ka and Siberia, the longest continuous length of tunnel under water would be about 22 miles, just a little less than the continuous underwater distance of the Channel tunnel between France and England. The Bering Strait is a shallow body of water no deeper than the English Channel, so the tunnel need not be at any significantly greater depth than the English Channel tunnel. In fact the tunnel would be much less deep than the existing railway tunnel connecting the main Japanese island of Honshu with the island of Hokkaido.

...The rock beneath the Bering Strait is sound and the tunnel would involve no unprecedented difficulties in this regard.

From an engineering standpoint and from a standpoint of economics it is obvious that this is not a project that is going to be started tomorrow, but could easily be part of a future world economy in a time frame from ten to twenty years. In discussing this tunnel project, its feasibility assumes an expanding level of world commerce and prosperity, and it also assumes the continued lessening of the international tensions that have restricted trade and economic developments in the past.

This plan does fit in with the growing trend to interconnect the rail networks of the world. The new line connecting China and the Commonwealth of Independent States in Khasakstan has recently been completed, and of course we are all familiar with the impending connection of the British and European continental railway networks through the Channel tunnel. In the last decade, for the first time, all four main islands of Japan have been connected by rail. A tunnel under the Straits of Gibraltar to connect the the rail network of Europe and North Africa is being proposed. A plan has recently been proposed by the Official Economic Planning Agency in Central America to connect the railways of Central America to form a continuous standard gauge from Mexico to Panama. But the Bering Strait tunnel project is the key link, connecting the western hemisphere with the eastern hemisphere. In this new era of peace between Russia and the United States, perhaps even a name such as the World Peace Tunnel is not too grandiose, since it would link by land transport all the continents of the world except Australia and Antarctica.

The AREA [American Railway Engineering Association] is forming a technical committee to work on the engineering aspects of this project.

...[T]he AREA encourages the detailed study of a railway from North America to Asia via a tunnel under the Bering Strait. In addition to the advantages of joining the United States and Russia with a railway, one of the main economic justifications for this project is the present and future Pacific Rim traffic, which railroads could handle in one seamless trip without changing modes of transportation from the Orient to North America via a route shorter than that presently used and at speeds higher than presently run.

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**Bush Nuclear Program: Technology Apartheid**

*by Marjorie Mazel Hecht*

The Bush Administration’s Global Nuclear Energy Partnership, or GNEP, is a program of technological apartheid dressed up as nuclear development. It is the civilian side of the British geopolitical strategy, first enunciated by Bertrand Russell and H.G. Wells in the first half of the 20th Century, to consolidate power in a single or small group of states, and deny technological development to most of the world. Like the global warming hoax, behind it lies a Malthusian program for checking population growth, especially of non-white populations.

Under GNEP, the United States would provide selected nations with all aspects of the nuclear fuel cycle—in a “black box.” The recipient countries must agree not to develop those technologies on their own, thus denying those nations knowledge of uranium enrichment, fuel fabrication, and reprocessing, as well as nuclear applications like desalination or medical isotopes. The program aims to control the nuclear fuel cycle “from cradle to grave,” as U.S. Energy Secretary Samuel Bodman said. Recipient nations will have only a leased black box—as long as they stay on the good side of the supplier.

GNEP is thus an attack on the national sovereignty of recipient nations, which must give up control over their energy resources and over the training of nuclear scientists and engineers.

From the beginning of the civilian nuclear age, just after World War II, there were two views of the nuclear future. One faction saw nuclear energy as a boon for all mankind, providing virtually unlimited energy to develop industry and raise living standards. The other were the proponents of the Bertrand Russell/H.G. Wells policy, who aimed to prevent Third World development and population growth, by keeping the nuclear genie bottled up. Their program was conveyed in the 1946 Baruch Plan, an earlier version of GNEP, which intended to put a United Nations agency in control of all nuclear fuel. The policy was carried forward from the 1950s by a school of truly mad strategic analysts centered for a time in the Rand Corporation. The leading figure was Albert Wohlstetter, the real model for Stanley Kubrick’s fictional “Dr. Strangelove,” whose students included the prominent neocon strategists, Richard Perle and Paul Wolfowitz.

**Selling Points vs. Reality**

GNEP was sold to the U.S. nuclear community on the basis that it will fund research and construction of three new fa-
ficiencies: 1) a nuclear reprocessing facility using new methods that will make it harder to divert nuclear fuel for bomb making; 2) a nuclear fast reactor, which would be geared not to breed new fuel, but instead just to burn up the long-lived radioisotopes (actinides) in spent fuel; and 3) an advanced fuel cycle research facility, to look into new methods of reprocessing and new fuel cycles.

Eleven sponsors for potential sites for the first two facilities have been selected to receive grants to prepare “detailed siting studies.” One is the Hanford Site in Washington State, where, in 2005, the Bush Administration shut down the Fast Flux Test Facility, a working research fast reactor that was perfectly suited to perform the R&D proposed by GNEP, and to burn up actinides.

There is no question that the United States needs an advanced nuclear program, which will include recycling, enrichment, fuel cycle research, and development of the fast reactor and other advanced reactors. But GNEP is a go-slow program, which may (or may not) produce a new reactor or new technologies in the next 10-15 years. It is not a crash development program to build the research facilities and the advanced reactors the nation—and the world—need. GNEP’s focus is nonproliferation enforcement, at home and abroad.

The Department of Energy’s funding for GNEP is up to $60 million in the next two years, for conceptual studies, scheduling, and design. It has managed to hook in the nuclear community, as well as all the national laboratories, because it is the only Federal nuclear program going. As for the foreign countries participating, most of them—Russia, China, and Japan, for example—already reprocess their spent fuel, and have ambitious programs for research and construction, including fast breeder reactors. They have nothing to lose by participating in GNEP—unless they get so tangled in the web of bureaucracy that they stop forging ahead with their own programs.

U.S. No Longer a Nuclear Leader

Although the United States now has nearly one-fourth of all the world’s nuclear reactors (104 out of 435), more than any other country, it has taken a back seat to other nuclear nations in the development of nuclear technology. The U.S. shut down its commercial reprocessing (recycling) capability in the 1970s, although its PUREX reprocessing facility was working well. Since then, the U.S. has had a once-through nuclear fuel cycle, instead of recovering the 97% of the spent nuclear fuel that could be turned into new fuel.\(^1\) The reason for the shutdown was ostensibly to prevent “proliferation,” because reprocessing spent fuel separates out plutonium (about 1% of the spent fuel), which might be stolen and used for bomb-making.

The real reason is that by allowing reprocessing, nuclear energy becomes fully “renewable” and therefore fully able to supply increasing amounts of energy for a growing world. This is what the Russellites wanted to prevent, using the banner of nonproliferation to do it. Meanwhile, spent fuel rods—containing a valuable resource—are sitting in storage.\(^2\)

In addition to the shutdown of reprocessing, there was a virtual shutdown of enrichment technology. Enrichment involves increasing the ratio of fissionable uranium (U-235) to unfissionable uranium (U-238) from the 0.7% found in natural uranium to 3-4% required for fission reactors. The U.S., which had pioneered uranium enrichment methods for nuclear fuel, now must import more than 80% of the enriched uranium for its 104 nuclear plants. The nation also shut down its fast breeder program, although fast reactors are essential to the future of nuclear.

GNEP has captured the allegiance not only of the nuclear community, but of the national laboratories, which historically have been leaders of U.S. nuclear research, both civilian and military. When this writer posed the question of GNEP and its coercive nonproliferation function to Dr. Robert Rosner, the director of the Argonne National Laboratory, he replied “I’ll give you the reason why it’s a good thing. It’s not so much proliferation, it’s economic.” In Rosner’s view, countries that want to develop nuclear power plants will choose the GNEP way because it’s cheaper. As for the political control, Rosner said that countries could choose a supplier from among the seven or so advanced nuclear nations—including Russia and China.

As for proliferation, Rosner said: “The key point here is that what GNEP does, if you really put this regime in place—then if someone refuses to be part of it, it’s perfectly clear why. It could only be one reason. So at least there’s this wonderful element of clarity. With GNEP, if you don’t participate, then you basically are interested in proliferation.”

And so, we do have clarity: GNEP is about policing nonproliferation, removing national sovereignty, and ensuring technological apartheid, not about advancing nuclear technologies for the benefit of mankind. Much of the U.S. nuclear community has bought into it, along with the fraud of global warming, thus crippling their capability to fight for the kind of nuclear development program that will build the 6,000 nuclear power plants the world needs by the year 2050.\(^3\) Instead of siding with Prometheus, the giver of fire (the atom) to mankind, these supporters of GNEP are working with Zeus to keep Prometheus bound.

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2. The spent fuel from one 1,000 mw nuclear plant, operated over 40 years, is roughly equivalent to 130 million barrels of oil, or 37 million tons of coal.
3. See “How To Build 6,000 Nuclear Plants by 2050,” by James Muckerheide, State Nuclear Engineer of Massachusetts, www.21stcenturyscience tech.com/Articles%202005/6000NuclearPlants.pdf