Croatia

Key Issues

Competition in Croatia's energy market is still very limited. Market opening is needed to improve the investment climate and create incentives for new entrants.

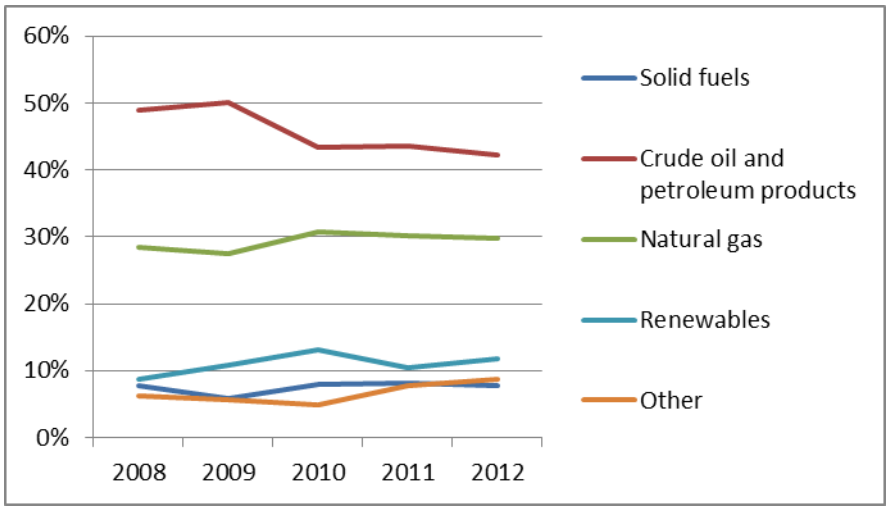
Croatia should step up its efforts to deregulate wholesale prices and prices for end-users and complete the unbundling process. Market liberalization depends on the effective enforcement of EU law including competition and State aid rules and the removal of barriers to the export and import of gas.

Investment in LNG terminal on the Croatian island of KrK is of strategic importance to regional energy security.

1. General Overview

Croatian national gross energy consumption in 2012 amounted to 8.12 Mtoe[70]. Crude oil, petroleum products and natural gas contributed the largest shares to the energy mix.

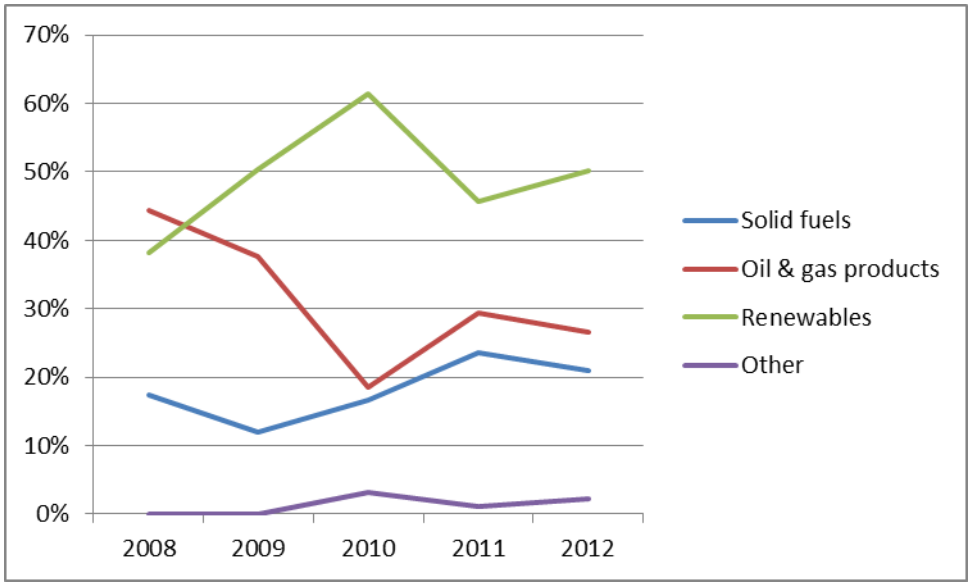
Figure 1: Gross inland consumption mix 2008 – 2012 (source: Eurostat)



In 2012, total power generation reached 10.5 TWh (a significant decrease compared to 2010, when it was 14.1 TWh). Almost half of power generation mix comes from hydro.

[70] Eurostat

Figure 2: Gross electricity generation mix 2008 – 2012 (source: Eurostat)



Croatia has a long tradition of gas production by which it covers over 70% of its annual domestic demand. In 2012, the domestic production of natural gas decreased. Imports increased significantly and a large amount of imported gas has been stored in underground facilities[71]. The share of renewable energy sources in gross final energy consumption in 2012 amounted to 16.8%[72], above Croatia's 2011/2012 interim trajectory, and is showing good progress towards its national target of 20% by 2020.

2. Regulatory framework

General

The Energy Law adopted in 2012 aims at incorporating the Third Energy Package into Croatian national legislation[73]. Implementation has not yet taken place. In 2013, the Croatian Parliament enacted the Strategic Investments Act[74]. It gives preferential treatment to energy projects of national interest, regardless if they are private or public.

National Energy Regulator

The Croatian Energy Regulatory Agency (HERA) was established in 2004. HERA's annual budget of 4.5m EUR is not part of the government budget. Funds for financing the work of HERA are secured from income from its own activities (collection of one-off fees and compensations).

[71] The Croatian gas storage operator is Podzemo Skladiste Plina d.o.o (PSP) operating the storage facility Okoli Underground Gas Storage
[72] Eurostat.
[73] Official Gazette 120/12.
[74] Official Gazette 133/1.

Unbundling

The unbundling process in Croatia is not yet completed. The HEP Group (*Hrvatska Elektroprivreda)* is a state owned electricity company, engaged in electricity production, transmission and distribution, supply and trade, as well as in many other supporting activities including other energy sectors such as heat and natural gas.

In mid-2013 the Croatian TSO, HEP-OPS changed its name to Croatian Transmission System Operator (HOPS). The equity capital of HOPS was increased and founding acts amended to ensure functional unbundling from the rest of HEP Group, including a different visual identity. However, unbundling certification by HERA has not been yet notified to the Commission. The HEP Group has a monopoly on the energy market but the TSO and DSOs have independent accounting, legal and management systems.

The gas grid operator Plinacro has been separated from the company INA for more than a decade, but its certification is still pending. Gas is distributed by 36 companies which operate at a local level, of which 13 have unbundled their supply and distribution operations[75]. The remaining DSOs serve less than 100,000 customers and are exempted from the unbundling rules.

3. Wholesale markets

Electricity

The power generation sector is also dominated by HEP. It was the largest electricity generator, covering 82% of the market in 2012. It owns a 50% stake in the Krsko nuclear power plant in Slovenia, near the Croatian border. HERA has so far issued 24 licenses for electricity generation, the most significant two being HEP and the independent producer TE Plomin d.o.o., co-owned by HEP and RWE Power[76] (50:50), operating a 210 MW power plant[77]. At the wholesale level, the market is based on bilateral contracts.

The Cross-border transmission and allocation of interconnection capacity is progressing. In 2012, HEP TSO carried out its first multilateral coordinated cross-border transmission capacity auctions with Slovenian and Hungarian operators. HOPS is striving to improve further integration with neighbouring electricity systems, including models for market coupling.

Gas

There is currently no commodity exchange or gas hub. Wholesale gas trading is based on bilateral contracts. The conditions for a *de facto* opening of the gas market have been met with the construction of the interconnecting gas pipeline between Croatia and Hungary which became

[75] http://www.hera.hr/hr/html/dozvole_tab11.html.

[76] RWE Energija objective is to gain control of 10% of the total electricity market over the next three years. RWE Energija is entering the Croatian natural gas market: the aim is to expand its electricity provision services to include gas provision.

[77] Croatia's biggest telecom operator, T-HT (majority owned by Deutsche Telekom) announced it would start delivering electricity to local households and companies as part of a diversification plan.

operational on 3 August 2011. The Croatian gas market began its transition to an entry/exit model on 1 January 2014. Rather than seeking a new long-term deal (the supply contract with Italy's ENI ended last December), the Croatian oil and gas group INA-*Industrija Nafte* is focusing on domestic gas resources and spot markets. INA's plan to purchase all its gas imports on the spot market has sparked interest from Slovenia and Hungary, from which shippers can import. By moving to the new model, traders will be able to book entry and exit capacity separately and shipping gas to Croatia will be easier. However, some provisions in the Gas Market Act represent a serious obstacle to cross border gas flows, by obliging domestic gas producers to offer their gas primarily to suppliers of customers in the territory of Croatia and obliging public service suppliers to primarily purchase gas from domestic producers.

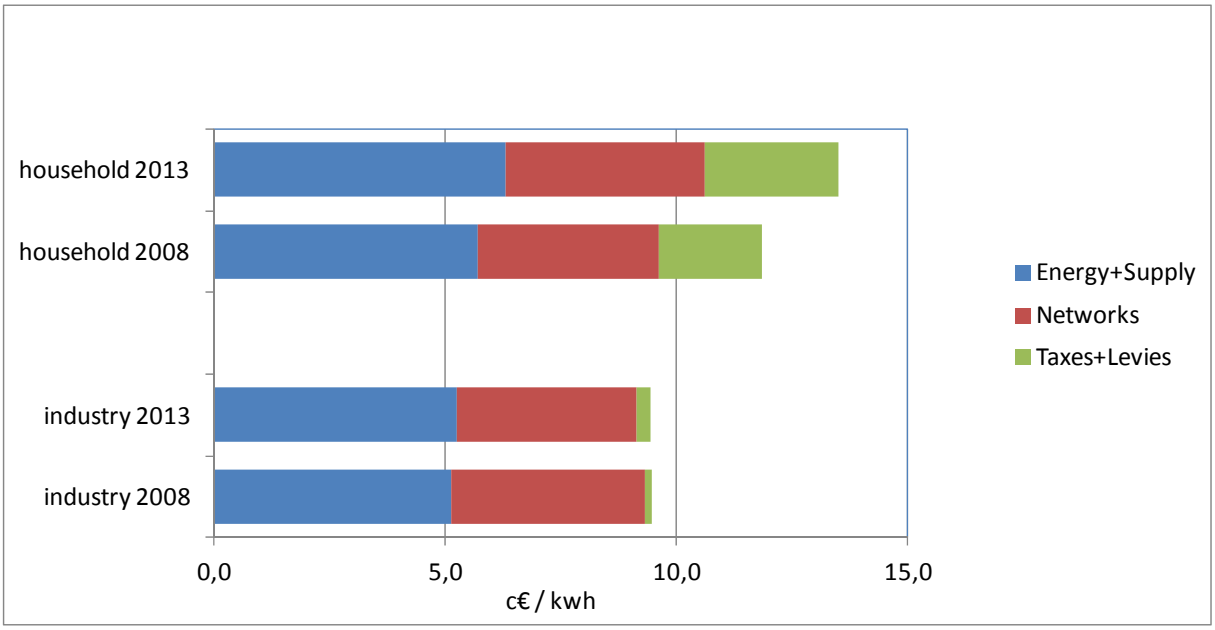
Until 31 March 2014, the company *Prirodni Plin* (owned by INA) remained the "supplier of suppliers" under the public service obligation of gas procurement at regulated prices. From April 2014 until 2017, this function was transferred to HEP, which purchases the necessary gas from INA also at a regulated price. This marked the beginning of a three year transitional period before complete liberalisation of the market, which contradicts Croatia's commitments under the accession negotiations. During this period households prices will remain regulated.

4. Retail Markets

Electricity

In June 2013, two new power retailers entered the market offering electricity to customers connected to the distribution network. The response of small customers and households at first seemed high, although the actual switching rate is unclear. This development is significant given that the price for household customers remains fully regulated. Recently the competition for customers gained momentum. Operators launched advertising campaigns, promising savings on energy bills of 30%. Though the Croatian regulator issued 15 electrical energy supply licences, the two companies leading the campaign for swapping suppliers are Slovenia's GEN-I and Germany's RWE. In practice, supplier switching rules are yet to be developed.

Figure 3: Electricity price change by component 2008 – 2013 (source: Eurostat, energy statistics)



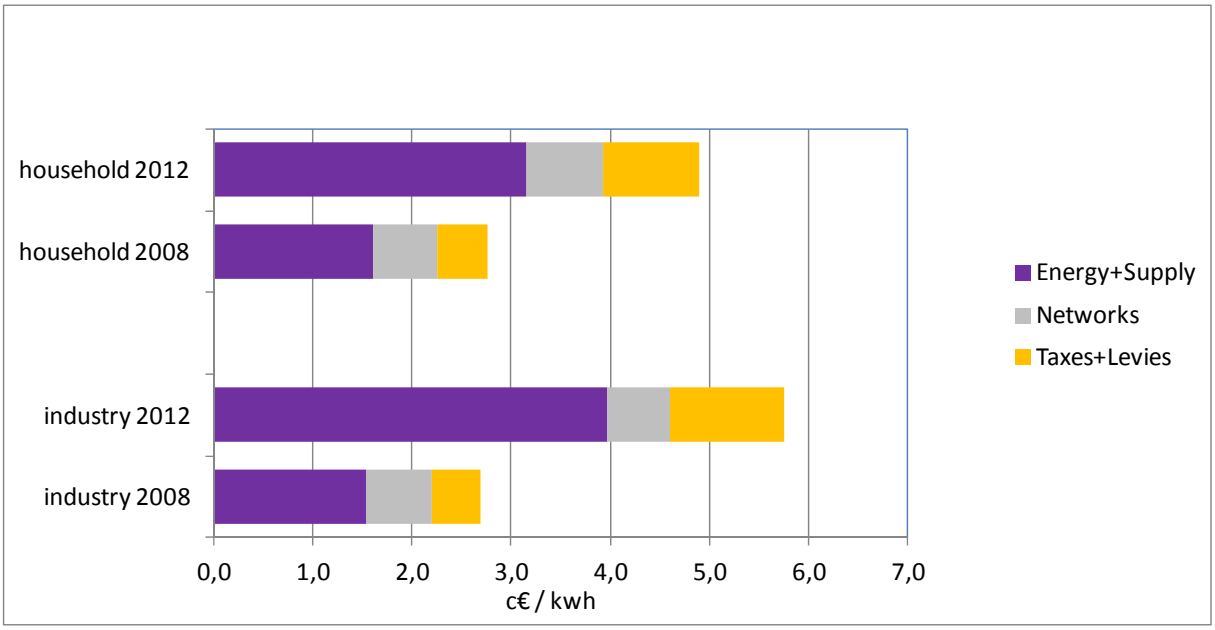
Although below the EU average, Croatia's domestic electricity prices rose by 16.9% between 2008 and 2012. Industrial price rises were lower (4%), in part due to a decrease in the network costs paid by industry. In 2012, energy and supply costs accounted for 60% of domestic prices, while network costs accounted for 40% (share in price without taxes and levies). For industrial consumers, the shares were 58% and 42% respectively. In 2013, the price for industrial customers (without VAT) was EUR 91/MWh. For households, price reached a value of EUR 106/MWh (without VAT and other taxes).

Gas

Between 2008 and 2012, Croatia's gas prices rose by 45% and 94% for domestic and industrial consumers respectively.[78] The growth was due to a VAT increase (25% for both electricity and gas), and a major rise in the natural gas shipping rate. Although permitted, there were almost no switches of supplier in 2012. The steep rise in gas prices has made helping customers a priority for the government. In 2013, industrial consumers paid 12.9 EUR/GJ on average, which is more than industry pays for gas in North West Europe. High prices negatively impact competitiveness of the Croatian economy.

[78] Eurostat

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



5. Consumers

According to the law, all customers are eligible and free to choose their supplier. Protection of customers is strengthened, particularly in terms of ensuring quality of service and protection of vulnerable customers. HERA is in the process of preparing a rule which should simplify the switching procedure and ensure it takes no more than 3 weeks. It has appointed a council for customer protection, which makes recommendations and opinions to assist the ongoing transformation of the sector.

6. Infrastructure

The Croatian 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

There are several Projects of Common Interest under the guidelines for trans-European energy infrastructure planned in Croatia, including two electricity clusters, a high voltage transmission line between Croatia and Bosnia and Herzegovina and a high voltage transmission line between Croatia, Hungary and Slovenia. Considerable investment is expected. An 800 million EUR investment in a 500 MW coal-fired power plant *Plomin*, is underway. The government is trying to find investors that

would enable the delivery of a 500 MW gas plant in Osijek, which would help reduce imports of electricity, especially from Serbia. Investment scenarios are optimistic.

Gas

The gas pipeline Donji-Miholjac – Dravaszerdahely between Croatia and Hungary has created conditions for gas market opening. This is the second supply route for imported natural gas with an annual pipeline capacity of 6.5 bcm. The cross-border interconnector in Rogatec between Croatia and Slovenia is the supply route for Russian gas. Plinacro has finalised the implementation of its previous Network Development Plan by putting into operation the transmission pipeline Benkovac-Split[79].

The LNG terminal on Krk, on the list of PCIs, would open a cross European North-South corridor. To deliver the project, the government should encourage investors but for the time being contradictory signals are being conveyed. In January 2013, Gazprom and Plinarco adopted an action plan to implement the South Stream project in Croatia by 2016. A strategically important PCI (a least costly N-1 solution for Croatia) is the Ionian-Adriatic Pipeline to Albania which creates a new energy corridor for the region.

7. Security of Supply

Electricity

The Croatian power system is one of the smallest in Europe. It has 4 GW of installed generation capacity and 15.000 MVA[80] of gross installed interconnection capacity. Due to its geographical position and location of generating plants, electricity is transported for most of the year from the south to the north and vice versa, and from the north towards the east[81]. Croatian security of power supply is strengthened by interconnecting infrastructure with the systems of neighboring countries[82].

Gas

Croatian Regulation on Security of Natural Gas Supply is not fully aligned with EU Regulation 994/2010. The Preventive Action and Emergency Plan have not yet been adopted; there is no bi-directional flow obligation; no obligation to perform the Risk Assessment and no official obligation for a N-1 rule application. Croatia is strategically located in terms of regional security of gas supply. A recent survey revealed the existence of promising deposits of gas and oil in the central and southern Adriatic. Delivery of a PCI in LNG terminal in Krk is quickest way to improve the whole region's natural gas supply security.

[79] http://www.energy-community.org/pls/portal/docs/2304177.PDF.
[80] MVA is a measurement that also takes into account the reactive power in the power load.
[81] In 2012, the total cross-border Electricity Exchange by Borders (GWh) was: power flows to Croatia, 1,3191; power flows from Croatia, 5,568.
[82] Together with the Slovenian power system and the power system of Bosnia and Herzegovina, the Transmission System Operator HEP OPS constitutes the control block SLO – HR – BIH within the UCTE grid.

8. Key Indicators

Electricity		**Gas**	
Number of companies representing at least 95% of net power generation	2	Number of entities bringing natural gas into country	5
Number of main power-generation companies	2	Number of main gas entities	2
Market share of the largest power-generation company	82%	Market share of the largest entity bringing natural gas	60.8%
Total Number of electricity retailers	9	Number of retailers selling natural gas to final customers	36
Number of main electricity retailers	2	Number of main natural gas retailers	3
Switching rates (entire electricity retail market)	N/A	Switching rates for gas (entire retail market)	N/A
Regulated prices for households – electricity	Yes	Regulated prices for households – gas	Yes
Regulated prices for non-households – electricity	Yes	Regulated prices for non-households – gas	Yes
HHI in power-generation market	7,738	HHI in gas supply market	4,833
HHI in electricity retail market	4,516	HHI in gas retail market	1,588
Electricity market value[83] (bn€)	1.197	Gas market value[13] (bn€)	0.505
Installed generation capacity (MW)	4,000		
Peak demand (MW)	3,193		
Number of smart meters installed	N/A		

[83] 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.