

Energetska bezbednost sektora prirodnog gasa Srbije

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Tematska oblast	Procesne tehnologije
Naslov	Energetska bezbednost sektora prirodnog gasa Srbije
Ključne reči (maksimum 5 reči)	N-1, IDUPS, energetska bezbednost, sigurnost snabdevanja
Sažetak (do 300 reči)	<p>U prve dve decenije 21. veka obezbeđivanje sigurnosti snabdevanja prirodnim gasom domaćeg tržišta bio je jedan od prioriteta razvoja energetike Srbije. Istovremeno, aspekt sigurnog snabdevanja bio je neizostavni deo slagalice stvaranja energetske bezbednosti. Izražena uvozna zavisnost je dominantna karakteristika sektora prirodnog gasa, tačnije, Republika Srbija je snažno zavisna od ruskog gasa, sa više od 80% uvezenih količina gasa, a do pre dve godine snabdevala se isključivo kroz jednu interkonekciju. U radu se razmatra aktuelna situacija u sektoru prirodnog gasa, razlika u odnosu na ranije periode i potencijalni trend procene sigurnosti snabdevanja Srbije prirodnim gasom, kao i ranjivost ovog sektora na prekide u međunarodnim lancima snabdevanja. Kroz rad je izvršena analiza energetske bezbednosti sektora prirodnog gasa primenom indeksa N-1, indeksa IDUPS i parametra razvoja infrastrukture sektora. Ova tri parametra opisuju raspoloživost sistema u tehničkom smislu, diversifikaciju izvora i pravaca snabdevanja, kao i stepen strukturnog razvoja u poređenju sa predviđenim strateškim planovima razvoja, respektivno. U ovom radu je predstavljena i nova metodologija za utvrđivanje uticaja spremnosti sistema i broja izvora i pravaca snabdevanja, kao i njihove međusobne interakcije, na sigurnost snabdevanja, a u krajnjoj liniji i na energetske bezbednost Republike Srbije.</p>
Kratka biografija (CV) (do 70 reči za svakog autora)	<p>Aleksandar Madžarević je rođen 21. aprila 1987. godine u Ivanjici. 2006. godine upisao je Mašinski fakultet Univerziteta u Beogradu. Osnovne i diplomske akademske studije na modulu Procesna tehnika i zaštita životne sredine završio je u roku, 2011. godine. Završio je doktorske studije na Rudarsko-geološkom fakultetu, Univerzitet u Beogradu, na studijskom programu Rudarsko inženjerstvo, oblast Energetika. Radi kao docent na RGF, UB. Oženjen je i otac je troje dece.</p> <p>Predrag Jovančić je redovni profesor na Rudarsko-geološkom fakultetu, Univerzitet u Beogradu. Diplomirao, magistrirao i doktorirao u okviru naučne oblasti Mehanizacija u rudarstvu, na Rudarsko-geološkom fakultetu, Univerzitet u Beogradu, gde je i prvi put biran u zvanje 2004. godine. Autor je velikog broja</p>

radova u međunarodno priznatim časopisima, učestvovao u izradi različitih studija i međunarodnih projekata. Od 2001. godine poseduje Državni stručni ispit za obavljanje poslova pri eksploataciji mineralnih sirovina.

Miroslav Crnogorac je docent na Rudarsko-geološkom fakultetu, Univerzitet u Beogradu. Diplomirao, završio master studije i doktorirao je u okviru naučne oblasti Naftno rudarstvo, mehanizacija i automatizacija u rudarstvu, na Rudarsko-geološkom fakultetu, Univerzitet u Beogradu, gde je i prvi put biran u zvanje 2014. godine. Autor je velikog broja radova u međunarodno priznatim časopisima, učestvovao u izradi različitih studija i međunarodnih projekata.

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ABSTRACT	
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Institution	Faculty of Mining and Geology, University of Belgrade
Conference topic	Process technologies
Title	Energy Security of Serbian Natural Gas Sector
Keywords (max. 5 words)	N-1, IDUPS, security of supply, energy security
Abstract (max. 300 words)	In the first two decades of the 21st century, ensuring the security of the supply of natural gas to the domestic market was one of the priorities of the development of the Serbian energy sector. At the same time, the aspect of secure supply was an indispensable part of the puzzle of creating energy security. Pronounced import dependence is a dominant feature of the natural gas sector, more precisely, the Republic of Serbia is strongly dependent on Russian gas, with more than 80% of imported gas volumes, and until two years ago, it was exclusively supplied through one interconnection. The paper discusses the current situation in the natural gas sector, the difference compared to earlier periods and the potential trend of assessing the security of natural gas supply to Serbia, as well as its vulnerability to interruptions in international supply chains. Through the paper, an analysis of the energy security of the natural gas sector assessed by the N-1 index, IDUPS and the parameter of infrastructure development of the sector was carried out. These three parameters describe the availability of the system in a technical sense, the diversification of sources and directions of supply, as well as the degree of structural development, compared to the foreseen strategic development plans, respectively. This paper also presents a new methodology for determining the impact of system readiness and the number of sources and directions of supply, as well as their mutual interaction, on the security of supply, and ultimately on the energy security of the Republic of Serbia.
Brief biography (CV) (max. 70 words about each author)	<p>Aleksandar Madzarevic was born on April 21, 1987, in Ivanjica. In 2006, he enrolled at the Faculty of Mechanical Engineering, UB. He completed his undergraduate and graduate academic studies in the module Process Engineering and Environmental Protection in 2011. He finished his doctoral studies at the Faculty of Mining and Geology, UB, in the study program Mining Engineering. He works as an assistant professor at FMG, UB. Aleksandar is married and the father of three children.</p> <p>Predrag Jovančić is a full professor at the Faculty of Mining and Geology, University of Belgrade. Graduated, master's and doctorate in the field of Mechanization in mining, at the FMG, UB, where he was first elected to the position in 2004. He is the author of many papers in internationally recognized journals, participated in the development of various studies and international projects. Since 2001, he owns State professional exam for the performance of work in the exploitation of mineral materials.</p>

Miroslav Crnogorac is an assistant professor at the Faculty of Mining and Geology, University of Belgrade. He graduated, completed his master's studies, and received his doctorate in the scientific field of oil mining, mechanization, and automation in mining, at the Faculty of Mining and Geology, University of Belgrade, where he was first elected to the position in 2014. He is the author of many papers in internationally recognized journals, participated in the development of various studies and international projects.