

Energy Consumption Analysis Of Home Appliances For Energy Conservation

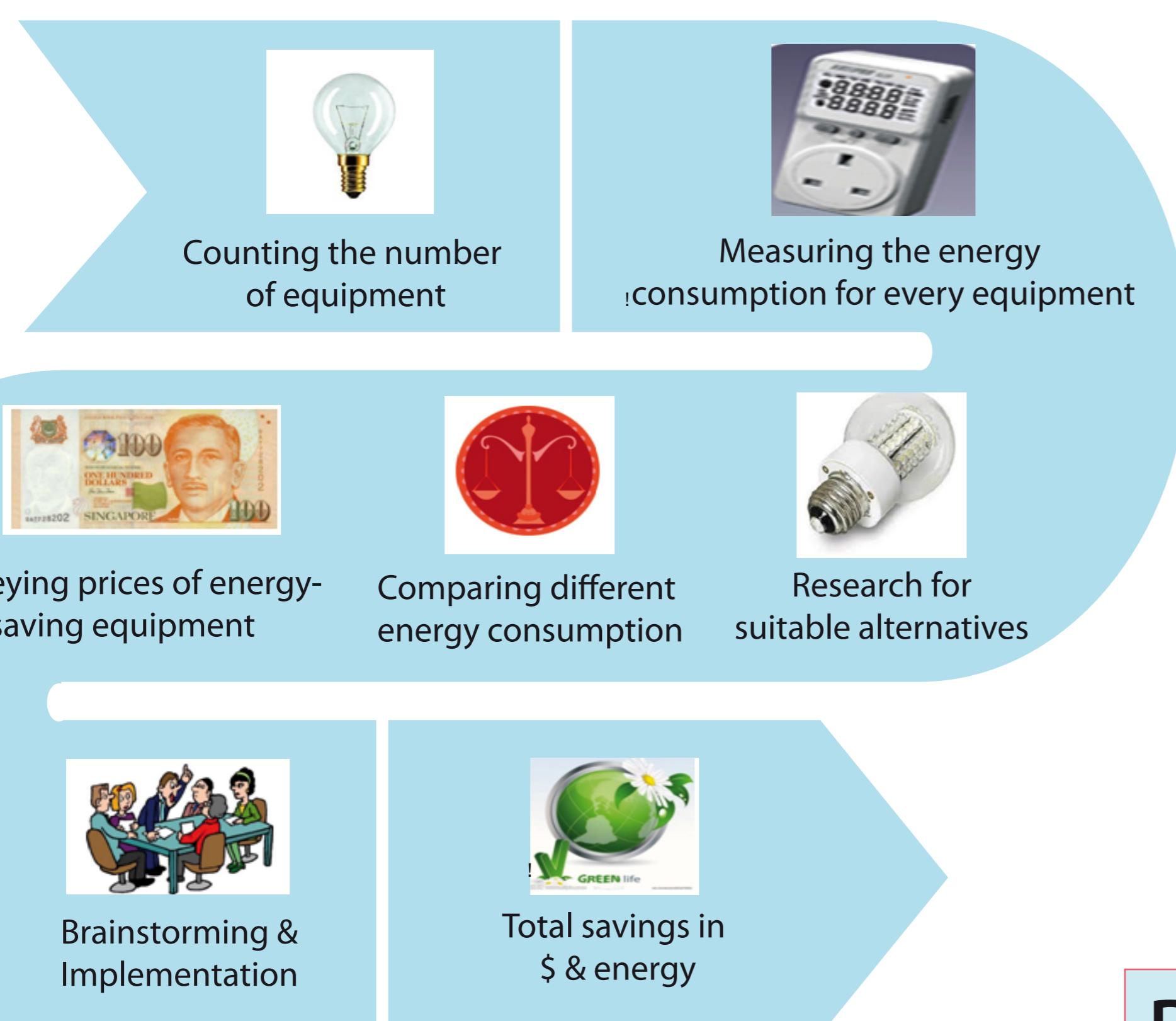
Research Question

How do we use monitoring device to analyze energy consumption of home appliances to achieve energy conservation?

Abstract

The team studied three types of power meters that is able to capture and monitor energy consumption data. The energy consumption data was analyzed, thus reflecting certain trends of consumer behaviour. It is of utmost important to be aware of the most energy-consuming appliances at home. With such data, consumers may change their habits accordingly to reduce electrical consumption. The team's case study of energy consumption is Zhonghua Secondary School. Based on our study, it is possible to save electricity by changing people's habits on electricity consumption.

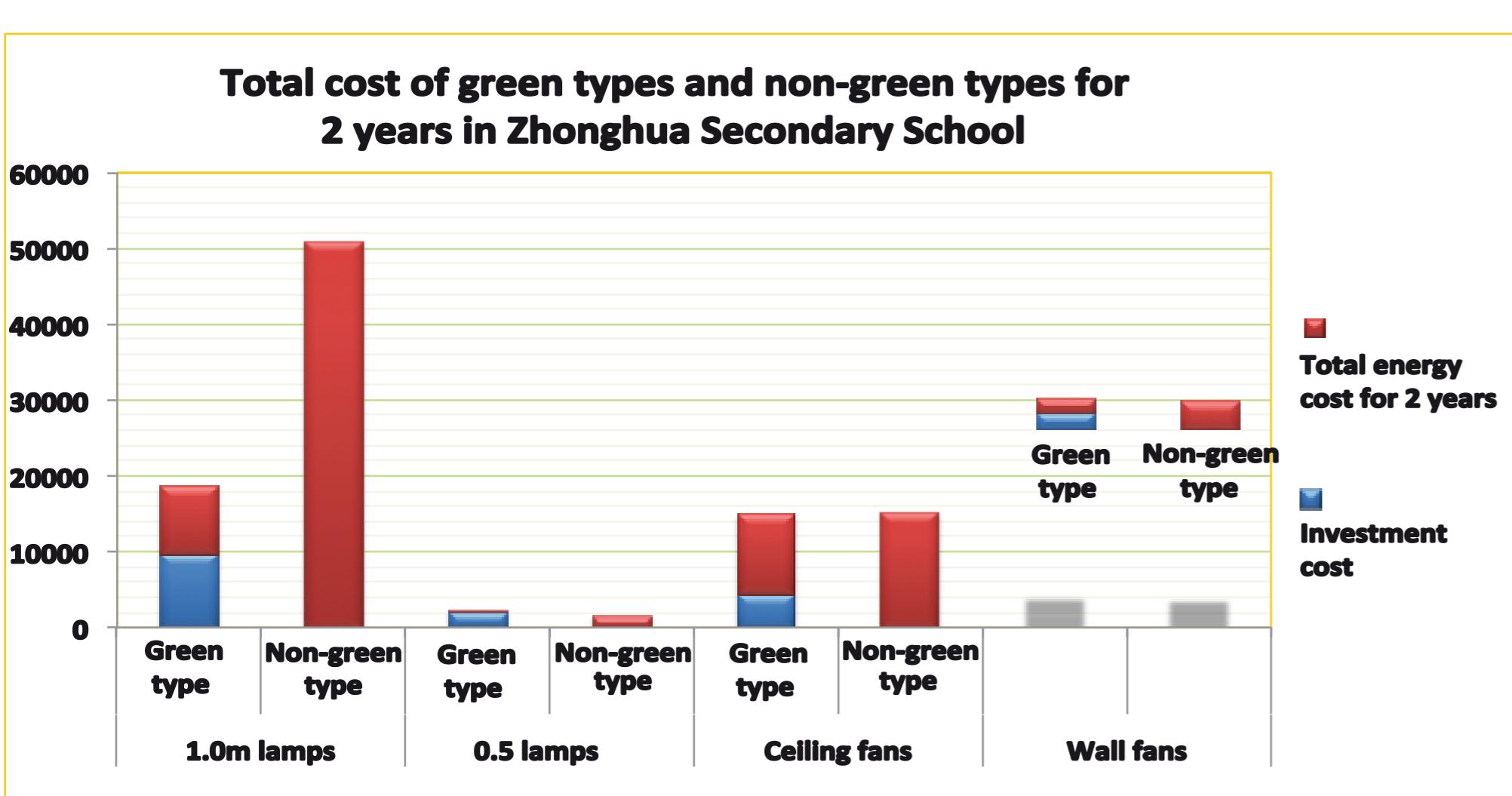
Case Study



ArtiPro Power Meter



ArtiPro Power Meter is simply plugged into an electrical appliance, and the power of the appliance will automatically be shown. This enables people to study the electricity consumption of a specific appliance.



Discussion

We measured the real energy consumption of wall fans using Artipro Power Meter. Energy consumptions of different fans were taken and data was averaged. We then compared the average energy consumption of wall fans with the data stated in the rating of the fans. It was observed that the data in the rating is very close to the data recorded from real measurement. Thus the data in the rating was reliable. Data stated in the rating of the appliances was used for calculations.

Improvements

We should take the lifetime of the green-type equipments we used into consideration. We also need to think about the waste of equipments incurred during the replacement of the school appliances.

Conclusion

Time taken for the investment to be returned will be 1.4 years. Using latest technologies of green product, we can save a significant amount of electricity and cost. In addition, by studying their electricity consumption pattern, people can also reduce their use of those energy-consuming appliances in their daily life to save electricity cost.