

Portugal

Key issues

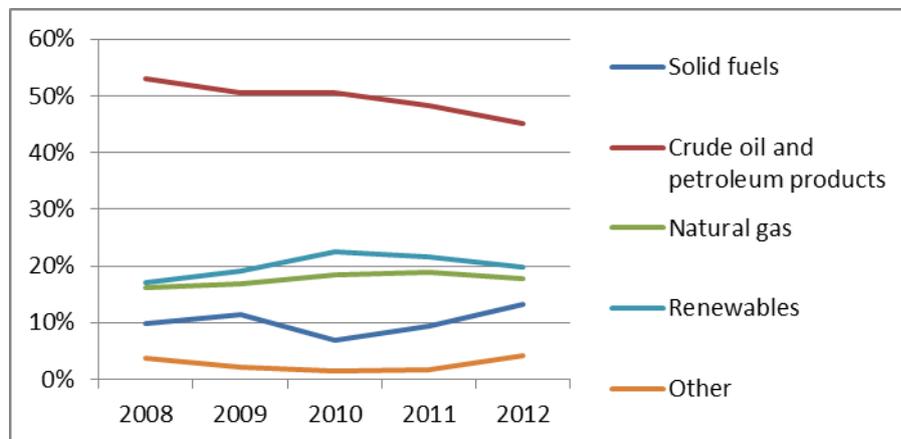
Electricity and gas sectors have undergone reforms as part of the Financial Assistance Program. Regulated tariffs are being phased out gradually until 2015 and some State-controlled companies will be privatised. At present, both the wholesale and retail markets are still concentrated. However, deregulation has led to an increase in customer switching.

In the gas sector, wholesale market development is still constrained due to slow integration with the Spanish market. Integration should be promoted notably through the harmonisation of entry-exit tariffs in both transmission systems, the use of platform PRISMA to allocate capacity, the harmonization of the congestion management procedures and the creation of an Iberian Gas hub in line with the South Gas Regional Initiative and the Gas Target Model.

General overview

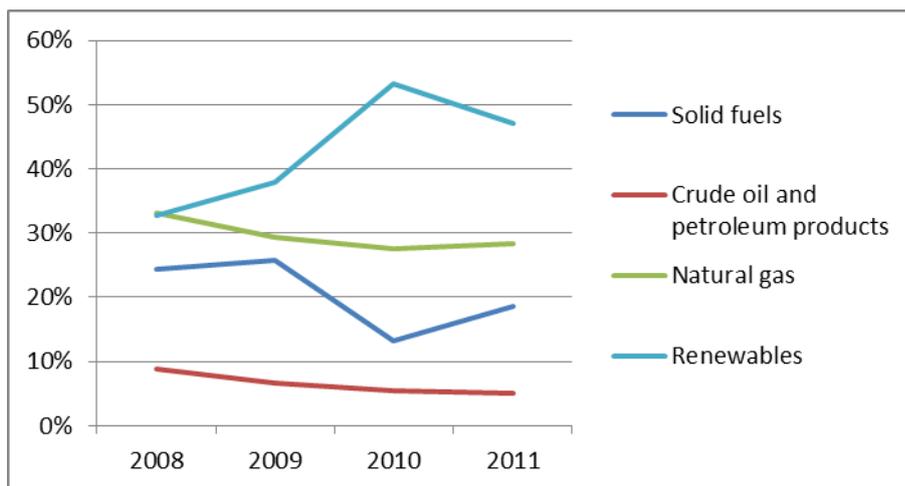
Portuguese energy demand decreased again in 2012 by 5.9%, to 22.2 Mtoe, following a 2.9% drop in 2011. Falling demand has reduced fossil fuel consumption, although it remains the main source of energy.

Figure 1: Gross inland consumption mix 2008 – 2012 (source: Eurostat)



The power generation mix in 2011 (52.5 TWh) was dominated by renewables (47.0%), gas-fired power generation (28.4%) and solid fuels (18.7%). Net imports were 2.7 TWh, to a total electricity demand of 49.2 TWh. The share of gas-fired generation has however decreased considerably in the last two years.

Figure 2: Gross electricity generation mix 2008 – 2011 (source: EU Energy in Figures – Pocketbook 2012 and 2013)



The domestic power generation mix in 2013 (47.8 TWh) was made up by 53.8% from hydro, coal and CCGT and 46.2% from renewable resources⁴¹¹. The share of renewable energy varies yearly due to hydrological and wind conditions. Portugal's 2020 renewables target⁴¹² is 31%, which is higher than the EU-27 average. According to Eurostat data, between 2008 and 2012, the renewables share in gross final energy consumption increased from 22.8% to 24.6% and the country is showing good progress towards its 2020 RES obligation.

Regulatory framework

General

The evolution of the energy sector in Portugal has been driven by reforms as part of the Financial Assistance Program. These reforms aim to reduce the energy tariff deficit. The privatisation of *Redes Energéticas Nacionais SGPS* and *Energias de Portugal (EDP)* was accelerated and regulated gas and electricity retail tariffs are being phased out. In this context, Portugal is undertaking other measures, discussed later in this report.

National Energy Regulator

The independent Portuguese Energy Services Regulatory Authority, *Entidade Reguladora dos Serviços Energéticos (ERSE)* has been in operation since 1997. It had a budget of almost EUR 9 million in 2012 and employed a staff force of 75 people.⁴¹³

Unbundling

REN (Rede Elétrica Nacional) and *REN Gasodutos* are the electricity and gas TSOs. Both are part of *REN SGPS (Redes Energéticas Nacionais SGPS)*. After the re-privatisation of a 40% share capital of *REN SGPS* in 2012, the process continued and currently the Portuguese government does not hold shares in the capital of *REN SGPS*. These TSOs have both been certified in 2014 under the ownership

⁴¹¹ <http://www.ren.pt/>.

⁴¹² Share of RES in Gross Final Energy Consumption.

⁴¹³ Employment of 80 people in 2010.

unbundling model, after the opinion of the Commission issued in May 2014⁴¹⁴ and subject to the fulfilment of a number of conditions.⁴¹⁵

EDP is the main electricity distributor and was privatized in 2013. It holds the concession to operate the national distribution network in high and medium voltage, and most municipal concessions to operate in the low voltage distribution network. There are a few other smaller electricity distributors. The distribution of natural gas is provided by six distributors (four of them belong to GALP) that work under concession contracts and five autonomous natural gas distribution units (four of them belonging to GALP) which have a license.

Wholesale markets

Electricity

Total electricity consumption in Portugal stabilised in 2013 at 49.1 TWh after a two-year period of decline. Electricity production was 12.4% higher, driven by higher than average rainfall. Generation from hydro plants in 2013 more than doubled compared to 2012. Renewables also increased their production 16.4% when compared with 2012 data. This increase was compensated by a reduction in imports, CCGT and coal production.

Electricity generation in Portugal has an unconventional structure. While EDP, the former State-owned company, remains the largest generation entity (43% of electricity sold in 2013), a 42% share is supplied through regulated agents which are not exposed to market risks.⁴¹⁶ REN Trading, which accounts for 7.6% of the domestic power generation mix, acts as a regulated market agent for the two historical PPAs. The renewable and CHP generators, which earn a feed-in-tariff, are represented in the market by a regulated single buyer. Imports account for 6% of energy supply and there is a high level of market integration and price convergence with Spain.

Changes to one of the most contentious issues, the regulated contracts for difference known as CMECs that aim to compensate for stranded costs arising from the liberalization process, are still pending. Portugal has already reduced the discount rate applied in the CMECs, but it is studying a retrospective reduction in previous years payments after the energy regulator and the antitrust authority advised of flaws in ancillary service related payments.⁷

Portugal and Spain have been integrating their electricity markets into a single Iberian Electricity Market, MIBEL. They share a common spot market operator, OMIE, which has been operating in both countries since July 2007, and a forward market operator, OMIP, launched in July 2006. In 2013, day-ahead prices were the same in both countries. In February 2014, OMIE was coupled with the Central and Northern European markets. In 2013, 54.5 TWh were traded in the Portuguese part of OMIE day-

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http://ec.europa.eu/energy/gas_electricity/interpretative_notes/doc/certification/certifications_decisions.pdf

⁴¹⁵

http://www.erse.pt/pt/imprensa/comunicados/2014/Comunicados/CertORT%20Decisao_Comunicado_vfinal.pdf

⁴¹⁶ Share over total production plus net Exchange. Source: REN, *Sistema eletroprodutor. Informação mensal, Dezembro 2013*.

ahead market.⁴¹⁷ The average price in the day-ahead market in Portugal was EUR 43.65/MWh in 2013. Since March 2014, OMIP has auctioned FTR for the Spain-Portugal interconnection and allowed continuous trading of that product in its trading platform.⁴¹⁸ In 2012 Portugal started auctioning forward contracts on energy produced by renewable and CHP plants under feed-in-tariffs. All forward contracts are settled financially, since no bilateral energy was delivered in the daily schedule in 2013.⁴¹⁹ In the last two years there have been some changes in the Portuguese wholesale market. In 2012, CHP feed-in tariffs were reviewed and capacity mechanisms were reduced and limited to hydro power plants during the Financial Assistance Program.⁴²⁰ Moreover, in order to promote the sustainability of the system, 80% of the income of the CO₂ allowance auctions are used to compensate for the over-costs due to the renewable feed-in tariffs.⁴²¹ In April 2012, ERSE approved a new system operation regulation⁴²² and in June 2013 the Government approved a new measure aimed at cancelling out the effects of external events, specifically the increase in prices from new generation taxes in Spain. At the end of 2013, the Portuguese Government announced an extraordinary tax on energy production, transmission, storage and distribution activities in order to decrease the tariff deficit and promote energy efficiency measures.⁴²³

Gas

Portuguese natural gas consumption dropped by 12.7% in 2012, mainly due to a 44% reduction of gas-fired power generation (all CCGT). Since Portugal does not produce natural gas, it covered its consumption in 2012 through LNG imports (23.9 TWh⁴²⁴) and through two pipelines that connect Portugal with Spain (27.9 TWh). Portuguese supply still comes mainly from a few long term contracts held by GALP with Algeria (through Spain) and Nigeria (imported as LNG) and signed before liberalisation. At present, the Portuguese market does not have a transparent market-based natural gas price reference.

So far, Portugal's gas market development has been constrained by its limited size and the slow progress of integration with the Spanish market, partially due to cross border entry-exit charges between both gas transmission systems. Increased integration would create the Iberian Gas Market, MIBGAS and promising developments are now ongoing. In recent years Portugal has taken steps towards market opening and integration with Spain. Portugal abolished transmission exit fees in the

⁴¹⁷ Own estimation. OMIE quotes trading in Portugal based on purchases for Portuguese customers (i.e. it does not report sales in Portugal that are sold in Spain). Thus, it is underestimating the real market size.

⁴¹⁸ OMIE has auctioned interconnection contract for difference since 2009, but it is a forward contract -it is settled against the price difference regardless the sign-, while OMIP's FTRs is one-sided –they have value only if prices in Spain is higher, or vice versa.

⁴¹⁹ Bilateral contracts in the day-ahead schedule are cancelled out though participation in the day-ahead market, so no net energy is added.

⁴²⁰ Although a new Ordinance approved in August 2012 sets an incentive to generation capacity that will apply after the end of the Financial Assistance Programme, initially in 2015.

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⁴²² This regulation results from the merger of two previous regulations and includes some changes regarding balance areas, registration of market agents, an additional market for secondary reserve, settlement processes and retailers balancing responsible parties.

⁴²³ The proposal still has to be approved in the parliament.

⁴²⁴ Nigeria presents over 80 % of all LNG imports, while other imports are also received from Qatar, Egypt and Trinidad y Tobago.

interconnection with Spain in June 2012 and Spain reduced the exit price (towards Portugal) in the cross border tariffs. Interconnection capacity between both countries was auctioned for the first time in 2013 and for the second time in March 2014.

As part of the review of the gas regulations finalised in 2013, the regulator allows the allocation of binding capacity rights in transmission, underground storage and LNG terminal infrastructures, for periods of up to one year.

Retail markets

In August 2012, the government announced the complete elimination of regulated tariffs. A transitory tariff (that includes an aggravation factor with a view to promoting switching) will be in place for three years. ERSE will review this tariff on a quarterly basis.

Electricity

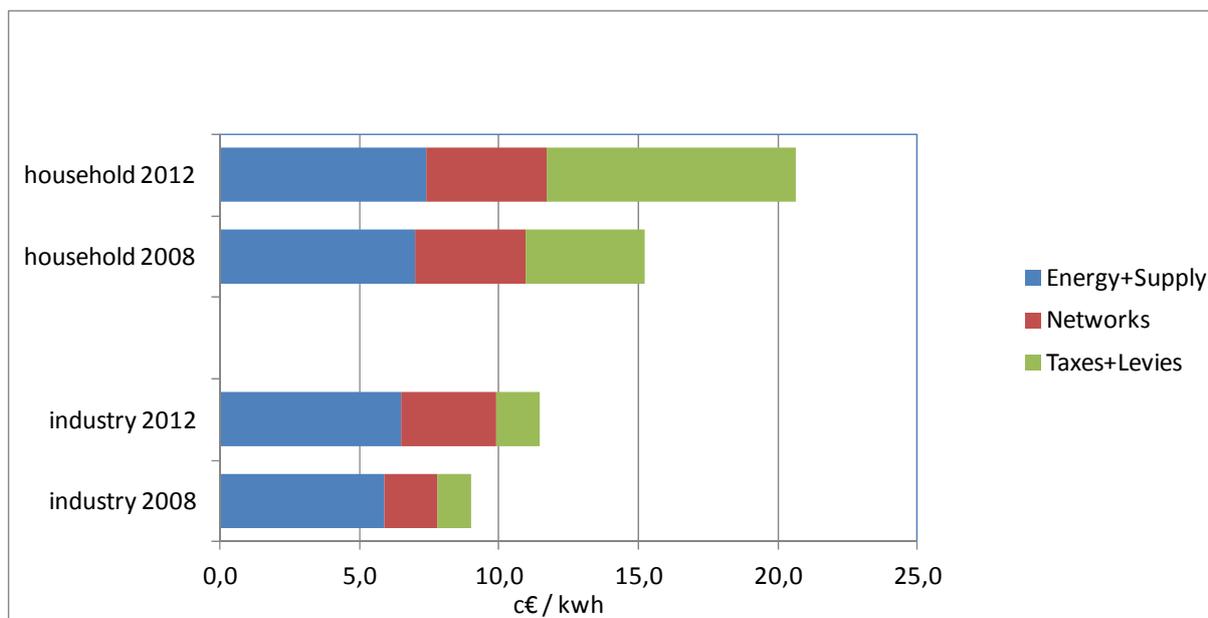
As a consequence of the previous monopolistic supply structure and price regulation, the retail market remains concentrated. In December 2013, the HHI for domestic and industrial consumers amounted to 6,778 and 2,239 respectively. The market share of the three biggest companies in the liberalised market was 85% in 2013. In 2013 Portugal had its highest switching rate so far of household consumers: 26,8% compared to 13.2% in 2012.

Customers' prices have increased considerably in previous years. From 2008 to 2012, final electricity prices have increased annually on average by 7.8% for domestic customers and 6.2% for industrial customers.⁴²⁵ The price increase for both domestic and industrial customers was due to an average annual increase in taxes and levies⁴²⁶ of 16% and 19%, respectively. This is influenced by a set of subsidies to ordinary producers, namely the compensation for stranded costs due to the liberalization process and the payments of feed-in tariffs for renewable and CHP.

Figure 3: Electricity price change by component 2008 – 2012 (source: Eurostat, energy statistics)

⁴²⁵ EuroStat.

⁴²⁶ Includes concession fees, stranded costs and other taxes linked to the energy sector, RES and CHP and the compensation for isolated islands, being some of these charged in the Access Tariff.



Gas

In April 2013, ERSE approved a new regulatory framework for natural gas to support the changes in commercial relationships following the removal of regulated tariffs. The modifications, which were aimed at strengthening consumer protection and enhancing competition, included extending the quality of service to all retailers, reinforcing unbundling provisions, adjustments to the supplier switching procedure and modifications in capacity allocation and pricing provisions.

The gas retail market in Portugal remains highly concentrated as liberalisation is recent and there remain some barriers to wholesale imports. At the end of 2012, GALP still supplied 68.8% of total consumption, followed by EDP with a share of 16.5% and Gas Natural with 10%. Nevertheless there are positive signs for the liberalisation process, such as the entry of new retailers⁴²⁷ and the ability for consumers to switch supplier.

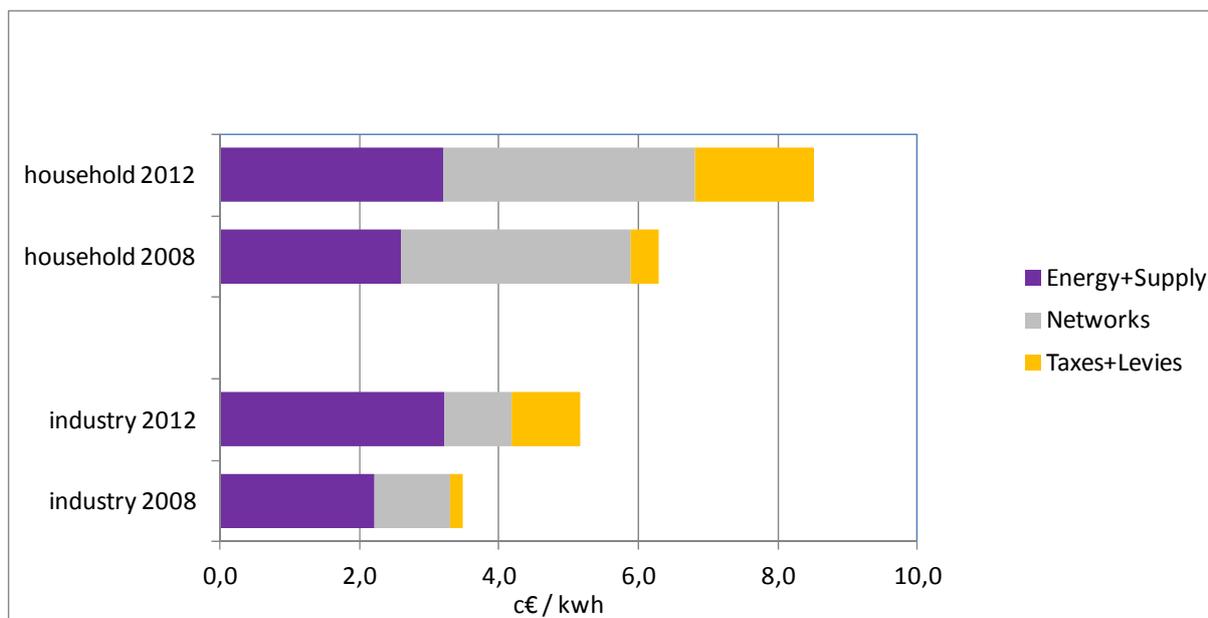
Portuguese gas retail prices for household consumers (EUR 0.0836/kWh) are one of the highest in Europe, while prices for industry (EUR 0.055/kWh) are average respectively in the first part of 2013.⁴²⁸ This is partly due to the high share of network costs in the final price (in 2012, network charges for household consumers represented up to 42% in Lisbon)⁴²⁹.

Figure 4: Natural gas price change by component 2008 – 2012 (source: EC, EPCR metadata)

⁴²⁷ In 2012, 6.1% of the consumers switched to Goldenergy.

⁴²⁸ Eurostat.

⁴²⁹ ACER/CEER, Annual Report on the Results of the Monitoring the Internal Electricity and Natural Gas Market in 2012, November 2013.



Consumers

Consumers' overall assessment of retail electricity market is below the EU average (22nd place and 66.3 points compared to 72.0, corresponding to 22nd place EU-wide) and second lowest among domestic services markets. However, the market has seen a considerable improvement (of 3 points) between 2012 and 2013. The incidence of consumer problems is third highest in the EU and trust in providers is fourth lowest. Retail gas market is ranked just below the EU average (74.0 points compared to 74.1⁴³⁰, corresponding to 16th place EU-wide) and just above the average of 31 domestic services markets (14th place). However, in both markets the scores on choice, ease of switching and actual switching have improved considerably since 2012. The proportions of gas and electricity consumers who have switched their provider or tariff in the past year saw increases of over 10 percentage points (in the electricity market, this has translated to a change from 3rd lowest place in the EU in 2012 to 3rd highest in 2013).⁴³¹

Around 80% of complaints (7,053 in 2012) dealt with by ERSE are concerned with the electricity sector, while the remaining 20% relate to the gas sector. These complaints are mostly related to tariffs, switching of supplier and connection to the network. ERSE offers a price simulation tool on their website for electricity and natural gas customers and operates a telephone information service. A collective switching in the electricity sector took place, organised by a Portuguese consumer organisation.

Portugal maintains public service obligations through the concept of vulnerable customers, defined as those who are beneficiaries of government social support plans.⁴³² They will keep the right to a regulated tariff with a limited increase established by the Government for each year. In 2012,

⁴³⁰ However the difference is not statistically significant

⁴³¹ 10th Consumer Markets Scoreboard,

http://ec.europa.eu/consumers/consumer_evidence/consumer_scoreboards/10_edition/index_en.htm

⁴³² These schemes are: solidarity supplement for elderly, unemployment assistance, 1st step of child benefit, social disability pension and social income supplements. Source: Diário da República, 1.ª série, N.º 189.

665,695 electricity and 17,000 natural gas consumers were eligible for this social tariff. During 2012, Portugal approved the new provisions for customers' protection in accordance with the Third Energy Package.

Infrastructure

The Portuguese authorities should ensure a proper and timely adoption of the measures stemming from the TEN-E Regulation, including the establishment of the one-stop-shop for Projects of Common Interest (PCIs) (due by 16 November 2013), and other measures foreseen for 2014 and 2015, including the publication of the manual on the permit granting process for project promoters, and the adoption of legislative and non-legislative measures streamlining the environmental assessment procedures.

Electricity

Investments in electricity transmission have slowed down. The length of the transmission network, which had been growing in recent years, in 2013 reached 8,519 km. The Portuguese transmission network has eight interconnection lines with the Spanish Transmission Grid. In the context of the TEN-E Regulation, Portugal has 4 projects of common interest (PCI) that will help to increase interconnection level with Spain and reach the 10% Barcelona target.

Gas

The Portuguese natural gas system has three entry points: an LNG terminal at Sines (whose LNG storage capacity was expanded by 943 GWh in 2012) and two interconnections with Spain (Campo Maior and Valença do Minho). A third interconnection pipeline with Spain, aimed at increasing the integration of the Iberian Gas Market, is in the initial phase of construction. Additionally, Portugal has 2115 GWh of underground storage capacity. In 2012, Portugal commenced work on the expansion of underground storage capacity at Carriço.

In May 2013, the TSO presented a proposal investment plan for 2014-2023 that had to be analysed by ERSE that intended to expand the gas network in Northern Portugal. ERSE asked REN to review the gas investment plans for 2014-2023, worth EUR 524 million, due to the anticipated increase in consumer bills. After ERSE's opinion, the government is responsible for the final approval of the plan.

In the context of the TEN-E Regulation, Portugal has 1 project of common interest (PCI) that will increase interconnection level with Spain (and further on with France) and will help Portugal to reinforce its security of gas supply.

Security of supply

Electricity

Portugal's dependence on imported energy has been historically high. Yet, due to an increasing amount of renewable energy in the generation mix, total energy dependence has been declining. The National Action Plan for Renewable Energy foresees a total increase of special regime generation capacity from 6,610 MW in 2012 to 8,780 MW by 2020. Addition new capacity is planned or

underway as some hydro power plants are being built and the Government has granted permission to four new CCGT plants.

At the beginning of 2013, the Secretary of State announced a plan to upgrade the electricity network in the Western part of the country (worth EUR 135 million).

Gas

The LNG Terminal at Sines has allowed Portugal to diversify its supply sources, as well as to take advantage of supply diversification in the Spanish market. The expansion of gas infrastructure, including the LNG storage tank, is expected to further improve the diversification of supply sources and help meet the standard required by the European regulation of security of supply.

The entry capacity in the system (re-gasification plus interconnection capacity) is expected to remain above gas peak consumption in the next few years. In 2012, the average daily peak in consumption represented 36.5% of the entry capacity offered in SNGN.

Key indicators

Electricity		Gas	
Number of companies representing at least 95% of net power generation	104	Number of entities bringing natural gas into country	5
Number of main power-generation companies	4	Number of main gas entities	1
Market share of the largest power-generation company	44.9%	Market share of the largest entity bringing natural gas	85.3%
Number of electricity retailers	10	Number of retailers selling natural gas to final customers	20
Number of main electricity retailers	4	Number of main natural gas retailers	3
Switching rates (only for electricity household consumers)	13,2%	Switching rates for gas (entire retail market)	N/A
Regulated prices for households – electricity	No	Regulated prices for households – gas	No
Regulated prices for non-households – electricity	No	Regulated prices for non-households – gas	No
HHI in power-generation market	3,567	HHI in gas supply market	3,883
HHI in electricity retail market (domestic consumers)	6,918	HHI in gas retail market	4,484
HHI in electricity retail market (industrial consumers)	2,815	HHI in gas retail market (industrial consumers)	5,509
Electricity market value ⁴³³ (bn€)	4.856	Gas market value ²⁰ (bn€)	0.897
Installed generation capacity (MW, 2011)	19,938		
Peak demand (MW)	8,554		
Number of smart meters installed	N/A		

⁴³³ Market value is an estimation of the size of the retail electricity and gas markets. It is calculated using data on electricity and gas consumption in the household and non-household sectors (average bands) and annual average retail prices.