



EVALUATION OF GENERATION AND TRANSMISSION ASSETS ON NODAL PRICES IN ELECTRICITY MARKETS

Pramod Gadge¹
Prakash Burade
Deepak Kadam

Received 26.12.2022.
Accepted 11.04.2023.
UDC – 629.423.33

Keywords:

Transmission Pricing, Nodal pricing, Electricity market. OPF

ABSTRACT

Electric utilities are going through a phase of quick changes, especially in the marketplace and rigid policies. Under such circumstances, electricity carrying prices can profile the level of contest in the electricity marketplace. Nodal pricing in such circumstances is one of the valuable schemes to reach transmission pricing goals. The performance of the Electricity Act 2003 has started the entry of the general electricity market in the Indian electricity sector. The implementation of the Transmission Open Access (TOA) regulation in India aims to confirm the required infrastructure and appropriate pricing strategies to support competition in this market. This study seeks to: (1) address the transmission pricing concerns that are prevalent and Nodal pricing that is exacting; (2) formulate the most advantageous Nodal price; and (3) implement the Nodal pricing methodology via IEEE-57. (4) to examine how transmission and generating assets affect nodal prices. Paper finalized that Nodal pricing is easy to execute over real network conditions and precious in achieving transmission pricing objectives.



© 2023 Published by Faculty of Engineering

1. INTRODUCTION

Electric power needs in a range of advanced and growing international locations have skilled a time of fast changes in market association and regulatory policies. Under a competitive electricity marketplace, it is necessary to control and regulate the transmission economies. These days the development of the strong market is in a direction closer to Transmission Open access (TOA) whereby transmission providers may be vital to bid on the transmission pricing (Hamoud, 2000; Areekul et al., 2010;) To make optimum utilization of the transmission grid by supplying accurate economic signals, a Nodal Pricing

statement for the reorganized electric power system is developed (Sarkar & Khaparde, 2009) To reach the objectives (1) to ensure the best progress of the transmission network, (2) to endorse the efficient operation of generation and transmission assets in the country, and (3) to draw the required investments in the transmission sector and to offer adequate profits. The states in India are to follow the policy laid down by the central sector. Subsequent to this introduction, section II gives a summary of the Indian electricity market as well as the electricity restructuring status in Maharashtra state. Section III highlighted the issues and aims of transmission pricing under destructive electricity markets. Section IV briefs the

¹ Corresponding author: Pramod Gadge
Email: gadgepm@rediffmail.com