



Turkey's Electricity Trade Relations with Europe: The Role of the EU and the Impact on the Environment

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ABSTRACT: Transnational electricity trade is made possible through transmission lines, known as the interconnectors. Globally, the level of interconnectedness between neighboring countries varies from region to region. As suggested by previous research, in transboundary river basins, the variation in this level affects the management of transboundary waters. In regions where all electricity utilities are connected and function at a synchronized frequency, the tendency towards the implementation of the principles of integrated water resources management is higher. This paper presents a comparative model of Turkey's electricity trade integrity with its European neighbors, namely Georgia, Armenia, Bulgaria and Greece. Turkey shares river basins and power transmission lines in Europe both with the members of the European Union (EU) and non-member states. While Turkey imports electricity from its western neighbors that are members of the EU, it exports electricity to its European neighbors in the east. Relying on official data, it is shown in this paper that the interconnectedness between Turkey and EU is higher, and the level of interconnectedness between Turkey and its non-EU neighbors are lower. The aim of this paper is to compare and analyze the level of Turkey's trade integrity with its EU-member European neighbors and with its non-EU-member neighbors and discuss the potential impacts of this situation on environment and shared water resources. The paper uses the energy trade data from official sources and technical reports. The main argument here is that the higher level of electricity trade between Turkey and its EU-member neighbors is facilitated by Turkey's membership to the European Network of Transmission System Operators for Electricity (ENTSO-E). The higher level of electricity interconnection may lead to a higher level of cooperation in water and environment issues in the shared river basins between Turkey and Europe.

KEYWORDS: Turkey; ENTSO-E; Electricity trade; European Union; Water management