

Brazilian Transmission System Efficient Contracting: Regulatory Impact Analysis of Economic Incentives

Authors : Thelma Maria Melo Pinheiro, Guilherme Raposo Diniz Vieira, Sidney Matos da Silva, Leonardo Mendonça de Oliveira Queiroz, Mateus Sousa Pinheiro, Danyllo Wenceslau de Oliveira Lopes

Abstract : The present article has the objective to describe the regulatory impact analysis (RIA) of the contracting efficiency of the Brazilian transmission system usage. This contracting is made by users connected to the main transmission network and is used to guide necessary investments to supply the electrical energy demand. Therefore, an inefficient contracting of this energy amount distorts the real need for grid capacity, affecting the sector planning accuracy and resources optimization. In order to provide this efficiency, the Brazilian Electricity Regulatory Agency (ANEEL) homologated the Normative Resolution (NR) No. 666, from July 23th of 2015, which consolidated the procedures for the contracting of transmission system usage and the contracting efficiency verification. Aiming for a more efficient and rational transmission system contracting, the resolution established economic incentives denominated as Inefficiency installment for excess (IIE) and inefficiency installment for over-contracting (IIOC). The first one, IIE, is verified when the contracted demand exceeds the established regulatory limit; it is applied to consumer units, generators, and distribution companies. The second one, IIOC, is verified when the distributors over-contract their demand. Thus, the establishment of the inefficiency installments IIE and IIOC intends to avoid the agent contract less energy than necessary or more than it is needed. Knowing that RIA evaluates a regulatory intervention to verify if its goals were achieved, the results from the application of the above-mentioned normative resolution to the Brazilian transmission sector were analyzed through indicators that were created for this RIA to evaluate the contracting efficiency transmission system usage, using real data from before and after the homologation of the normative resolution in 2015. For this, indicators were used as the efficiency contracting indicator (ECI), excess of demand indicator (EDI), and over-contracting of demand indicator (ODI). The results demonstrated, through the ECI analysis, a decrease of the contracting efficiency, a behaviour that was happening even before the normative resolution of 2015. On the other side, the EDI showed a considerable decrease in the amount of excess for the distributors and a small reduction for the generators; moreover, the ODI notable decreased, which optimizes the usage of the transmission installations. Hence, with the complete evaluation from the data and indicators, it was possible to conclude that IIE is a relevant incentive for a more efficient contracting, indicating to the agents that their contracting values are not adequate to keep their service provisions for their users. The IIOC also has its relevance, to the point that it shows to the distributors that their contracting values are overestimated.

Keywords : contracting, electricity regulation, evaluation, regulatory impact analysis, transmission power system

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