

### **HOW DOES GLOBAL WARMING HARM?**

Global warming is a threat to humans, societies and the world. New and old bacteria, viruses and infectious diseases will thrive to promote innumerable diseases that threaten the foods, food supply, lives, and habitats of communities and nations. The people living in coastal areas will be at a greater risk of floods and the sea rising and engulfing their habitats. Global warming will harmfully disturb all living creatures and upset nature's balance with many negative consequences on health, societies and economics.



### **GLOBAL WARMING: HOW IT EFFECT TO INDIA?**

India has one of the most populated coastal communities in the world with approximately 500 people per mile of coastline, compared to the U.S., which has approximately 30 people per mile. The country has historically experienced severe coastal threats, such as tsunamis, monsoons and cyclones in these areas of high population density. Such events are predicted to increase in number and severity if the global climate situation remains unchanged. The recent unprecedented growth of the Indian economy and population is expected to increase the country's greenhouse gas emissions and impact its natural resources unless drastic steps are taken.

Changes to India's annual monsoon are expected to result in severe droughts and intense flooding in parts of India. Scientists predict that by the end of the century the country will experience a 3 to 5°C temperature increase and a 20% rise in all summer monsoon rainfall.

Climate change studies undertaken so far reveal that action is essential in order to prevent long term damage to India's water cycle. The livelihood of a vast population in India depends on agriculture, forestry, wetlands and fisheries and land use in these areas is strongly influenced by water-based ecosystems that depend on monsoon rains. Changes to the water cycle may also cause an increase in water borne diseases such as cholera and hepatitis, as well as diseases carried by insects such as malaria.

India is faced with grave concern following melting glaciers, change in rainfall pattern, falling food production, rising sea level and other climate changes due to global warming, say experts. According to Achim Steiner, Chief of the United Nations Environment Programme, global warming should be seen as a security issue as well as shortage of water and fertile land may lead to conflicts in the next 10 to 20 years.

India is particularly vulnerable, Steiner said, adding that global warming will cause the Himalayan glaciers to melt. This will lead to mass migration and possible conflicts over valuable resources such as agricultural land and fresh water. As the heat-trapping gases warm the atmosphere, glaciers melt at a faster rate, sea levels are pushed up, and the consequences are as diverse as drought, flooding, violent storms and increased hunger, diseases and deaths.

In the next couple of decades, the Himalayan glacier can shrink to a fifth of its present size of 500,000 sq kilometers and many others, including the ones feeding the Ganges, can disappear, if the current pace of global warming persists.

### **Why should we save energy?**

The saving of MONEY is not only a reason, in fact top priority. Saving of energy is rather more importantly require for saving UNIVERS, PLANET, EARTH, ENVIROMENT, HEALTH AND HUMUNBEINGS the issue is very very, serious which need to address on war footings.

There are many reasons why it is important to consume less energy. Just to highlight very few of them are mentioned hereunder. Conserving energy saves your money on your utility bills. This immediate return for your family frees up money for other family needs Reducing the CO<sub>2</sub> emissions produced by generating electricity will reduce the greenhouse effect. Reducing the greenhouse effect helps reduce the impact of global

warming. Rising levels of carbon dioxide (CO<sub>2</sub>) , in addition to trapping more heat, promote plant pollen production, soil bacteria and fungi, and alter species c o m p o s i t i o n by favoring opportunistic weeds (like ragweed and poison ivy). Other emissions from burning fossil fuels in cars, trucks and buses form

photochemical smog that causes and exacerbates asthma, while diesel particulates help deliver pollen and molds deep into lung sacs. The combination of air pollutants, aeroallergens, heatwaves and unhealthy air masses, increasingly associated with a changing climate, causes damage to the respiratory systems, particularly for growing children, and these impacts disproportionately affect poor and minority groups in the inner cities. Combustion of fossil fuels (oil, coal and natural gas) is responsible for air pollution and climate change, and air quality is a particular problem for urban centers worldwide. Traffic patterns and automotive exhaust, power plants, airports and industrial emissions are the primary sources, while wind patterns can bring in pollution and unhealthy air masses originating in other regions. Allergens (molds and pollen) originating in rural areas can reach high levels in highly populated cities. The impacts of air pollution can be compounded by extreme weather events, whose intensity and frequency is increasing as climate changes. These events include more heat waves, drought-driven fires, and floods The effects of which will likely be visible within your grandchildren's generation.

We have a limited supply of fuel. At some point our current supplies will run out. Any conservation efforts now will extend this deadline further into the future The amount of fuel that we import in for our nation's demands contributes to our trade deficit and makes us dependent on other countries.

Sources of energy are very limited as compare to raise of it's consumption during last two decade. Resources are drying up and one has to remember it's not for ever. We are, at dangerous speed killing the source. Supply to demand ratio is widening day by day. New generation of electricity is much behind to meet it's demand, so the gap will increase still wide, may to the extent of unmanageable level.

### **Global energy scenario :**

**The good news first.** Renewable energy, combined with the smarter and efficient use of energy, can deliver half of the world's energy needs by 2050. This new report, 'Energy [R]evolution: A sustainable World Energy Outlook', shows that it is economically feasible to cut global CO<sub>2</sub> emissions by almost 50% within the next 43 years. It also concludes that a massive uptake of renewable energy sources is technically possible. All that is missing is the right policy support.

**The bad news is,** time is running out. An overwhelming consensus of scientific opinion now agrees that climate change is happening, is caused in large part by human activities (such as burning fossil fuels), and if left un-checked, will have disastrous consequences. Further more, there is solid scientific evidence that we should act now. this is reflected in the conclusions of the Intergovernmental Panel on Climate Change (IPCC), a UN institution of more than 1,000 scientists providing advice to policy makers.

### **From vision to reality :**

This report shows that a "business as usual" scenario, based on the IEA's World Energy Outlook projection, is not an option for future generations. CO<sub>2</sub> emissions would almost double by 2050 and the global climate would heat up well over 2°C. This would have catastrophic consequences for the environment, the economy and human society. In addition , **it is worth remembering that the former chief economist of the World Bank, Sir Nicholas Stern, in his report clearly pointed out that the ones who invest in energy saving technologies and renewable energies today will be the economic winners of tomorrow.** Inaction will be much more expensive in the long run, than taking action now. We therefore call on decision makers around the world to make this vision a reality.

THE IMMEDIAT SOLUTION AND WISDOM IS LYING IN CONSERVATION OF ENERGY ON WAR FOOTING. WHY ON WAR FOOTING? Reasons are very encouraging. VISION is:

### **Indian energy scenario:**

As per the Constitution of India, "Electricity" falls within the concurrent jurisdiction of the Centre and the States. In most states in India, the sector consists of vertically integrated, State Electricity Boards - most of which, are now unbundled into Generation, Transmission and Distribution companies which continue to be state-owned. In a few States, private licensees for power distribution are also in operation. Currently only 10.6 percent of the total installed capacity is in the private sector.

**Demand Supply Position and Expected Trends:**

The projected elasticity of electricity w.r.t. GDP is 0.8. With this, the growth rate in electricity consumption is expected to be 7.6 percent. The per capita consumption presently stands at 606 kWh (2005), far below the world average of 2,429 kWh. At an 8 percent GDP growth, the per capita consumption of India in 2032 is estimated to be 2,643 kWh, which is just comparable to the present day world average. With an installed capacity of 123 GW, the country currently faces energy shortage of 8 percent and a peak demand shortage of 11.6 percent. In order to sustain a growth rate of 8 percent, it is estimated<sup>37</sup> that the power generation capacity in India would have to increase to 306 GW in the next ten years which is 2.5 times current levels.

Year	Installed Cap. Req. (GW)	Energy Req. (Billion kWh)
2003-04	131	633
2006-07	153	761
2011-12	220	1097
2016-17	306	1524
2021-22	425	2118
2026-27	575	2886
2031-32	778	3880

Par Capita Consumption of Power (KWh) 2004					
World Average - 2510					
Canada	17179	USA	13338	Australia	11126
Japan	8076	France	7689	Germany	7030
UK	6206	Italy	5644	Russia	5642
U.A.E	10992	Saudi	6259	Romania	2220
Iran	1915	Jordan	1501	China	1370
Iraq	976	India	463	Pakistan	407
Bangladesh	127	Sudan	87	Nepal	67
Haiti	31				

Changes in electricity demand across industrial, domestic, and agricultural sectors may also have implications for the appropriateness of supply sources. The shift in the relative consumption of electricity by sector has seen considerable growth in the share of domestic and agricultural sectors along with a significant drop in the share of industrial consumption. The industrial share of electricity consumption has decreased over the last half-century from a peak of 69% in the 1960s to current levels of roughly 34% of total electricity consumption. Agricultural consumption of electricity steadily increased over the last half-century, from roughly 4% in the 1950s to more than 24% in 2003 and domestic consumption increased from roughly 13% in 1950 to approximately 25% during the same period. Agriculture is increasingly being modernised and the need for water pumping is driving the demand for electricity in the sector. The combined shift in relative electricity consumption from industrial to domestic and agricultural suggests an increased demand for decentralized, distributed generation. While urbanisation may counter the decentralisation of domestic consumption, with an urban population rising from 28% in 2001 to 48% in 2020, electricity consumption in general could be less decentralised than in India’s history due to the share of agricultural consumption and the policy goal of providing electricity to rural populations.

**Population growth :**

The growth in electricity demand is also due to population growth and a policy of improving electricity access to the entire population. Population growth is approximately 1.7 percent per year with the total population “expected to touch 1.9 billion by 2010 and 1.41 million by 2020.” Concurrently, the government has the goal of meeting “the lifeline energy needs of all citizens” which necessitates increasing “electricity generation capacity/ supply by 5 to 6 times of their 2003-2004 levels.” As of

2000, approximately 57% of rural households and 12% of urban households did not have access to electricity. The policy goal of reaching more of the population with electricity will result in significant increases in consumer demand for electricity and will also make non-grid, decentralised approaches such as renewable energy sources, more appropriate. With a large rural population, even in light of urbanisation trends, much of India’s population does not live close to transmission and distribution lines.