


Cost analysis of standard implementation in the SCADA Systems of electric critical infrastructures

Giuseppe Calabrese, Ugo Finardi and Elena Ragazzi *¹

National Research Council of Italy
Institute for Economic Research on Firm and Growth
CNR-CERIS Collegio Carlo Alberto - via Real Collegio, n. 30
10024 Moncalieri (Torino) – ITALY

*Corresponding author: e.ragazzi@ceris.cnr.it

 011-6824.930

ABSTRACT: This study presents an analysis of costs deriving from the implementation of security standards for SCADA systems of electric critical infrastructures. It is produced concluding the path of ESSENCE project and it starts from the experience of the two case studies performed in its context. It aims at obtaining a reasoned measure of the costs needed to implement the standards. The first section contains an introduction describing the main hurdles and sets of problems encountered in the implementation of cost analysis. Then the generalities of the two case studies are introduced, followed by the detailed evidence outlined from both. At the end of the study useful suggestions for Transmission System Operators and Generation Operators are offered, besides a reasoned set of figures assessing the costs on the implementation of security systems.

Keywords: cost analysis; SCADA systems security standard; electric critical infrastructures.

JEL code: D61, G17, H56, L94

¹ This report is based on Activity “Cost analysis of standard compliance. The authors thank all the Essence staff who contributed, directly or indirectly, to this task; in particular: Marco Alessi, Marco Biancardi, Luca Guidi, Daniela Pestonesi, Alberto Stefanini, Tadeusz Włodarczyk.