Enhancing power supply adequacy in Spain: Migrating from capacity payments to reliability options

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Abstract— There has been total unanimity about the vital importance of reliability of supply since the beginning of the electricity sector deregulation process. This paper describes the procedure proposed by Pérez-Arriaga et al. [2005. White paper for the reform of the regulatory scheme of the power generation in Spain. For the Ministry of Industry, Tourism and Trade of Spain (in Spanish)] to improve upon the current scheme to guarantee a reasonable reserve margin, the capacity payment mechanism. This alternative design introduces improvements aimed at guaranteeing at least a minimum capacity reserve margin, as well as at providing a strong incentive for generating units to be available when needed, namely, in situations when supply is likely to be insufficient to meet the total demand.

Index Terms— Electricity restructuring; Electricity markets regulation; Security of supply

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