



Globalna predvidevanja na področju oskrbe s primarnimi energenti in vloga premoga v energetske oskrbi sveta in Slovenije

ID 09 Global outlook on primary energy resources supply and coal role in energy supply in the world and in Slovenia

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POVZETEK

V strukturi globalnih energetskih rezerv po podatkih BRG (German Federal Institute for Geosciences and Natural Resources) iz leta 2009 imamo na svetu na voljo še 24,2 % nafte, 17,6 % plina, 4,3 % urana in torija ter 53,8 % vseh vrst premoga. Premog je med fosilnimi gorivi edini vir, ki bo na energetskem trgu zaradi velikega obsega zaloga po vsem svetu ostal najdlje. Dokazane rezerve so konec 2009 dosegale 729 bilijonov ton. Pri današnjem obsegu eksploatacije in stanju raziskanih rezerv premoga v svetu je premoga še za naslednjih 200 let.

Slovenija ima od fosilnih energetskih virov le premog, zato je z zalogi in izkoriščanjem premoga v Sloveniji potrebno ravnati kar najbolj racionalno. Ker EU ne nadzira trgov nafte in plina, so tveganja pri oskrbi izredno velika. Kljub vsem ekonomskim in ekološkim slabostim premoga EU ne bo bistveno zmanjševala sedanje porabe. Odvisnost EU od uvoza fosilnih goriv se bo od leta 2010 do leta 2030 bistveno povečala (European Commission, EU Trends to 2030) in sicer bo znašala za premog v letu 2030 63 % (2010 – 48 %), za nafto 95 % (2010 – 86 %) in za plin 84 % (2010 – 64 %). Fosilna goriva ostajajo dominanten primarni svetovni energetski vir in predstavljajo v projekcijah več kot tri četrtine povečanja vse porabe v obdobju do leta 2035. Premog se v pretežni meri namenja energetskemu sektorju oziroma proizvodnji električne energije, porast porabe do leta 2035 je predvidena po letni stopnji 2,2 %.

Obseg in učinkovitost strateških ukrepov za preprečevanje klimatskih sprememb ostaja še naprej glavni dejavnik, ki ga ni mogoče napovedati za prihodnje smeri razvoja trga premoga, se pa premogu v svetu po nobenem scenariju ne bomo mogli odpovedati. Po trenutnih scenarijih se pričakuje, da bo stopnja rasti emisij CO₂ iz premoga znašala 1,5 % med leti 2007 in 2030 (1990 – 20,9 Gt, 2007 – 28,8 Gt, 2020 – 34,5 Gt, 2030 – 40,2 Gt). Združena prizadevanja v boju proti klimatskim spremembam, kot smo jim trenutno priča po celem svetu, razvojem novih tehnologij v energetiki vključno z uporabo CCS tehnologij (zajem in skladiščenje ogljika), bi lahko vodila do nižjih emisij CO₂.

Uravnoteženje trajnostnega razvoja, konkurenčnosti in varnosti oskrbe pomeni za Evropo vstop v novo energetska obdobje. Svetovne gospodarske regije pri zagotavljanju varnosti oskrbe z energijo in stabilnih gospodarskih razmer ter pri zagotavljanju učinkovitih ukrepov proti podnebnim spremembam odvisne druga od druge. Dostop do energije je temeljnega pomena v vsakodnevnem življenju vsakega Evropejca.

Ključne besede: energetska oskrba, premog, CCS, UCG.

ABSTRACT

According to BRG (German Federal Institute for Geosciences and Natural Resources) data ([13]) from 2009 in the world structure of global energy reserves, there is still available 24,2 % of oil, 17,6 % of gas, 4,3 % of uranium and thorium and other 53,8 % of all categories of coal. Coal is the only resource among the fossil fuels, which will remain in the energy market the longest, due to the large volume of reserves around the world. World proven reserves at the end of 2009 reached 729 billion tons.

At current extent of exploitation and status of investigated coal reserves, the availability should be sufficient for the next 200 years. Among fossil fuel energy resources, Slovenia has only coal, which is the reason it has to handle its reserves and exploitation in the most rational way. Since the EU does not control oil and gas markets, the risks of the supply are extremely high. Despite all the economic and environmental disadvantages of coal, EU will not significantly reduce current rate of consumption. The EU's dependence on fossil fuel imports will significantly increase from 2010 to 2030 (European Commission, EU Trends 2030) namely, the amount of coal will reduce in 2030 for 63% (2010 - 48%), for oil 95% (2010 - 86%) and for gas 84% (2010 - 64%). Fossil fuels remain the dominant primary energy resource worldwide and represent the projection of more than three-quarters of all consumption in the period up to year 2035. Coal is mainly devoted to the energy sector and electricity production, increased consumption by 2035 is planned at an annual rate of 2.2%. The scope and effectiveness of strategic measures for preventing climate changes remains a major factor that cannot be predicted for the future direction of development of the coal market, but in any case the world cannot waive the coal. According to current scenarios, it is expected that the growth rate of CO₂ emissions from coal will amount to 1,5% between 2007 and 2030 (1990-20,9 Gt, 2007-28,8 Gt, 2020-34,5 Gt, 2030-40,2 Gt). The combined efforts in the fight against climate changes we are currently facing around the world and development of new energy technologies including the usage of CCS (Carbon Capture and Storage) technologies could lead to lower CO₂ emissions. For Europe, weighing up sustainable development, competitiveness and security of supply means an entrance into a new energy period. World economic regions depend on each other in ensuring security in energy supply and stable economic conditions and ensuring effective action against climate changes. Access to energy has fundamental importance in the daily lives of every European.

Key words: energy demand, energy supply, coal, CCS, UCG.