

# Slovenia

## Key issues

Further strengthening of the power grid is needed to ensure the reliable and safe operation of the national electricity system. Planned investments in additional cross-border capacity are needed to improve competition and integration in the internal energy market. Investments in more flexible sources with lower environmental impact would improve supply diversification and integration in the IEM. Finally, the electricity TSO ELES needs to be certified urgently.

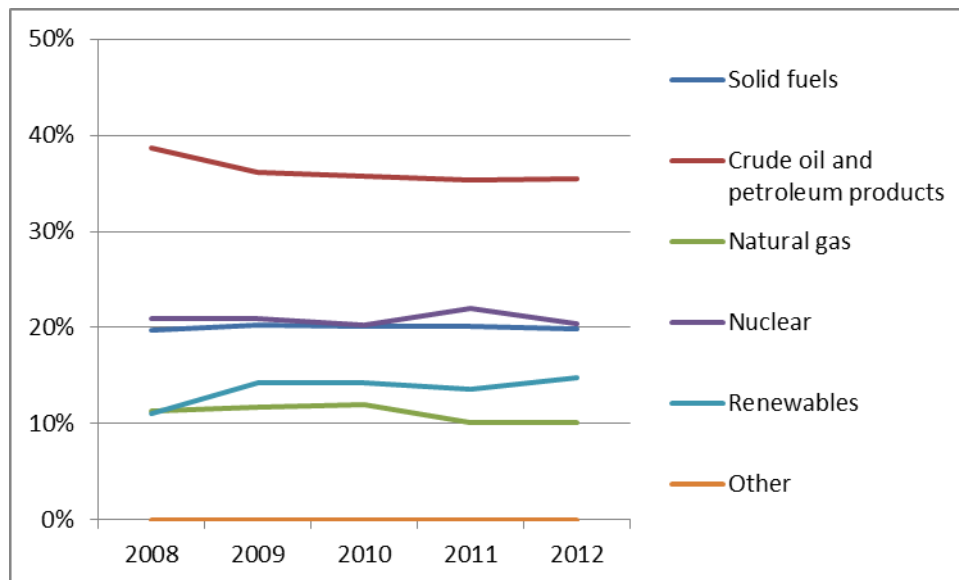
Contractual congestion of gas interconnection capacity frequently occurs, implying the need for the reinforcement of existing capacity. Investments in new gas pipelines could help to diversify the Slovenian energy supply, but current projects (notably South Stream) tend to extend the role of current suppliers. Slovenia still has to adapt its national legislation to comply with the provisions of Regulation (EC) No. 994 on security of gas supply. Finally, more should be done to encourage competition in the generation market.

## General overview

35% of gross inland energy consumption in 2012 (7.00 Mtoe) was accounted for by oil and petroleum products, followed by nuclear energy and solid fuels (20%) and renewables (15%)

In 2012, renewables increased to 20.2% of gross final energy consumption, showing good progress to the 2020 renewables target of 25%. The share of renewables increased mainly due to greater contribution (+1.9%) of heating technologies<sup>474</sup>.

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

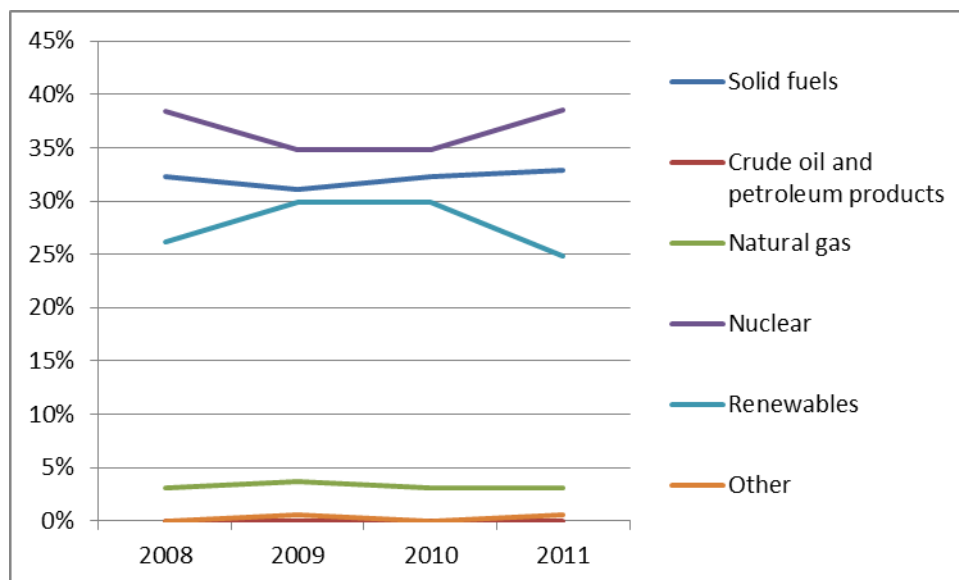


In 2012, the market share of different fuels in the electricity generation mix changed slightly compared to 2011 levels. Nuclear fuel remains the primary source of overall inland energy

<sup>474</sup> [http://ec.europa.eu/energy/renewables/reports/2013\\_en.htm](http://ec.europa.eu/energy/renewables/reports/2013_en.htm)

generation at 36%, with solid fuels accounting for 32%. Renewables rose from 25% in 2008 to 29% while the contribution of gas remained negligible at 3%.

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



## 1. Regulatory framework

### General

Slovenia's legislation transposing the Third Energy Package was approved by Parliament in February 2014.

### National Energy Regulator

The Slovenian national regulator, the Energy Agency of the Republic of Slovenia (AGEN-RS) has been in operation since 2000. In 2013 it had a budget of EUR 2.8 million and 46 employees.

### Unbundling

Electricity infrastructure is managed by one TSO (ELES) and one DSO (SODO), which are both state-owned. The gas TSO Plinovodi is responsible for natural gas infrastructure, together with 16 DSOs. These DSOs service less than 100,000 customers in total, and therefore no legal unbundling is required.

Plinovodi was certified as an independent transmission system operator (ITO) in 2012. ELES's certification is pending following the recent approval of the new Energy Act.

## 2. Wholesale markets

### Electricity

The Slovenian electricity wholesale market remained highly concentrated in 2012. HSE, Gen energija and TE-TOL were the three dominant (state-owned) market players, both in terms of installed

capacity (84.8% cumulative share) and production (91.4% cumulative share)<sup>475</sup>. The measure of market concentration (HHI) was 4,738 for generation, indicating a high level of concentration. The modest market size does not facilitate the development of many generators.

Following market coupling with Italy, Slovenia is part of a much larger market, even though cross-border capacity is still limited. Implicit auctions enabled Slovenia to improve cross-border capacity utilization and increase market liquidity.

In 2012 the day-ahead market<sup>476</sup> registered 4.4 TWh of traded energy, three times larger than 2011 results. The average baseload spot price was EUR 53.15/MWh, 7% lower than 2011 figures. In October 2012, an intraday market and a balancing market were introduced.

## Gas

Slovenia depends entirely on imports to meet its domestic demand for gas. Demand in 2012 declined further compared to 2011 (-4%, reaching 0.87 bcm) due to the economic crisis. 42% of gas imports supplied from Russia, 35% from Austria, 16% from Algeria, and 7% from Italy. Geoplin remained the principal importer, supplying over 90% of demand. Significant development of the secondary capacity market was observed in 2012 as the number of contracts increased together with the daily exchange capacity.

## 3. Retail markets

### Electricity

Electricity demand remained unchanged in 2012, amounting to 12.4 TWh. Eight out of thirteen active suppliers provided a share higher than 5%. The largest supplier was GEN-I, whose market share increased to 26.2% of the overall final customers. In 2012, more than five years since full market liberalisation (1 July 2007), retail competition finally increased due to a new entrant, GEN-I in the household market segment. The market share of the three largest suppliers increased slightly from 57% in 2011 to 59%. The concentration of the retail market remained at a medium level, with an HHI of 1,575. This indicator is however misleading as the retail market is supplied by many local suppliers, each of them dominant in a specific area.

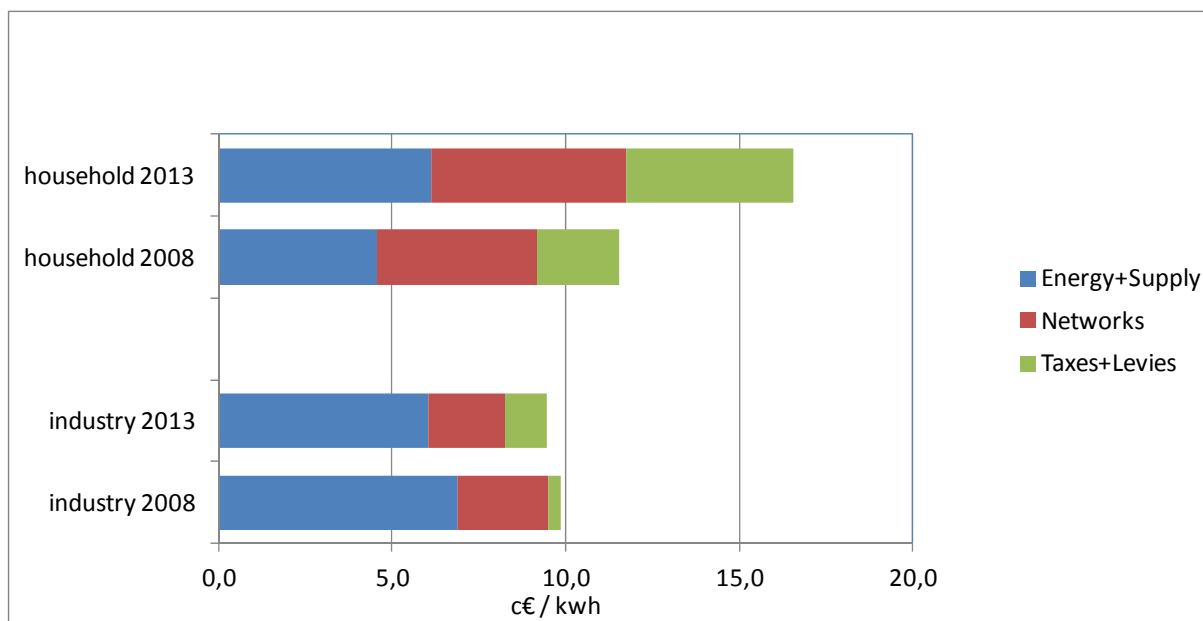
The switching rate grew to 5.9% (+1.7% compared to 2011). The vast majority of switches were undertaken by household customers (48,794 consumers) who changed their supplier following the entrance of GEN-I and Petrol into the household market segment, gaining 12.5% of the final consumers.

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

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<sup>475</sup>The overall installed capacity and power generation were considered in market shares' calculation, including small producers connected to the transmission and distribution networks. Only 50% of Krško nuclear power plant has been taken into account.

<sup>476</sup>Organised by BSP Regional Energy Exchange.



## Gas

The Slovenian natural gas market is one of the smallest in the EU-28, totalling around one billion standard cubic metres per year<sup>477</sup>. Most natural gas sold in the retail market is consumed by industry and other non-household consumers. The quantities of gas consumed by end customers amounted to 0.87 Gm<sup>3</sup> in 2012. The dominant supplier, Geoplin, increased its market share to 63%, followed by EnergetikaLjubljana (7.8%) and Adriaplin (7.2%). As a result, the retail gas market was concentrated, with an HHI of 4,186. Significant improvements in opening up the retail gas market were recorded. This was confirmed by the switching rate rising from 0.07% in 2011 % to 8.6% by the end of 2012 (reflecting GEN-I entered the market) placing Slovenia at a level similar to those observed in the Netherlands and Germany. In 2013, uniform tariffs for each entry and exit point of the gas transmission network were introduced.

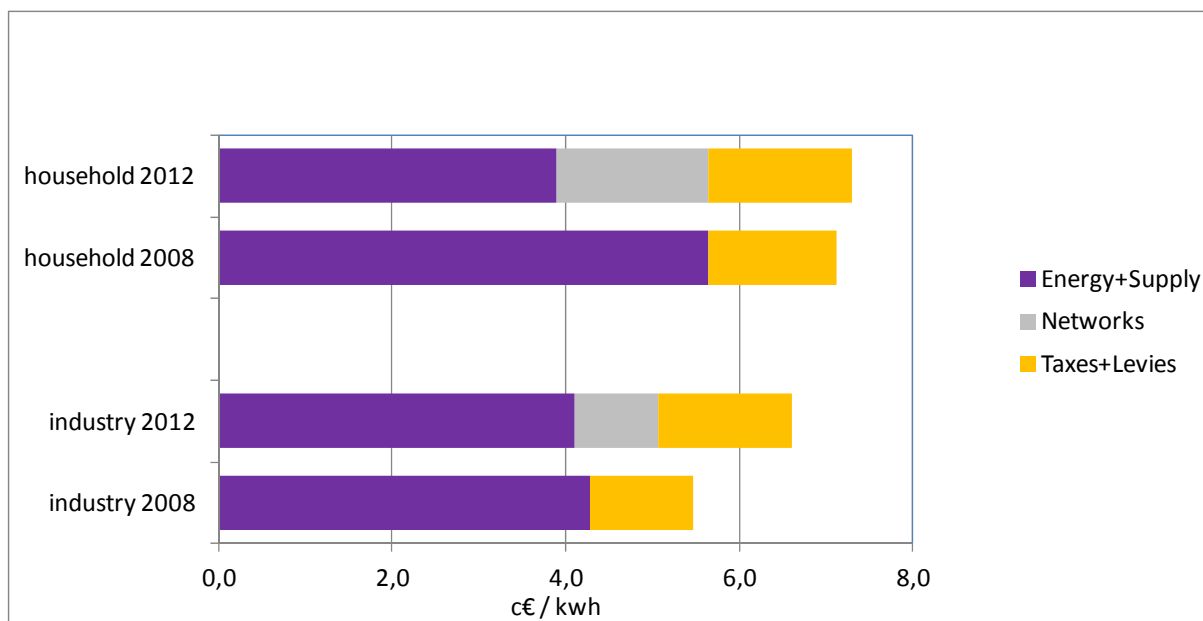
As a result of GEN-I's entry in the market in 2012, natural gas prices in Slovenia started declining in the fourth quarter of 2012. GEN-I price strategy that included prices lower than existing prices by around 10 cents per cubic metre (21.7% lower than the largest player's price before the new entry took place), led to a fast response from incumbent suppliers, that started modifying their own offers to consumption patterns, taking into account seasonal elements and changing their marketing strategies. Since October 2012 and well into 2013, prices have been declining to less than 40 cents per cubic metre due to the continued competitive response from incumbent suppliers, as well as seasonal factors<sup>478</sup>.

The percentage of network charges in the final price of gas varies between 15% and 19% for industrial customers, and between 17% and 28% for household customers (Figure 4).

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

<sup>477</sup> ACER/CEER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2012, November 2013.

<sup>478</sup> ACER/CEER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2012, November 2013.



Slovenia is among the Member States that have not yet initiated the mass rollout of smart meters<sup>479</sup>. A formal decision on the rollout, together with the establishment of a rollout percentage target has yet to be confirmed.

#### 4. Consumers

Slovenia had a very significant increase in switching during 2012 (especially in the 4th quarter of the year) due to the entry of a new player in the liberalised market. The absence of price regulation allowed the new player to enter the market with a pricing and sourcing strategy very different from that of the existing players and obliging the incumbent suppliers to modify their price strategies. The existence of the price comparability website maintained by AGEN-RS was certainly an asset in promoting energy markets' transparency and in facilitating switching.

This situation is also reflected in consumers' overall assessment of retail gas and electricity markets which scores the highest and second highest in the EU respectively (84.4 points compared to 74.1 and 81.0 compared to 72.0). Both markets are also assessed very well in the ranking of 31 domestic services markets (2nd and 9th highest, respectively). The electricity market is assessed above the EU average on all indicators, with the exception of actual switching (which is slightly below the EU average). Comparability, ease of switching and overall consumer satisfaction rate among the 3 highest in the EU and the incidence of problems is third lowest. The assessment of the gas market has also slightly improved since 2012 (by 1.3 points<sup>480</sup>). All indicators are assessed above the EU average<sup>481</sup>.

<sup>479</sup> CEER, Status Review of Regulatory Aspects of Smart metering, September 2013.

<sup>480</sup> However the difference is not statistically significant.

<sup>481</sup> 10th Consumer Markets Scoreboard,

[http://ec.europa.eu/consumers/consumer\\_evidence/consumer\\_scoreboards/10\\_edition/index\\_en.htm](http://ec.europa.eu/consumers/consumer_evidence/consumer_scoreboards/10_edition/index_en.htm)

## 5. Infrastructure

Slovenia has nominated the Ministry of Infrastructure and Spatial planning as the competent authority coordinating all permit granting processes ('one-stop shop'). The one-stop shop is responsible for facilitating and coordinating the permit granting process for Projects of Common Interest, in accordance with the Regulation on Trans-European infrastructure..

### Electricity

In 2012, installed generation capacity amounted to 3.3 GW. In the medium term, significant investments in thermal (including the controversial<sup>482</sup> Šoštanj lignite power plant, TEŠ) and hydro power plants are expected in accordance with the latest transmission network development plan for 2013-2022 published by ELES. This plan foresees an increase in installed generation capacity by 2.4 GW in 2022. The plan also outlines a range of different investment options, including the commissioning of a new nuclear reactor in Krško.

Since June 2012, when intraday allocation mechanism was also introduced for the Italian border, two explicit auctions are held every day. Allocation of cross-border capacity is carried out daily by implicit auctions within the market coupling mechanism of Slovenia and Italy.

In terms of infrastructure development, the interconnector with Hungary is expected to become operational in 2016. There are several electricity Projects of Common Interest under the guidelines for trans-European energy infrastructure planned in Slovenia including two electricity clusters with a high voltage transmission line between Slovenia, Croatia and Hungary and a high voltage transmission line between Slovenia and Italy. The Okroglo-Udine interconnection and HVDC line between Slovenia and Italy (PCI 3.20.1) is not expected to be completed before 2022.

### Gas

The Slovenian gas transmission network is interconnected with the gas transmission networks of Austria, Italy and Croatia. Of these, the Austrian border point was the most congested and commercially attractive in 2012. Network investments in 2012 amounted to EUR 38 million (almost 50% less than in 2011), of which EUR 9 million was granted by the European Union within the European Energy Programme for Recovery (total contribution for this project amounted to EUR 37 million) for the construction of the Ceršak – Kidricevo section of the gas pipeline M1/1. Two upgrades of the transmission network, M2/1b Rogaška Slatina–Trojane and M2/1c Trojane–Vodice, were completed in 2013. Work on strengthening the Kidričevo compressor station is ongoing.

There are several gas Projects of Common Interest, which Slovenia is involved in, including the LNG terminal in Krk (HR), which is a security of supply asset for the region as well as several gas pipeline projects involving Italy, Croatia, and Hungary.

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<sup>482</sup><http://www.sloveniatimes.com/thermo-plant-tes-6-showcase-of-catastrophic-corporate-governance>.

## 6. Security of supply

### Electricity

To ensure network security, the transmission grid and electricity distribution networks must adhere to the N-1 criterion. Network security is dependent on its import capacities to meet internal consumption demands.

The adequacy of Slovenia's network varies significantly depending on seasonal peaks, with the winter period highlighted as the critical period<sup>483</sup>. Summer reserve margins are expected to decrease from 10% in 2013 to 3% in 2020.

### Gas

Gas supply in Slovenia is entirely dependent on its interconnections with neighbouring countries as there are no gas storage facilities. Nonetheless, in spite of extreme weather conditions at the beginning of 2012, all customer service requirements were fulfilled.

Despite efforts in implementing the provisions mentioned in Regulation 994/2010, amendments in the national legislation are needed to complete the new rules and regulations for security of gas supply.

## 8. Key indicators

Electricity		Gas	
Number of companies representing at least 95% of net power generation	3	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	55.2%	Market share of the largest entity bringing natural gas	90%
Number of electricity retailers	13	Number of retailers selling natural gas to final customers	21
Number of main electricity retailers	8	Number of main natural gas retailers	4
Switching rates (entire electricity retail market)	5.9%	Switching rates for gas (entire retail market)	8.6%
Regulated prices for households – electricity	No	Regulated prices for households – gas	No

<sup>483</sup> Considerations based on ENTSO-E's Adequacy forecast report 2013-2030, Scenario B. System's adequacy is evaluated through a reserve margin indicator calculated as the ratio between *Remaining Capacity*, net of *Adequacy Reserve Margin*, and the *Reliable Available Capacity*. ENTSO-E, Scenario Outlook & Adequacy Forecast (SO&AF) 2013-2030, April 2013.

Regulated prices for non-households – electricity	No	Regulated prices for non-households – gas	No
HHI in power-generation market	4,738	HHI in gas supply market	5,868
HHI in electricity retail market	1,575	HHI in gas retail market	4,186
Electricity market value <sup>484</sup> (bn€)	1.161	Gas market value <sup>18</sup> (bn€)	0.432
Installed generation capacity (2011, MW)	3,268		
Peak load (MW)	2,100		
Number of smart meters installed	N/A		

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<sup>484</sup> 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.