain. Throughout 2014, quarterly auctions were held for each direction of the interconnection, concerning the last 3 quarters of 2014 and the 1st quarter of 2015, as well as the annual auction for the year 2015.

The auctions took place through a platform operated by OMIP.

REVENUE FROM CONGESTION ON INTERCONNECTIONS

In 2014, revenue from congestion on the interconnections between Portugal and Spain, resulting from the zonal price difference after the application of market splitting, totalled 6.8 million euros, inverting the upward trend recorded in the last three years and representing a 40% decrease against 2013.

This reduction in the global amount of revenue from congestion represents greater market interaction, observed both in the lower number of congestion hours and in terms of average price differences.

In terms of the reduction of the total number of congestion hours, there was a decrease of about 59%, going from 944 hours in 2013 to 486 hours in 2014. This total includes congestions in both directions of the interconnection.

In terms of reduction of the price differential, in 2014 there was an average spread in the exporting direction of €0.28€/MWh, i.e. less than 55% against the €0.61/MWh recorded in 2013 also in the export direction.

Breaking down this analysis by month, it appears that, while during the 1st quarter there was congestion predominantly in the export direction (337 hours), with an average *spread* of €1.11/MWh, in the remaining months of 2014, congestion occurred for only 149 hours, mostly in the import direction, with an average spread of €0.13/MWh.

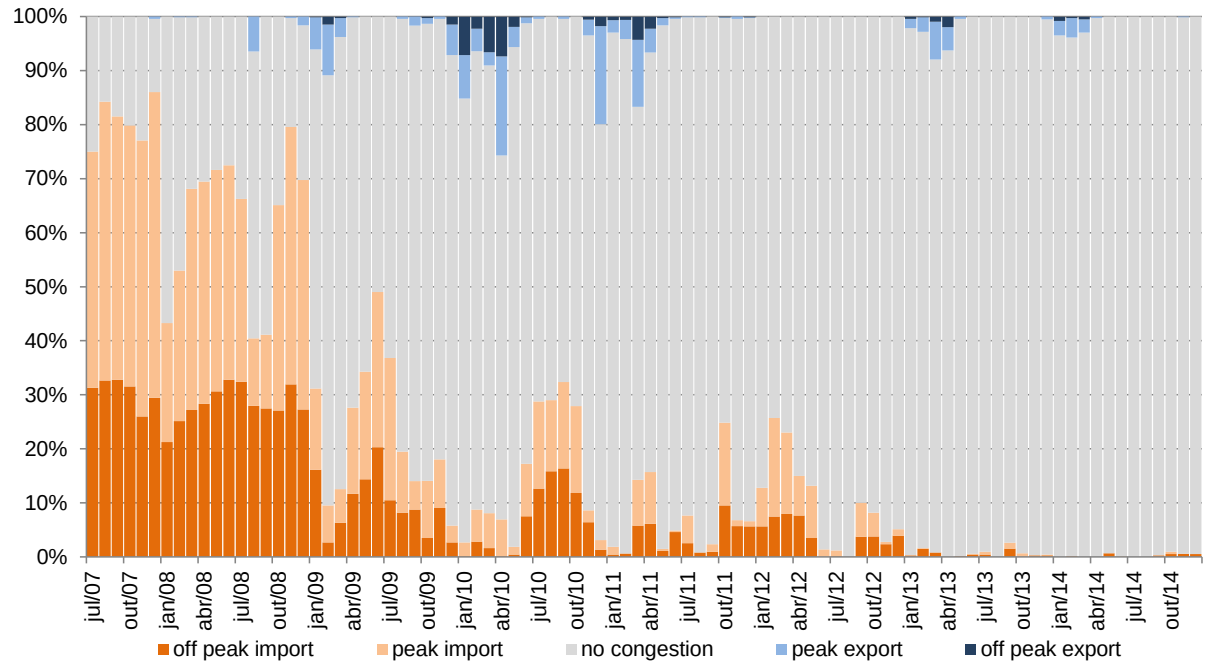
Table 3-4 - Monthly evolution of revenue from congestion in 2014

Month	Congestion		Average Price PT	Average Price SP	Price differential	Imports (PT < SP)	Export (PT < SP)	Congestion revenue (PT < SP)
	no. hours	% hours month	(€/MWh)	(€/MWh)	(€/MWh)	(MWh)	(MWh)	10^3 €
January	142	19%	31,47	33,62	-2,15	844 201	17 208	2 984
February	111	17%	15,39	17,12	-1,73	764 765	25 962	2 218
March	64	9%	26,20	26,67	-0,47	631 807	74 403	787
April	20	3%	26,36	26,44	-0,09	243 029	187 231	133
May	10	1%	42,47	42,41	0,06	80 784	425 220	9
June	20	3%	51,19	50,95	0,24	50 976	518 422	122
July	12	2%	48,27	48,21	0,06	10 691	750 134	82
August	0	0%	49,91	49,91	0,00	14 334	560 890	0
September	6	1%	58,91	58,89	0,02	76 797	634 114	32
October	39	5%	55,39	55,11	0,27	102 047	544 673	301
November	32	4%	46,96	46,80	0,16	358 629	159 495	67
December	30	4%	47,69	47,47	0,21	187 489	355 210	95
								6 830

Source: ERSE, OMEL

The figure below shows the use of available capacity, in both directions, for the Portugal-Spain interconnection, with highlight to the reversal of the direction of congestion transit from May 2014 onward, from an exporting direction (Portugal to Spain) to an importing direction (Spain to Portugal), as shown in the price differences presented in Figure 3-6.

Figure 3-6 - Use of the Portugal-Spain Interconnection Capacity



Source: ERSE, OMEL

COOPERATION

ERSE regularly cooperates with the other European regulators in the scope of CEER and ACER in the pursuit of the internal energy market.

With Portugal being geographically located in the Iberian Peninsula, ERSE cooperates closely with the Spanish regulator, through the MIBEL's Board of Regulators, namely in terms of the coordinated management of the Portugal-Spain interconnection. Similarly, in terms of the works inherent to the Southwest region of Europe (SWE REM), work is underway with a view to the successful European integration of the Iberian Electricity Market.

- FORWARD TRADING OF THE COMMERCIAL CAPACITY IN THE PORTUGAL-ESPANHA INTERCONNECTION

Throughout 2014, the process continued for the harmonised attribution of financial transmission rights (FTR) over the commercial capacity of the Portugal-Spain interconnection.

This process resulted from the works carried out in order to integrate the integrate the Portugal-Spain interconnection into a harmonised and coordinated reference system for the fixed term allocation of commercial capacity, within the framework of the MIBEL's Board of Regulators and the Southwest region of Europe, which culminated in the approval, in December of 2013, of changes to the Access to Networks

and Interconnections Code and the respective Procedures Manual for the Mechanism for Joint Management of the Portugal-Spain Interconnection, following public consultation.

In this regard, in 2014, there were 4 FTR allocation auctions in the Portugal-Spain border, with quarterly and annual horizons, where all the rights offered were acquired.

- COUPLING OF THE IBERIAN MARKET WITH THE NORTH-WEST EUROPE REGION

On 13 May 2014 the coupling of the Iberian market with the *North-West Europe* (NWE) region, which includes the markets of France, Belgium, Netherlands, Germany, Luxembourg, United Kingdom, Norway, Denmark, Sweden and Finland), became a reality, and has been successful since then.

Also, for the first time on 19 May 2014, between 4:00 p.m. and 5:00 p.m. CET, there was a convergence in prices in almost all of Europe, from Portugal to Finland, involving all the countries of the Iberian Peninsula and the NWE region, at a minimum price of €37.92/MWh.

The MIBEL's Board of Regulators accepted the regulators' commitment, in close cooperation with the Iberian Market Operator (OMI) and with the system operators in Portugal and Spain (REN and REE) to take all the measures needed to enable MIBEL to join forces with the markets of the Northwestern region of Europe.

- REGULATORY RESERVE EXCHANGE MECHANISM BETWEEN TRANSMISSION SYSTEMS OPERATORS

On 4 April 2014, as part of the South-West Regional Initiatives by ACER, MIBEL and the BALIT project, regarding the system service exchange between operators, amendments were approved to the Global System Management Procedure Manual, in order to implement the mechanism for the exchange of regulation reserve between transmission network operators.

These changes were approved following the joint works developed by transmission network operators in Portugal, Spain and France, for the purpose of optimising the use of available resources and reducing the regulation reserve energy mobilised in each of the participating electricity systems.

MONITORING OF THE RNT OPERATOR'S INVESTMENTS

In addition to the critical analysis carried out in the scope of the opinion on the Development and Investment Plan for the Electricity Transmission Network (PDIRT), every year ERSE carries out an analysis of the investments made by the RNT operator for the purpose of their consideration in the allowed revenue and consequent reflection in the tariffs.

3.1.5 COMPLIANCE

In the scope of the powers attributed by its statutes and other applicable legislation, ERSE:

- Approves codes;
- Issues binding decisions on electricity companies;
- Conducts inquiries on the functioning of electricity markets;
- Has the ability to demand the information that electricity companies must provide to fulfil their functions;
- Requests and promotes the conducting of audits to companies subject to regulations issued by ERSE;
- Develops other actions, of Supervision and of Screening;
- Sanctions behaviours that constitute administrative offenses by electricity companies;
- Promotes information and clarification for electricity consumers, handles their grievances and complaints and intervenes in extrajudicial dispute resolution;
- Issues opinions on matters requested by the Government, the Parliament or other public administration entities.

On the legislative front, in 2014, the following measures deserve a special mention:

- Creation of the Fund for Systemic Sustainability of the Power Industry, through Decree-Law No. 55/2014 of 9 April, with impact on ERSE's powers, particularly in terms of the reduction of the tariff debt of the National Electricity System (SEN) through revenues from the special contribution on the energy sector.
- The publication of Decree-Law no. 24/2014 of 14 February, which approved the new rules for distance and off-premises contracts, transposing Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011, on consumer rights.
- The publication of Decree-Law No. 153/2014 of 20 October, with provisions on the new regimes applicable to the generation of electricity for self-consumption and generation of electricity from small production units for sale to the public network.
- The publication of Decree-Law No. 172/2014 of 14 November, which broadened the scope of application of the social tariff in electricity supply, supplemented by Ordinances 278-B/2014 and 278-C/2014 of 29 December, with new procedures and conditions for the granting, application and maintenance of the social tariff and the Special Social Support for Energy Consumers (ASECE).

In 2014 a regulatory review was also undertaken by ERSE in the electricity sector, in view of adjusting the regulatory framework to the legislative changes introduced in the meantime, namely those resulting from the transposition of the Third Energy Package and the publication of the Energy Sector Sanction System, as well as the integration of new developments in the electricity market. Within this context, the following new regulations for the electricity sector have been approved and published:

- Commercial Relations Code;
- Access to Networks and Interconnections Code;
- Tariff Code;
- Network Operation Code.

On 1 January 2014, the new regulation Quality of service Code for the electricity sector, approved by ERSE, entered into force.

On 9 September 2014, ERSE made a decision to certify the National Transmission Network Operator (RNT), having granted extra time for compliance with the established conditions, whose verification is required for the final decision.

As part of its supervisory responsibilities, in 2014, highlight goes to the following initiatives undertaken by ERSE:

- Verification and analysis of the general conditions of electricity supply contracts concluded with suppliers on the market regime.
- Verification and analysis of commercial offers made available by suppliers on the market regime.
- Monitoring of flows between regulated and non-regulated activities, through the analysis of transfer pricing.
- Monitoring of the remuneration rates of regulated activities.
- Independent audit follow-up of supplier switching procedures.
- Auditing investments and reference costs pertaining to 2013.

The Energy Sector Sanction System was approved by Law No. 9/2013 of 28 January. Consequently, in 2014, a few structuring projects were developed, with a view to the implementation of this system, namely:

- The Administrative Infraction Proceeding Organisation System was implemented;
- The Sanction System Implementation Manual was approved;
- The general rules on Internal Audits, as part of General Supervision, were approved.

By the end of 2014, 44 complaints had been received, with particular focus on aspects of the commercial relationship with consumers (billing, supply interruption, unfair commercial practices, etc.). In the same year, 8 administrative offense proceedings were opened.

3.2 PROMOTING COMPETITION

3.2.1 WHOLESALE MARKET

In 2013, there was a slight increase in concentration in the electric energy generation market, as well as an increase in the concentration level in terms of installed capacity, justified by the termination of the tolling contract between Iberdrola and EDP 31 March 2014, following the decision issued by the Competition Authority on the EDP/Ativos EDIA concentration operation[24]. Due to the hydrological regime recorded, favourable to hydropower generation by the incumbent, the level of participation of hydro plants to meet demand was quite significant, and provided the justification for the increase in concentration of the generation of electric energy.

As was the case in 2013, the more favourable development of liberalised market led to greater dispersion of energy contracting resources, particularly through the implementation of regulated forward trading SRG energy placement mechanisms, with guaranteed revenue, which suppliers can access.

Conditions felt in wholesale market operations in 2014 were conflicting for the purpose of setting prices in the organised market. As in 2013, there were one-off factors which led to slightly higher spread between the MIBEL price areas, namely high hydrological capability and a consequent significant decrease in the use of combined cycle natural gas plants and the reduction in the weight of imports, in addition to an increase in the relative weight of the intermittent component for the generation of SRG, with a guaranteed revenue in the consumption structure which favoured the separation of the two price areas. On the other hand, the implementation of a tax regime in Spain aimed at taxing income from power plants, namely coal plants, combined cycle natural gas plants and hydro plants meant that the price differential between MIBEL areas reversed in comparison to 2012.

The number of hours of market splitting decreased in comparison with 2013, in line with the evolution recorded in the price difference between the two markets, due to the existence of a more humid hydrological regime during the first semester, as well as the positive evolution in the average capacity of the Portugal-Spain interconnection for commercial purposes.

[24] http://www.concorrencia.pt/vPT/Noticias_Eventos/Comunicados/Paginas/Comunicado_AdC_200809.aspx

From the regulatory point of view, the development of market supervision mechanisms by ERSE sought to help strengthen the transparency and integrity of the wholesale electricity market.

Therefore, from a general point of view, due to high hydraulic conditions, 2014 was marked by a development that was beneficial to the incumbent, whose installed hydro capacity was the greatest, leading to an increase in the global concentration of the generation of electricity. Indeed, a high level of concentration persists in the electricity market, so the implementation of further measures to foster competition and promote transparency should follow on from the developments already achieved.

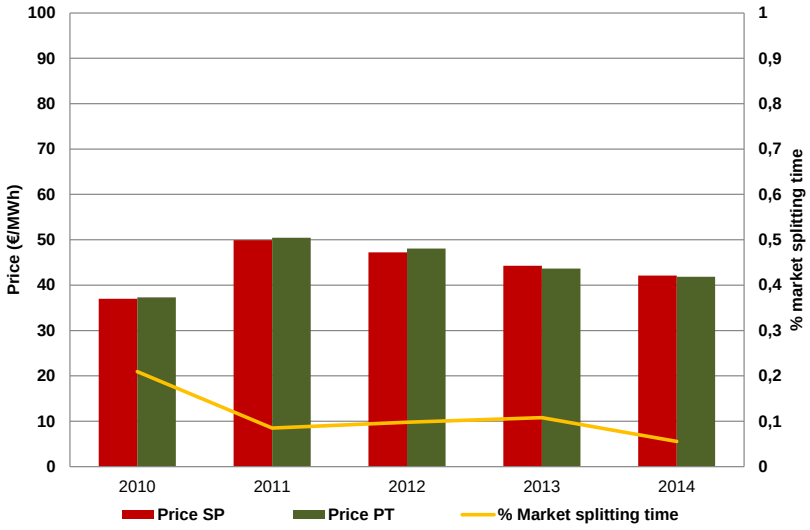
3.2.1.1 MONITORING THE PRICE LEVEL, TRANSPARENCY LEVEL AND THE LEVEL AND EFFECTIVENESS OF MARKET OPENING AND COMPETITION

The price evolution formed in the wholesale market in Portugal is intrinsically related to the Iberian integration and the participation of Portuguese agents in the MIBEL context.

The price formed in the spot market is common to Portugal and Spain, except in situations in which there is congestion in the interconnection resulting in the need to apply the market splitting mechanism, and so, apply different prices in the two countries.

The evolution of the annual average price in the spot market, both in Portugal and in Spain, is presented in Figure 3-7.

Figure 3-7 – Evolution of the annual average price in the spot market and market splitting



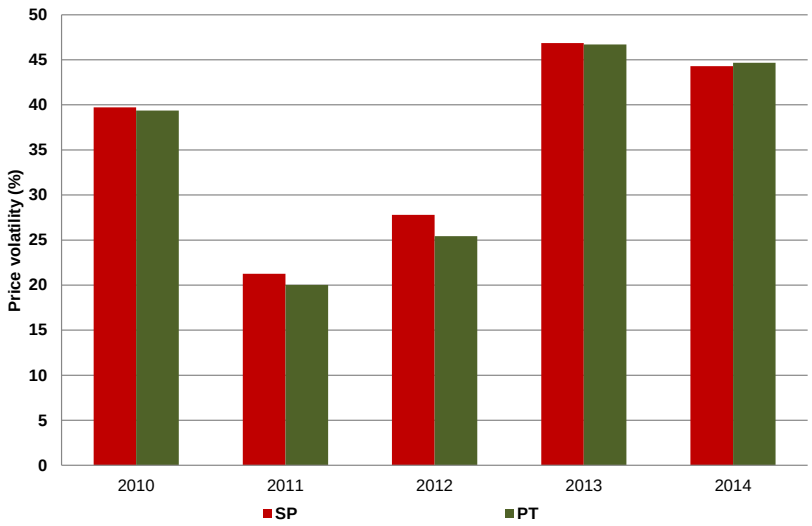
As can be seen from this figure, the average price in the spot market for Portugal, in 2014, was about 41.86 €/MWh, approximately 4% lower than the price recorded in 2013 (average annual price of 43.65 €/MWh). This reduction was mainly due to the evolution of the hydrological regime and also the

decline in the price of coal in international markets, which determined the setting of the price well below the marginal costs of combined-cycle natural gas thermal plants. In any case, the average market price in 2014 for Portugal was approximately 26% below the marginal cost[25] of combined-cycle natural gas plants and approximately 44% above marginal costs of coal thermal plants.

Regarding the setting of the spot market price, the market's volatility represents an important aspect considered by market agents, namely regarding the need to cover price risks. In 2014, the volatility of the spot market price for Portugal, measured as the coefficient between the standard imbalance of prices in the year and the respective average price, was approximately 45%, which means prices varied, on average, between 23 €/MWh and 61 €/MWh.

Figure 3-8 shows the evolution of the annual volatility of the spot market price, from 2010 to 2014, for both Portugal and Spain, with a slight decrease in the volatility of the spot price between 2013 and 2014. As in 2013, the high levels of volatility are justified mainly by the aforementioned evolution of water availability and the relative weight of the intermittent component of SRG with guaranteed revenue in the consumption structure. In any case, the Portuguese market has been slightly less volatile in price than the Spanish market, a trend that has changed in 2014.

Figure 3-8 – Volatility of spot price



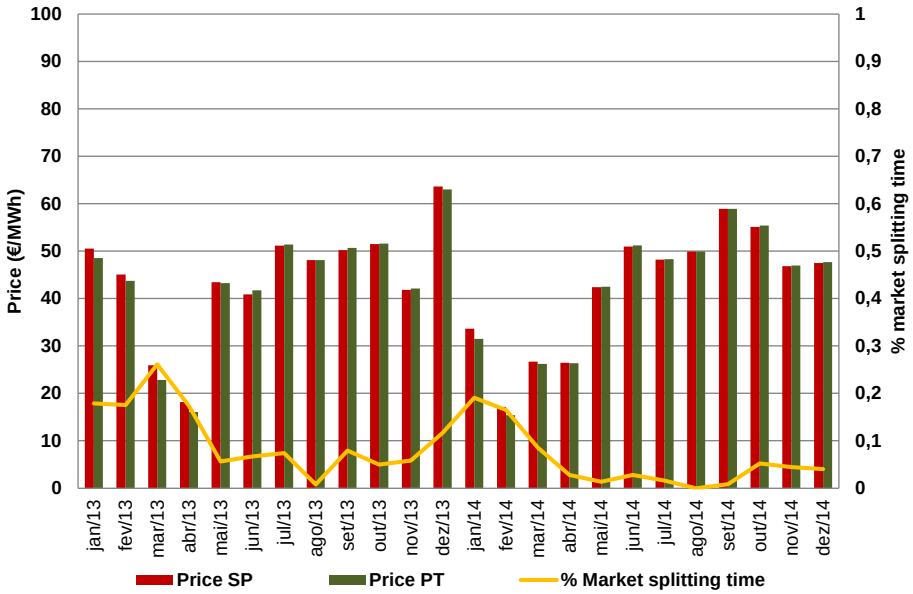
Note: volatility measured as a ratio between the standard imbalance of the spot price and the respective annual

Figure 3-9 presents the evolution of prices in Portugal and Spain and the percentage of market splitting time, broken down by month for 2013 and 2014. The following can be seen in relation to 2014: (i) a slight reduction in the average price set in the market in 2014, in comparison to what had happened in 2013; (ii)

[25] Estimated marginal cost, including CO_2 emission costs.

the existence of a more humid hydrological regime during the first semester; (iii) a reduction in the number of hours of market splitting in the exporting direction against 2013, driven by an increase in the interconnection capacity for commercial purposes between Portugal and Spain.

Figure 3-9 – Spot market price and market splitting time



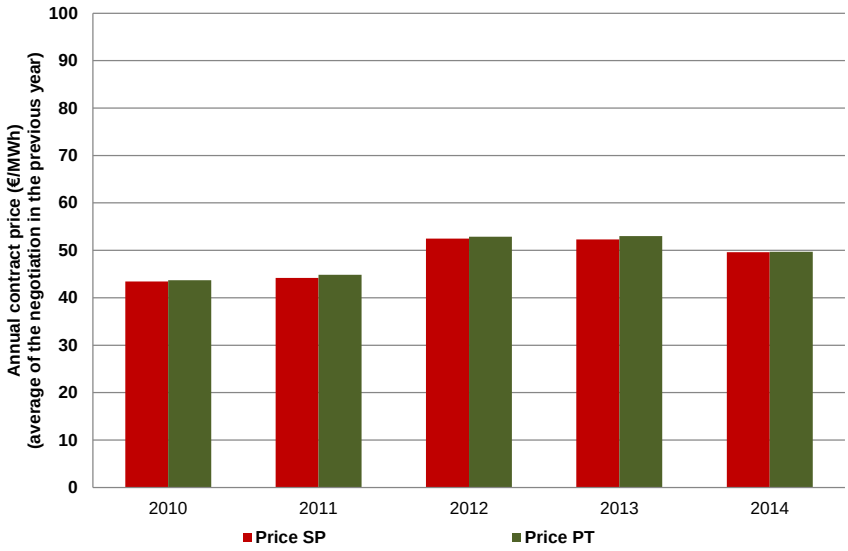
The MIBEL operating model provides for the existence of references for forward contracting in an organised market regime, where agents can place part of their electricity needs, namely for the partial definition of the future price for the electricity to be supplied to end users. The operating of the forward market is, in fact, an additional tool for agents to be able to mitigate the risks of the volatility of prices and ensure the availability of electricity (supply) or meet demand with characteristics of greater predictability and stability.

Indeed, as the spot market, in the Iberian context, is a rather liquid platform and, in the case of Portugal, in particular, approximately 75% of consumption is satisfied through contracting in this market reference system. In this sense, without an intrinsic problem of liquidity and depth within the definition of the classic indicators used (number of transactions, market volume, dispersion of volumes negotiated), there is a growing need to cover the risks of fluctuating spot market prices for which one of the most efficient and transparent answers will be the use of organised market platforms for forward contracting.

The evolution of the price set in the forward market, in this case, the market formally provided for under the agreement for the creation of MIBEL (OMIP), showed that the price could be expected to remain steady between 2013 and 2014. In fact, the market agents who, in 2012, had acquired a position in the delivery

contract with a base load for 2013 would have paid an average price (49.71 €/MWh for Portugal[26]) about 18.8% higher than the price set in the spot market. Figure 3-10 presents the evolution of the average market closing prices related to the annual contract, in a base load delivery.

Figure 3-10 – Evolution of the average price for the negotiation of the annual futures contract (delivery in Portugal and in Spain)



Note: the average closing price for the year prior to delivery, for a base load delivery; the 2014 price corresponds to the average price set during 2013.

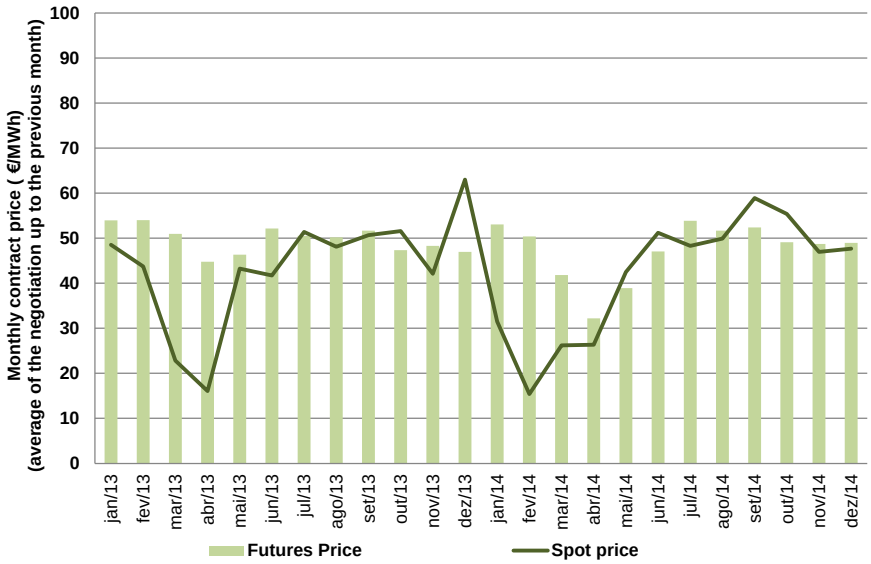
On the other hand, the evolution of the negotiation of monthly future contracts with a base load delivery shows an increase in the average risk premium in forward contracting in the first half of 2014 (difference between the forward price and the spot price for the corresponding month), showing a relative decline in expectations for the price set in the spot market. In the second half of 2014, on the other hand, the situation was more favourable, with a reduction in the average risk premium. As for December 2013, a month in which high prices occurred in the spot market, (average of 58.91 €/MWh), agents who had ensured the coverage of their needs in the forward market for this month in advance secured gains of 6.51 €/MWh, due to the cancellation of the spot market average price risk.

Figure 3-11 presents the evolution of monthly futures contract prices in the market managed by OMIP, and also the spot negotiation price, both for Portugal. Throughout 2014, the evolution of the futures price for monthly contracts shows an upward trend in the price of energy traded on the organised market, higher

[26] The value of the forward provisioning price reflects the average weighted value per contract volumes of shares of the 2014 annual contract with delivery in the Portuguese area of MIBEL, including the record of auction, continuous and OTC operations.

than the evolution of the spot market, where the trend throughout the year was also upward. The evolution of monthly contracts is less variable than the evolution of spot contracts during this period.

Figure 3-11 – Evolution of the average price for the negotiation of the monthly futures contract (delivered in Portugal)

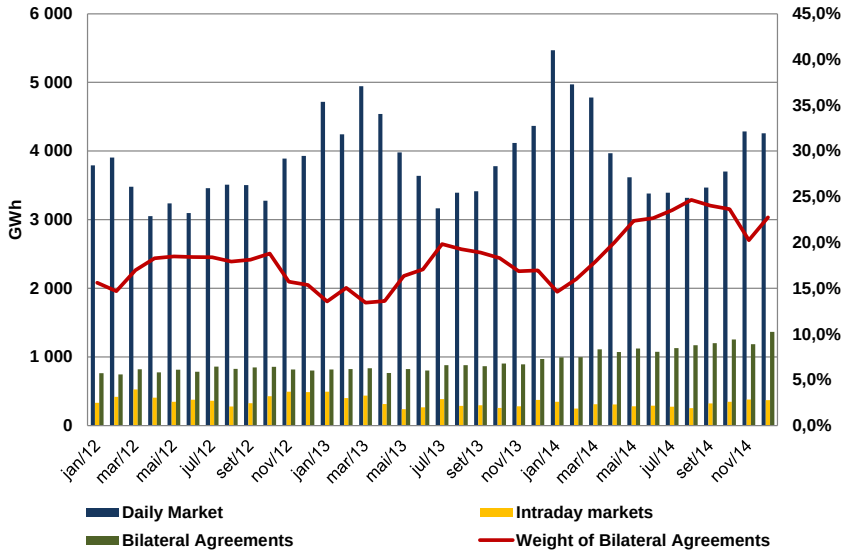


For 2014, in the scope of the application of the forward contracting mechanism for energy acquired from generators in special regime, five guaranteed revenue SRG auctions were held, with the placement of a total of five distinct products (one annual base load and four quarterly base loads). These five auctions resulted in the placement of total hourly power output (volume placed) of 650 MW. The variation in volume was carried out in full by the modulation of quantity in the quarterly product (400 MW for each quarter) and in the annual product (250 MW). The volume of energy placed in this instrument corresponded to approximately 12% of national consumption.

The auctions conducted for delivery in 2014 ensured a total placement of the minimum volumes open to negotiation having allowed the stabilisation of the placement prices for SRG electricity and consequent reduction in overcosts reflected in the tariffs to an overall amount of approximately 37.92 million euros. Furthermore, the existence of the auction mechanism allowed for the provision to the market of energy provisioning risk coverage tools (in volume and in price) which were positively evaluated by the market agents.

Regarding the spot market negotiation (daily and intraday markets), in the case of Portugal, it is much higher than the trading in bilateral contracts, as shown in Figure 3-12. It is useful, however, to bear in mind that the acquisition of fixed term products listed on the MIBEL forward market is settled in cash through the daily market.

Figure 3-12 – Breakdown of energy supply volumes between markets



For the year 2014, a positive evolution can be seen in the average weight of bilateral contracts, in comparison with 2013, and also in the absolute value of bilateral contracts (a 33% increase, equivalent to 3.4 TWh).

The significant change in the contracting volumes in the daily market relates to the complete implementation, in 2012, of the autonomous explicitness of the volumes of SRG with guaranteed revenue, which were no longer placed on the market in a perspective of compensation of volumes between the needs of the LRS (the instrumental buyer of SRG) and the supply of SRG generation.

Spot contracting for the wholesale market in Portugal fits into the context of the deepening of MIBEL, in which there is a single market for Portugal and Spain with an associated mechanism for the resolution of congestion on a daily basis, based on market splitting whenever the flow of electricity generated by aggregated demand and supply exceeds the commercial capacity available on the interconnection. The contracting structure in the spot market is characterised by the following aspects:

- On the demand side, agents registered in Portugal, including the LRS, direct most of their demand to the *spot* market, and, in the case of the LRS, the quantity of electricity acquired from special regime generators (legal imposition) is deducted from the electricity needs for supplying customers.
- On the supply side, with the exception of special regime producers, all other market agents direct their supply mainly towards the spot market.

The evolution, both for spot market demand and overall consumption in mainland Portugal, is given in Figure 3-13, where it can be seen that consumption is met by resorting to purchases on the spot market. During 2012, the total explicitness of the guaranteed revenue SRG supply contributed decisively to this level of coverage of consumption by the demand in the daily market.

Figure 3-13 – Spot market demand and spot monthly consumption

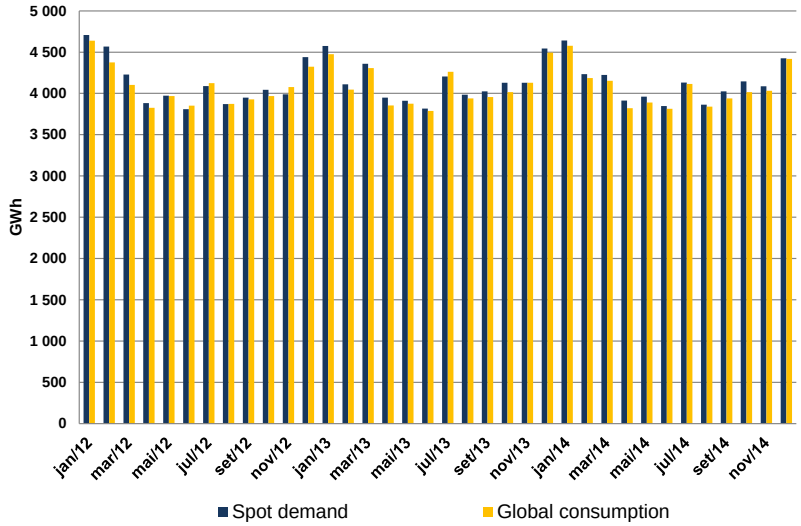
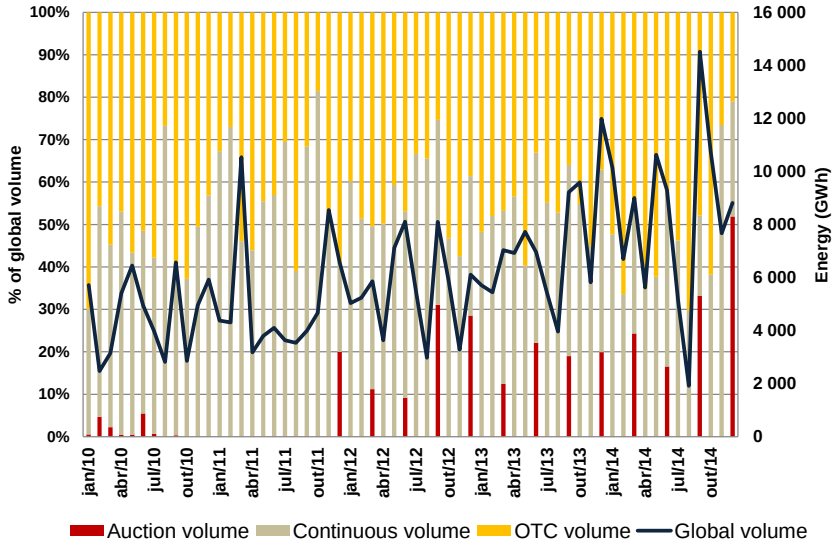


Figure 3-14 shows the evolution in the volumes recorded in the organised forward market forecasted in MIBEL (OMIP). A trend can be seen towards a significant increase in operations in the continuous market and OTC operations, although with high variability over time.

Figure 3-14 – Volumes in the MIBEL forward market



The increase in the volume being negotiated in auctions in December 2011 and during the months prior to the start of each quarter was due to the introduction, by ERSE, of a mechanism for the placing of electricity from special regime generation with guaranteed revenue, designed to make means of forward procurement and/or the coverage of price risks available to suppliers in the market regime. In the last 3 auctions of 2013, a total of 250 MW were also negotiated for the annual contract for delivery in 2014, 400 MW to be delivered in the first quarter of 2014 and 200 MW to be delivered in the second quarter of 2014.

During December 2013, as part of the annual programme for the placing of SRG electricity launched by ERSE, contract volumes for delivery in 2015 were also negotiated in an auction. Highlight also goes to the occurrence of auctions for the initial allocation of financial right contracts over capacity in the Portugal-Spain interconnection in each of the quarters of 2014 (300 MW for delivery in the first quarter of 2014 and 400 MW for delivery in the remaining quarters), in both directions, which allows agents to cover the spread price risk between Portugal and Spain.

The overall volume of negotiation on the forward market controlled by OMIP (including registered operations corresponding to OTC) rose, in 2014, to over 100 TWh, which means a growth of approximately 17% in comparison to 2013.

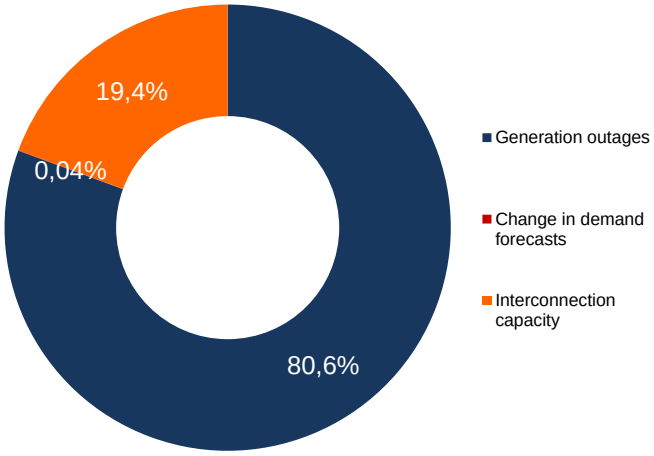
TRANSPARENCY

From a market monitoring point of view, it is important to consider the rules of transparency in the markets. The wholesale electricity market in Portugal benefits from a regulatory system which already imposes obligations to disclose inside information to the market. Indeed, the requirements to report relevant facts under the Commercial Relations Code have already been in force for 5 years and are comparable with the prerogative expressed in the *Regulation on Wholesale Energy Market Integrity and Transparency* (REMIT) regarding the requirement to report inside information.

Among the facts subject to the reporting requirement, are the non-programmed non-availabilities of electricity generation centres, and also their updating, in addition to the non-availabilities of networks (transmission and distribution) which may affect consumption or price setting. The alterations in the capacity commercially available in the Portugal-Spain interconnection are also subject to the requirement to provide information by REN, as the system manager, and also the significant imbalances in the forecast of aggregated consumption of the system and/or of each agent in particular.

The communication of inside information is made in a centralised manner, and is available on a portal managed by REN. During 2014, 2,841 relevant facts were communicated. Of these, approximately 80% correspond to the communication of production non-availabilities, their updating or alteration, and 19% to alterations in the interconnection capacity available for the market and respective price setting in the context of MIBEL, as can be seen in the following figure.

Figure 3-15 – Communication of relevant facts

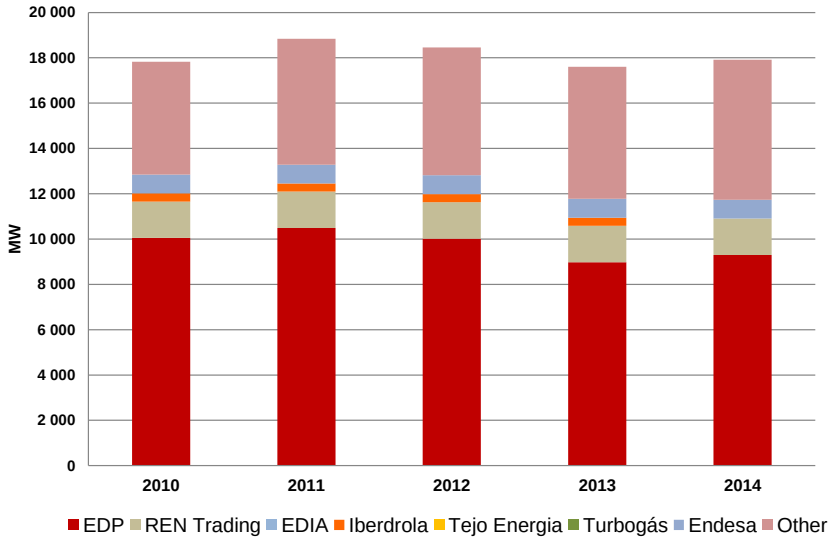


COMPETITION EFFICIENCY

The evaluation of the wholesale market should be done through the characterisation of the installed power plant generation system and its actual generation. To this end, it is important to analyse the evolution of the installed power plant generation system in terms of primary electricity used.

As a complement to the analysis of the breakdown of installed capacity by technology, it is important to characterise the breakdown of the installed power plant generation system by owning or managing company, developed in the next figure, from which we can see that EDP owns most of Portugal's power plant generation systems. However, its predominance has been falling both in relative terms and in absolute terms, due to the decommissioning of 6 groups from the Carregado Plant and the decommissioning of the Setúbal Plant at the end of 2012.

Figure 3-16 – Characterisation of the power plant generation system in Portugal (by agent and installed capacity)



Note: "Other" includes all undertakings that hold SRG assets with guaranteed revenue.

The EDP Group quota in terms of installed capacity has been falling, mostly due to the growth in the SRG segment with guaranteed revenue, in which EDP has an individual minority position. Additionally, highlight goes to the discontinuing, as of 1 April 2014, of the validity of the measure to minimise competition risks decided on by the Competition Authority under the scope of the concentration process that consisted of the acquisition, by EDP, of operating rights in the hydropower plants of Alqueva and Pedrógão (EDIA), which led to the assignment of operating rights over the Aguieira/Raiva hydropower plant for a 5-year period to Iberdrola, which was the successful bidder in an international tender, with a residual impact on the growth of the EDP Group's quota.

During the period 2010 - 2014, EDP's quota in the total installed capacity fell by approximately 5%

The characterisation of the wholesale market also includes an evaluation of the corporate concentration, both in global terms and also in terms of each of the generating technologies.

The evolution of the quotas of the different agents in terms of installed capacity by technology and/or regime is presented in Figure 3-17. Combining all the factors, the level of concentration in the electricity generation segment in Portugal is high in terms of installed capacity, as can be seen in Figure 3-18, which presents the values of the Hirschman-Herfindall Index (HHI), which measures corporate concentration.

Figure 3-17 – Installed capacity quotas by agents in the different technologies

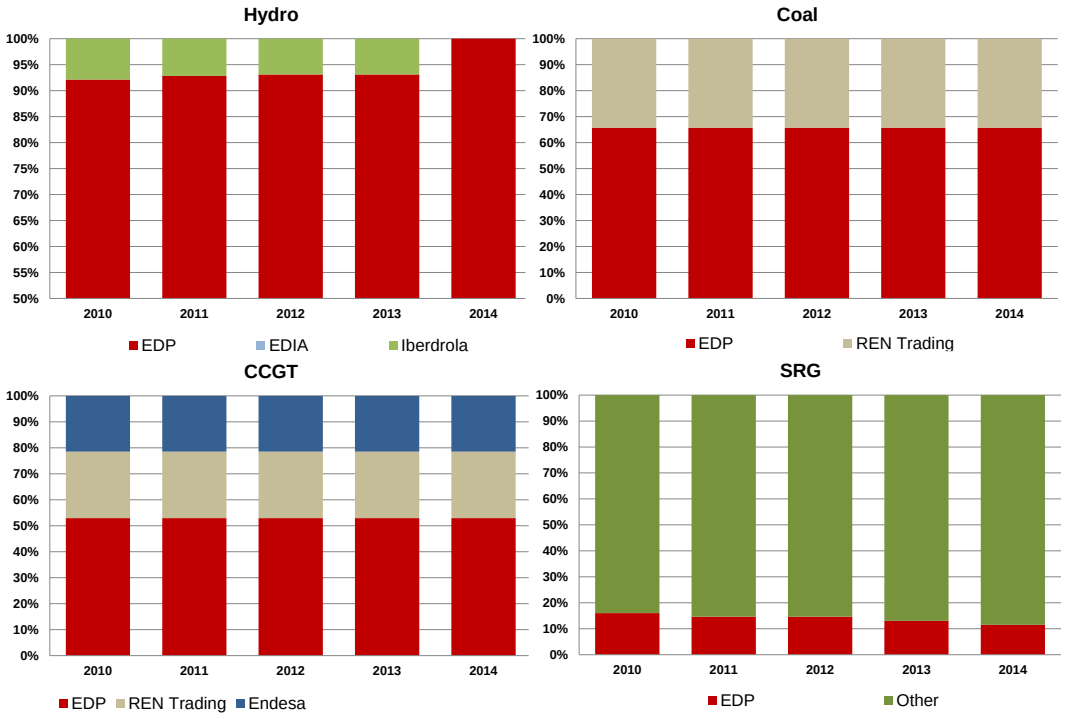
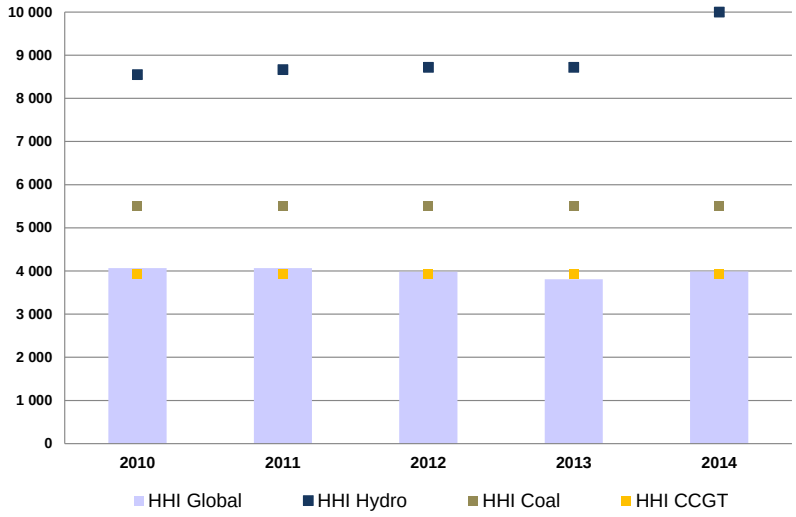


Figure 3-18 – Concentration in generation in terms of installed capacity

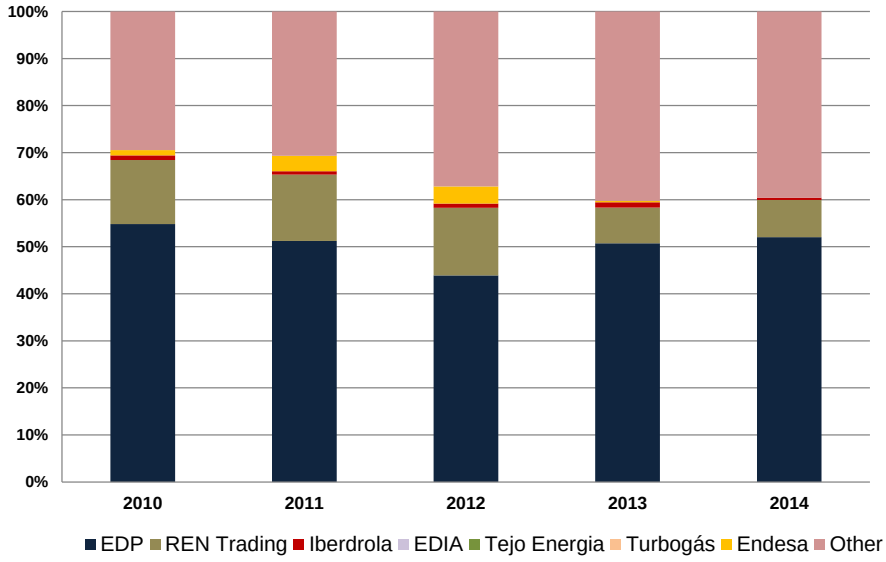


The HHI figures for installed capacity show an evolution, between 2010 and 2014, of a gradual reduction in the overall concentration of capacity supply in the Portuguese system, particularly via the aforementioned increase in SRG capacity. From an evolutionary perspective, highlight goes to the commissioning, in 2010, of a new CCGT plant, belonging to Endesa, a group of companies that competes with EDP. In the coal segment, no alterations in the market concentration were recorded and, in the case of hydro, the entry into operation of the power reinforcements from the two plants held by EDP in 2012 led to an increase in

corporate concentration in this technology. In 2014, the assignment, on 1 April 2014, of the operating rights over the hydropower plant of Aguieira/Raiva, which Iberdrola held by way of tolling contract with the EDP group, reinforced the full dominance of the incumbent in hydro technology.

The evolution in quotas of electricity generation by agent is shown in Figure 3-19 – Quotas of electricity generated by agent, while the same evolution in the different technologies and special regime with guaranteed revenue are presented in Figure 3-20.

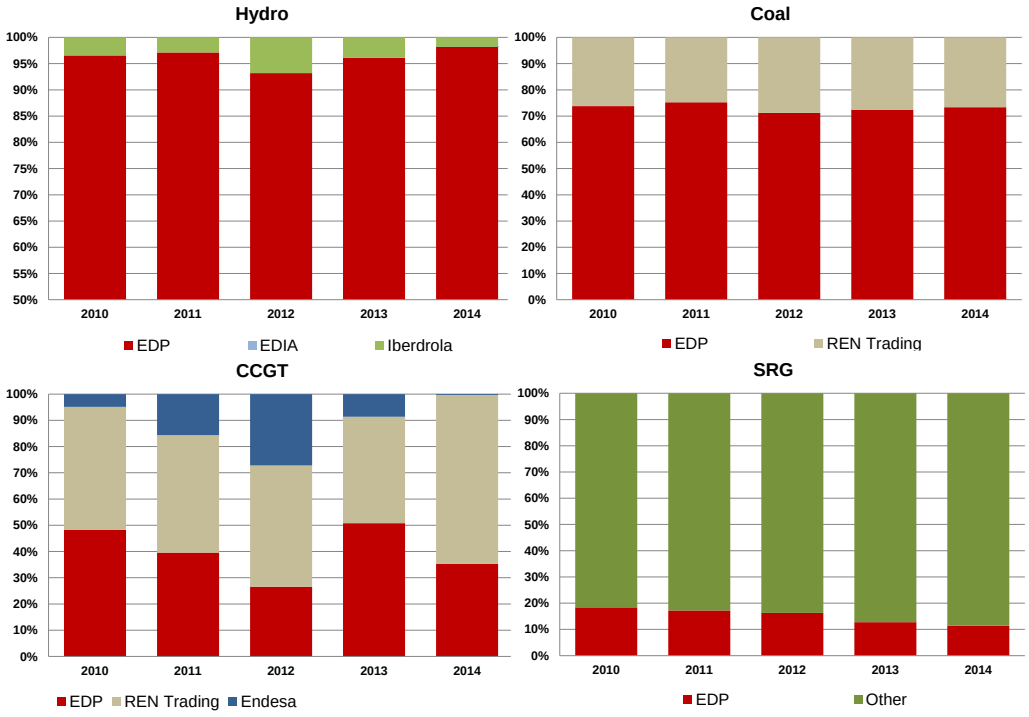
Figure 3-19 – Quotas of electricity generated by agent



Source: REN, prepared by ERSE – does not include figures for imported energy.

From a global point of view, in 2014, an increase in the EDP group's participation in total generation in mainland Portugal must be highlighted, mainly due to an increase in hydropower generation due to a favourable hydrological regime.

Figure 3-20 – Quotas of energy generated by agents in the different technologies



In terms of electricity generated, the trend seen between 2010 and 2014 points towards a distinct evolution in EDP's generation quota in the main technologies. In SGR, the incumbent has seen its quota reduced between 2010 and 2014, mainly due to the reduction in the generation from thermal sources with guaranteed revenue (biomass and cogeneration).

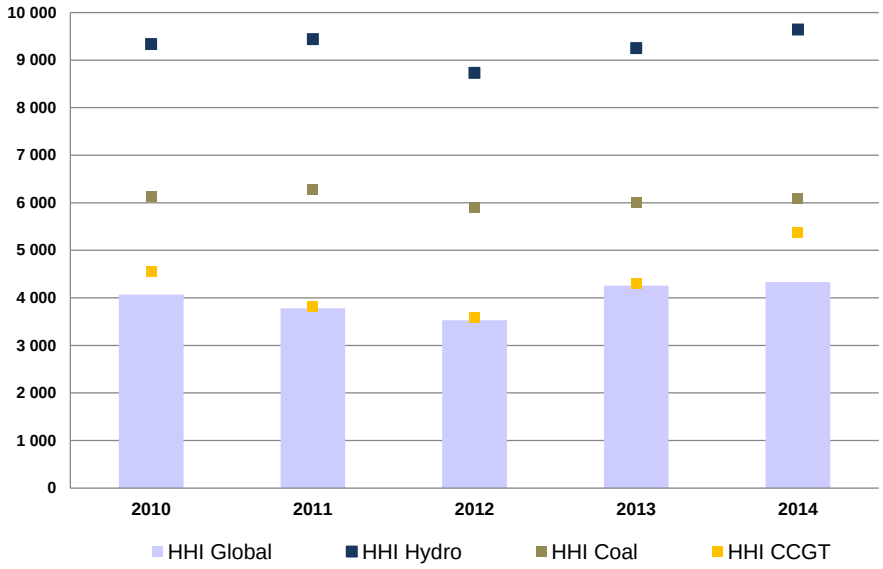
With regard to hydro technology, an increase in the EDP quota was recorded in 2014. This fact was due to the existence of an abundance of hydro resources in the system, caused by year comparatively wetter than 2013. Iberdrola also contributed slightly to the overall hydroelectric generation, due to the operation of the hydroelectric plants of Aguieira/Raiva during the period from 1 January to 31 March 2014, for the reasons mentioned above. As of 1 April, EDP owns 100% of hydroelectric plants, being the incumbent on this production technology.

With regard to combined natural gas cycles, in spite of the slight reduction in generation from combined natural gas plants in 2014, in comparison with 2013, EDP saw its quota decrease due to a significant increase in generation by REN Trading (Turbogás plant). On the other hand, Endesa's generation (Pego plant) was virtually expressionless (5,2 GWh generated in 2014) in comparison with its competitors.

In 2012, REN Trading's generation value was significantly higher than in previous years. In 2013, EDP's quota rose once again due to the reduction in generation at the Pego plant. In 2014, this share gain trend by EDP continues.

The concentration indicators for the generation of electricity, presented in Figure 3-21 show that, overall, generation in 2014 was more concentrated corporately than in 2013. This evolution is sustained mainly by the increase in the level of concentration in all so-called conventional generation segments, while the position of the EDP group in Special Regime Generation remains a minority in relation to the segment as a whole.

Figure 3-21 – Concentration in generation in terms of electricity generation



At the same time, one should bear in mind that, as a more detailed analysis is not possible, the SRG with guaranteed revenue not controlled by EDP is, for the purposes of calculating the concentration indicators, wholly in the hands of a single entity (a single market share). Accordingly, on the one hand, the true evolution of corporate concentration in the special regime generation cannot be seen and, on the other, the figures for global concentration will be equal to or greater than those that actually exist in the current market structure.

3.2.2 RETAIL MARKET

From the point of view of retail market development, 2014 was marked by the consolidation of the liberalised segment in terms of global electricity consumption, prompted by some structural factors:

- The extinction of regulated end user tariffs and the adoption of transitory tariffs subject to an incentive to encourage customers to switch suppliers in 2013;
- The implementation of regulated risk coverage mechanisms for suppliers;

- The reinforcing of communications to end consumers about the market coverage process;
- The perfecting of supplier switching rules.

Similarly, in terms of economic and market circumstances, the reduction in energy price differences between Portugal and Spain in the wholesale market encouraged the perception of lower commercial risks among suppliers that operate from Spain and which compete against the Portuguese market leader.

The evolution of the concentration of the electricity retail market (whose liberalised segment rose significantly in volume) -was characterised, in 2014 by an increase in suppliers operating in the market, namely in the residential customers segment.

In 2013, the supplier switching process was marked by a significant penetration by liberalised market suppliers into the segments with the highest consumption levels, large customers and industrial customers: approximately 100% and 97%, respectively, of total consumption in each segment. The last VHV client moved to the liberalised market in July 2013, with a regulated market for this segment ceasing to exist.

3.2.2.1 MONITORING THE PRICE LEVEL, TRANSPARENCY LEVEL AND THE LEVEL AND EFFECTIVENESS OF MARKET OPENING AND COMPETITION

METHODOLOGY FOR MONITORING REFERENCE PRICES AND AVERAGE PRICES PRACTISED IN THE RETAIL MARKET

Suppliers send ERSE updated information on the reference prices[27] practised or expected to be practised in the scope of the sale of electricity for all Low Voltage (LV) electricity supply. Reference prices are understood to be the set of tariffs, tariff options and respective prices and indexes per billing variable offered by suppliers to their customers, as well as the conditions for the application of the tariffs, namely the characteristics for minimum consumption, duration of contracts and conditions for the revision of prices. Reference prices are the supplier's basic commercial offer which does not prevent the practice of differentiated special contractual conditions such as the application of discounts or other promotional campaigns.

The information provided to ERSE by suppliers is included in simulation and decision making support tools for consumers, made available by ERSE on its website.

Furthermore, all electricity suppliers inform ERSE quarterly of the average prices actually practised in the retail market. This information is used by ERSE to monitor and supervise the retail electricity market, and

[27] Pursuant to Order no. 18637/2010 of 15 December, available at http://www.erse.pt/pt/legislacao/Legislacao/Attachments/1531/Despacho18637_%202010.pdf

also serves as an information tool for the reports produced by official statistical data organisms (INE or EUROSTAT, for example).

TRANSPARENCY

With the aim of continuing to provide information to electricity consumers on the reference prices practised in the market, as well as the computer tools to help customers choose a supplier, ERSE continues to update and offer simulators on its website that will give electricity consumers objective information to help them make an informed choice, namely regarding the selection of the best offer on the market, based on the following simulators:

- Simulation of rated power to contract.
- Retail market price comparison simulator for StLV supplies in mainland Portugal.
- Billing simulator for VHV, HV, MV and SpLV electricity in mainland Portugal.
- Billing simulator for MV and SpLV electricity in the Autonomous Region of the Azores.
- Billing simulator for HV, MV and SpLV electricity in the Autonomous Region of Madeira.

In late 2014, the electricity billing simulator underwent an intervention for redesigning and expansion of capabilities. This intervention was made following an increase in the number and diversity of offers available for energy consumers, as part of the development of retail markets. The purpose was, thus, to offer electricity consumers a new set of features that would allow them to customise their simulation in order to better adapt it to their requirements and needs, as well as their consumption characteristics. These features are related to the forms of payment, contracting and providing of additional services.

In order to guarantee the transparency of the information made available to consumers by suppliers, ERSE also checks that the suppliers publish the offers which are being practised on the market on their websites, in terms of both price and commercial conditions, and that they are in accordance with the information on reference prices sent to ERSE within the scope of its monitoring.

In addition, under the terms of the Commercial Relations Code, suppliers with over five thousand customers are obliged to publicly disclose, through the communication means available and also on websites, their commercial offers, and also the general conditions of contracts for StLV customers.

Rules are also in force pertaining to the information to be made available on customer invoices, namely information regarding the portion of access tariffs, the portion of general economic interest costs (CIEG) and the labelling of electricity.

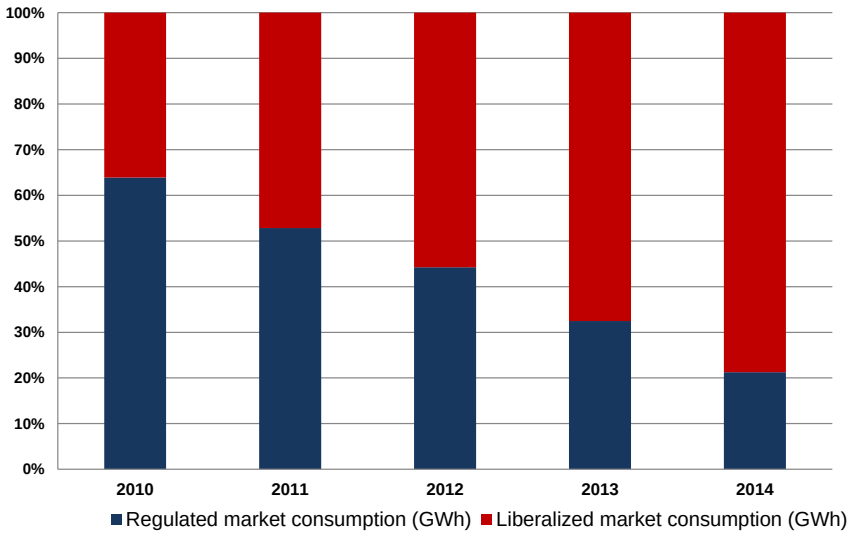
The rules for access to information regarding their consumption is regulated by ERSE under the terms of the Measuring, Reading and Data Management Guide.

COMPETITION EFFICIENCY

The liberalisation process of the electricity sector in mainland Portugal followed exactly the same methodology as that used in most other European countries. The market was opened up gradually, starting with the biggest customers and the highest voltage levels.

The evolution of the liberalised market in Portugal can be seen in Figure 3-22.

Figure 3-22 – Breakdown of consumption between the regulated and the liberalised market



2014 consolidated the trend that has been observed since 2010, a period when the cost of electricity in the last resort tariff exceeded the price developed by the market, thereby dictating the existence of conditions conducive to regulated tariff customers migrating to the market. The increase in the size of the liberalised market was also due to the extinction of regulated tariffs which, in January 2013, covered all customers including residential ones. This evolution meant that consumption in the market regime already represented approximately 79% of total consumption in 2014.

The gradual increase in the size of the market in the period analysed, in terms of the total number of customers, is largely due to the continuing entry of residential customers, which in 2014 increased by nearly 65% in comparison to the previous year.

On the other hand, it can be seen that, in 2014, the segments with greatest consumption and already covered, since 2011, by the extinction of the tariffs - large customers (VHV and HV), industrial customers (MV) and small businesses (SpLV) - registered a growth in the relative weight of the market. It should also be noted that all VHV customers have been in the liberalised market since July 2013.

In 2014, an audit on supplier switching procedures in the electricity sector, which, in accordance with ERSE's rules, takes place every 2 years, was initiated. This audit focused on compliance with the provisions on supplier switching procedures established by ERSE, particularly in ensuring transparency and non-discrimination in the use of the platform used, in order to ensure the proper processing of supplier switching and compliance with reporting deadlines.

This audit detected a few non-conformities, namely with regard to inconsistency in the reported data, lack of database traceability mechanisms, the existence of generic users with privileged access to the database and the absence of formal procedures for the process of collection and processing of information reported on a monthly basis, thereby making it difficult to validate the values submitted. The entity responsible for the operational management of supplier switching procedures devised a plan to correct the non-conformities detected.

Figure 3-23 – Evolution of the liberalised market in Mainland Portugal (number of customers)

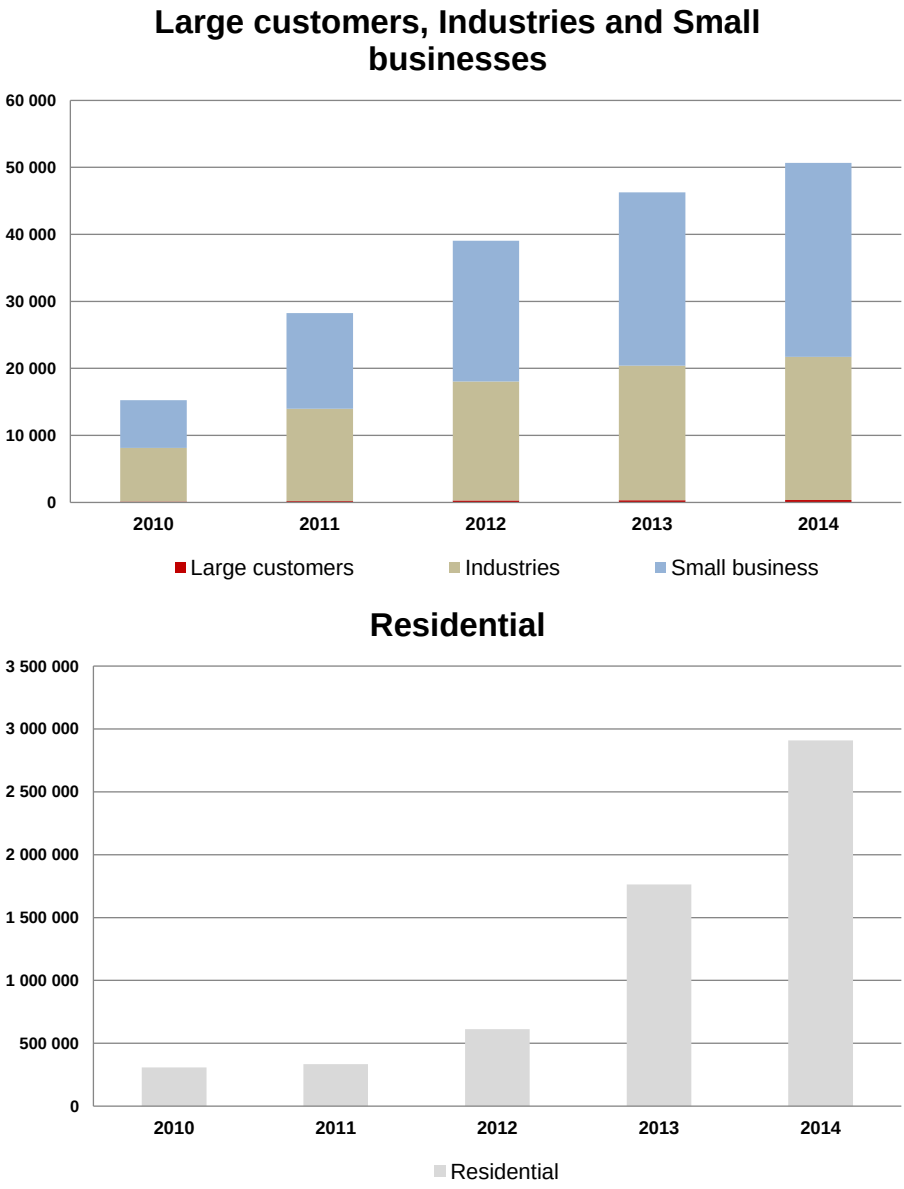
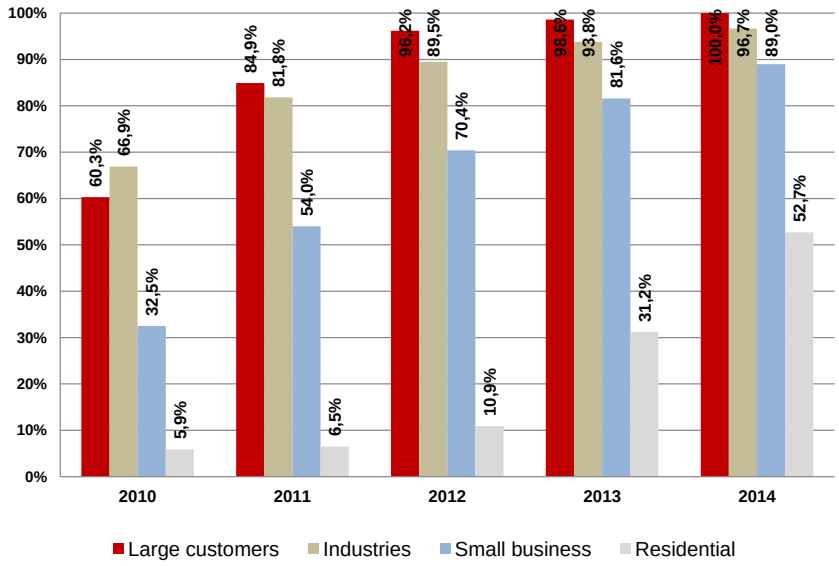


Figure 3-24 shows the portion of consumption from each customer segment that can be found in the liberalised market. It can be seen that, in 2014, as a whole, approximately 97% of consumption by industrial customers was provided by market regime suppliers. The same was true for almost all of consumption by large customers.

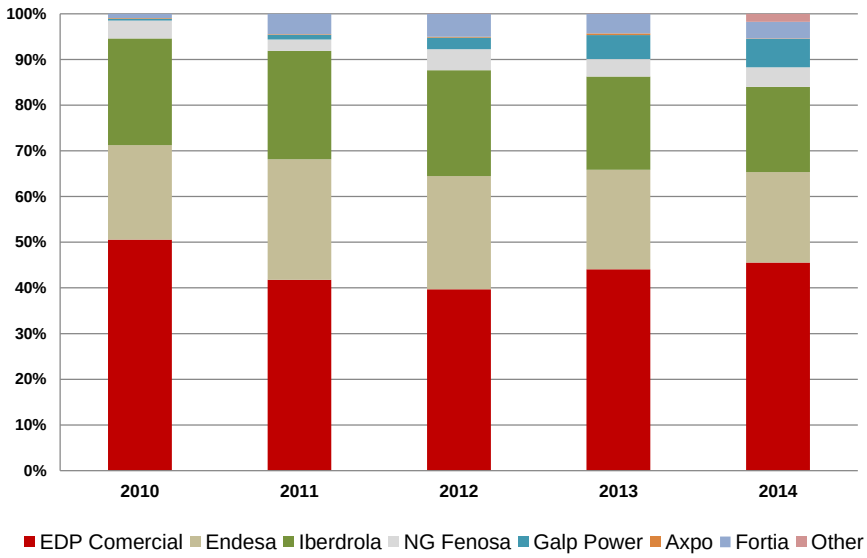
Figure 3-24 – Penetration of the liberalised market by customer segment



An analysis by segment demonstrates that the industrial customer segment is the most competitive of all, and the residential customer segment is the one where there is greater corporate concentration, with the number of suppliers in this segment increasing at the end of 2014.

Despite the growth of the liberalised market and the decrease in global corporate concentration in 2014, there was an increase in concentration in segments with lower consumption (small businesses and residential customers). Also, despite the reduction in its market share, the EDP Group, which was the main operator until 2012, has recovered, providing approximately 45% of supplies in the liberalised market in the last year, as can be seen in Figure 3-25.

Figure 3-25 – Supply structure in the liberalised market by supplier



An analysis of the evolution of the retail market is available at the ERSE website in the form of a monthly report, which shows the issues of competitive pressure on the market and on each of its segments.

3.2.2.2 RECOMMENDATIONS ON SUPPLY PRICES, INVESTIGATIONS AND MEASURES TO PROMOTE EFFECTIVE COMPETITION

RECOMMENDATIONS FOR SUPPLY PRICES

In the context of regulated tariffs for the sale of electricity to StLV end customers in 2013, ERSE did not publish any recommendations on the conformity of the supply prices under the terms provided for in article 3 of Directive 2009/72/EC of the European Parliament and of the Council of 13 July.

MEASURES TO PROMOTE EFFECTIVE COMPETITION

In the framework of sectorial regulation powers in matters related to the promotion of competition, ERSE has specific authority attributed by the legal framework governing the electricity sector and other attributions which arise from competition law.

The institutional and legal framework for competition and the electricity sector states that ERSE must be consulted by the Competition Authority in the scope of corporate concentration processes, whenever those involved are players in the electricity market. ERSE's opinion is not binding under legal terms, and the measures for minimising competition risks (also known as operation "remedies") may be monitored by ERSE.

The monitoring of competition in the electricity markets has structural and behavioural aspects. Action on the structural conditions of competition in the market tends to be the responsibility of sectorial regulation, namely through the regulations which must induce principles for the development of market competition. In terms of behavioural performance, ERSE, as the sector regulator, has specific powers to monitor the functioning of the electricity market, and, under the terms of its statutes, must notify the Competition Authority of possible practices which contravene competition law.

On 15 March 2013, World Consumer Rights Day, ERSE published a recommendation for suppliers (Recommendation no. 2/2013) relating to aspects pertaining to the contracting of electricity and natural gas and relevant to consumers: the existence and scope of loyalty periods, the availability of payment forms and the indexing of prices on the liberalised energy market. ERSE recommended to suppliers that the existence of loyalty periods and the indexing of prices practised in the contract needed to be explained beforehand (before the signing of the contract) and duly justified by suppliers (why they exist and the benefits to the consumer). Pertaining to payment methods made available to customers, these must be diversified and may not exclude consumers from any market offers.

In 2014 the first report was published on the information collected by ERSE following the issuing of Recommendation no. 2/2013. With regard to contractual loyalty, the information revealed that, in late 2014, the electricity market showed a tendency towards the absence of customer loyalty or contractual penalties for its breach. With regard to the availability of payment methods, the situation is uneven among the suppliers in the market; for some of them, practically all of the offers have only one payment method (which is not cash), and for others, at least half of the offers allow for several payment methods, including cash. With regard to price indexing in the electricity market offers, the information gathered shows that the most common practice is the lack of any price indexing.

TARIFF DEFICIT

The variation of the LV end-user tariffs defined for 2006 were limited, so their variation was not above that expected for the Consumer Price Index implicit to Private Consumption, and variations in the StLV tariffs defined for 2007 were limited to 6%. These limitations created a tariff deficit for regulated companies. These deficits are recovered in continuing instalments through the GUoS (Global Use of the System) tariff over a period of 10 years, starting in 2008.

In the 2009 tariffs, the tariff adjustments made in 2007 and 2008 to electricity costs were deferred for a period of 15 years with effect from 2010, as well as the overcost of acquiring electricity from SRGs with guaranteed revenue pertaining to 2009.

Subsequently, in 2011, it was decided that the overcosts from SRG would be recovered over a five-year period, taking effect from 2012 tariffs and continuing at the most until 2020. Therefore, for 2014, another

tariff deficit was created, which corresponded to the extra SRG overcost in 2014, including the 2011 and 2012 adjustments.

In 2014, the amounts owed in all items of the electricity sector's tariff deficit were those shown in the following table:

Table 3-5 – Tariff deficit in 2014 – Outstanding debt

Unit: 10^3 EUR

	Outstanding debt in 2014
Tariff deficit 2006/2007	114 765
Tariff deficit 2008	1 225 949
Tariff deficit 2012	516 450
Tariff deficit 2013	982 690
Tariff deficit 2014	1 533 878
Other	315 782
Total	**4 689 514**

3.3 SECURITY OF SUPPLY

Under Portuguese law, the powers relating to the security of supply in the electricity and natural gas sectors are the responsibility of the Government, which delegated monitoring responsibilities to the Directorate General for Energy and Geology[28]. However, ERSE monitors the evolution of the installed capacity and the evolution of demand, which addressed in greater detail below.

3.3.1 MONITORING THE BALANCE BETWEEN SUPPLY AND DEMAND

The capacity margin, which is defined as the difference between the installed generation capacity and the maximum peak consumption for the year, in respect of the installed capacity, stood at 53% in 2014, maintaining the figure of 2013, which is slightly lower than that of 2012.

The evolution in installed power and maximum requested power is shown in **Erro! A origem da referência não foi encontrada.**.

[28] Republished on 8 October 2012 through Decrees-Law no. 215-A/2012 and n.º 215-B/2012.

Table 3-6 – Capacity margin

	2014 (MW)	2013 (MW)	2012 (MW)	2011 (MW)	2010 (MW)	2014/2010 Variation (%)
Total instaled power	**17.833**	**17.790**	**18.546**	**18.903**	**17.905**	**0%**
Thermal	5.585	5.750	6.697	7.407	7.407	-25%
Hydro	5.269	5.239	5.239	4.980	4.578	15%
SRG	6.979	6.801	6.610	6.516	5.920	18%
Maximum annual power	**8.313**	**8.322**	**8.554**	**9.192**	**9.403**	**-12%**
Capacity margin	**9.520**	**9.468**	**9.992**	**9.711**	**8.502**	**12%**
	(53%)	(53%)	(54%)	(51%)	(47%)	

Source: 2013 data obtained from REN. In the table, the term "SRG" corresponds to SRG with guaranteed remuneration.

In addition, the 2014 electricity consumption figure was 49.2 TWh, a slight increase of 0.7% (with adjustment to take into account the effect of temperature and number of business days, the variation in comparison to the previous year is nil).

Satisfaction of consumption requirements by the various means of supply is presented in **Erro! A origem da referência não foi encontrada.**.

Table 3-7 – Consumption supply

	2014 (GWh)	2013 (GWh)	Variation (%)
Hydro generation	14 664	13 303	10,2
Thermal generation	12 661	12 690	-0,2
SRG	21 673	21 844	-0,8
Import balance	900	2 782	-67,6
Hydro power pumping	1 079	1 458	-26,0
Total consumption	**48 819**	**49 161**	**-0,7**

Source: 2014 data obtained from REN. In the table, the term "SRG" corresponds to SRG with guaranteed remuneration.

In 2014, hydrological conditions were favourable, with a hydro capability factor of 1.27. Hydroelectric power plants Supplied 29% of electricity consumed, practically double the previous year's figure. Thermal power plants supplied 25%, with 22% of generation coming from coal plants and only 3% of generation coming from natural gas plants.

Deliveries from generation in special regime with guaranteed revenue maintained a 43% share of consumption. The import balance suffered a 68% reduction and represented a mere 5% of consumption.

The percentage breakdown of electricity generation by power source in the last 5 years is presented in **Erro! A origem da referência não foi encontrada.**.

Table 3-8 – Breakdown of generation

	2014	2013	2012	2011	2010
Natural gas	3%	3%	11%	28%	28%
Import balance	2%	5%	16%	6%	5%
Coal	22%	22%	24%	18%	13%
Hydro	29%	26%	12%	20%	28%
SRG	43%	43%	37%	36%	34%
Fuel	0%	0%	0%	0%	1%

Source: 2014 data obtained from REN. In the table, the term "SRG" corresponds to SRG with guaranteed remuneration.

With regard to the maximum power requested from the public grid, on 4 December, 8313 MW were registered, 9 MW less than that recorded in February 2013, which translates into a reduction in annual maximum power for the fourth consecutive year.

The evolution in annual maximum power is shown in Table 3-9.

Table 3-9 – Maximum annual power

Year	Day	Power (MW)	% Variation
2014	04/fev	8 313	-0,11
2013	09/dez	8 322	-2,71
2012	13/fev	8 554	-6,94
2011	24/jan	9 192	-2,24
2010	11/jan	9 403	2,02

Source: 2014 data obtained from REN.

In 2014, in terms of the installed capacity of power plants in the market regime, in October, the 30-MW reversible downstream hydroelectric harnessing project of Baixo Sabor was commissioned, and in May, the Tunes 165 MW Diesel plant was disqualified.

In terms of special-regime generation with guaranteed remuneration, highlight goes to the installation of 173 MW of new capacity by wind generators and 114 MW by photovoltaic generators, reaching a total of 6,979 MW.

The evolution in terms of installed power at the end of each year is shown in **Erro! A origem da referência não foi encontrada.**.

Table 3-10 – Power plant generation system

	2014 (MW)	2013 (MW)	Variation (MW)
HYDROELECTRIC POWER PLANTS	**5 269**	**5 239**	**30**
			0
THERMAL POWER PLANTS	**5 585**	**5 750**	**-165**
Coal	1 756	1 756	0
Natural gas	3 829	3 829	0
Fuel / Natural Gas / Diesel	0	165	-165
			0
SRG INSTALLED POWER	**6 979**	**6 801**	**178**
Thermal Generators	1 627	1 738	-111
Hydro Generators	415	413	2
Wind generators	4541	4368	173
Photovoltaic Generators	396	282	114
Wave Energy Generators	0	0	0
			0
TOTAL	**17 833**	**17 790**	**43**

Source: 2014 data obtained from REN. In the table, the term "SRG" corresponds to SRG with guaranteed remuneration.

With regard to the development of the RNT, highlight goes to Minho, with the commissioning of the 400 kV switching station of Vieira do Minho, the connection, at 400 kV, between this point and the substation of Pedralva, the commissioning of the new 150/60-kV substation of Fafe, and, in the Douro region, the 220 kV connection between the Pocinho substation and the Baixo Sabor power plant, connecting this new hydroelectric project.

On the coast, south of Greater Porto, the 220 kV Carrapatelo - Estarreja 3 power line was commissioned, which will be part of the future axis for the transmission of the energy generated by the power plants of Alto Tâmega.

In the Lisbon area, highlight goes to the conclusion of the overhead section between the substation of Fanhões and the switching station of Prior Velho for the future connection between Alto de S. João and Fanhões, at 220 kV.

In Algarve, the Spanish section of the Tavira - Puebla de Guzmán 400 kV power line was concluded, enabling the commissioning of this new 400 kV interconnection with Spain.

In terms of quality of service, the Transmission Network recorded the second best ever performance, with an Equivalent Interruption Time of 0.02 minutes.

3.3.2 MONITORING INVESTMENTS IN GENERATION CAPACITY

During 2014, with regard to new investments in generation, there were no significant developments in respect of the situation of the previous year.

In the case of the thermal power plant generation system, in addition to the already mentioned declassification of the Tunes plant in 2014, the expected evolution of the electricity generation system in the standard regime until 2030, is due, in accordance with DGEG[29], to the development of the projects for the construction of four new 400 MW CCGT groups, which are already licensed and the latest information on the generators' investment plans.

Similarly, there was no change in the evolution of hydroelectric power generation facilities, maintaining the expected boosts of existing plants, by a total of around 1500 MW, of which over 1080 MW are reversible. In addition to this, there are two new hydroelectric power plants already in implementation phase, one in Baixo Sabor (168 MW, reversible), of which the downstream section, with 30 MW, was commissioned in October 2014) and another in Ribeiradio (70 MW). The National Programme for Dams with High Hydropower Potential [PNBEPH - Programa Nacional de Barragens de Elevado Potencial Hidroelétrico] is expected to be completed by 2030. It envisages a series of another 10 new power plants with a total generation capacity of around 1100 MW, 810 MW of which will use reversible equipment.

According to the National Plan of Action for Renewable Energy [PNAER 2020 - Plano Nacional de Ação para [30]as Energias Renováveis[31]] the evolution of the installed capacity indicated in Table 3-11.

Table 3-11– Forecast for SRG generation

	2016 (MW)	2020 (MW)

[29] Report on the Monitoring of Supply Security in the National Electricity System for 2013 to 2030.

[30] PNAER 2020: Part II of the Resolution of the Council of Ministers no. 20/2013, published in the official Portuguese Gazette, Series I, of 10 April

[31] PNAER 2020: Part II of the Resolution of the Council of Ministers no. 20/2013, published in the official Portuguese Gazette, Series I, of 10 April

Wind	4942	5300
Hydro (< 10 MW)	368	400
Hydro (> 10 MW)	6703	8540
Biomass	814	828
Solar	474	720
Waves	6	6
Geothermal	29	29

Source: PNAER 2020.

3.3.3 MEASURES TO MITIGATE PEAKS IN DEMAND OR DISRUPTIONS IN SUPPLY

With regard to the security of supply in the electricity sector, during 2014, there were no incidents which resulted in the need to implement measures aimed at guaranteeing the coverage of peak demand or supplier shortfalls.

4 NATURAL GAS MARKET

4.1 NETWORK REGULATION

4.1.1 UNBUNDLING

CERTIFICATION OF THE TRANSMISSION NETWORK OPERATOR

The transposition of Directives 2009/73/EC (natural gas) and 2009/72/EC (electricity), both of 13 July, introduced new rules into the organisational framework of the natural gas and electricity sectors, such as the adoption of measures aimed at strengthening the discipline of the unbundling of generation and supply activities and the operation of transmission networks, in order to successfully establish an internal energy market in the EU.

These provisions include the procedure for the certification of the electricity and natural gas transmission network operator by the national regulatory authority, in this case, ERSE.

In September 2014, ERSE issued a decision that included the certification of REN - Gasodutos as the operator of the National Natural Gas Transmission network (RNTGN) and REN - Rede Eléctrica Nacional as the operator of the National Electricity Transmission Network (RNT), in full legal and ownership unbundling, contingent on the satisfaction, within a period of eight months, of a set of certification requirements intended to ensure the independence of these operators.

The conditions required by ERSE's decision include changing REN SGPS' Articles of Association so as to impose:

• Restrictions on REN SGPS' shareholders, namely:

a) shareholders exercising control in any undertakings dedicated to the generation or trading of electricity or natural gas shall be prevented from exercising any rights at REN SGPS, without prejudice to their right to receive dividends, except where the certifying entity recognises that there is no conflict of interest.

b) any persons exercising control or rights in any undertakings dedicated to the generation of electricity or natural gas shall not be allowed to appoint, directly or indirectly, members of the management and supervisory bodies of REN, except recognition by the certifying entity of not having risk of conflict of interest.

• Restrictions on the members of the boards of directors or supervisory bodies of REN SGPS and of Transmission System Operators (TSO), which shall be specifically prohibited from simultaneously integrating corporate bodies in any undertakings dedicated to the generation or trading of electricity or natural gas.

An obligation is also imposed for the timely reporting to ERSE of any changes in circumstances involving the conditions analysed in the certification process, as well as any changes occurring after the operator has been certified.

ERSE is currently assessing compliance with the certification requirements that are part of the decision approved, and REN - Gasodutos S.A., as the concessionaire of the RNTGN, is subject to compliance of the issued certification decision, with a view to its approval and appointment as the transmission system operator by the Government body in charge of energy.

IMAGE DIFFERENTIATION

The natural gas sector regulation review of 2013 established the terms and deadlines for the purposes of approval, by ERSE, of the rules applicable to image differentiation and communications by the distribution system operator and the last-resort supplier, in relation both to each other and to other entities that operate in the SNGN.

In 2014 were submitted proposals by the distribution system operators and last-resort suppliers subject to this obligation. These proposals were analysed and are in the process of approval by ERSE.

Throughout 2014, distribution system operators and last-resort natural gas suppliers proceeded to separate the respective web pages.

4.1.2 TECHNICAL FUNCTIONING

4.1.2.1 BALANCING

During 2014, the balancing rules were included in the Procedures Manual for the Global Technical Management of SNGN (MPGTG), approved by ERSE.

The MPGTG details the methodologies for obtaining the breakdown of the energy that flows through the relevant points of the RNTGN, from which the individual balances of the market agents are determined. Specifically, this corresponds to the determination of the stocks of natural gas that each market agent has in the infrastructures that constitute the RNTIAT.

In the case of RNTGN, market agents must manage the balance between the supply and demand of natural gas in the transmission network so that the individual balances are within the maximum and minimum stock allocated to each of them annually, in accordance with the methodology published in the MPGTG. This approach consists of assigning a tolerance to each market agent, proportional to the size of their customer portfolio and also taking into account the market segments they supply, namely the electricity generation market and the conventional market. The sum of all individual tolerances reflects the accumulation capacity of the network (linepack).

Market agents whose balances violate the tolerances determined by their maximum and minimum individual stocks are considered to be in individual imbalance and a penalty is applied in line with the costs that these imbalances cause to the system. This is done in accordance with what is set out in the Incentive Mechanism to Replace Individual Balances in the MPGTG.

The Incentive Mechanism to Restore the Individual Balances applies penalties based on the storage tariff of the LNG terminal, in cases where the agents are in a situation of imbalance in the RNTGN and hold a positive stock of gas at SNGN. In situations where there is a negative stock of natural gas in the SNGN, in aggregate, the penalty is determined on the basis of the valuation of natural gas in the reference markets. What is being sought, therefore, is greater involvement by the market agents in managing supplies for their customer portfolios on the one hand, and, on the other, a suitable attribution of costs incurred with the balancing of the RNTGN.

4.1.2.2 ACCESS TO STORAGE INFRASTRUCTURES, LINEPACK AND AUXILIARY SERVICES

The involvement of market agents in managing supplies for their customer portfolio benefits from individual tolerances to, on a daily basis, consolidate natural gas supply with demand in the transmission network. In practice, these tolerances correspond to an implicit access to the linepack, or in other words, the transmission network operator assumes, without an explicit allocation of costs, the balance of the market agents, as long as the individual deviations are within the respective tolerances. The cost of this service (residual balance) is incorporated in the transmission network tariffs, and the implicit access to the linepack is proportional to the capacity used by the market agents in the RNTGN, incorporating a policy of positive discrimination in favour of the smaller market agents who, in relative terms, benefit from larger tolerances.

In addition to the implicit access to the linepack in the transmission network, a regulated third party access regime (rTPA) is applied explicitly to the storage of natural gas in the Carriço underground storage facility and at the Sines LNG terminal. ERSE approves the capacity allocation mechanisms detailed in the Procedures Manual for Access to the SNGN Infrastructures (MPAI) and the tariffs for the use of those infrastructures, ensuring that there will be sufficient capacity to meet the commercial needs of the market agents.

ERSE monitored the access conditions to the storage facilities, especially in cases of potential congestion, particularly in 2014 at the Carriço facility. It should be highlighted that, to date, there has been sufficient capacity available to satisfy the requests from the market agents.

4.1.2.3 THIRD PARTY ACCESS TO STORAGE

In 2014, third party access to the natural gas storage facilities was governed by a regulated regime.

It should be noted that Decree-Law no. 30/2006 of 15 February, in the wording given by Decree-Law -no. 230/2012 of 26 October, and Decree-Law no. 140/2006 of 26 July, in the wording given by Decree-Law no. 231/2012, of 26 October, states that, in respect of third-party access to RNTIAT networks and infrastructures, the regime of regulated access is maintained, extending it, however, to the possibility of new concessions for underground storage facilities, for a purpose other than the constitution and maintenance of safety stocks, benefiting from a system of negotiated access.

4.1.2.4 CONNECTIONS

The regulatory framework for the commercial conditions regarding network connections includes, among others, the following aspects:

- Obligatory connection to the network;
- Type of charges that can be levied;
- Rules for calculating network connection charges;
- Budget content and submission deadlines;
- Connection charge payment terms;
- Construction of the network connection elements;
- Provision of information.

The network operator is required to provide network connection to customers who request it in accordance with the commercial conditions approved by ERSE. Distribution network operators are subject to a requirement of connection only for customer installations with an annual consumption above 10 000 m^3 (n), as well as for installations located within the area of influence of the respective network, defined as the geographic area in the proximity of the existing network, whose boundary is defined by ERSE (currently 100 m).

Natural gas installations cannot be connected to networks without the prior issuance of a licence or authorisation by the relevant administrative bodies.

Once built, the connecting elements will form an integral part of the networks, as soon as they are deemed to be in proper technical operating conditions by the operator.

Regulation codes require that network operators send information to ERSE, on a half-yearly basis, on the number of connections established, co-funding granted to requesters, broken down by type of connections elements, total length of elements built, average budgeting deadlines and average execution times, as well as the number of changes made to existing connections. In this regard, it is worth mentioning the recent implementation by ERSE of a system dedicated to the collection and analysis of information on the natural gas sector, which includes information on connections to the network.

4.1.2.5 QUALITY OF SERVICE

The Quality of Service Code for the natural gas sector envisages, in technical terms, the monitoring of the quality of service provided by the various infrastructure operators, and covers three areas: continuity of service, natural gas attributes, and the pressure of natural gas supplied to customers. The Quality of Service Code defines the rules for the evaluation and characterisation of the quality of the natural gas supply service, and applies to customers, suppliers and sector infrastructure operators.

ERSE publishes an annual report on the quality of service in the natural gas sector, according to the provisions established in the RQS, aimed at briefly characterising the quality of service provided by natural gas sector entities.

Regarding the LNG terminal, general indicators have been established for service continuity with the objective of evaluating the service provided by this infrastructure in the following processes: reception of LNG from tankers and carriers, loading of tanker trucks with LNG (for the supply of satellite LNG units) and the injection of natural gas into the transmission network.

In 2014, the most significant aspects in terms of the performance of the LNG terminal were the following:

- The number of road tanks trucks experiencing a delay in loading corresponded to 9% of the total. This value has decreased against previous years, the main causes for delay being the non-availability of loading bays and technical problems and operational downtime at the LNG terminal.
- The number of unloadings from LNG carriers was 31. No delays were recorded in the unloading of LNG carriers;

- The natural gas injection assignments for the transmission network recorded a compliance of 100%, as in previous years.

In terms of the continuity of service associated with the underground storage, it is important to evaluate the management of the natural gas flow between this infrastructure and the transmission network. In 2014, the compliance of the injection and extraction assignments and energy storage compliance was 100%.

The evaluation of the continuity of the supply service to the transmission network is done through general indicators which consider the number and duration of interruptions at the points of delivery. In the last four years, there were no interruptions in the transmission network.

In the distribution networks, as with the transmission network, performance is evaluated through indicators which consider the number and duration of interruptions. In the 2014, there were no interruptions in 5 out of the 11 existing distribution networks (Medigás, Beiragás, Dianagás, Sonorgás e Paxgás) and only 1.3% out of approximately 1.33 million customer installations suffered interruptions. No customer was affected by more than one interruption. The vast majority (82%) of interruptions in the distribution networks occurred due to one-off cases or cases of force majeure (c.f.f.m.), caused by third party interventions in the networks. The average duration of the interruptions per customer was less than 2 minutes in all the distribution networks. The standards set for the values of the various indicators were met.

Over the last four years, all the limits set out in the RQS for the natural gas characteristics monitored by the transmission network operator and the operator of the LNG terminal were respected.

All distribution network operators presented information on the monitoring of the pressure in their networks. In 2014, the pressure supplied was monitored at 535 points in the distribution networks. There were one-off incidents of non-compliance with the pressure limits set out in the applicable legislation and in the monitoring methodologies which, according to the distribution network operators, had no impact on the supply of natural gas to customers.

4.1.2.6 SAFEGUARD MEASURES

In the event of a sudden crisis in the energy market or of a threat to the physical or other safety of people, equipment or installations, or to the integrity of the networks, as a result of a serious accident or other event of force majeure, the member of the Government responsible for energy may take any transitional and temporary safeguard measures needed.

In 2014, there were no incidents that required the implementation of the safeguard measures established in article 46 of Directive 2009/73/EC of the European Parliament and of the Council of 13 July.

4.1.3 NETWORK AND LNG TARIFFS FOR CONNECTION AND ACCESS

PROCEDURES AND METHODOLOGY FOR CALCULATING NATURAL GAS INFRASTRUCTURE ACCESS TARIFFS

In 2014, the methodology for calculating natural gas infrastructure access tariffs was maintained.

The approval of the Tariff Code and any amendments thereto, by ERSE, requires prior public consultation and an opinion from the Tariff Board. The tariff fixing process, including the timeframes, is also set out in legislation and in ERSE's codes.

The following brief explanation of the new Portuguese tariff system serves to contextualise the tariff calculation methodology.

The infrastructure access tariffs applied to all natural gas consumers for access to the respective infrastructures, and more specifically, the tariffs for the Use of the Transmission Network, the Use of the Distribution Network, the Use of the LNG Reception, Storage and Regasification Terminal, and the Use of Underground Storage.

Generally speaking, these infrastructure access tariffs are paid by suppliers on behalf of their customers. They may be paid directly by customers benefiting from the status of Market Agent, i.e. customers buying energy directly on the markets, and who are responsible for managing imbalances arising from differences between the capacity contract, demand forecasts for their customer portfolios and actual consumption recorded, depending on the sales margins defined by ERSE.[32].

NETWORK ACCESS TARIFF PRICES IN 2014

The variation in the average price of Infrastructure Access Tariffs for the 2014-2015 gas year, relative to the previous gas year (2013-2014), is shown in the following tables.

[32] Under ERSE Directive No. 24/2013 of 6 December.

Table 4-1 – Evolution of Infrastructure Access Tariffs for the 2014-2015 gas year

Access tariffs per pressure level	Average price for 2013-2014 (EUR/MWh)*	Average price for 2014-2015 (EUR/MWh)	Variation
Power Plant Access	4,25	4,28	0,7%
HP Customer Access	1,86	2,35	26,3%
MP Access	6,53	6,88	5,5%
LP Access>	20,71	22,07	6,5%
LP Access<	40,90	43,25	5,7%

* Application of 2013-2014 tariffs to the demand forecast for 2014-2015

Table 4-2 – Tariff evolution per activity 2014-2015 / 2013-2014

	Tariffs 2012-2013, consumption 2013-2014*	Tariffs 2013-2014, consumption 2013-2014	Variation
Sines Terminal	2,21	2,31	5%
Underground Storage	7,45	11,16	50%
Use of Transmission Network	1,91	2,35	23%
Use of Distribution Network	12,01	12,78	6%
Global Use of the System	0,77	0,95	23%

* Application of 2013-2014 tariffs to the demand forecast for 2014-2015

The figures below present the breakdown and structure of the average price of the Network Access tariffs, by the various tariffs of which they are composed, for each pressure level. High pressure access does not include electricity generation plants.

Figure 4-1 – Breakdown of the average price of Network Access Tariffs

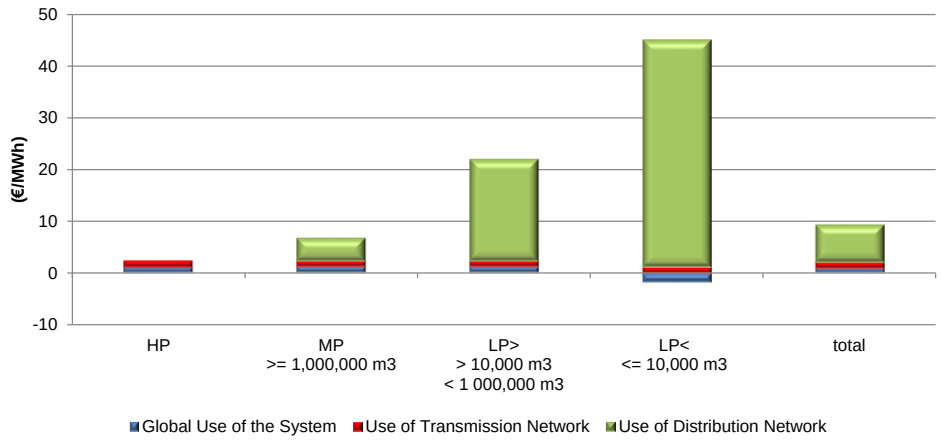
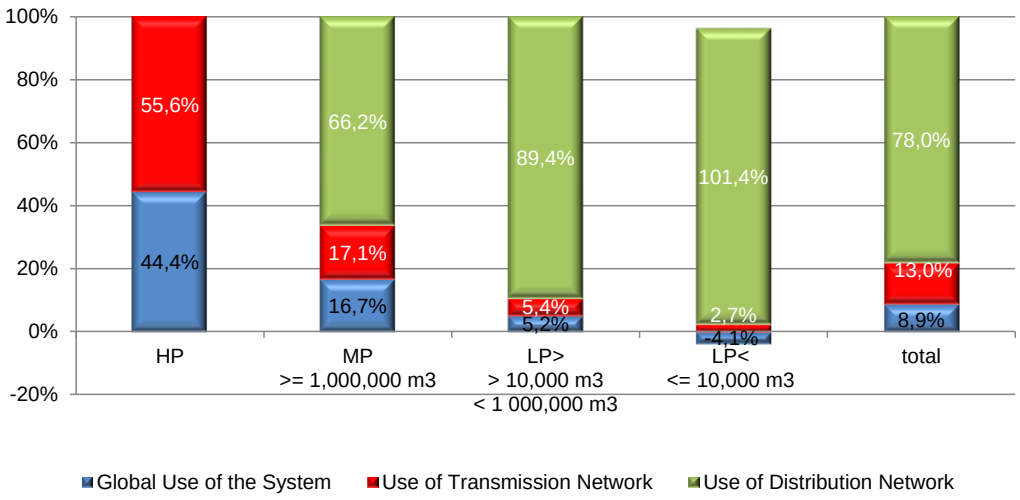


Figure 4-2 – Structure of the average price of Network Access Tariffs



REGULATED TARIFFS AND ACTIVITIES OF THE NATURAL GAS SECTOR

In the natural gas sector there are some regulated activities whose allowed revenues are established by ERSE and are recovered by the following tariffs: Global Use of System, Use of Transmission Network, Use of the LNG Reception, Storage and Regasification Terminal, Use of Underground Storage, Use of MP Distribution Network, Use of LP Distribution Network, Energy and Supply.

Tariff prices for each activity are established in such a way that their structure reflects the structure of marginal or incremental costs and also enables the recovery of allowed revenue.

TARIFF ADDITIVITY APPLIED TO THE NATURAL GAS INFRASTRUCTURE ACCESS TARIFFS

Customers who intend to use natural gas infrastructures, namely the networks, the LNG terminal and underground storage, must pay the respective access tariffs.

Network access is paid by all consumers of natural gas. Network access tariffs are calculated by adding the following tariffs together: Global Use of System, Use of Transmission Network and Use of Distribution Network. Access tariff prices for each billing variable are determined by adding up the corresponding tariff prices per activity. Insofar as the tariffs making up this sum are based on marginal costs, cross-subsidisation between consumers is avoided and an efficient use of resources is promoted.

Tariffs for the Use of the LNG Reception, Storage and Regasification Terminal and the Use of Underground Storage are paid only by users of these infrastructures.

This tariff calculation methodology allows for detailed knowledge of the various tariff components by activity or service. Therefore, each customer can know exactly how much they pay, for example, for the use of the MP distribution network, and how that value is considered in terms of billing. The transparency in the formulation of the tariffs, which is a consequence of the implementation of this type of system, gains special importance for customers who have no experience in selecting of supplier and in particular for customers who are less informed.

REGULATION METHODOLOGIES FOR ALLOWED REVENUE DETERMINING

2014 coincided with the second year of the 2013/2014 - 2015/2016 regulatory period and brought the consolidation of the changes resulting from ERSE's assessment of the forms of regulation of activities in the natural gas sector in the previous year. As mentioned in the previous report, the main changes, per activity, were the following:

- Reception, Storage and Regasification of LNG - application of a price cap methodology[33] to OPEX with the redefinition of the parameters; application of a tariff adjustment attenuation mechanism which recognises the positive externalities for the entire national gas system associated to this activity.

- Underground Storage - introduction of a price cap[34] methodology for OPEX regulation.

- Sale and Purchase of Natural Gas - definition of two functions arising from the sale and purchase of natural gas in the scope of long term supply contracts and the market; inclusion of a mechanism for the progressive acquisition on the market by wholesale last resort suppliers whose definition will be subject to additional regulation.

[33] The cost driver that determines the evolution of revenue recoverable by application of the respective tariff is regasified energy.

[34] The cost drivers that determine the evolution of revenue recoverable by application of the respective tariff are extracted/injected energy, the storage capacity for REN Armazenagem and the storage capacity for Transgás Armazenagem.

The definition of regulatory methodologies and the selection of drivers in high pressure activities, in particular those applied to OPEX, were based on a benchmarking analysis.

The definition of the efficiency targets for natural gas distribution companies was based on a nationwide benchmarking study with the application of parametric (OLS[35]with *panel data*) and non-parametric (DEA) methods. In the case of supply, as this activity is smaller in scale, the definition of the efficiency targets did not require any specific benchmarking analysis but rather an analysis of the company's historical data through questionnaires submitted to each operator.

The annual efficiency targets applied to the OPEX varied between (i) 1.5% and 3% in the case of LNG reception, storage and regasification; (ii) 1.5% for transmission, (iii) 1.5% and 4% for underground storage; (iv) 1.5% and 5.8% per company, in the case of distribution, and (v) 3% for all last resort suppliers.

Highlight goes also to the methodology used for indexing the cost of capital, introduced in the 2013 2014 to 2015-2016 regulatory period. This will enable the evolution of the economic and financial context to be reflected, thereby compensating equity and other risks. Therefore, remuneration rates are be updated based on the average daily price of 10-year treasury bonds issued by the Portuguese Government. Given the volatility of the market indicators, a cap and a floor were established.

In 2014-2015, in addition to some legislative measures, changes were introduced as a result of a regulation revision, among which the following stand out: (I) recovery of adjustments made to the last-resort wholesaler's natural gas supply activity and (ii) recovery of the costs borne by the last-resort wholesale supplier related to the logistics manager of UAG.

DISPUTED DECISION

In terms of appealing against a decision or methodology used by the regulating entity, under the terms provided for in Article 41(1) of Directive 2009/73/EC of 13 July, it should be noted that the natural gas distribution network concessionaires brought lawsuits against ERSE, challenging the approval of tariffs for use of the networks relating to the following gas years:

- 2010-2011 Gas Year: 1 July 2010 to 30 June 2011;
- 2011-2012 Gas Year: 1 July 2011 to 30 June 2012;
- 2012-2013 Gas Year: 1 July 2012 to 30 June 2013;
- 2013-2014 Gas Year: 1 July 2013 to 30 June 2014;

[35] Ordinary least squares

- 2014-2015 Gas Year: 1 July 2014 to 30 June 2015.

These lawsuits were duly challenged and are currently under investigation and trial in the competent administrative court with no decision having been taken thus far.

NETWORK CONNECTION COSTS

The commercial conditions for connection to the natural gas networks are set by ERSE. The rules and costs for connecting installations to the networks take into consideration criteria of economic rationality (adherence to the connection construction costs) and the need to ensure consumer access to natural gas. The rules are approved by ERSE following public consultation processes in which all interested parties participate.

4.1.4 CROSS-BORDER ISSUES

The Capacity Allocation Mechanisms (CAM) and the of Congestion Management Procedures (CMP) applied to the SNGN infrastructures are set out in accordance with the provisions of the Natural Gas Infrastructures and Interconnections Access Code (RARII) which ERSE is responsible for publishing.

RARII features a set of principles aimed at bringing forward the implementation of the rules set forth in EU Regulation no. 984/2013 of the Commission of 14 October, which established the network code for the CAM in gas transmission networks and which completed EC Regulation no. 715/2009 of the European Parliament and of the Council of 13 July, in respect of the conditions for access to the natural gas transmission networks.

According to RARII, ERSE is responsible for the approval of the MPAI, which was published for the first time in 2013. This manual includes the rules previously established in the CAM and CMP for the SNGN infrastructures. The MPAI includes a thorough revision of the capacity allocation rules with the introduction of the capacity reservation concept through an *ex ante* allocation of annual, quarterly, monthly and daily capacity products in the infrastructures.

In 2014, as part of the early application of Commission Regulation (EU) No. 984/2013 of 14 October and for the purpose of auctioning the annual allocation of the capacity of the Virtual Interconnection Point (VIP) referring to 2014-2015, held in March 2014, ERSE, in coordination with the Comisión Nacional de los Mercados y la Competencia (CNMC), approved the respective rules, through Directive No. 3/2014 and Decision No 1/2014, having identified the need to include in the MPAI the fundamental principles of interconnection capacity allocation.

In accordance with RARII and with its statutes, ERSE submitted to the directly interested parties, a consultation for changes to the MPAI following a proposal by the Global Technical Manager of the SNGN,

which consisted of the establishment of new deadlines for the requesting and allocation of infrastructure capacity and an embodiment of the congestion management mechanism to be implemented in the transmission network interconnections between Portugal and Spain (as defined in Annex I of the European Commission Regulation No. 715/2009 of 13 July, as amended by the European Commission through Decision 2012/490/EU of 28 August). On the other hand, it established fundamental principles for the allocation of the interconnection's capacity, based on Commission Regulation (EU) No 984/2013 of 14 October and on the aspects agreed between the regulators of the South Gas Regional Initiative (SGRI), which integrates the activity of the Agency for the Cooperation of Energy Regulators (ACER).

Insofar as capacity allocation is concerned, it must be stressed that, no Third Party Access refusals have been registered in the SNGN infrastructures until now. However, in 2013, the rules and procedures to be applied to the Carriço underground storage facility were revised and the rules and procedures applicable to the RNTGN and the Sines LNG terminal regarding this matter were published for the first time.

The capacity allocation mechanisms in force only allocate capacity on an annual basis, i.e. the current framework does not allow for long term commitments. This explains why the implementation of EU Commission Regulation no. 984/2013 of 14 October, regarding the harmonised capacity allocation in the interconnections is not subject to significant constraints on the Portuguese side.

ACCESS TO INTERCONNECTIONS

In the context of ACER's Gas Regional Initiative for the South of Europe, which aims to implement a regional natural gas market, the harmonisation of the CAM in the three countries of the south region (Portugal, Spain and France) has been set as priority. As such, according to the European guidelines and in the context of MIBGAS, the Portuguese and Spanish TSOs allocate capacity in the interconnections through a Joint Capacity Allocation Mechanism in the Portugal-Spain Interconnections (at Valença do Minho and Campo Maior).

Works to implement the Joint CAM in the Portugal-Spain Interconnections began in 2011, and are based on the Framework Guidelines on Capacity Allocation published by ACER and later, on EU Commission Regulation no. 984/2013, of 14 October. ERSE and CNMC are responsible for the approval of this mechanism, which is subject to consultation extended to all stakeholders.

With the Joint CAM in the Portugal-Spain Interconnections in place, harmonised procedures for capacity allocation in the interconnections were established, resulting in bundled capacity products allocated on a Virtual Interconnection Point (VIP), with a progressive elimination of the differences which still exist in the methodologies applied on each side of the border.

This mechanism was initially implemented in 2012, taking effect between 1 October 2012 and 30 September 2013, and is presently in its second year of implementation (between October 2013 and

September 2014). In the first allocation year, there was no demand for the annual and quarterly capacity products at the respective auctions and the capacity was later allocated in time frames of a shorter duration. These were carried out in a non-harmonised manner, according to the rules and principles implemented in each country. In 2013, there were new auctions (annual and quarterly), with capacity being allocated in the VIP, both for annual and quarterly products. In the third year of harmonised capacity allocation in the Portugal-Spain interconnection (2014-2015), progress was made in the adoption of the rules of Commission Regulation (EU) No 984/2013 of 14 October, and auctions began to be held for annual, quarterly and monthly products. These auctions were held via a European platform for capacity allocation (PRISMA platform). REN Gasodutos and ENAGAS participated as part of a pilot project and with special conditions. Thus, since March 2014, market agents in Portugal use the PRISMA platform for contracting capacity on the interconnection.

The allocation of harmonised capacity in the interconnections between Portugal and Spain is suffering from a sharp drop in the capacity available at the Campo Maior interconnection due to the long term capacity contracts which existed prior to the implementation of the Joint CAM in the Portugal-Spain interconnections. In light of this, it will be necessary to wait for the conclusion of the aforementioned contracts, in force on the Spanish side, for a wider application of this concept.

COOPERATION

The Portuguese and Spanish transmission network operators have been cooperating closely with each other to improve the inter-operability of the two systems. This cooperation has resulted in management agreements for the Portugal-Spain interconnections coherent with the *Interconnection Agreements* provisions established in the Network Code for Interoperability and Data Exchange prepared by ENTSOG, recently approved by Commission Regulation (EU) 2015/703 of 30 April 2015.

As a result of the decision to implement the Joint CAM in the Portugal-Spain Interconnections, the cooperation between the operators became more effective with the setting of more ambitious objectives regarding the allocation of capacity in the interconnections.

The VIP concept, aggregating the Campo Maior and Valença do Minho interconnections, is currently operational and the capacity products being allocated in the VIP range as far as the monthly product. The annual, quarterly and, from October 2014 onward, monthly auctions took place through the European PRISMA platform and the daily products are allocated in FCFS until September 2015. From October 2015, the allocation of daily products will also take place via auctions.

In addition to capacity products, ERSE and CNMC have been taking steps to progressively eliminate the pancaking tariff and promote the mutual recognition of the market agents. Furthermore, in 2013, ERSE and CNMC also began the preparation of a study on possible models for the integration of the Iberian natural gas market, provided for in the Southern Gas Regional Initiative work plan. This integration of markets is

comprised in the European Target Model for natural gas, defined by ACER. This study was put up for public consultation simultaneously in Portugal, through ERSE, in Spain by CNMC and at ACER until September 2014.

Through this public consultation, the various stakeholders in the creation of the Iberian Natural Gas Market (MIBGAS) were asked to submit their comments on the three models presented, and to submit their suggestions and contributions for identifying and resolving any issues that might hinder the integration of the Portuguese and Spanish markets. During the public consultation, 23 comments were received from entities, companies and consumer representatives in Portugal, Spain, France and Italy. The comments, as well as their analysis by the Spanish and Portuguese Regulators, have been recently been published on the websites of the two regulators.

MONITORING OF RNTGN OPERATOR INVESTMENTS

In May 2013, REN Gasodutos submitted a proposal for a Development and Investment Plan for RNTIAT (PDIRGN) for the period between 2014 and 2023.

Pursuant to Decree-Law no. 140/2006 of 26 July, in the wording amended by Decree-Law no. 77/2011 of 26 October, ERSE submitted the aforementioned PDIRGN proposal for public consultation and later prepared its opinion in which it suggests revising the forecasts for the nationwide demand of natural gas downwards, to levels more in line with the current economic climate, as well as greater cooperation with the Spanish TSO concerning the project for the third interconnection between Portugal and Spain. In its opinion, ERSE took into consideration the coherence between the PDIRGN and the Ten-Year Network Development Plan (TYNDP) published by ENTSOG concerning the European networks and infrastructures. Presently, the 2013 PDIRGN proposal is being revised for formal approval by the minister responsible for energy.

Pursuant to EU Regulation no. 347/2013 of the European Parliament and of the Council of 17 April, the third natural gas interconnection between Portugal and Spain was included in the first list of Projects of Common Interest (PCI no. 5.4), in a group of investment projects aimed at allowing a two-way flow of gas between Portugal, Spain, France and Germany, which, in turn, incorporates the priority line of the North-South interconnections in Western Europe. To date, REN Gasodutos has not submitted the investment request for this PCI to ERSE, for the purpose of the cross-border allocation of the respective investment costs.

As part of the selection process of the 2nd PCI list, which began in September 2014, REN Gasodutos submitted a new application for this project, with a view to maintaining its PCI status. The results of this selection process will be disclosed in late 2015, and the 2nd Union list should come into force in early 2016.

On an annual basis, prior to the publication of tariffs for the natural gas sector, ERSE evaluates the investments in progress, safeguarding the coherence between the values presented for the investment projects and those submitted by REN in the PDIRGN. In this context, in 2014, the investments presented for tariff setting and the PDIRGN proposal for the years 2014-2023, submitted by REN Gasodutos, were consistent. It should be noted, however, that a delay is expected for the commissioning of the new pipeline projects planned under the PDIRGN.

4.1.5 COMPLIANCE

In the scope of the powers attributed by its Statutes and other legislation applicable, ERSE has met the obligations inherent to its capacity as regulator, such as:

- Approving codes.
- Issuing binding decisions on natural gas companies;
- Carries out surveys on the functioning of the natural gas markets;
- Has the capacity to demand, from natural gas companies, information relevant to the fulfilment of its functions.
- Requesting and promoting the conducting of audits to companies subject to regulations issued by ERSE;
- Develops other supervision and inspection activities;
- Sanctions behaviours by electricity companies that constitute administrative offenses;
- Promotes information and clarification for electricity consumers, handles their grievances and complaints and intervenes in extrajudicial dispute resolution;
- Issues opinions on matters requested by the Government, Parliament or other public administration entities.

The legislative measures already issued for the electricity sector shall also apply in the natural gas sector, with the exception of the amendments to the social tariff established for the supply of electricity by Decree-Law No. 172/2014 of 14 November.

Also on 9 September 2014, ERSE issued a decision to certify the National Transmission Network Operator (RNT), having also granted extra time for compliance with the established conditions, whose verification is required for the final decision.

As part of its supervisory responsibilities, in 2014, highlight goes to the following initiatives undertaken by ERSE:

- Verification and analysis of the general conditions of natural gas supply contracts concluded with suppliers on the market regime.
- Verification and analysis of commercial offers made available by suppliers on the market regime.
- Monitoring of flows between regulated and non-regulated activities, through the analysis of transfer pricing.
- Monitoring of the remuneration rates of regulated activities.
- Independent audit follow-up of supplier switching procedures.
- Audits to natural gas distribution system operators, with regard to the provision of market information, resulting in the establishment of a set of reporting obligations, through Directive No. 6/2014 of 29 January.
- Analysis of image differentiation proposals from distribution system operators and last-resort suppliers, when these belong to a vertically integrated company.

The Energy Sector Sanction System was approved by Law No. 9/2013 of 28 January. Consequently, in 2014, a few structuring projects were developed, with a view to implementing this system, namely:

- The Administrative Infraction Proceeding Organisation System was implemented;
- The Sanction System Implementation Manual was approved;
- The general rules on Internal Audits, as part of General Supervision, were approved.
- By the end of 2014, 44 complaints had been received, with particular focus on aspects of the commercial relationship with consumers (billing, supply interruption, unfair commercial practises, etc.). In the same year, 8 administrative offense proceedings were opened.

4.2 PROMOTING COMPETITION

4.2.1 WHOLESALE MARKET

The wholesale natural gas market in Portugal is relatively isolated due to degree of integration with the Spanish market still being in its initial stages, and a condition of relatively low attractiveness due to its absolute size. Due to a reduction of approximately 6% in the combined demand for natural gas from the large customers connected to High Pressure (which include large power plants) and distribution networks, due to the adverse economic climate, the volume of natural gas supplied in 2014 was 5% lower than in 2013.

The integration of the market and the boosting of the wholesale natural gas market are adversely affected by the condition of indivisibility in the management of gas supply transactions through the LNG terminal

and the dual charging of the interconnection with Spain, as well as the absence of a transparent and liquid reference price for the whole Iberian system.

4.2.1.1 MONITORING THE PRICE LEVEL, TRANSPARENCY LEVEL AND THE LEVEL AND EFFECTIVENESS OF MARKET OPENING AND COMPETITION

PRICES

The natural gas wholesale market in Portugal does not really have a reference for the setting of prices based on an organised or regulated market. On the other hand, Portugal is not a natural gas producer, so negotiation and procurement form the first segment of the sector's value chain.

In this context, the Portuguese market is supplied with natural gas through entries into the system via the interconnection with Spain (Campo Maior and Valença) and the port terminal at Sines (LNG terminal), by means of long-term contracts.

The supply of natural gas through the interconnections is essentially based on the contract between Sonatrach and the Galp group (representing 68% of the import balance in 2014) which includes obligations to purchase and the payment of quantities consumed or not (take or pay clause). This contract presupposes the existence of annual supplies of around 2.5 bcm for the duration of the contract, i.e. until 2020.

Supply through the terminal is, essentially, based on contracts of the same nature, where the LNG comes from Nigeria. This contract follows price rules defined in contracts, and envisages to an annual volume of approximately 3.42 bcm.

In 2014, about 32% of the natural gas was supplied via loads of liquefied natural gas predominantly originating in Nigeria and Qatar.

Other agents of less importance in the Portuguese market supply natural gas from Spain, (where there is a liquid wholesale market, with supplies from Algeria, Nigeria, Trinidad and Tobago, Egypt, Qatar, Oman, Norway, Libya and Equatorial Guinea, among others) and also through the entry of carriers in the Sines LNG terminal.

TRANSPARENCY

Although a process is underway to systematise the rules of transparency and integrity of the market at European level, it is acknowledged that the use of long term natural gas contracting mechanisms hinders the transparency and symmetry of the information on the market. This is also the case in the natural gas sector in Portugal, where, despite the existence of regulated mechanisms for wholesale contracting, information about the operation of the market is still scarce.

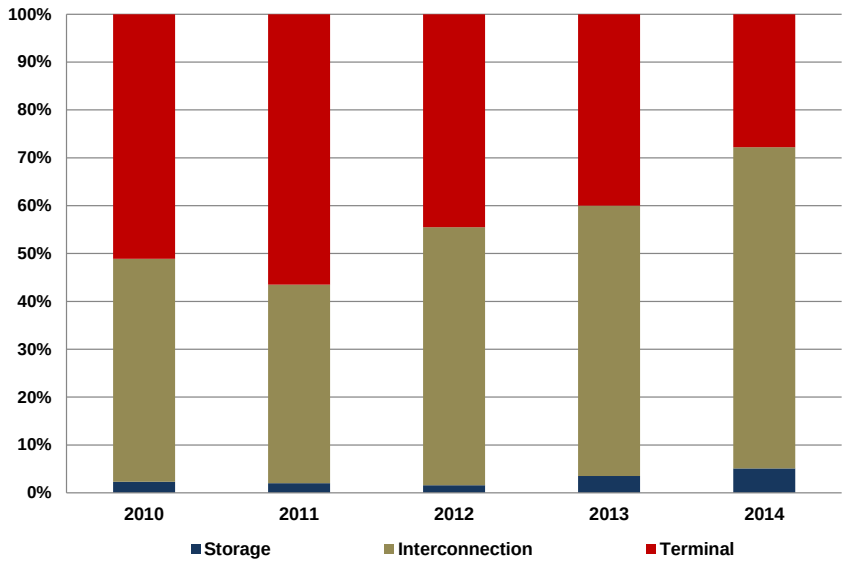
Moreover, the absence of a specific negotiation hub for the Iberian context, which allows an explicit reference price and registration of negotiation volumes, whether spot, or with a fixed term, is an added difficulty in the task of providing the natural gas market with more information and transparency.

As the information on the characterisation of the transactions includes, in itself, commercially sensitive information, it is clear that, in the regulatory context, one can forecast the existence of mechanisms which, on one hand, ensure the safeguarding of commercially sensitive information and, on the other, provide the conditions for the integrity of the market and its transparency.

COMPETITION EFFICIENCY

As Portugal does not have its own production, the main countries supplying natural gas are Algeria and Nigeria. This is done mainly through long term take or pay contracts. The characteristics of the supply are described in Figure 4-3. It can be seen that until 2011, the terminal (contracts for LNG from Nigeria) was responsible for most of the natural gas introduced in the Portuguese market. However, from 2012 onwards, a gradual reduction in the importance of the terminal as opposed to the use of the interconnection, at both the Campo Maior and Valença entrances, became clearly visible, with the interconnection with Spain being the main supply route in 2014, representing approximately 67% of the total volume of gas contracted. Moreover, at the start of the 2000s, the latter was essentially used for continuous outgoing international traffic to Spain, a situation which has been inverted over the last years.

Figure 4-3 – Breakdown of supply by infrastructure



For the 2013-2014 gas year, there was no auction to release excess quantities of natural gas (which result from the take or pay supply contracts, which allow for the placement of contractual quantities on the market through the holding of auctions).

4.2.2 RETAIL MARKET

According to the schedule defined by the Government, the end user tariffs published by ERSE for all customers ceased to exist on 1 July 2013, with the extinction of regulated end user tariffs to customers whose annual consumption is less than 500 m^3, concluding the liberalisation process of the natural gas retail market.

Although all natural gas consumers have been able to freely choose their supplier since January 2010, the schedule now defined concludes the liberalisation process for the natural gas retail market. In real terms, at the end of 2014, nearly 90% of natural gas consumption within the conventional segment (excluding-standard regime power plants) was being supplied by liberalised market suppliers.

The number of customers who switched from the regulated market to the market supply or who began consumption directly in the liberalised market was, at the end of 2013, approximately 3.5 times higher than in December 2012. By the end of 2014, about 825,000 consumers, from a universe of approximately 1.2 million, had switched supplier through the respective platform since 2010, most of them from the residential segment.

4.2.2.1 MONITORING THE PRICE LEVEL, TRANSPARENCY LEVEL AND THE LEVEL AND EFFECTIVENESS OF MARKET OPENING AND COMPETITION

METHODOLOGY FOR MONITORING REFERENCE PRICES AND AVERAGE PRICES PRACTISED IN THE RETAIL MARKET

Suppliers send ERSE updated information on the reference prices[36] practised or expected to be practised in the sale of natural gas for all Low Pressure (LP) supply. Reference prices are understood to be the set of tariffs, tariff options and respective prices and indexes per billing variable offered by suppliers to their customers, as well as the conditions for the application of the tariffs, namely the characteristics for minimum consumption, duration of contracts and conditions for the revision of prices. Reference prices are the supplier's basic commercial offer which does not prevent the practice of differentiated special contractual conditions such as the application of discounts or other promotional campaigns.

The information provided to ERSE by suppliers is included in simulation and decision-making support tools for consumers, made available by ERSE on its website.

Furthermore, all natural gas suppliers regularly inform ERSE of the average prices actually practised in the retail market. This information is used by ERSE to monitor and supervise the retail natural gas market, and

[36] Pursuant to ERSE Order No. 3677/2011 of 24 February.

also serves as an information tool for the reports produced by official statistical data bodies (INE or EUROSTAT, for example).

TRANSPARENCY

With the aim of continuing to provide information to natural gas consumers on the reference prices practised in the market, as well as the IT tools to help consumers choose a supplier, ERSE has provided a simulator on its website since August 2012 that provides natural gas consumers with objective information so that they can make informed choices, namely regarding the selection of the best offer on the market. The simulator compares prices in mainland Portugal for installations with annual consumption of less than 10,000 m^3.

In late 2014, the natural gas billing simulator underwent an intervention for redesigning and expansion of capabilities. This intervention was made following an increase in the number and diversity of offers available for energy consumers, as part of the development of retail markets. The purpose was, thus, to offer natural gas consumers a new set of features that would allow them to customise their simulation in order to better adapt it to their requirements and needs, as well as their consumption characteristics. These features are related to the forms of payment, contracting and providing of additional services.

In order to guarantee the transparency of the information made available to consumers by suppliers, ERSE also checks the offers on the suppliers' websites, in terms of both price and commercial conditions, and that they are in accordance with the information on reference prices sent to ERSE within the scope of its monitoring.

In addition, under the terms of the Commercial Relations Code, suppliers with over 5,000 customers are obliged to publicly disclose, through the communication means available and also on websites, their commercial offers, and the general conditions of contracts for customers who consume up to 10 000 m^3.

Rules are also in force pertaining to the information to be made available on customer invoices, namely information regarding the portion of access tariffs, the volume of natural gas measured and energy conversion factors (from m^3 to kWh), and the labelling of natural gas.

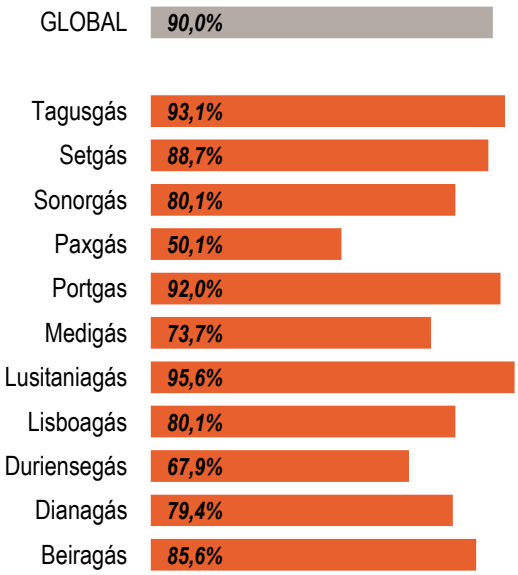
The rules for access to information regarding their consumption is regulated by ERSE under the terms of the Measuring, Reading and Data Availability Guide.

COMPETITION EFFICIENCY

Since July 2012, transitory tariffs have been applied to LRS' customers whose annual consumption is greater than 500 m^3, with this extinction having been extended to all end users since January 2013.

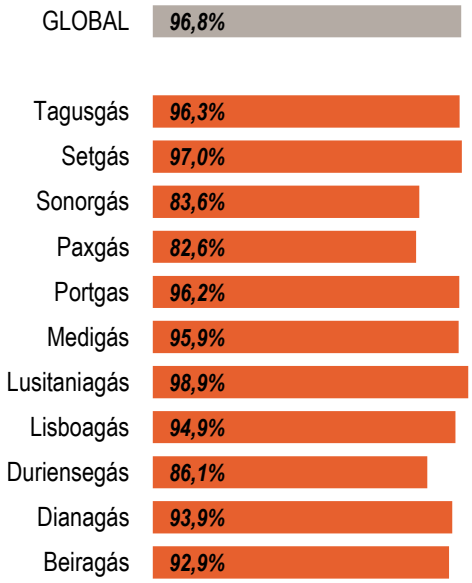
In terms of the effective liberalisation of the market, excluding the group of supplies to power plants in the standard regime, Figure 4-4 presents the market share (in consumption), in 2014, that is being supplied by suppliers in the liberalised market. It can be seen that nearly 90% of the total consumption, with the exception of power plants, is provided by market suppliers and this value is generically higher among the leading natural gas distributors.

Figure 4-4 – Effective opening of the natural gas market in 2014 (total energy consumption, excluding electricity generating plants)



It is also important to note the occurrence of the opening of the market in 2013 in the customer segment with greatest consumption, as the extinction process of regulated tariffs occurred sooner for these customers, a fact which is shown in Figure 4-5.

Figure 4-5 – Effective opening of the natural gas market in 2014 (customers with annual consumption greater than 10,000 m³ -Energy)



Overall, the values specifically relating to the customer segment with annual consumption greater than 10,000 m³ follow the same rationale as the total customers. It should be noted that almost 97% of consumption from this group of customers is already being supplied by liberalised market suppliers.

The management of the supplier switching process is being handled by the national transmission system operator (REN Gasodutos), with the procedures and timelines for switching being approved by ERSE.

Continued access difficulties and doubts about the quality of the information provided by the distribution network operators in the natural gas sector, namely the natural gas distribution companies of the Galp group and Tagusgás, regarding the characterisation of the retail market, led to ERSE deciding in 2013 that this information should be subject to an independent audit. This work proved there were shortcomings in compliance with reporting obligations. In early 2014, in Directive[37], ERSE established that a corrective plan must be implemented to correct the remaining deficiencies identified in the audit, which must be prepared by the network operators covered by the audit.

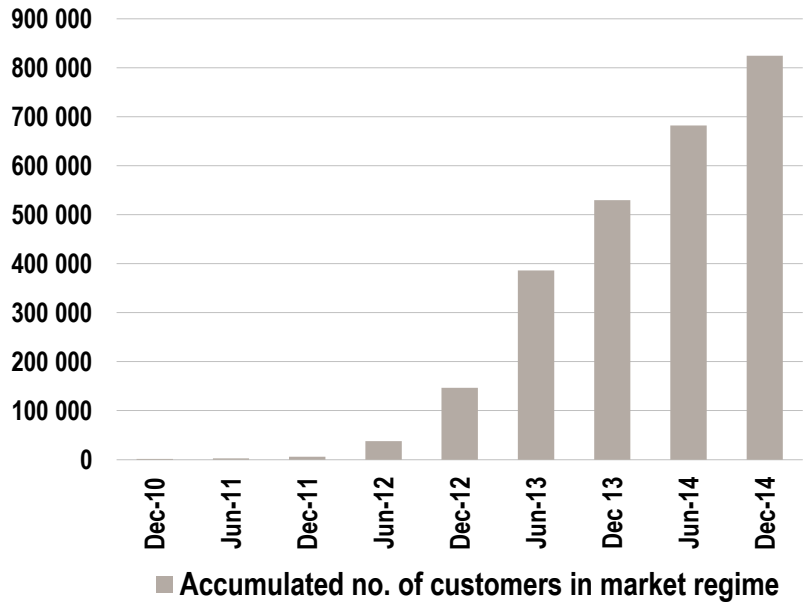
In 2014, an audit on supplier switching procedures, which, in accordance with ERSE's rules, will take place every 2 years, was initiated. This audit focused on compliance with the provisions on supplier switching procedures established by ERSE, particularly in ensuring transparency and non-discrimination in the use of the platform used, in order to ensure the proper processing of supplier switching and compliance with reporting deadlines. The audit was completed in 2015.

[37] Directive no. 6/2014 of 29 January on the Audits to the distribution network operators of the Galp and Tagusgás groups with regard to the provision of market information

Therefore, based on the information processed by the supplier switching manager, the number of customers who switched from a tariff supply to the market supply or who began consumption directly in the liberalised market was, in 2014, approximately 56% higher than in December 2013.

Figure 4-6 shows the evolution in the accumulated number of customers in the liberalised market from the end of 2010 to the end of 2014, whose new supplier selection process was performed via a platform managed by REN Gasodutos. From this figure it can be seen that, at the end of 2014, more than 825,000 customers had switched supplier through the aforementioned platform.

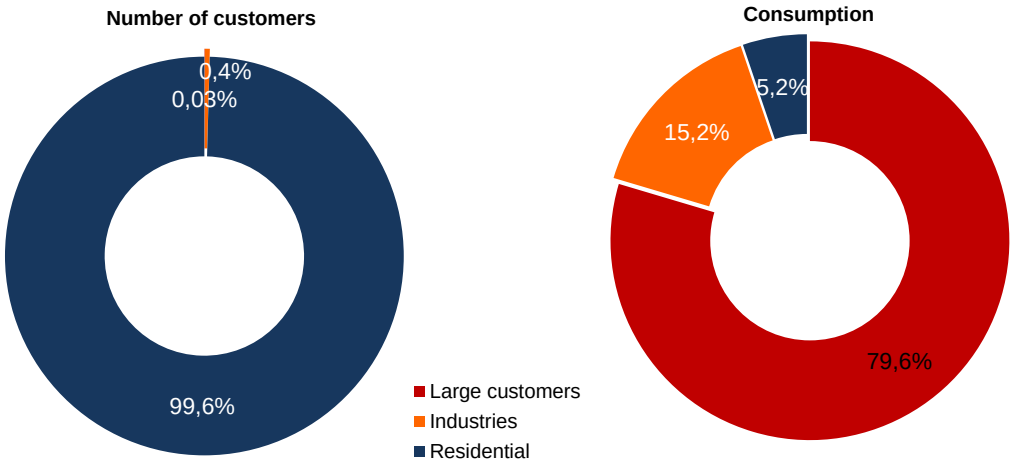
Figure 4-6 – Number of customers switching supplier within the scope of the platform managed by REN Gasodutos



Of the customers in the market, almost 3,000 are large customers (annual consumption greater than 1 million m^3), or customers in the industrial segment (annual consumption greater than 10,000 m^3), which only translates into approximately 0.65% of the total number of liberalised market customers, as can be seen from the analysis of Figure 4-7. In terms of consumption, these customers represent over 94.8% of the total consumption in the liberalised market.

In terms of the number of customers, the residential segment is the largest one in the liberalised natural gas market, representing almost all customers, but only representing approximately 5.2% of the total consumption in this market.

Figure 4-7 – Breakdown of the number of customers and consumption in the liberalised market by customer segment at the end of 2014

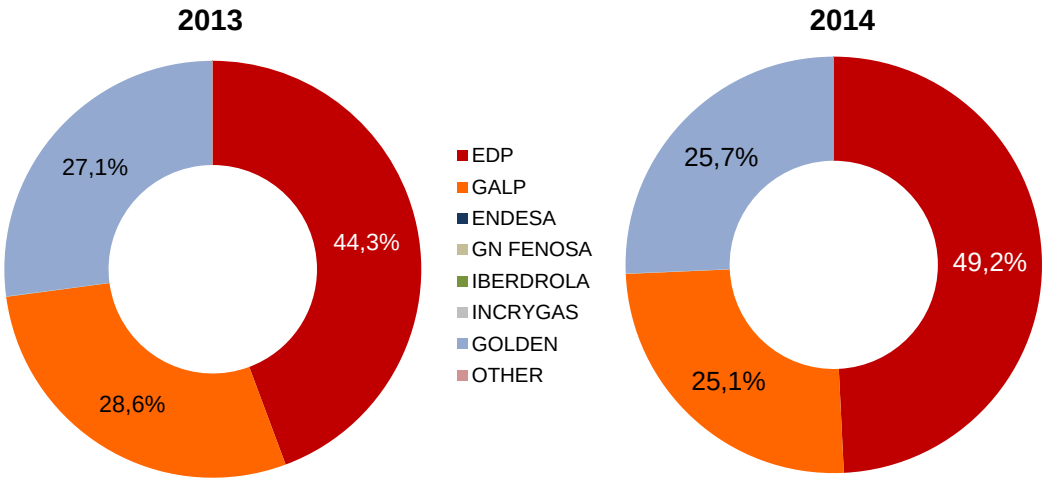


EVOLUTION OF SALES

Regarding the activity of attracting customers by suppliers on the market, a substantial part refers to the migration between portfolios of the two main operators. Indeed, as shown in Figure 4-8, it can be seen that in 2013, around 44.3% of the total number of customers in the liberalised market were already supplied by EDP, with Galp taking second place, at 28%, closely followed by Goldenergy, with 27%. Thus, there was a reduction in corporate concentration in 2013 in respect of the number of customers in their portfolio, despite the fact that only three suppliers continue to attract residential customers.

Already in 2014, EDP strengthened its position, accounting for more than 49% of customers in the natural gas market. Goldenergy continued to increase its customer portfolio, focusing mainly on the residential segment, and now holds 25.7% of market customers, overtaking Galp, with 25.1% of customers. Here, there was a slight increase in corporate concentration in 2014, in respect of the number of customers in their portfolio; however, the fact remains that only 3 suppliers continue to attract residential customers.

Figure 4-8 – Breakdown of customers attracted by suppliers in the market in December 2014 and December 2014



Note: the number of customers belonging to the suppliers Endesa, GN Fenosa, Iberdrola and Incrygas represents 0.03% of the total.

Based on the information of consumption supplied, Figure 4-9 shows the breakdown of consumption by supplier, explaining the market structure in 2013 and 2014. This structure shows a corporate concentration that is inferior in consumption to what was calculated in terms of customer numbers, concentration having actually decreased in comparison with the previous year.

It is also noteworthy that Galp's share is significantly lower, mainly in favour of Gás Natural Fenosa and other groups of suppliers. This information about the market structure relates to the overall group of customers supplied by market suppliers.

Figure 4-9 – Breakdown of consumption supplied by liberalised market suppliers in December 2013 and December 2014

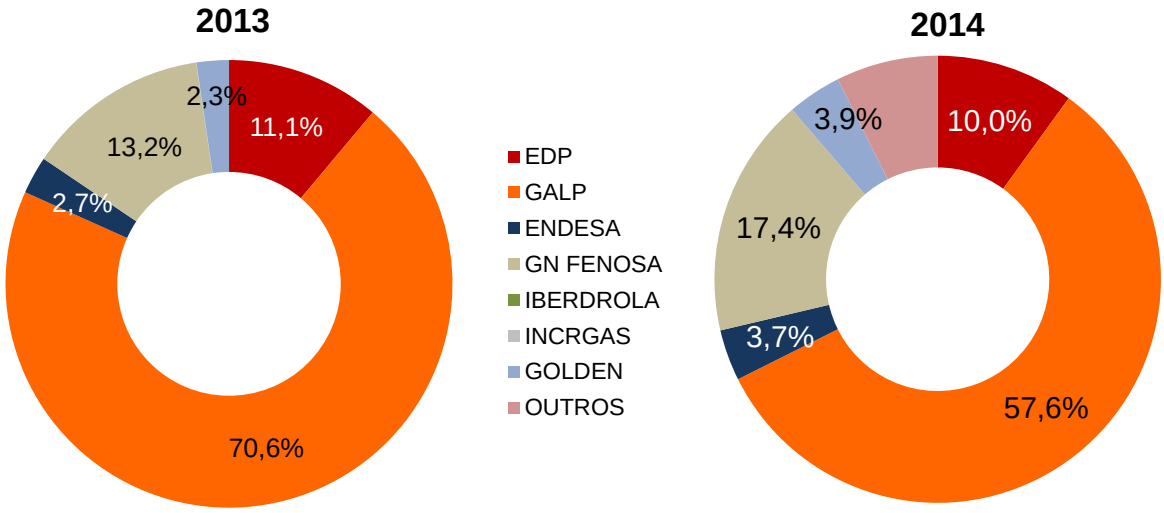
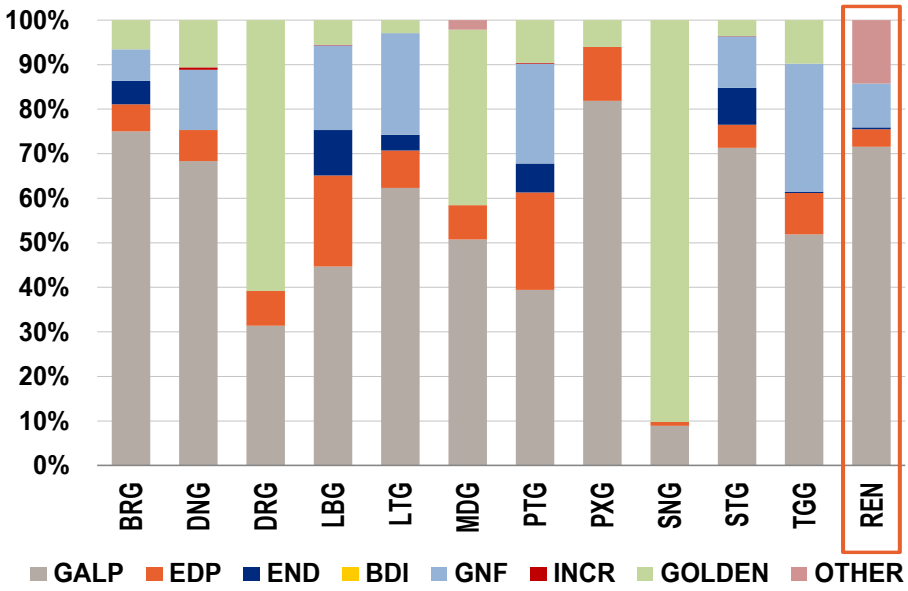


Figure 4-10 shows the breakdown of market share by distribution network, in terms of consumption supplied. Therefore, with the exception of Lisboagás (LBG), Sonorgás (SNG) and Duriensegás (DRG) and, in 2014, also Portgás (PTG), the Galp group holds a market share greater than 50% in all the distribution networks. The same is true in relation to customers directly connected to the transmission network (REN) in which the Galp group holds a market share of almost three-quarters of consumption supplied.

Figure 4-10 – Breakdown of consumption supplied by liberalised market suppliers in 2014 and by distribution and transmission network



Note: BRG – Beiragás, DNG – Dianagás; DRG – Duriensegás; LBG – Lisboagás; LTG – Lusitaniagás; MDG – Medigás; PTG – Portgás; PXG – Paxgás; SNG – Sonorgás; STG – Setgás; TGG – Tagusgás. END – Endesa; GNF – Gas Natural Fenosa; INCR – Incrygas; Golden – Goldenergy.

In 2014, the group Gás Natural Fenosa occupied the second position in terms of share of natural gas supply, with its position based on distribution networks operated by Dianagás, Lusitaniagás and Tagusgás.

The EDP group was the third operator in the market in 2014 (it took second place the year before), its position being more significant in the distribution networks operated by Lisboagás and Tagusgás.

Highlight also to Goldenergy, which already occupies majority positions in the distribution networks of Duriensegás and Sonorgás and already accounts for 40% at Medigás.

Endesa's largest market share is in the distribution network managed by Lisboagás.

4.2.3 RECOMMENDATIONS ON SUPPLY PRICES, INVESTIGATIONS AND MEASURES TO PROMOTE EFFECTIVE COMPETITION

RECOMMENDATIONS FOR SUPPLY PRICES

In the context of regulated tariffs for the sale of natural gas to end users in LP with annual consumption less than or equal to 10,000 m^3 in 2014, ERSE did not issue any recommendations on the conformity of the sales prices under the terms provided for in Article 3 of Directive 2009/73/EC of the European Parliament and of the Council of 13 July.

MEASURES TO PROMOTE EFFECTIVE COMPETITION

On 15 March 2013, World Consumer Rights Day, ERSE issued a recommendation for suppliers (Recommendation no. 2/2013), relating to aspects pertaining to the contracting of electricity and natural gas and relevant to consumers: the existence and scope of loyalty periods, the availability of payment forms and the indexing of prices on the liberalised energy market.

ERSE recommended to suppliers that the existence of loyalty periods and the indexing of prices practised in the contract needed to be explained beforehand (before the signing of the contract) and duly justified by suppliers (why they exist and the benefits to the consumer). Pertaining to payment methods made available to customers, these must be diversified and may not exclude consumers from any market offers.

In 2014, a first report was published on the information collected by ERSE following the Recommendation no. 2/2013. With regard to loyalty, in late 2013, the natural gas market showed a global tendency towards the absence of customer loyalty or contractual penalties for its breach. With regard to the availability of payment methods, the situation is uneven among the suppliers in the market; for some of them, practically all of the offers have only one payment method (which is not cash), and for others, at least half of the offers allow for several payment methods, including cash. With regard to price indexing in the offers of the natural gas market, it appears that the practice followed by suppliers in terms of price indexing is to apply it to all offers or to not apply it to any offers they place in the market.

TARIFF DEFICIT

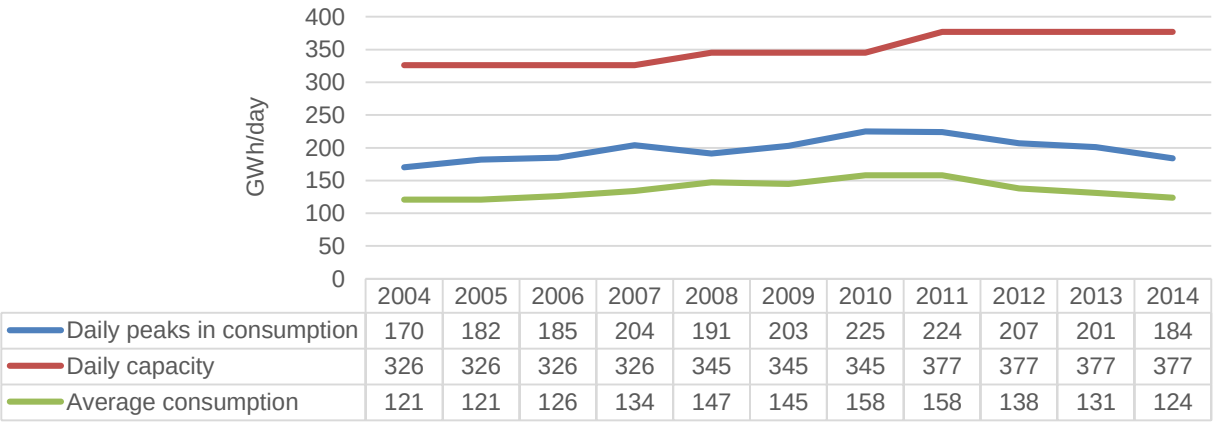
In the natural gas sector, there is no tariff deficit to be reported.

4.3 SECURITY OF SUPPLY

4.3.1 MONITORING THE BALANCE BETWEEN SUPPLY AND DEMAND

Figure 4-11 shows the evolution of the capacity offered in SNGN[38], average daily consumption and annual peak consumption of natural gas, between 2004 and 2014.

Figure 4-11– Evolution in the capacity offered in SNGN, daily average consumption and consumption peaks between 2004 and 2014



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Daily peaks in consumption	170	182	185	204	191	203	225	224	207	201	184
Daily capacity	326	326	326	326	345	345	345	377	377	377	377
Average consumption	121	121	126	134	147	145	158	158	138	131	124

Source: REN Gasodutos

The analysis of the figure above shows a large gap between the capacity offered in SNGN and the annual consumption peaks, especially from the time when the Sines LNG terminal began operating in 2004. In 2014, the average daily consumption and the peak consumption represented, respectively, 33% and 49%, of the entry capacity offered in SNGN, which reflects the margin that exists between the capacity available for commercial purposes and the capacity used.

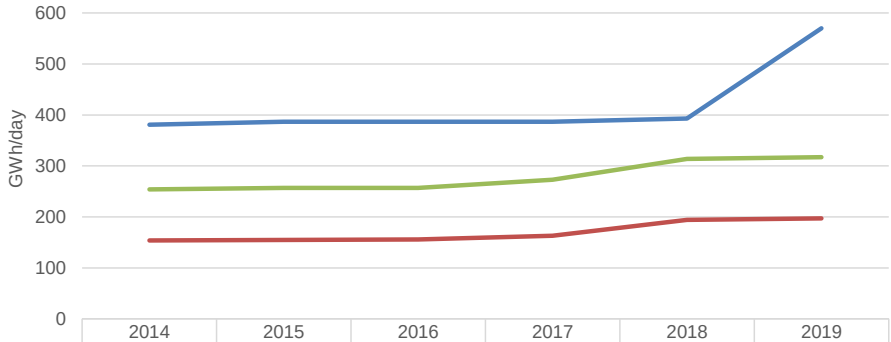
ERSE monitors the allocation of capacity in RNTGN, in particular the level of capacity offered for commercial purposes in comparison to the used capacity.

[38] The capacity offered in SNGN corresponds to the sum of the entry capacities of the Campo Maior and Valença do Minho interconnections and the connection between RNTGN and the Sines LNG terminal.

4.3.2 EXPECTED FUTURE DEMAND, AVAILABLE SUPPLIES AND ADDITIONAL CAPACITY

Figure 4-12 presents the forecast for the evolution of the capacity offered in SNGN, average daily consumption and annual peak in consumption of natural gas, between 2014 and 2019.

Figure 4-12– Evolution in the capacity offered in SNGN, daily average consumption and consumption peaks between 2014 and 2019



	2014	2015	2016	2017	2018	2019
Daily capacity forecast	381	387	387	387	393	570
Average daily consumption forecast	154	155	156	163	194	197
Forecast for daily peaks in consumption	254	257	257	273	314	317

Source: REN Gasodutos

An analysis of the figure above clearly shows the comfortable margin between the capacity offered for commercial purposes and the estimated capacity usage for the coming years. According to REN's forecasts, average daily consumption and peak consumption will represent, respectively, 35% and 56%, of the entry capacity offered in SNGN in 2019.

4.3.3 MEASURES TO COVER PEAK DEMAND OR SHORTFALLS OF SUPPLIERS

The Portuguese market is essentially supplied by natural gas from Algeria and LNG from Nigeria. Indeed, the construction of the Sines LNG terminal, which began operating in 2004, was mainly related to the diversification of supply sources and the promotion of security of supply.

Another initiative to promote the security of supply and diversification of the supply sources is the integration of the Portuguese market into an Iberian market. Indeed, in 2013, the presence of market agents in SNGN, with a significant activity in Spain, led to an increase in the use of the interconnections, with the Portuguese market benefiting from a wider diversification of supply sources such as the Spanish market.

In addition to the measures adopted to safeguard the security of supply and the covering of peak consumption, on the supply side, there are also measures which have been planned and implemented for the demand side, namely the interruptibility of large consumers. Indeed, the power plants of Tapada do Outeiro and Lares have bi-fuel groups, and were granted the interruptibility statute by DGEG, for the purpose of maintaining natural gas safety stocks. In this context, it is possible to act on the demand side in a situation of covering peak consumption or when there is a disruption in supply to SNGN.

The legislative framework in force also establishes public service obligations regarding the constitution and maintaining of natural gas safety stocks which are intended to give SNGN the means to respond to situations when there are disruptions in the supply and/or coverage of extreme peak consumption. In this context, the reinforcing of the Carriço underground storage infrastructure and the reinforcing of the storage component of the Sines LNG terminal make it possible to ensure compliance with the public service obligations established by Portuguese law and community regulations, namely Decree-Law no. 140/2006 of 26 July, in the wording given to it by Decree-Law no. 231/2012 of 26 October and EC Regulation no. 994/2010 of the European Parliament and of the Council of 20 October, respectively.

5 CONSUMER PROTECTION AND DISPUTE SETTLEMENT

5.1 CONSUMER PROTECTION

ERSE's mission to protect the rights and interests of energy consumers translates -into the pursuit of certain functions and subsequent conducting of various tasks, based on the regulatory framework itself. To this end, in 2014, highlight goes -to legislative measures that directly affected ERSE's activity. In turn, ERSE undertook regulatory activities towards the implementation of the legislative options issued and triggered mechanisms for verifying compliance with applicable legal and regulatory provisions, as well as providing information and clarification to consumers, and actively participating in the resolution of disputes submitted for its intervention.

Thus, in 2014, the following legislative initiatives are worth highlighting:

- The publication of Decree-Law no. 24/2014 of 14 February, which approved the new rules for distance and off-premises contracts, transposing Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011, on consumer rights.
- Publication of Decree-Law No. 172/2014 of 14 November, which widened the scope and approved new rules for the social tariff for electricity supply, created in 2010.
- Ordinance No. 278-C/2014 of 29 December, which defined new procedures and conditions for the granting, application and maintenance of the social tariff.

The regulatory measure with the most impact on the protection of consumers in 2014, was the approval by ERSE of the new Commercial Relations Code for the electricity sector (Regulation no. 561/2014 of 22 December), of which the following aspects are noteworthy:

- Supplementary supply by the LRS in case of absence of supply or cessation of the activity of the market regime supplier.
- Loyalty and price indexing in the supply contract.
- Invoice correction resulting from estimated consumption.

With regard to verifying compliance with the regulations it approved, ERSE promoted the conducting of audits, particularly on supplier switching procedures in the electricity and natural gas sectors.

ERSE also verified and monitored the changes introduced by some liberalised market suppliers in respect of the general terms of the supply contracts proposed, and those presented by new suppliers.

With regard to the information given to consumers, in addition to answering individual requests, handled in the scope of dispute management, ERSE prepares and updates the information content published on the Energy Consumer Portal, which can be found on ERSE's institutional website. Also with the objective of providing energy consumers with clearer information, both directly and indirectly, ERSE organises or participates in, at the invitation of other entities, information and training sessions on the issues of greatest concern to electricity and natural gas consumers. In 2014, ERSE was present at several events, with particular emphasis being given to the topics of the extinction of regulated tariffs and supplier switching.

As far as the resolution of conflicts of a commercial and contractual nature is concerned, ERSE employs mediation and conciliation procedures, through which it can recommend the resolution of disputes or suggest to the parties that they find a mutually agreeable solution, but it may not impose these measures on the parties involved. Simultaneously, and as a result of a case-by-case analysis, ERSE recommends the use of arbitration, especially when carried out in the scope of existing arbitration centres for consumption conflicts. The following section includes more detailed information on the handling of complaints by ERSE in 2014.

5.2 DISPUTE SETTLEMENT

ERSE directly intervenes in the resolution of disputes by encouraging the use of voluntary arbitration and making use of other mechanisms for settling disputes on a voluntary basis, through which it can recommend the resolution of specific cases.

ERSE promotes frequent inspections of records of complaints and of the installations of the electricity suppliers to assess their compliance with the law and sector codes, particularly in relation to specific obligations relating to the Complaints Book.

In 2014, ERSE's information and energy consumer support service received 14,979 complaints, of which 12,405 were related to the electricity sector and 2,569 to the natural gas sector.

Of the total complaints received, 8,844 (approximately 59%) were complaints written in the Complaints Books of the companies against whom the complaints were lodged; 7,430 of these related to the electricity sector and 1,414 to the natural gas sector.

Billing, interruptions of supply, commercial quality of service and supply contracts were, once again, the topics that required the most attention from ERSE in 2014, in the electricity sector and in the natural gas sector.

In 2014, ERSE also received a total of 2,330 requests for information. In the electricity sector, the majority of requests for information related to the following topics: supplier switching (436); tariffs and prices (409); billing (235) and supply contract (219). In the natural gas sector, the most common- requests for information related to: tariffs and prices (91); contracts (51); supplier switching (49) and billing (39).

Every working day, from 3 p.m. to 6 p.m., ERSE's energy consumer information and support service provides information via a dedicated low-cost telephone line.[39].

[39] The consumer pays only the cost of a local call with the remainder being covered by ERSE.

6 ACRONYMS

- ACE – Energy Consumers Support Office
- ACER – *Agency for the Cooperation of Energy Regulators*
- CAPEX – Capital Expenditure.
- CCGT – Combined Cycle Gas Turbine
- CEER – Council of European Energy Regulators.
- CIEG – General Economic Interest Costs
- CMVM – Comissão de Mercados e Valores Mobiliários (Portuguese Securities Market Regulator)
- CNMC – *Comisión Nacional de Mercados y Competencia*
- CNMV – *Comisión Nacional de Mercados de Valores*
- DEA – Data Envelopment Analysis
- DGEG – Directorate-General for Energy and Geology
- DSO – Distribution System Operator
- DUoN – Distribution Use of Network
- DUoN (HV) – Distribution Use of Network in HV
- DUoN (LV) – Distribution Use of Network in LV
- DUoN (MV) – Distribution Use of Network in MV
- ERI – Electricity Regional Initiative.
- ERSE – Energy Services Regulatory Authority
- HP – High pressure (pressure whose value is greater than that of atmospheric pressure by more than 20 bar)
- HV – High Voltage (voltage between phases whose effective value is greater than 45 kV and less than or equal to 110 kV)
- LNG – Liquefied Natural Gas
- LP – Low pressure (pressure whose value is lower than that of atmospheric pressure by more than 4 bar)
- LRS – Last Resort Supplier
- LRWS – Last Resort Wholesale Supplier
- LV – Low Voltage (voltage between phases whose effective value is equal to or lower than 1 kV)

- MIBEL - Iberian Electricity Market
- MIBGAS – Iberian Natural Gas Market
- MP – Medium pressure (pressure of 4 bar or more and equal to or less than 20 bar in relation to atmospheric pressure)
- MPAI – Procedures Manual for Access to SNGN Infrastructures
- MV – Medium Voltage (voltage between phases whose effective value is greater than 1 kV and less than or equal to 45 kV)
- OMIE – Iberian Energy Market Operator – Spanish Section, SA.
- OMIP – Iberian Market Operator - Portuguese Section.
- OPEX – Operational Expenditure.
- OTC – Over The Counter
- PCI – Project of Common Interest
- PDIR – Development and Investment Plan of the RNTIAT
- RARII –Access to Networks, Infrastructures and Interconnections Code
- RNT – National Electricity Transmission Network
- RNTGN –National Natural Gas Transmission Network.
- RNTIAT – National Transmission, Storage Infrastructure and LNG Terminal Network
- RQS – Quality of Service Code
- RRC – Commercial Relations Code
- RT – Tariff Code
- SEN – National Electricity System
- SNGN – National Natural Gas System
- SpLV – Special Low Voltage (LV supply or delivery where contracted power is (i) Mainland Portugal- greater than 41.4 kW, (ii) Autonomous Region of the Azores- equal to or greater than 20.7 kW and is achieved by way of maximum power at 15-minute intervals, (iii) Autonomous Region of Madeira - greater than 62.1 kW)
- SRG - Special Regime Generation
- StLV – Standard Low Voltage (LV supply or delivery where contracted power is (i) Mainland Portugal - 41.4 kW or lower, (ii) Autonomous Region of the Azores - 215 kW or lower and is not

achieved by way of maximum power at 15 minute intervals, (iii) Autonomous Region of Madeira - 62.1 kVA or lower)

- TSO – Transmission System Operator
- TUoN – Transmission Use of Network
- VHV – Very High Voltage (voltage between phases whose effective value is greater than 110 kV).
- VIP – *Virtual Interconnection Point*.
- WACC – Weighted Average Cost of Capital