

## **PERSPEKTIVA NUKLEARNE ENERGETIKE NAKON NESREĆE U FUKUSHIMI**

### **Sažetak**

Pitanje budućnosti nuklearne energije postavlja se nakon nesreće na elektrani Daichi u Fukushima. U svijetu su u pogonu 433 nuklearne elektrane koje proizvode oko 14 posto električne energije. Najveći broj nuklearnih elektrana (134) u pogonu je u Europskoj uniji (EU) proizvođači oko trećine električne energije. Za ovu vodeću ulogu u korištenju nuklearne energije postoje dobri geopolitički i strateški razlozi. Bez vlastitih izvora nafte i plina i u ovisnosti od zemalja izvoznika EU teško može voditi neovisnu vanjsku politiku. EU također želi igrati vodeću ulogu u naporima da se ostvare redukcije emisije i zadrži porast globalne temperature ispod 2°C. Nuklearna energija daje važan doprinos kompetitivnosti europske industrije. Ocjene neovisnih stručnih komisija nakon nesreće u Fukushima ne dovode u pitanje osnovne koncepcije današnjih elektrana, iako se očekuje da će određena poboljšanja biti preporučena. Što se nuklearne energetike u EU tiče, bez obzira na kratkoročne političke i stranačke odluke, osnovni dugoročni geopolitički, ekonomski i strateški razlozi, koji su poticali njen razvoj u prošlosti, ostaju nepromijenjeni. Treba dakle očekivati da će se i nuklearni razvoj u EU nastaviti bez značajnijih zastoja. Pored pregleda mjera koje se provode u svijetu nakon nesreće u Fukushima dan je i kratak osvrt na dostatnost nuklearnog goriva za dugoročne strategije sa znatnim učešćem nuklearne energije.

## **ON THE PERSPECTIVE OF NUCLEAR ENERGY FOLLOWING THE FUKUSHIMA ACCIDENT**

### **Abstract**

Future of nuclear energy after accidents on the nuclear power station Daichi at Fukushima has been questioned and discussed. At present 433 nuclear power plants are contributing with about 14% to the world production of electricity. Looking at regional distribution of nuclear power plants, the largest number of nuclear power plants (143) is operating in European Union (EU) producing around one third of its electric energy. EU leads the world in the use of nuclear energy, with very good geopolitical and strategic reasons. Without its own oil and gas resources and with high dependence on external supplier EU has a problem in conducting independent foreign policy. As industrially and technologically developed region of the world EU intends to play a leading role in efforts to reduce CO<sub>2</sub> emission and limit the global temperature increase to below 2°C. Also, nuclear energy is important for international competitiveness of European industry. After the Fukushima accident, and in the light of that event, many expert groups have

revaluated the safety of operating nuclear power plants. Whilst they do not find faults with basic conceptions, some safety related improvements will be recommended. As regards to nuclear energy in EU, irrespectively of short or medium term political decisions, long term geopolitical and strategic reasons that stimulated strong nuclear development in the past, continue to exist. Thus, we may expect continuation of nuclear development in EU without essential delays. As it appears, pending post-Fukushima nuclear safety analysis and applying safety improvements where needed, Fukushima accident will not stop nuclear development in industrially and technologically developed regions of the world. In view of frequently expressed claims that nuclear fuel resources are insufficient for the long term large scale production of nuclear energy we also give a short comment on the sustainability of nuclear energy.