

With the rapid adoption of electric vehicles and the rise of power generation from renewable sources, intelligent management of power demand on a household level is gaining importance. Current algorithms used for that purpose have negative privacy implications and focus only on controlling the charging of electric vehicles while ignoring other appliances. We describe a decentralized algorithm designed to control the power demand of different types of household appliances along with the charging of electric vehicles while preserving the privacy of the subscribers. We also present a smart grid simulator to evaluate the algorithm's effectiveness along with results of simulating a scale model of the power grid of the state of Texas.