

Planning for big things in Brazil

L.A. Barroso, F. Porrua, L.M. Thomé, M. V. Pereira

Abstract— This paper discusses the planning and building of large-scale transmission networks in competitive hydrothermal systems. The business model for transmission expansion in Brazil relies on a combination of planning and competition. The model is felt to be successful both in terms of ensuring expansion and attracting private investments and is being considered by other Latin American countries, mainly Central America and the Andean market. Due to new transmission facilities the interchange capacity limits in between regional systems have increased, avoiding congestion risks, enhancing the system security margins, and giving more transmission capacity to accommodate the needed power flows to optimize the hydrothermal dispatch. Regulatory risks have also been low, since regulations in place are almost consolidated and considered stable by market players. However, some challenges remain to be tackled, essentially concerning the strong coupling between generation and transmissiori planning and transmission tariff allocation. Additionally, it must be mentioned that improvement of the regulatory framework for the transmission and distribution frontier is a topic that is being currently focused on by the regulator. Clearly, setting the rules for system reinforcement in this interface area has been proved to be highly relevant in not jeopardizing the reliability of load supply.

Index Terms— Brazil; Hydroelectric power; Investments; Mathematical models; Power transmission; Project management

Due to copyright restriction we cannot distribute this content on the web. However, clicking on the next link, authors will be able to distribute to you the full version of the paper:

[Request full paper to the authors](#)

If you institution has a electronic subscription to IEEE Power and Energy Magazine, you can download the paper from the journal website:

[Access to the Journal website](#)

Citation:

Barroso, L.A.; Porrua, F.; Thomé, L.M.; Pereira, M. V.; "Planning for big things in Brazil", IEEE Power and Energy Magazine, vol.5, no.5, pp.54-63. September, 2007.