

Evaluation of three methods proposed for the computation of inter-TSO payments in the Internal Electricity Market of the European Union

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Abstract-

Parties to the Internal Electricity Market of the European Union (IEM) decided in 2001 to abolish the method of pancaking of transmission tariffs for cross-border transactions that was originally in place. Instead, they have agreed to implement a system whereby national transmission tariffs provide access to the entire IEM. This system is supplemented by a scheme of inter-TSO payments. However, conflict may arise if the compensation that a country must pay another one is not in accordance with the electrical usage that the former is making of the grid of the latter. For instance, Inter TSO Compensation methods (ITC methods) implicitly allocate the cost of any existing or new transmission line. Therefore, the adoption of an inefficient method may be an obstacle for building some needed regional grid investments. Consequently, one should give careful consideration to the selection of the ITC method. This paper analyzes, both qualitatively and quantitatively, the implementation of the most relevant ITC methods that have been considered so far in the European debate. When assessing each method from a conceptual point of view, considerable attention is devoted to the critical examination of its main underlying assumptions.

Index Terms- Cross-border tariffs, European electricity market, game theory, interconnected power systems, power transmission economics, power transmission planning, regional markets, transmission lines,

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