## **Energy Challenges and Regional Electricity Markets: Opportunities, Barriers and Prospects for Bosnia and Herzegovina**

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Abstract: Electricity networks have traditionally been built and managed by government owned, vertically integrated companies. Modern systems are undergoing significant organizational, structural and technological changes. These changes are driven by two processes. The first process is market liberalization which requires reorganization of state owned monopolies, unbundling, establishment of independent system and market operator and regulatory authority. The second process is the energy transition from conventional energy sources to renewable energy. These two processes present a new energy paradigm. The process of market liberalization is mature in European Union while its practical initiation is still expected in Bosnia and Herzegovina. Important step for Bosnia and Herzegovina is integration in Southeastern Europe Regional Electricity Market. European Union policy goal is creation of a single Internal Electricity Market. This implies that electricity future of Bosnia and Herzegovina lies within the large European Electricity Market.

This paper investigates Bosnia and Herzegovina's sector and market specific policy priorities, challenges and opportunities with respect to electricity market liberalization and integration process. Main objective of this paper is to present current situation of electricity market in Bosnia and Herzegovina, identify steps required to achieve full market liberalization and assess the regulatory framework required to face challenges of a new energy paradigm. This research seeks to determine what are the opportunities and challenges of electricity market liberalization in Bosnia and Herzegovina and how do the regional integration help in overcoming current and future energy challenges. Research is undertaken by collecting and analyzing relevant electricity consumption and production data and relating them to specific market and structural policies within national and regional framework. It was determined that sector specific priorities are unbundling, restructuring and reorganization. Market specific issues such as demand and supply side imperfections can only be partially solved within national framework. Regional regulatory issues, interconnection management and global investment policy cannot be adequately managed from the national perspective and need to include adequate regional coordination mechanisms.

**Key words**: regional electricity market, deregulation, liberalization.