

Are smart grid technologies based on information and Communication Technology?

While current power systems are based on a solid information and communication infrastructure, the new smart grid needs a different and much more complex one, as its dimension is much larger. This paper addresses critical issues on smart grid technologies primarily in terms of information and communication technology (ICT) issues and opportunities.

Can smart grid communication support diversified power grid applications?

This study provides a comprehensive review on smart grid communication and its possible solutions for a reliable two-way communication toward supporting diversified power grid applications. Existing networking methods along with their advantages and weaknesses are highlighted for future research directions.

Are there existing networking methods in the smart grid?

Existing networking methods along with their advantages and weaknesses are highlighted for future research directions. The communication network architecture in the smart grid, with details on each networking technology, switching methods and medium for data communication, is critically reviewed to identify the existing research gaps.

What is a smart grid?

There is no single definition of what a Smart Grid is, however common in the definitions is the emphasis on communication for measurements, monitoring, management, and control. Communication plays an essential role in providing reliable, efficient and secure power generation, transmission, and distribution.

What is smart grid communication?

3. Smart Grid Communication From the previous section we can see that SGs are highly dependent on information flow and communication between different entities in different networks. Communication is one of enabling technologies of SG. As the number of sensors increase, the amount of data coming to and from the utility increases. 3.1.

What is the difference between a traditional grid and a SG?

Communication play an important role in SGs, as one of the most significant differences between traditional grids and SGs is two-way communication. Traditional power grids only provide one-way communication between the utilities and the customer, whereas SGs provide two-way communication [3,10].

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British Indian Ocean Territory communication technologies in smart grid

1 Introduction to Power Systems Before Smart Grid 3. 1.1 Overview 3. 1.2 Yesterday's Grid 8. 1.3 Fundamentals of Electric Power 20. 1.4 Case Studies: Postmortem Analysis of Blackouts 34. ...

Keywords: review, survey, smart grid, smart grid technologies, smart grid communication, wireless communications, wired communication, smart grid security. 1. Introduction. Today's method ...

With the ongoing trends in the energy sector such as vehicular electrification and renewable energy, the Smart Grid (SG) is clearly playing a more and more important role in the electric power system industry. One ...

The power network in the Middle East is desperately crying out for expansion to meet rapidly growing demand from all quarters. Gulf oil producers and other countries in the Middle East and North Africa must pump ...

