

عنوان مقاله:

Review of Communication Technologies for Smart Grid applications

محل انتشار:

کنفرانس ملی رویکردهای نوین در صنعت برق (سال: 1396)

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خلاصه مقاله:

Information and communication technologies (ICT) represent a fundamental element in the growth and performance of smart grids. A sophisticated, reliable and fast communication infrastructure is, in fact, necessary for the connection among the huge amount of distributed elements, such as generators, substations, energy storage systems and users, enabling a real time exchange of data and information necessary for the management of the system and for ensuring improvements in terms of efficiency, reliability, flexibility and investment return for all those involved in a smart grid: producers, operators and customers. This paper overviews the issues related to the smart grid architecture from the perspective of potential applications and the communications requirements needed for ensuring performance, flexible operation, reliability and economics and addresses critical issues on smart grid technologies primarily in terms of ICT issues and opportunities. The main objective of this paper is to provide a contemporary look at the current state of the art in smart grid communications as well as to discuss the still-open research issues in this field.

کلمات کلیدی:

Smart Grid, Information and Communication Technologies (ICT), Advanced Metering Infrastructure (AMI), Quality of Service (QoS), Power Line Communication (PLC)

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