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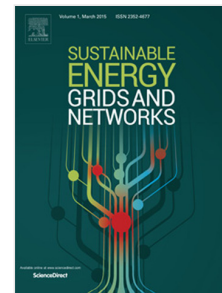
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ELECTRICITY INDEPENDENCE OF THE BALTIC STATES: PRESENT AND FUTURE PERSPECTIVES

E. Bompard^a, E. Carpaneto^a, T. Huang^{a*}, R.J. Pi^a, G. Fulli^b, A. Purvins^b, A. Mutule^c

^a Dipartimento Energia, Politecnico di Torino, Torino, 10129, Italy

^b Institute for Energy and Transport, Joint Research Centre of the European Commission, Ispra, 21027, Italy

^c Institute of Physical Energetics, Riga, LV-1006, Latvia

*corresponding author: Tao Huang (tao.huang@polito.it)

Abstract

Due to historical and geographical reasons, the Baltic States are strongly interconnected to power transmission grids of Russia and Belarus. Current energy security policies and electricity interconnection targets in the EU trigger the need for studying and implementing alternative electricity supply options and power system configuration schemes for the Baltic countries.

In order to provide a supporting analysis for the energy policy making, with a special focus on electricity, a framework with methodologies is proposed in this paper to assess the electricity independence of the Baltic States. To comprehensively assess the electricity independence, we provided three indices: “adequacy”, “security” and “economic factor”. The proposed framework and methodologies are applied for assessing the electricity independence of the Baltic States in the present (2014) and future scenarios: mid-term (2020), and long-term (2030) time frame.

The analysis results show that the planned generation capacities are adequate to cover future electricity demand in the Baltic States in 2020 and 2030. Under the current electricity grid planning, power distribution in some local areas is limited in the future scenarios. Additional grid investments are necessary to keep high security level of power supply in 2020/30.

Key words: the Baltic States; energy policy; electricity independence assessment; power transmission grid; security of supply

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