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Work title: Assessment of the potential for reduction of the maximum electric load of the apartment

Annotation:
Today's rapid development of society has led to an increase in residential electricity demand and an increasingly complex electrical load curve. The purpose of this thesis is to investigate one of the factors affecting the electrical load of apartments and find ways to improve it. The influence of the use of electrical appliances on the total maximum electrical load is calculated on the basis of measurement data of the electrical load of several electrical appliances in a typical apartment in an apartment building in the Moscow region: the estimated power at different time intervals is calculated and the possibility of reducing the total maximum electrical load of the apartment is evaluated by comparison. It was found that the use of electrical appliances at certain time intervals can significantly affect the maximum electrical load; there is a potential to reduce the maximum electrical load of the apartment. The use of smart meters to collect data, analyze specific electricity consumption patterns, and regulate electricity consumption for each household load through a smart grid makes household electricity consumption more economical and environmentally friendly. The broad goal of sustainable development is achieved.