

✘ Domestic electricity supply is mainly from thermal and hydro generation. The main domestic generation facilities are the lignite-fired thermal power plants in Bitola and Oslomej (together 800 MW), with the three generation blocks at Bitola alone representing 675MW. Both these generation facilities are owned and operated by the state-owned ELEM (ELEktrani na Makedonija, or Electric Power Stations of Macedonia). In addition, there is a back-up thermal power plant fueled by heavy fuel oil in Negotino (210 MW capacity), which is not owned by ELEM. Hydroelectric generation represents the other main domestic electricity supply, with a total installed capacity amounting to 528 MW, out of which over 500MW is run by ELEM. As power plants, and in particular hydro power plants due to their dependence on hydrological conditions, cannot continuously be run at peak capacity, overall electricity generated by hydro facilities amounts to some 20 percent of total. Further modest domestic generation capacity exists in geothermal, while there are plans for small wind farms also.

Domestic generation capacity does not suffice to meet demand. Generation capacity has to match peak demand plus a reasonable amount of spare capacity to ensure room for failure and maintenance of equipment. With peak demand in Macedonia at some 1,500 MWh, and hydro generation limited by water supply, it is clear that domestic generation capacity is insufficient to supply the market. The difference between demand and supply is made up by electricity imports through the high-voltage international transmission network. Total imports averaged 20 percent of demand (1,468 GWh) between 2000 and 2009, and peaked at 32 percent of demand (2,757 GWh) in 2008, the year before the global crisis impacted Macedonian power demand in earnest.

Electricity generation falls short of EU environmental standards and its output is used inefficiently. The domestic thermal generation facilities heavily rely on dirty lignite for fuel, and as a consequence they are dirty by international comparison. The main facility at Bitola, for instance, operates on lignite, and emits much CO₂, as well as NO_x (exceeding the limits set in the EU Large Combustion Plants Directive about 4 times), and SO_x (exceeding the LCP Directive limits about 7