THE PROBLEMS OF NUCLEAR AND COAL POWER STATIONS

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Energy is the ability to do work or to cause a heat transfer between two objects at different temperatures. Work is what happens when a force is used to push or pull a sample of matter.

The quickest, cheapest, and most cost-effective way to meet projected energy needs is energy conservation – primarily by improving the energy efficiency of houses, cars, and appliances so that less energy is wasted unnecessarily. Reducing the waste saves money and decreases the environmental impact of the use of any energy resource, because less is used to achieve the same amount of work. Conservation also extends supplies of fossil fuels, makes countries such as the United States less dependent on oil imports, and eliminates or sharply reduces the need to build additional electric power plants. Meanwhile, it buys time to phase in a diverse and flexible array of decentralized, mostly perpetual energy resources based on direct sunlight, wind, biomass, and falling and flowing water.

The vulnerability of the United States to nuclear attack would be significantly decreases if we switched from large, centralized power plants, which can be knocked out by a relatively few missiles, to a widely dispersed array of small-scale energy systems based primarily on locally available energy resources. All forms of nuclear power should be phased out because this method for producing electricity is inefficient, uneconomic, unsafe, and unnecessary compared to other available alternatives. It is also unacceptable the increased reliance on coal and coal-based synthetic fuels. The massive amounts of carbon dioxide released into the atmosphere when these fuels are burned could bring could bring about undesirable long-term changes in global climate patterns.

I must say that coal-fired plants release air pollutants such as carbon dioxide, particulate matter, and sulfur and nitrogen oxides. Concerning to the nuclear power stations they have their own peculiarities. They are:

1. Construction and operating costs of nuclear plants have been much higher than projected, even with massive government and consumer subsidies;
2. Conventional nuclear power plants can be used only to produce electricity;
3. Although large-scale accidents are extremely unlikely, some have already occurred as a result of a combination of mechanical and human errors, and these have eroded public confidence;
4. The net useful energy yield of nuclear power is low;
5. Safe methods for storing high-level radioactive waste for hundreds to thousands of years have not been developed;
6. Nuclear power commits future generations to safely storing radioactive wastes for hundreds to thousands of years;
7. Its use spreads knowledge and materials that could be used to make nuclear weapons.

In addition, the cost of producing energy in this way could be enormous compared to other already available alternatives. Even if everything goes right, nuclear fusion is not expected to be a significant source of commercial energy until sometime between 2050 and 2150.

That's why building more nuclear, coal and other electrical power plants to supply electricity is unnecessary and wasteful.