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The objective of this research was to conduct a feasibility study of an improvement in the efficiency of an air-conditioning system. It was tested by using an electronically controlled cooperative device for a ventilate condenser. The main objective was to design and create an effective device to decrease not only the quantity of electrical energy but also cost. After the device was installed in the air-conditioning system the electrical energy was measured. Finally, the obtained data was analyzed in terms of effectiveness, performance and efficiency by using average value and percentage.

The results of this research show that an air-conditioning system using this electronically controlled cooperative device (6 working hours) saved a cost of 16% less than the normal system. The quantity of energy was decreased to 2.049 unit/day, 47.818 unit/month and 573.804 unit/year. The cost savings was 3.32 baht/day, 76.52bath/month and 918.24 baht/year.

The research work shows that a cooperative device with an electronic control can reduce the quantity of electrical energy and save a cost of 16%. Further research on circuit development for a higher efficiency and smaller size device should be done. After further work, this technology may be suitable for broader application.