

## **Wireless Communication Technologies for the Smart Grid**

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### Abstract:

Electrical power grid is among the critical infrastructures of a nation. In the past several years, the power grid operators have experienced several major blackouts which have caused large financial losses. In a close future, the imbalance between the growing demand and the diminishing fossil fuels, aging equipments, and lack of communications are foreseen to worsen the conditions of the power grids. For this reason, governments and utilities have recently started working on renovating the power grid to meet the power quality and power availability demands of the 21<sup>st</sup> century. The opportunities that have become available with the advances in Information and Communications Technology (ICT) have paved the way to this modernization. The new grid empowered by ICT is called as the smart grid.

The natural extension of the advanced technologies to the consumer premises can be through Wireless Sensor Networks (WSNs) which are able to provide pervasive communications and control capabilities at low cost. WSNs have broad range of applications in the smart grid. In this presentation we present the application of the WSNs in the smart grid and provide a number of examples.