

Position of Croatia within the region of South East Europe, its interconnection to EU energy market and links with Balkans and Asian connections provides a market opportunity not only for energy traders but also for international companies which are introducing modern technological solutions to this key sector. Croatian energy market passed certain steps in market opening and liberalization which leads to conclusion that market opportunities are opened for innovation companies which may bring the necessary modern technology for energy market management. Brief analysis of supply security of the Croatian energy sector reveals the current potentials and market perspectives.

Croatia scores below the EU27 average, between Portugal, Lithuania and Romania around 2100 kgen/capita. The share of primary energy self-supply has been decreasing rapidly; in 2009 around 40 % of total demand was met by domestic generation. By 2030, import share is predicted to rise up to 70 percent. High proportion of import poses a considerable threat to supply security.

Concerning security of supply, the main stakeholders are the vertically integrated HEP sub-companies, HEP Generation, HEP TSO, and HEP DSO. The industry is regulated by the ministry and the CERA.

Current security of supply practices include prioritizing households in case of supply interruption, gas reduction to the power generation company HEP and fuel switching to oil. Dual fuel thermal power plants possess a capacity of 267 MW. Oil supply to HEP dual fuel plants is given high importance in case of gas supply interruption.

Electricity supply structure in Croatia is characterized by relatively high proportion of import, which has been growing in the past 20 years considerably. The domestic generation mix is relatively favorable, consisting of about 49 percent of hydropower generation, 38 percent thermopower, 8 percent nuclear, and the rest wind, renewables and others. Due to the regional political changes, some supply power plants turned out to be located on the other side of the border: in Serbia and Bosnia- Herzegovina. The sole nuclear power plant of the country is owned commonly with and located in Slovenia. These issues endanger security of supply.

According to the newly drafted energy policy of Croatia, for the year 2020 thermopower capacities are to be expanded by 2400 MW, renewables by 1500 MW, hydropower by 300 MW. The regulatory agency is responsible for small power plants tendering, below 50 MW, and the government for those over 50 MW. So far, no standard detailed tendering procedure has been approved, but the ambitious goals would enhance the supply-demand ratio of the country.

Speaking of network capacities, there are some good news and some bad news as well. Croatia owns very high installed cross-border capacities. Unfortunately the transmission network is ageing, most of the lines are over 30 years old, which means they are close or at the end of their life-time. Comparing export over peak load and import over peak load

indices Croatia follows the example of other small countries: import exceeds 100 percent of peak load likewise as in case of Latvia, Lithuania, and Estonia. Import is allowed by the relatively good connection of the region, since 20 years ago the region was a single country with an internal transmission network.

Market opening finished in 2008, although the market is fully concentrated in the hands of the HEP group. In the near future, according to HEP estimations, the gap between power generation and demand may rise up to 9,5 TWh, contrary to the power plant expansions. The energy strategy sets higher standards to cover all the possible demand.

In the natural gas sector, situation is relatively the same. Storage and transport is owned by Plinacro and Ina. Distribution and supply for households is divided up among 36 distributors. The ministry has the same role in regulating industry as in case of electricity. Import share has been gradually increasing in the past 20 years, the interconnections between Croatia and Hungary, Serbia and South Montenegro are being built up. Potential new supply directions may be an Adria LNG terminal, connection to the Hungarian gas system and later to Nabucco, connection of Romanian gas via Serbia, expanding existing capacities with Austria and Slovenia, increasing imports from Slovenia via the Volta pipeline, or long term connection to the Italy-Greece Interconnector and the Trans-Adriatic pipeline.

Underground storage is of special importance in Croatia. Operational capacity of the Okoli storage facility is 550 million cubic meters, of which 50 mcm is reserved for Slovenian Geoplin. The development of Okoli storage and the construction of Benicani storage facility is also intended.

Due to EU and Energy Community obligations on security of supply the regulatory and legislative framework had been defined. The key roles and responsibilities of stakeholders had been assigned in both sectors. Electricity and natural gas sectors development plans are regularly updated. The power system is very well interconnected, and the natural gas system is developing in the same direction. Existing networks are combined with: relatively favorable generation capacity mix and future gas supply direction diversification. This way electricity and gas sectors are able to reach satisfactory level of security of supply despite increasing energy import dependency.

Source Serbia-energy.com