

Security and Privacy Challenges in Smart Energy Grid

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Abstract

The introduction of smart electricity meters opens up new possibilities for the electricity distribution system. While old meters were read manually once a year, these new meters can be read constantly through network. Thus the electricity companies will get more detailed information about electricity use which in turn will help for example creating more accurate monthly billing and the development of the energy grid further. This can also open up new opportunities for third parties to provide additionally services for electricity consumers. When new opportunities arise, it will also mean new risks, especially towards security of the distribution network and privacy of the user. We will go through various potential attacks against the security and privacy and describe an overall analysis of the smart energy grid to identify the potential vulnerable spots.

Index Terms: Smartg energy grid, Security, Privacy.