

Solution development for heating, ventilation, and air conditioning replacement

[Engineering](#)



The paper tells about how to make it possible and easy to know which components of the air conditioners make them high electric energy consumers (the United States, 1989). These sampled features will then be cross-examined with the minimum electric requirements of the components of domestic air conditioners.

After adjusting the identified features to the recommended electrical energy requirement thresholds, the modified air conditioners will be reinstalled in the houses from which they were sampled (National Research Council (U. S.), 1990). The efficiency and effectiveness, as well as the electric energy consumptions of these air conditioners, are to be monitored. One feature that shall be incorporated in the experimental air conditioners is the thermostat to regulate the temperatures within which they should operate. It is known that an air conditioner should run two to three cycles per hour; hence, adding a temperature regulator will ensure that these cycles are not prolonged thereby leading to too much of electric consumption. The project will use five air conditioners that shall be left to operate for a period of five months after making the necessary adjustments. Both qualitative and quantitative data shall be collected to ensure the efficiency and effectiveness (qualitative, since the user will give reports⁰ and new electric bill collected from the designated households (quantitative) to give a report of the changes realized on the electric energy consumption (National Research Council (U. S.) and National Academies Press (U. S.), 2010). Nonetheless, the modified air conditioners should be highly effective and efficient than the current ones.