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Project Description

The North American power grid is an old system that has not been designed and engineered to face many of the challenges of this century. The high power flow is overwhelmingly threatening the system while the market demands for more reliability, security and protection. Various architectures have been proposed for such systems; however, most of them implement centralized intelligence through hierarchical monitoring and control. The main problem with such systems is the low level of consumer participation in the process of power management. The ultimate goal of this capstone project is to develop intelligent system to automatically monitor of load behavior and adjust it to improve consumption efficiency. SUMS will be programmed on a microprocessor which can wirelessly communicate with the home appliances and using a smart algorithm for monitoring and predicting the cost of electricity it determines the operation time for appliances to save cost for the user.