

# Marginal pricing of transmission services: An analysis of cost recovery

I.J. Pérez-Arriaga, F. Rubio-Odériz, J.F. Puerta Gutiérrez, J. Arcéluz Ogando, J. Marín

**Abstract—** This paper presents an in-depth analysis of network revenues computed with marginal pricing, and in particular it investigates the reasons why marginal prices fail to recover the total incurred network costs in actual power systems. The basic theoretical results are presented and the major causes of the mismatch between network costs and marginal revenues are identified and illustrated with numerical examples, some tutorial and others of real-istic size. The regulatory implications of marginal network pricing in the context of competitive electricity markets are analyzed, and suggestions are provided for the meaningful allocation of the costs of the network among its users.

**Index Terms—** Network pricing, spot pricing, complementary charge, competitive markets

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