Defining Sustainability

As all industries are run on energy, achieving 'sustainable' growth of the industries depends completely on the 'sustainable' availability of energy. If we consider that both fossil and solar energy are 'finite' or limited, we have to understand that all current campaigns/researches/activities in favor of solar energy are not enough. Efficient use of solar energy is a must, we do not argue against this point; shifting from fuel energy to solar energy is important, we do not argue on this point either. But at the same time, it is important to think of the "ecosystem of energy, industry and environment" as an overall system. Unless and until we design a good ecosystem of these three elements, we might get temporary solution to the current danger, but overall sustainability could never be achieved. Rather, always problems will be created as byproducts of the solution.

Now, we want to explain how we could consider solar energy 'finite'. The word 'infinite' is used relatively. Nothing is infinite in this world; everything has a finite measurement. Sea/ocean is not infinite any more for a man, but for an ant, it's still infinite. So the 'infiniteness' completely depends on relative perspective.From this point, the fossil energy is also finite, and so finite is the SOLAR ENERGY!!

It must feel ridiculous to think that solar energy is also limited. But the fact is: one hundred years ago, when industrial revolution occurred, everyone thought fossil energy was unlimited and used it in abundance. After one hundred years, now, we know that fossil fuel is decreasing every single day. There are other good examples too. At the beginning of the internet era, IPv4 was thought to be a lot, but after all we ended up with IPv6 and all the mess due to the transition between v4 and v6! Now, the scientists think that IPv6 is infinite in number, but we want to believe that it is really finite. There is a fixed number. It seems huge now, but who knows, may be in future we will be looking for a v7 (depending on the future use, perspective etc.)!

So, from energy and environmental point of view, while designing a solution of the current problem of climate change, it would be wiser to think that solar energy is also limited. [*Even if solar energy is not limited, the materials by which solar energy is converted to electricity (chemicals, solar panels etc.) are of course limited (*need to investigate in detail*)*]. And we have to design the solution of the climate change problem based on this fact. It will help us plan properly for the unseen future.

Current model of energy production is: if you need energy, produce energy, no matter what the source is – by using fossil fuel or solar resources. If we don't produce energy, the overall industrial growth will be hampered. This model has the fundamental flaw; it never assumes how the source of energy will impact on environment in short and long term. To work with this flaw, first of all, we emphasis on the point that gradual shifting towards solar resources is a must 'do'. At the same time, we want to establish a relation in terms of coexistence of energy, industry and environment in the same system-design platform. We call it "energy-industry-environment (EIE) ecosystem". In this way, we will not produce energy as per our need, and we will not hamper the industrial growth either. The EIE ecosystem will ensure the industrial growth in a sustainable way (discussed later).

From a different angle (just to make clear about the importance of EIE ecosystem), many people argue on the fact that we have to reduce the use of energy in our daily life to achieve sustainability. It is agreed, but the way it can be achieved is really difficult. That group of scholars thinks that personal incentives to save energy can boost them to reduce their usage. Some of them think that a limitation on personal usage can help the cause. They now want to monitor the usage of a person properly so that a good method of personal incentives/ personal limitation can be figured out. Even they think, incentives can be given in terms of direct money too.

First of all, this is really difficult to devise a proper monitoring system of the usage. Second of all, we think that it will not reduce overall energy consumption. If a person is given some money back as an incentive because of his personal savings of energy or using less than personal energy limit, that person is going to use the extra money in something else. May be he will buy some more chocolate, which will result in more chocolate production of that chocolate company resulting in more energy to produce that extra chocolate. May be he will save his money in a bank, which will result in that bank being more capable of investing more money in some industry, resulting in more demand of energy. In no way, this incentive or personal limit can help the overall energy reduction, the overall sustainability.

CARBON TRADING [need to investigate in detail] seems to be a viable solution for everyone. It is true that carbon trading creates some progress in industry level. It focuses on reducing the energy usage of individual company. Every company has a quota of its energy usage. If it exceeds that quota, there will be monetary penalty or it needs to buy the extra amount from some other company. If it saves some energy, the amount it will save could be sold to other companies who need it. This is a good way to regulate overall use of energy. It makes big companies care about their energy usage and of course, is better than the previous situation. But it actually focuses only on the energy usage portion. So when needed, big industries will anyway use the extra energy - by giving penalty or by buying from others. As a result, we believe it will not help us achieve sustainability globally.

We think that an EIE ecosystem can achieve sustainability, though it cannot guaranty the reduction of energy usage. As per our thinking, reducing energy usage is not our top most priority; we deem this as a contrary to the human nature of "use-more-habit". This is the most natural and spontaneous instinct of human – that he always demands more. The industry, knowledge and civilization has one thing in common - growth! The growth of the economy, culture, education, science, technology – everything was based on this never ending demand/thirst of human-being. And to support this growth, energy usage must increase. As a result, the very thought of reducing energy usage have been a research/theory model for quite a few years now, but practical implementation has not been possible. That's why we believe, quota/incentive system can not reduce the use of energy at all. It is just a regulation that can reduce the wastage of energy and can decelerate the growth of energy use.

The basis of our EIE philosophy depends on seeing the system as a whole, rather than solving the problems individually. We like to think all the elements - Energy, Industry and Environment as a whole, and come up with a solution that fits all of these 3 elements. Because we believe that all existing approaches or models are based on solving the problems individually. They consider the problem of one of the elements
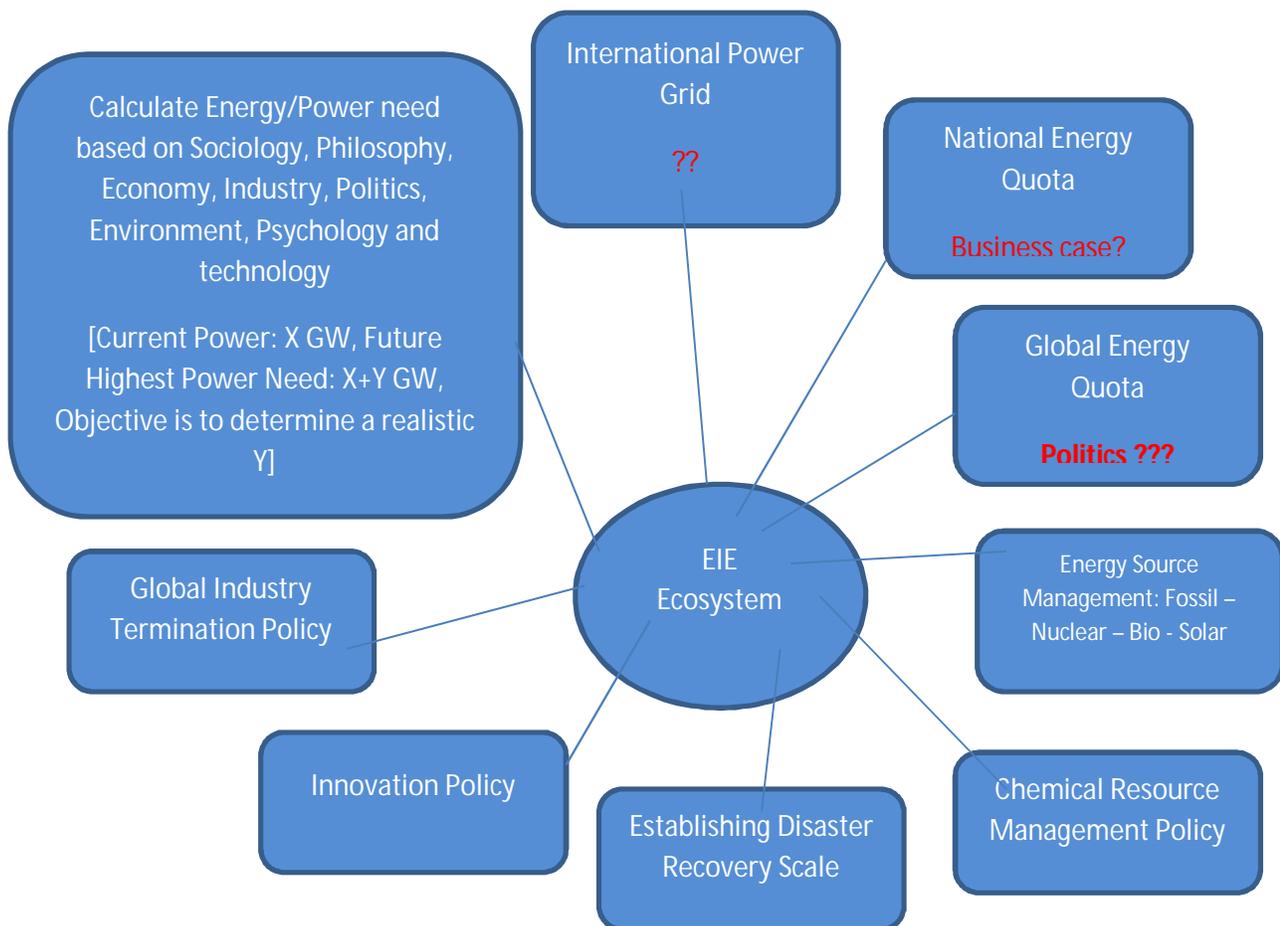
(energy/industry/environment) and provide a solution to that it fits for the element. The solution might be a good one, but it always produces inconsistent solution and future problems.

EIE Ecosystem

EIE ecosystem is a model which represents a balanced coexistence of different other models, i.e. economy, psychology, environment, politics, philosophy, sociology etc. But mainly, it is the policy-making system which provides solution that is energy-wise, industrially and environmentally sustainable. It is just a probabilistic model that will help make policy adjustment in terms of sustainable development respecting the current situation of environment and economy.

This model is formed based on several seperate models:
1. Behavioral or Psychological Model
2. Technological Model
3. Environmental Model
4. Innovation Implementation Model
5. Industry Termination Model

Calculate Energy/Power need based on Sociology, Philosophy, Economy, Industry, Politics, Environment, Psychology and technology

[Current Power: X GW, Future Highest Power Need: X+Y GW, Objective is to determine a realistic Y]

International Power Grid

??

National Energy Quota

Business case?

Global Energy Quota

Politics ???

Global Industry Termination Policy

EIE Ecosystem

Energy Source Management: Fossil – Nuclear – Bio - Solar

Innovation Policy

Establishing Disaster Recovery Scale

Chemical Resource Management Policy

Case-1:

Effective use-time of a PC
1 device per person, no multiple PCs
If extra food is a waste, then extra device is also a waste
Work-hour in a device/machine should be defined
A global energy model, like submarine cable network, worldwide, is necessary to measure required energy for a country/organization