

Limited resources and unlimited usage.
How can we save it?

Newsletter



**Conserve the energy,
Save our climate!**

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Why ???

We the people on the earth are gifted with wonderful energy sources by the nature, which has made our routine much more smother & easier... However, this gift of the nature is ' limited '. What we have done is, with the growth of science & technology, we have started using it extremely, because of which the energy resources are going to finish in near future. Hence, let us take the pledge to conserve the energy - save the energy!!!

Tips of the Month



A city bus can hold as many passengers as 40 cars! The average 7 person van emits almost seven times less pollution than a car with only one commuter. Thus make sure to carpool or use public transport.

Article - 1 : CLEAN SOURCE OF ENERGY: BIOGAS

Rapid industrialization and urbanization has triggered an enormous increase in energy demand based on the non-renewable energy resources such as oil, coal and natural gas.

Based on a recent report by the UN, some factors such as climate change and increased energy demand are the main reason behind switching to alternate sources. Biogas is very important among them.

Basically biogas is a mixture of gases produced by the breakdown of organic materials. It can be produced from any raw material such as animal waste, human or any other organic waste. Being a renewable energy source, it has no carbon footprint.

Materials that can be used to produce biogas are available very easily in rural areas. Animals such as cattle and goats produce large amount of biogas because of billions of micro-organisms living in their digestive system.

Major sources of biogas include municipal wastewater treatment plants, industrial waste treatment facilities, landfills, and agricultural sources such as manure and energy crops.

Methane is the dominating gas (98%) generated out of the biogas plant. Because of such high concentration of methane in it, this product is known as "biomethane".

Implementation of biogas as an alternative source of energy can be done either by direct burning or enriching and converting it into other forms of energy to be used in industries.

Biogas clearly holds promise to resolve both the modern

day's problems of energy and the environmental crisis. Unlike intermittent renewable energies like wind and solar biogas energy is constant. It is also economically viable for power generation and available at low cost and in sufficient quantities.

People really need to evaluate how much energy they need; they must consider turning off the lights that are left on for no purpose, the heating and cooling systems that are over-used for extreme comfort, the excess of food they leave on plates and the pots of food dumped in the trash. If we talk about the rest of the world, there is malnutrition and a shortage of food. So, a straightforward question is, "Is it fair to consume edibles to make energy that we do not necessarily need, while there are people suffering from hunger?"

Source: www.newvision.co.ug

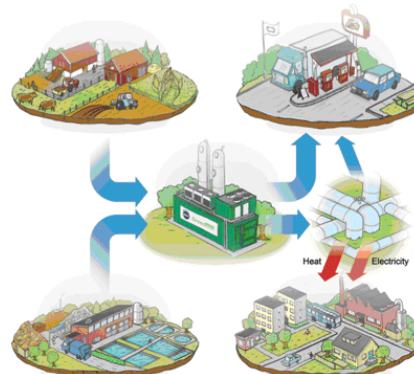


Image Source: greenlanebiogas.com

Article - 2 : ENERGY EFFICIENCY SEEKING ATTENTION

Solar and wind energy may get all the headlines and attention but in the future, green technology will be dominated by the energy efficiency.

Energy efficiency does not mean that how little energy you use, it means creating a balance between energy demand and energy supply. Energy efficiency mainly focuses at managing and restraining the increasing demand of energy.

According to IEA (International Energy Agency), "Energy efficiency is a way of managing and restraining the growth in energy consumption. Something is more energy efficient if it delivers more services for the same energy input, or the same services for less energy input."

Technologies developed to cut down the energy demands includes improved lightings, greener building materials, software which can measure power consumption and many others. It is an effective way to produce desperately needed jobs, to save consumers money and also to reduce carbon emissions at the same time.

The easiest way to reduce the energy consumption is to run the gadgets and appliances which we need. It will indirectly help to reduce greenhouse gases, combat climate change and reduce energy cost.

According to the International Energy Agency, improved energy efficiency in buildings, industrial processes and transportation could reduce the world's energy needs in 2050 by one third.

Energy Secretary of United States of America Steven Chu regularly describes himself as an "energy efficiency nut." Sixteen states have passed legislation enabling homeowners to finance energy-efficiency upgrades through their property taxes. President Barack Obama even declared insulation "sexy" at a Home Depot in December.

During energy efficient lightings, three things that energy engineers take into consideration are:

1. How much illumination is needed?

2. How much illumination exists in the location?

3. How can illumination be introduced so that it creates the least drain on the energy grid?

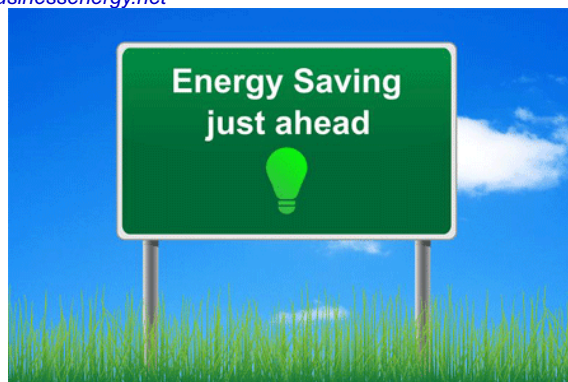
One example of planning of energy efficient lighting is to look at the use of low energy CFL bulbs as a choice. CFL bulbs are long lasting, low energy bulbs that can provide illumination that equals that of traditional light bulbs.

If we take a look at the public hallway, even the lights are place near to each other, the result may be too dim to allow us the safe vision. To increase the result of illumination in the hall does not need more lights, but to introduce more efficient lights which can provide more efficient result.

Though the energy efficient lights are costlier than normal lights, but when we talk about the long term expenses they are more cost effective. Energy efficient lights last almost 10 times longer than traditional and use 50% or less energy. The main problem with many people is that they only look at the initial cost, not the total life cost of providing light. Installation of different types of insulators or using different types of energy efficient materials can be expensive at first, but the total cost of saving over the lifespan.

*Source: www.chigagotribune.com

www.businessenergy.net



*Image Source: www.genesys-project.eu

Article - 3 : FUTURE OF TRANSPORT: HYBRID VEHICLES

Hybrid cars are becoming more popular, and more common. Hybrid cars are the ones that use two types of engines such as electric motor and the other one is either petrol or diesel. When the car is at lower speed the electric engine will be in use and at the higher speed gas engine will power the car. Hybrid car not only conserves fuel but also produces less CO₂ emissions.

The technology has been into existence since the early 1900s. It has only been in the past decade or so that the price of manufacturing them has brought them into the range of possibility for the average driver. As a part of the program, of becoming more environmentally responsible, public transport and services of many cities in US have also been switched over to hybrid cars and buses.

Some of the advantages of using hybrid cars over gasoline powered cars are:

- Hybrid cars are environmental friendly compared to the conventional cars.
- It runs on two engines, which will result in reduction of fuel consumption and also energy conservation.
- Reduced fuel consumption will result in reduced emissions i.e. cleaner environment.
- Less dependence on fossil fuel might turn into reduction in fuel prices.
- Unlike conventional cars, whenever you apply break while driving a hybrid car it will charge car's engine to some extent.
- Outer body of the hybrid cars are made up of lighter materials which will reduce the energy demand to run a vehicle. Engine of such vehicles are also smaller and lighter.

With continuous increase in price of gasoline, more and more people are turning towards hybrid cars. The result is that these green vehicles have started commanding higher than average resale values. So, in case you are not satisfied with your vehicle, you can always sell it at a premium price to buyers looking for it.

There are so many other things you can do to reduce your effect on the environment except purchasing a hybrid vehicle. One of the most important considerations is how you drive. Replacing many car trips by using public transport or even riding a bicycle, planning to use the car more effectively can reduce the adverse environmental impacts. Hybrid or not, the less you drive the better it is for the environment.

*Source: www.dailyfinance.com



Image source: (*www.nagelphotography.com)

Article - 4 : HYDROPOWER DEVELOPMENT AND SUSTAINABILITY IN NEPAL

Hydropower has been accepted as sustainable source of energy with almost zero input cost. It does not create pollution as it doesn't release any heat or noxious gases. It has a low operating and maintenance cost. The current generating capacity of hydropower projects in Nepal is around 600 MW. This technology offers reliable and flexible operations. Hydropower stations have high efficiency along with long life.

The enormous role of the power sector in contributing to the generation of broad, sustainable and high level of economic growth as well as improving the relative competitiveness of the economy both on a regional and global basis makes it crucial that the programs and activities on power sector development as visualized in the plans and policies be given the utmost attention and priority.

Imagine how our country's economy would be if almost half of our electricity came from renewable sources. There would be no fuel shocks, no foreign control and no worries about climate change. The country will have clean, abundant and affordable electricity.

Many rivers run through the steep valleys of Nepal. The potential for hydropower is large. To generate for electricity, Nepal needed forest investors and expertise. In Khimti, we have the Statkraft and SN power hydro plant. A 60 megawatt project was established with an agreement in 1996. It was later built and developed and put into operation in the year 2000. It is a so called "build-own-operate-transfer project" which means that it was the responsibility of the developers to build and operate it. After a license period of 20 years, 50% of the assets will be returned to the government authorities of Nepal. There is approximately 10% installed capacity in Nepal and 17% delivering capacity in the country. The power plant is built in a remote area and some of the large equipment was actually carried to the plant by workers. Khimti-1 began its commercial operation in 2000, with Statkraft as the majority owner. This ownership was later transferred to SN Power. Access to energy means a lot of things, for regular people especially in a country like Nepal where there is no electricity. It provides lighting to the homes so that the children can study; it enables the people to do household chores in a much convenient manner and they are able to pump water for household purposes.

Prime Minister Narendra Modi is dispatching external affairs Minister Sushma Swaraj to Nepal with a proposal to tap

enormous hydropower potential available in the Himalayan country. India's proposal for electricity generation in Nepal is an ambitious plan as the kingdom is the second country in the world after Brazil with highest potential in hydro electricity generation. Besides Nepal, other SAARC countries which have the potential are Bhutan and Bangladesh. By harnessing the hydro electricity potential, a power grid can be built to sort out power crisis in the region, paving new avenues for development.

The cascading waterfalls and winding patterns are a common and spectacular site in Bhutan. The hydro power plants of Bhutan harness Himalayan water flows to generate the country's electricity for the large surplus giant neighbor India. Along with being a developed nation, it is turning into an emerging power house. The power is generated from the snow melt and glaciers that they have uphill and from the monsoon rains that they receive. Hydro power is being used to light up the urban areas as well as the remote settlements in Bhutan. This gives tremendous job opportunities to people and keeps the economy buoyant.

Hydropower plant possibility is also there in Bangladesh hill districts. They are also collaborating with Nepal for the same. The poultry farm waste power plants in Bangladesh are also gaining popularity for generation of electricity and biodiesel production. Wood biomass gasification power plants use biomass pellet and agriculture (straw, wheat, corncob, rice, husk, peanut shell, cotton shell, cotton straw etc) as well as forest (wood, bark, tree root, tree leaves, wood shavings, bamboo powder, saw dust etc) waste as fuel.

*Source: www.eere.energy.gov



Conserve the Energy,
Save our Climate!

Conserve™
The Energy



It's
Tomorrow™


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