Planning Studies for the Gabon-Congo Interconnector: Static and Dynamic Transfer Limits

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***Abstract* — The paper deals with the 400 kV - 50 Hz interconnection line (Int.Ga.Co) between Congo and Gabon. The line represents a section of a backbone extending from Angola to Cameroun. A preliminary analysis of the operation of Int.Ga.Co is presented, aimed at assessing the maximum active power transfer capacity. Static (N-1) security is at first considered; moreover, angle stability is checked simulating electromechanical transients caused by severe but credible contingencies. Results show that the Int.Ga.Co transfer limit depends on the power flow direction and is dictated by angle stability.**

Keywords—Gabon-Congo interconnection; power corridor; maximum transfer capacity; static security; angle stability

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