write-up right-now!

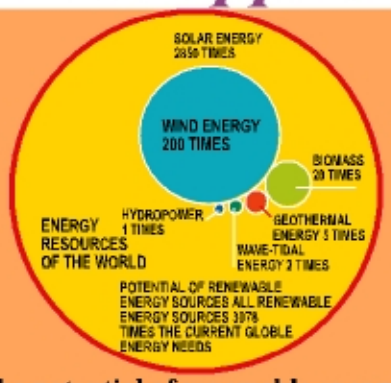
FACING THE FUTURE

ISSUE 21

Energizing Our World (part III)

Renewable Energy! In Abundance; Waiting to Be Tapped!

To energize our world with different sources of power so that humans can continue to go about with their daily lives is the foremost requirement today, will be in the future and has remained a priority in the past. So why has it become a problem? This quest for energy became a concern for our earth when humans grew so ambitious that they started to destroy natural resources for their own pleasure. Our ancestors always respected nature, nothing was cut or used more than what was needed to survive. Things changed after the industrial revolution in the 19th century. We had chosen a dangerous path. Our actions have brought us on a collision course with nature. Serious environmental issues like climate change due to increased greenhouse gases, global warming with known disastrous consequences is glaring at us. So what do we do? We need to change the way we live today. In the previous issues we learned about the negative impact our world faces if we continue to power our world with fossil fuels. Our future generation cannot be burdened with dangerous radioactive wastes of the nuclear power plants. Our only option is renewable form of energy which we can use again and again. The sun shall always rise and the wind shall always blow. The energy they produce is called RENEWABLE and it is SUSTAINABLE, they can meet our energy needs now and in the future without harming our environment. Investing in renewable sources has enormous benefits, like reducing energy costs as these sources are free and it will also reduce the use of dwindling natural resources, it produces no greenhouse gases etc.



The potential of renewable energy is far beyond what we need.

Solar power: For billions of years the sun has been the source of energy for our earth. Solar energy reaches us through sun rays which are converted and used for heating and producing electricity. Solar energy is converted to electricity through solar cell or photovoltaic cells, commonly known as PV. They are made of silicon which can convert the light energy of the sun into electrical energy for our consumption. These PV cells can be small enough to charge a calculator but when grouped together into panels they can be used to power houses and buildings. Solar thermal power plant is yet another way to harness the energy of the sun. Solar energy is used to heat water that turns into steam which powers a generator and produce electricity. Energy from the sun that reaches our earth is sufficient to cater the earth global energy needs many times over, so what is stopping us from using this source? We have yet to learn means to harness this energy efficiently and economically. In recent years we have seen a growth in research in the solar PV industry and making of more efficient solar panels that converts sunlight into electricity. It is estimated that by 2040 as much as 40% of our global energy will be generated from the sun. How cool would that be! Not just that we will have a continuous supply of power, there will be no damaging greenhouses gases emitted in the process too.Sunlight energizes almost all life forms on earth and it is the most available source of energy which is free of pollution and sufficient many times over to meet our energy demand, so how come we are still held hostage by the coal and oil companies? The reason is the cost and efficiency of the solar panels and also solar energy is not available all the time but as the reserves of these fossil fuels deplete it will become imperative to find efficient ways to utilize this enormous source.

Wind power: Humans have known the power of the wind throughout its history. Our ancestors had used it to sail around the world to discover new lands, to irrigate their farms to grow food for themselves. Today we have discovered yet another use of the wind energy, which is to produce electricity. This source like the sun is available to us for free; it does not pollute our environment or produce greenhouse gases.The blades on a wind turbine are similar to the propeller blades on an airplane. The rotor blades generate lift from the passing wind, causing them to rotate the hub of the turbine. The rotating action of the hub then turns a generator, which creates electricity. A gearbox is generally necessary to optimize the power output from the machine. That power is then either fed into the electric grid or stored in batteries for use on-site.With the help of modern technology it can be used to fulfill our ever increasing demand for energy. Wind farms can now be seen around the globe, the wind turbines erected on tall poles use their huge blades to collect the energy produced by the flowing wind to power the generators which turns it into electricity. These turbines can measure more than 400 feet (122 meters) tall and weigh in at close to 400 tons. The wind power industry now employs about 150,000 people globally.

Geothermal Energy: This is yet another potential source to be tapped. Deep inside the Earth lays an extremely hot core with temperatures soaring to 7,600 degrees Fahrenheit. This heat is so intense that rocks are turned into molten stuff called the Magma. We at times witness it when it erupts from volcanoes in the form of lava or we see hot water springs shoot up where it finds cracks on the surface of the Earth. Huge geothermal reservoirs, rests beneath the earth surface waiting to be harnessed for our consumption.

Biomass: This source of energy is based on the use of organic materials such as wood, sugarcane and other solid wastes, they have been used for this purpose since antiquity but with modern technology production has become more efficient. Biomass has helped to provide opportunities for economic development in the rural areas.

Hydroelectric power: The energy that is released by the flowing of water downhill produces electricity. Dams are built to store water in huge reservoirs. Water is allowed to descend from a height generating energy that turns turbines which produces electricity. Hydroelectric power stations can be of various sizes depending on the amount of water in the river it built on. It is estimated that about 24 percent of the world's electricity is produced by hydropower plants.

Tidal power: Another possible alternative energy source is wave power from the ocean. Due to the constant motion of sea water, this energy source has a lot of potential.

"Will we look into the eyes of our children and confess that we had the opportunity but lacked the courage? That we had the technology, but lacked the vision."
Greenpeace International

The choice s not ours anymore! Our future is with renewable energy! We urgently need a clean, efficient and renewable energy system that will not only cater to our energy needs but also protect us from climate change. Fortunately the world has realized this fact and is on track towards the right direction. Countries all over the world are investing in research and development of renewable energy sources. According to UNEP, renewable energy accounts for 12.9% of the world's total energy supply. We are told that many industrialized countries will soon have a supply of solar energy on their power grids. Developing countries are also investing in these sources. In Bangladesh one million homes are powered by solar energy today. By 2050 India will produce 60% of its electricity from renewable sources. Pakistan which is in the midst of an energy crisis should seriously pursue the renewable energy option and start putting the right policies in place to facilitate the development of technologies in this field. Learn more about these renewable sources of energy and share your thoughts with us at info@cmphr.org

Sources: www.unep.org www.greenpeace.org

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