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KAZAKHSTAN'S ENERGY SECURITY: THE ROLE OF NUCLEAR ENERGY

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Overview

Energy security has the strategic importance for the government due to the fact that energy is a key for economic development and social well-being of the country. Kazakhstan presents an interesting case where the state poses huge amount of energy resources; however, Kazakhstan's energy sector is facing numerous challenges to provide secured energy supply to the domestic market. The aim of this paper is to analyze how the planned introduction of nuclear energy in Kazakhstan would contribute to the energy security of the country. Additionally, the discussion of Kazakhstan's energy security and challenges of country's energy sector will be presented.

Methods

For the purposes of this paper the analysis of Kazakhstan's energy policies, especially state programs concerning nuclear energy will be reviewed. Moreover, statistical data and future scenarios produced by IEA's *World Energy Outlook* publication will be utilized and applied. The model of energy security indicators developed by Asia Pacific Energy Research Center (APERC, 2007) will be used as a sample to assess Kazakhstan's energy security.

Results

According to IEA's *World Energy Outlook* (2011) the energy demand will continue to grow in Kazakhstan in future decades, thus the government has to secure the stable supply of energy resources. The reliance of Kazakhstan's energy sector on coal production could not be sustainable due to hazardous environmental impact that this industry produces in terms of CO2 emissions. The government of Kazakhstan (2011) is planning to introduce nuclear energy production by 2016, with the first nuclear power plant to be constructed in Aktau (Kirienko, 2011). The introduction of nuclear energy in Kazakhstan will contribute to diversification of energy resources and power generation and Kazakhstan's commitment to CO2 reduction. Furthermore, Kazakhstan is closely cooperating with Russia, Japan, France and Canada in not only nuclear energy development, but also related industrial projects. By doing so, Kazakhstan increases its economic relations with foreign countries. Nevertheless, the role of the nuclear energy in Kazakhstan's energy sector would be rather minor. In addition, one of the challenges to Kazakhstan's energy security is the obsolete energy system which was created during the Soviet times. It is for this reason, that nuclear energy could not be considered as a solution to the Kazakhstan's energy security, but rather as a part of general modernization and reconstruction of energy sector in the country.

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