

## Case for Simulating Consumer Response to Feed in Tariff Based on Socio-Economic Parameters

**Authors :** Fahad Javed, Tasneem Akhter, Maria Zafar, Adnan Shafique

**Abstract :** Evaluation and quantification of techniques is critical element of research and development of technology. Simulations and models play an important role in providing the tools for such assessments. When we look at technologies which impact or is dependent on an average Joe consumer then modeling the socio-economic and psychological aspects of the consumer also gain an importance. For feed in tariff for home consumers which is being deployed for average consumer may force many consumers to be adapters of the technology. Understanding how consumers will adapt this technologies thus hold as much significance as evaluating how the techniques would work in consumer agnostic scenarios. In this paper we first build the case for simulators which accommodate socio-economic realities of the consumers to evaluate smart grid technologies, provide a glossary of data that can aid in this effort and present an abstract model to capture and simulate consumers' adaptation and behavioral response to smart grid technologies. We provide a case study to express the power of such simulators.

**Keywords :** smart grids, simulation, socio-economic parameters, feed in tariff (FiT), forecasting

**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020