

Agent-Based Framework for Supporting Transactive Power Electronic Systems

Oak Ridge National Laboratory

M. Starke, M. Chinthavali, S. Zheng, R. Zeng, M. Smith, T. Kuruganti

Abstract— In this paper, the concept of a framework based on an agent-based interface for power stages in a power electronic system is presented. The presented concept or agent system is able to consider any number of different types of sources, types of converters, communication protocols, embedded decision making to support transactive, and hierarchy for large system integration. The concept is presented through several examples including the implementation on an actual physical system.

Index Terms-- IoT, agents, transactive, demand management, grid-interactive, power electronics

