Smart City Testbed

Adam Hahn, Anurag Srivastava, Chen-Ching Liu
Washington State University

Abstract

The design of a reliable and economical electric power grid creates many research challenges. The modern grid needs to incorporate a wide array of renewable energy resources that have limited inertia and intermittent availability. The diverse set of modern technologies which compose a modern smart grid presents an increased need for testbeds which can accurately simulate and emulate real-world grid phenomena to support necessary research and development activities. The Washington State University (WSU) Smart City Testbed provides a flexible and comprehensive research environment, which can enable cross-cutting research across multiple power system domains including, wide-area transmission networks, distribution automation, renewable energy, microgrids, and smart meters. The testbed will enable state-of-the-art research in power system control and communication, as well as provide an educational environment for students, and it will enable increased collaboration with industry.