

## Croatia exclusive: Power generation decreased, electricity balances and production results 2013

This is the third year in a row that Croatia decreased total (gross) of electrical energy that in 2013th amounted to 17.3 TWh, while in 2010th it amounted to 17.9 TWh, according to the annual report of the Croatian Energy Regulatory Agency in 2013th .

The current level of security of electricity supply is satisfactory, but without investing in new production facilities can significantly worsen until 2020th, because the dilapidated power plants during that period out of the drive, while the projected economic development cause a significant increase in power consumption. Namely, it is necessary in that period to withdraw about 1,100 MW of power from the facilities in the dilapidated power plants. The sole construction of plants using renewable energy sources, especially wind power, can worsen the security of electricity supply if it is not accompanied by the energy construction whose production can be controlled", says in the report of Croatian Parliament. A total of 4,386 MW of generating capacity was available in RC in 2013th. The largest share of production capacity of around 85% is owned by HEP Ltd., which operationally controls HEP-Production Ltd. This share in 2013th was less by 4% than in 2012th, as a result of the entry of a number of power plants that use renewable energy sources into the power system. The share of electricity production from wind power reached 4%. In the system of the electricity production from renewable sources and cogeneration it was produced a total of 599.6 GWh. The largest portion of the total electricity consumption in 2013th was covered by domestic production from plants located in the territory of the Republic of Croatia, which amounted to 12.8 TWh (74%). Production of nuclear power plants (NPP) Kranj for HEP needs was 2.5 TWh (15%), while total imports was 2 TWh (11%) for electricity customers needs. The electricity import in 2013th reached 25% of total consumption of Croatian power system.

The share of imports in the total electricity consumption is significantly lower than in 2012th when, due to unfavorable hydrological conditions, was 29%, which demonstrates the high sensitivity of the electricity production from power plants located in the territory of the Republic of Croatia on hydrological conditions. In 2013th, by purchasing electricity to cover losses in the transmission network for the last quarter of 2013th, HOPS began the process of purchasing electricity to cover losses on market principles. Energy for covering losses in the distribution network, the provision of ancillary services of electric power systems and energy for balancing are basis of contracts concluded within the HEP group, or have not yet been obtained in accordance with transparent, non-discriminatory and market principles, according to the HERA-in report. At this time, due to lack of adequate market ancillary services and balancing energy, these services could not be purchased at market principles, it is concluded, adding that the new Law on Electricity Market envisages a methodology which would regulate the price of such services until market opening.

Losses in the transmission network were acceptable 2.2%, while the electricity losses in the distribution system can be reduced, which in 2013th amounted to 9.1%. The total amount of



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traded electricity of all market participants (including end customers' suppliers) amounted to 43 TWh in 2013th. The total electricity amount traded between companies belonging to HEP group was 34.1 TWh, or 80% of the total volume of electricity trading in the Republic of Croatia in 2013th. One of the necessary technical and organizational prerequisites for the development of the wholesale electricity market is an efficient mechanism for determining the allocation of cross-border transmission capacity and management with congestion in the transmission network. The largest part of customers at electricity market was supplied by HEP Supplies Ltd. Other suppliers had a share of 7.8% in total sales, or 15.6% in electricity sale to customers who do not have the ability to supply within the public service, what was increased more than five times compared to the end of 2012th. Suppliers outside HEP Group supplied about 47,000 households in 2013th, compared to the end of 2012th when they supplied less than 700 households. In this respect, it can be concluded that real opening of the retail electricity market started in 2013th and HERA notes that its intensification trend also continues in 2014th. The Croatian electricity market is based on bilateral trade. In parallel with the energy sold to end customers from contractual arrangement (about 16 TWh) and the actual consumption of end customers (about 15.1 TWh) it is obvious that the suppliers during 2013th significantly reported the contractual arrangements that were unrealistically high. It is pointed out that the settlement mechanism of balancing energy subjects responsible for the discrepancy is one of the areas that need improvement. In the case of construction of new wind power plants of total capacity of 1,200 MW, HEP-OPS provides the construction of TS 400/110 kV Lika, which in addition to the acceptance of all WPP in the surroundings, will be the connection point of the future new interconnection with BiH at 400 kV towards Banja Luka. It is also provided the rehabilitation of the existing 220 kV transmission line Melina-Konjsko and raising at 400 kV, while the existing 220 kV switchyard Brinje would be turned into a 400/220/110 kV, at which would be joined future HPP Senj 2 and TPP Dalmatia.