Recent Research and Innovations in Social Science & Education and Green Technology Awareness

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ABSTRACT

Technology is application of information to practical necessities. Green technologies take in various aspect of technology which helps us to reduce the human impact on the environment and create ways of sustainable development. Social equitability, economic achievability and sustainability are the key parameter for green technologies. Today the atmosphere is racing towards the tip position on which we would have done unending permanent damage to the globe. Our current proceedings are pulling the human race towards an ecological avalanche which if happens would make demolition simply unavoidable. Green technology is an advance towards saving earth. Thus together its positives and negatives need to be investigated. Green technology uses renewable natural resources which never deplete. Green technology use new and modern energy generation technique. Nanotechnology uses green engineering and green chemistry; these are one of the latest in green technology. One of the important factors for ecological contamination is the dumping of waste. Green technology has response to that as well. It can efficiently revolutionize waste pattern and production in a way which it doesn't harm the globe and we can go green. Along with the probable areas where these creation and growth are likely to come from comprise green energy, organic agriculture, eco-friendly textiles, green building constructions, and manufacturing of related products and materials to support green business. As this is new to the industry, it is also projected to attract new trade who will see the many advantages of using green technologies in their home and others. Alongside other forms of green technology in field of generation of energy is done by solar power & fossil fuel. These have no bad effect on the world and it won't replenish. So, the upcoming generation can also gain from them without harming the earth. This paper focus on the advantages of green technology and the benefits with the purpose can be accruing out of it.

Keywords: Environmental pollution, Eco-Friendly Technology, Green Chemistry, Green technology, Renewable energy, Organic Farming.

Introduction

As the name imply "green technology" is one which fulfills "green" principle. By the word green we don't only mean the color green. Green invention are always eco-friendly inventions which often gets involve with - energy efficiency, recycling, safety and health concerns, renewable resources, and many more. The world has a fixed quantity of natural resources, some of which are before now depleted or ruined. For example - household batteries and electronics often contain hazardous chemicals which pollute the groundwater after disposal, contaminating our soil and water with chemicals which can't be distant from the drinking water supply and the crops are grown in the same contaminated soil. The risk toward human health is more. Hence, the need for the hour is that, every financier must think green. They must be familiar with green invention and clean technology which are good business. These are rapidly emerging market with increasing earnings. With the view position of customers they must also be acquainted with that buying green inventions, which can decrease their energy bill and that green invention are often safer as well as better products.

Type of green technology

Green technologies cover a large area of creation and utilization of technologies. The acceptance and use of green technology involve the use of ecological technologies for monitoring and evaluation, pollution prevention & control, remediation & re-establishment. Monitoring and estimation technologies are used for measuring and tracking the condition of the environment, together with the release of natural or anthropogenic substances which is harmful in nature. Technologies are used to avoid the production of environmentally hazardous substances or alter human activities in traditions which minimize the damages to our surroundings; it encompasses the products replacement or the redesign of the whole production process rather than using new equipments. Control technologies render toxic substances into nontoxic before they enter the environment. Remediation and re-establishment, technologies embody methods designed to get better conditions of the ecosystems, degraded through naturally induce or anthropogenic effect.

Green technology products and its types

Green technology products are those by which the factors of environmental awareness can be observed as well as they have their design and can be reuse. Green technology product aims on reducing waste, cut pollution, and also minimizing use of the fossil fuel. Various major types of green technology products consist of energy creation products, green chemicals, sustainable or recyclable products, and technology which runs on the alternative energy. Product like solar panels and thermal heating discs are a few of the most significant green technology products used in daily life. Solar panels, which can be install at homes, apartments, and commercial buildings, utilize the sustainable heat of the sun for charging the batteries, this can be used for electricity, as a substitute of traditional, no sustainable sources like gas. Thermal heating discs, which are used in swimming pools, absorb the sun's rays in and radiate them over the pool's surface, providing an alternative means of heating which avoid use of fossil fuel. Green chemicals are important in many green technology products. These products meant for creating the same effect as toxic, polluting chemicals, whereas this reduces the risk of poisoning and ecological harm. Green chemical products comprise home cleaning agents made out of coconut and glycerin, insecticides by using orange or peppermint oil instead of toxic chemicals, and even green laundry detergent which reduces water pollution. Sustainable and eco-friendly green technologies products help amplify

the life cycle of end user material. These products may include cell phones made from plastic water bottles, appliances rebuilt from scrap metal, and even recyclable laptops. A green technology product which uses sustainable and recyclable materials habitually advertise their participation in recycling initiatives; consumers shopping for a new cell phone or laptop may wish to make inquiries regarding specific models which use the recycled materials. Nowadays Solar powered charging devices for phones, laptops, and portable appliances are very popular green technology products. By converting daily products to unconventional energy power sources, green technology can help out, cut in fossil fuel use and lend a hand to the user in cutting their energy bills.

Applications of green technologies:

1. Solar array

One of the best identified examples of green technology must be the solar cell. Solar cells directly convert the light energy into electrical energy during the process of photovoltaic. Generation of electricity by solar energy means with a reduction of consumption of fossil fuels, by reducing pollution and greenhouse gas emissions.

2. Reusable water bottle

Drinking lots of water is healthy, but the uses of the new bottle continuously also damage the eco-system. Another simple innovation which should be considered green is the reusable water bottle. Plummeting plastic throw away is great for the environment. Hence, the trendy reusable water bottles which we can refill ourselves are health-promoting, eco-friendly, and green.

3. Solar water heater

By installing solar water heater can be a immense way to reduce on energy costs to a large extent, lower initial expenditure. The cost coupled with the mechanism of a solar water heater is actually recouped much faster than the costs associated with photovoltaic technology for power generation. This is because of the increased effectiveness of solar water heating systems, and reduced expense when compared to large solar array required for powering home.

4. Wind generator

Cost of the home wind generator varies to the highest degree. Several have built their individual wind generators with off-the-shelf parts from their local hardware supplies. Others bought kits or paid for proficient installation to supplement the power purchase from their local electrical grid. The power production capacity of a home wind generator varies about as much as the preliminary expenditure. Many kit based generator will generate only an adequate amount power to offset 10-15% of home energy expenses.

5. Rainwater harvesting

Rain collector systems are enormously simple automatic systems which connect to a sewer system, another rooftop water collection network and store rain water in a container or reservoir for later no potable use (like watering plants, flushing toilets, and irrigation). These systems are awfully economical.

6. Insulation of house

EPA estimates, 10% of domestic energy loss from poor insulation. We will get an excellent return on investment from sealing our home by preventing energy escape.

7. Green buildings

Green buildings use a mixture of environmentally friendly techniques for reducing impact on the surroundings. Reclaimed materials, passive solar design, natural ventilation and green roofing technology can allow the builder in producing a configuration with a significantly smaller carbon footprint than the normal construction. These techniques not only do well to the environment, but also produce cost-effective attractive buildings which are healthier for the occupant as in good health. The principal benefit of green building is to reduce a building's impact on the surroundings. By using green building techniques we can also reduce the expenses connected with construction and operation of buildings. Green ventilation techniques involve open spaces and natural airflow, reduces the need of conventional AC's and preventing many of the problems.

8. Energy generation and repayment to the nation

Power generation is a major segment in which green technology might generate wonder. Circulated generation technologies e.g. solar PV, biogas production, wind power etc. enclose almost proved that it provides more employment opportunity to people and this can be applied to provide energy solution to community in isolated areas effectively. Be in this world example exist in India where citizens have used alternative green power generation technologies and have not only satisfied own energy needs but they also sold the energy to the grid thereby making significant income. Same is in countries like Germany, where people sell the electricity generated by their domestic Photovoltaic panels to the national grid and in exceptional cases may wind up charging money from the convenience rather of paying! In this way anyone not only helps him or hers but moreover helps the nation in reality and causative to the national power generation. Thus proves to be an asset before a liability to the humanity.

9. Benefits for rural areas

A green technology has great impact on communities of the area where they are been implemented. Prerequisite of bio-gas plants to rural house has empowered communities and have amplified their efficiency. Same have been the case with circulation of solar lanterns through various programs. It is clear with the purpose of people, have been benefited from it by not only using the output individually but also by trading it. Initiatives for instance the barefoot college in Rajasthan empower villagers by training them on, the use eco-friendly technology like solar cookers, mud refrigerators, and sustainable farming practices. Villagers boast built their personal water storage and rainwater harvesting techniques and are now independent of outside help. These have uplifted the standard of livelihood of the villagers.

10. Benefit in urban areas

Towns & Cities which energetically pursued their ecological concern in the past few years are showing a marked improvement in their environment quality parameters. E.g. Delhi started CNG fuelled public transport phase wise. It was done as actions to improve fresh and healthy air excellence of Delhi wherever the toxic gas level is offs the charts, every so often more than 5-12 times the standard values. While, then Delhi has publicized stable enhancement in quality of air.

11. Green chemistry

Green chemistry is called as sustainable chemistry; it's an idea of chemical research and engineering with the purpose of encouragement in design of products and processes to facilitate minimize the use and generation of hazardous wastes. In 1990 the Pollution Prevention Act was passed in the USA which helped in creating a modus operandi for dealing with pollution in a unique and pioneering way. The aim was to avoid harms before they occur. As a chemical viewpoint, green chemistry applies to the all branches of chemistry like organic chemistry, inorganic chemistry, biochemistry, analytical chemistry, and even physical chemistry. Despite the fact that green chemistry seem to be a focal point on engineering applications; it does apply to any chemistry preference. Click chemistry is frequently cited as an approach of chemical synthesis with the intention of reliable with the goal of green chemistry.

12. Green nanotechnology

Nanotechnology involve with the idea of management of materials at the scale of the nanometer, one billionth of a meter. Several scientists accept as true that mastery of this issue is approaching which will renovate the way that everything in the planet is manufactured. "Green nanotechnology" is the principle of green chemistry and green engineering principles to this field.

Challenges toward green technology implementation

Comparatively green technology is expensive technology it aims to replace, for the reason that it accounts for the ecological costs in facilitating are externalized in many unadventurous production processes. As its relatively new technology, the allied development and working out costs can make it even more costly in contrast with traditional technologies. The superficial benefit is reliant on other factors like supporting infrastructure, technology inclination, human resources capability and geographic essentials. Implementation and distribution of these technologies can be constrained by a number of additional barriers. A few may be institutional, such as the deficiency of an appropriate dictatorial framework; others may be technological, financial, political, cultural or legal in nature. From a company's perspective, some of the few barriers in adoption of green technologies are - High implementing costs, Lack of information, No known alternative chemical or raw material inputs, Uncertainty about performance impacts, deficiency of human resources and skills. Overcoming all hurdles in the process is a very complex process. Promotion of green growth involves identifying and removing all Hassels and the barriers which hinder the large-scale distribution of clean technology in all developing countries.

CONCLUSIONS

Customer demand for the green technology products and equipment is on peak. Government customers are increasingly mandated to purchase green where available, as well as the end user who are aware and concerned on the ecological and environmental issues, and the spectrum of products covered by such requirements is growing. As for traders and business customers, if they demonstrate a homecoming on investment in green products, then claim will materialize. The greatest opportunity is in products so as to reduce energy consumption. Even a growing number of big business buyers can be projected to be aggravated by nothing more than the desire to be apparent as helping and supporting the environmental sustainability. Hence, the change is coming. Green technology products and instruments are being installed in the research and development phase. Products are been reconfigured to use less hazardous materials, require less shipping material, operate on less energy and promote end-of-life recycling. So in terms of environmental sustainability, the technology industries

are embracing change. They are changing to avoid penalty or to convene green demand or to achieve both. Whatsoever their inspiration be, but they are unquestionably changing toward green.

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