- **Illnesses, incurables, the problems of aging, Aids/STD's, new forms of infections/viruses**
- **Energy, cost controls, pollution controls and new/renewable sources**
- **Education, the workforce of tomorrow, re-training for displaced workers**
- **Environment, human use of the planet, clean manufacturing, minimising secular changes**
- **The future of the human race**

A brief overview of how the US is proposing to solve these problems, gives us insight in to the future of S&T in the USA.

Keeping the Peace, Security and War-fighting, bio-warfare, E-warfare, terrorism
The Department of Defense, with its current R&D budget totalling $41.8 billion, spends funds on military preparedness and advanced warfare equipment. This requires both basic research ($1.3 billion) and applied research ($3.7 billion). The new Administration's plans are to scrap some of the systems under current development, and to go straight to a future level of military weapons, requiring research into new technologies for the US military. Universities, which perform more than 50% of DOD's basic research working with US prime contractors, will be developing new laser systems, enhanced war-fighter personal protection and intelligence built into military clothing, and high speed links between ground stations, planes, satellites and operational forces. Continued research into the defence against biological weapons, and the security of the information infrastructure, will be essential. Space observation to assist military operations will be developed to reach new levels of sophistication.

Illnesses, incurables, the problems of aging, Aids/STD's, new forms of infections/viruses:
The National Institutes of Health (NIH) with the biggest civilian budget, currently $20.4 billion, will be working closely with both academic and industry researchers on the analysis and application of the genome databases. In February 2001, both the government and privately funded genome sequencing maps were published (Nature and Science magazines). Congress has consistently voted to increase NIH funding for research at the NIH research institutes (most at the Bethesda, MD site), and by university and hospital researchers. No doubt the human genome database will be used extensively as a tool to develop cures for illnesses and to arrest aging problems in the next decade and beyond. This will also spur the development of ever faster computers, due to the vast computational requirement of such processes as protein folding. Biotechnology companies, in some cases working with drug companies, will be using the results of genome analysis to produce a wide variety of new-style custom drugs to cure many currently incurable illnesses.

Energy, cost controls, pollution controls and new/renewable sources:
Although the Department of Energy (DOE) has a R&D budget of $8.0 billion, only $3.0 billion of the budget is for civilian science applications. Most of the balance is used for US security and military research. Energy Sciences, which receives