

Energy is critical to a modern society, but political pressure groups have created increasing obstacles for growth and even maintenance of traditional inexpensive energy sources such as hydro and coal generation which is our least expensive sources of energy. The next economical sources in order are nuclear, natural gas, and the most expensive energy sources being pushed by environmental groups are of course wind and solar.

With attacks on coal generation, the development of nuclear energy facilities have become foremost in energy growth. I have always been a strong opponent of adding more nuclear facilities because of concerns with safety and waste disposal.

However, with the new technology breakthroughs in addressing both issues, I have become very supportive of consideration of this energy source. It has become a logical energy source, but the question was how to control and harness this incredible power without the danger of radioactivity being a human health hazard.

The Russian Cherenoble nuclear facility melt-down with its release of wide-spread radioactivity plus the additional close call at the American Three Island facility created logical concerns resulting in wide-spread political bans on additional nuclear facilities in various states and even in Britain which has recently lifted their ban to allow development of the new small facilities which is being proposed also in the U.S.

We also have nearly a half century of observing operations in the United States, Europe, Japan, and a number of other countries without further mishaps and time to refine safety procedures while attempting to address the monumental issue of waste disposal. France produces around 80% of its energy from nuclear generation, but most important are the years of military power generation from nuclear reactors with principle aircraft carriers and submarines enjoying an excellent record of successful operation.

The biggest challenge has been the handling of large volumes of radioactive waste with no good options for disposing of this dangerous bi-product. Certainly, no one wants a radioactive waste deposit near their community with the only option being to seal it underground for thousands of years. This issue caused me ^{in the past} to be a strong opponent to the nuclear energy industry even though I recognized the tremendous potential for power.

However, in the past few years there has been a technological breakthrough which is eliminating these fundamental problems. This new technology has been made possible by the extensive experimentation in France and Japan as they worked on developing sized-down reactors for home and community use which has built on the submarine technology.

A couple of years ago I became aware of a new manufacturing company (Hyperion) formed by a group of retired military nuclear officers who joined with fellow physicists from the Los Alamos research facility to begin manufacture of community sized nuclear generation units. We are witnessing American technology emerging to meet the goal being promoted by various "green energy" groups to have the U.S. using 80% carbon free energy sources by 2035.

Because of the high costs, massive amounts of property required, high maintaince costs, and unreliability of wind and solar generation facilities, nuclear is fundamental to any non-carbon energy production. The obstacles rest on public opposition which resulted in reactive bans in states like Montana and California a half century ago. Interestingly, some

states like California, which receives 20% of its current energy from nuclear generation, have observed continual nuclear power generation during this past half century with no problems except for the issue of waste disposal.

That fundamental problem is now being addressed through the newly developing technology. This new generation of nuclear reactors will completely utilize the radioactivity in energy production. The fuel will be consumed to 95% with the remaining 5% (about a coffee can full) turned over to the Federal Department of Energy (DOE) for testing before it also is re-enriched with the next batch of non-weapons grade U 235 uranium fuel for the next ten years of producing electricity.

This company is revolutionizing construction of the nuclear energy facilities by concentrating on 20 mega watt to 50 MW facilities which are built as components to be assembled on site with factory sealed generation modules which will be returned sealed to the factory at the end of the anticipated ten years of operation to be opened and re-charged with newly constituted fuel.

With permission of the Chairman, I would like to pass out two hand-outs showing a diagram of Hyperion's 25 MW facilities which only has about an acre "foot-print". To put this unit in perspective, about 900 to 1,000 households can be serviced for each KW produced. These small units are designed for rural areas, intensive energy using industries, and to stabilize power grids. We must also remember that our present electric grid is very vulnerable to terrorist attacks or natural disasters which could create chaos in an industrialized nation.

Now before you get all excited about quickly implementing this technology, there are obstacles which can become very time consuming and expensive for those willing to invest in this industry. Because of bureaucratic obstacles in the U.S. including bans in states like Montana and California as well as the potential for expensive litigation by potential opposition groups, this new technology is currently heading to Russia which is very excited at its potential and obviously can cut through red tape much quicker than the U.S..

I am pleased to see this body addressing revisions in the current restrictions in Montana. I can tell you from working with the industry that Montana is not currently even under consideration as a site for these plants because in addition to current restriction, business investors view Montana as highly business unfriendly, controlled by radical anti-business activists supported by a generally business hostile court system.

I am pleased that HB 326 is being considered since it is the first step in a process to allow Montana to participate in nuclear energy development. Energy is critical for any economic development and since Montana residents are allowing its vast coal resources to remain unused—this is Montana's "green" alternative.