

The use of economic fluorescent bulbs environmental sciences essay



The Central Electricity Board (CEB) has been entrusted with the duties of providing electrical power in the country. With a view of providing an effective service it conducts regular surveys on the demand for electricity. Its latest report for the period 2013-2022 confirms a continuous upward trend in the demand for electrical power. The CEB has put in much effort and devised a number of plans to curtail excessive investment in the electrical sector. Among others the following are worth mentioning; Subsidizing solar water heater by the state. Encouraging the use of fluorescent bulbs. Summertime as in European Countries.

Subsidizing solar water heater by the State

During the recent years, government has come up with a plan encouraging families purchasing solar water heater for household use. The subsidy varied between Rs 5000 and Rs 10000. The development Bank of Mauritius is currently in charge of this project. It is noted however that many people are not satisfied with the service because many purchasers have not obtained their subsidy promised. Another important issue is that there have been too many applications for this grant and the money voted in the budget was not adequate to satisfy everyone. A system of first come first serve has been adopted and many families are still waiting.

Encouraging the use of economic fluorescent bulbs

To promote a more rational use of electricity the central electricity board has come up with the promotion of economic fluorescent bulbs. Many programs were organized to sensitize the population to exchange their normal bulbs with the fluorescent one. At the beginning people were very interested with the project but they felt discouraged when they noticed that these bulbs did

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not prove their efficacy and their durability as CEB stated and afterwards with the internal problem concerning the purchase of these bulbs.

Adoption of summertime as in European Countries

The summertime in Mauritius is pushing the time by one hour in order to benefit from the natural sunlight. This was done twice in Mauritius, The first time in the 1980s and the second time in the early 2000. When the Central electricity Board computed its electricity consumption during these two periods, it was found that the change proved to be negligible. Moreover because of resistance from the population this policy has not been renewed since. The cost of electricity is constantly rising besides affecting negatively the environment in terms of various types of pollution. The latter in its term is affecting the health of the population through respiratory diseases, skin diseases and in many cases causing cancers. Unfortunately there are no noticeable signs that the price of most materials used for making electricity such as oil, petrol and coal will decrease. The alternative therefore prospected by many countries is green electricity.

Green Electricity

What is green electricity?

Green electricity means electricity produced from sources that will not produce byproducts affecting the environment such as smoke, fumes and dangerous gases. The cleanest energy sources are those that utilize the natural energy from the earth. The most popular are;

Wind Power

This process use wind power to turn turbines for producing electricity. Wind power energy is being developed successfully in many countries across the world. Wind power offers many advantages as it is plentiful, renewable, clean and uses little land but above all creating no greenhouse effects. Progress in wind power technology during the recent years has made this type of production more efficient. Around one hundred countries nowadays are using wind power on a commercial basis. In the region wind power technology has been introduced in Rodrigues since a long time and it is being seriously envisaged to introduce it in Mauritius as well

Solar Power

Solar power implies the conversion of sunlight into electricity. This is done either directly using photovoltaic or indirectly using concentrated solar power. The latter uses lenses or mirrors and tracking systems to focus a large area of sunlight into a small beam. In Mauritius this type of energy is used more and more in the form of solar water heaters and more recently for lighting and power to run machines and equipment.

Hydro Power

Hydro power or water power has been used in ancient times. It is process by which power is obtained from the energy of falling water and running water. In Mauritius water turbines have been installed near many waterfalls using the force of falling water to turn them for the production of electricity.

Tidal Power

This is a form of hydropower that converts energy of tides or waves mainly into electricity. It is regarded as a potential source of power for the future as waves are more predictable than wind or sunlight. However its limitations are relatively high cost and limited availability of sites.

Biomass

By this process agricultural wastes or especially grown plants are used to produce electricity. Biomass is converted into energy in three ways namely thermal conversion, chemical conversion and biochemical conversion.

Biomass energy is regarded as very beneficial to the environment as it reduces carbondioxide emissions rendering the atmosphere more healthy and clean. The United States of America despite being a very rich country is striving hard to reduce its budget of power production by investing in research in renewable energy. Solar energy, geothermal, biomass, hydroelectricity, landfill gas, wind power are some examples of renewable resources which not only less costly but has negligible affects on environmental pollution. So at the same time two objectives are obtained namely a reduction in the cost of power production and secondly a cleaner and healthier atmosphere. Apart from the above numerous energy saving devices are being extensively used which are more efficient used helping to save energy, money and contributing to protect the environment. There are many ways that can be used to reduce the electricity bills in the households as well as in industrial and commercial places.

Residentially

Some simple methods to reduce electricity consumption in households Use electricity for household works for example washing machine during off peak hours when the cost of electricity per unit is lower. Do not buy electrical devices that are bigger than necessary for example a small pressure cooker rather than a big one. Putting off or disconnecting electrical devices when not in use. Putting cooling devices in places which are cooler in the house. Checking cooling devices often to ensure that they are functioning well and defrosting the fridge if there is a layer of ice. Switch off light when not in use Painting the house in bright colors which emit light instead of absorbing them. For example using white paints instead of dark ones. Replacing bulbs by fluorescent tubes. For cooking stove and oven should be efficiently used such as using the oven several times when already hot instead of letting it cool down after each cooking and heating again afterwards. Avoid heating the room with electricity when nobody is at home. An excellent method to reduce electricity is to use programmable thermostats. Set computers in the sleep mode instead of keeping it on when not in use. Make maximum use of sunlight by opening the house during the day to heat the house and close it at night to reduce the amount of heat lost through openings such as windows and doors.

Reducing power consumption in industries and commercial undertakings

Electricity consumption in commercial and industrial undertakings is considerable putting much strain in their overall budget. Much research is also underway to reduce power consumed by fluorescent lighting systems.

The Toronto based lighting solutions company has quite recently launched the Lumismart_ Intelligent lighting Controllers. This solution is designed for commercial and industrial buildings that can enable them to reduce their lighting bills by 30% to 45%. This system will surely help them as in industrially and commercially 40% of the electricity costs are for lighting purposes. This project will soon be produced in Toronto as to many countries throughout the world. Mauritius is still using much thermal materials such as coal, crude oil to produce electricity. Only a small percentage of its electricity comes from hydroelectricity. So to become more efficient and to reduce the cost of production there is an urgent use to seek other alternatives such as renewable energy sources such as wind power, solar power, biomass, waves. Although the initial investment will be quite heavy afterwards the cost will be relatively cheaper. There is for example plenty of sunshine, waves and wind that can be used for power production. Moreover these renewable energy sources being cleaner and healthier will keep people in good health reducing the cost of health services of the state.