

Abstract

Nowadays many researchers and international organizations are looking on the availability of getting single communication systems for automation of management of power systems. This paper presents four communication system(s); Power Line Communication (PLC), Optical Fiber, Satellite Communication and Wireless Communication. PLC and Optical Fiber were selected to be the most effective communication system(s) in automation of management of power systems from generation level to end users level in Tanzania. The criteria used to select PLCs and Optical fiber communication systems are; capacity, coverage, security, reliability, accuracy, and availability. The use of effective communications systems on power networks will help the power utility company Tanzania Electrical Supply Company (TANESCO) to perform actions like reading the electricity meter, monitoring the power consumers, finding faults along the systems, detecting illegal electricity usages etc to ensure better provision of services to its consumers.