

The East Goes Nuclear, While The West Heads for the Caves

by Michael Billington

Jan. 14—In the midst of the greatest international financial crisis in modern history, all of Asia, including, emphatically, the Russian Federation, is engaged in a process of rapid expansion of nuclear power construction, a source of great pride to the nuclear producer-nations, and of great hope to their clients among the developing-sector nations. These former colonies have been systematically deprived of their natural right to the use of nuclear power by the continuing legacy of British imperial power. What was promised by the Atoms for Peace process of U.S. Presidents Dwight D. Eisenhower and John F. Kennedy—access to the virtually unlimited power potential of nuclear energy, to escape from the colonial legacy of backwardness and poverty—was abruptly sabotaged in the 1970s. This was done under the cover of the anti-nuclear hysteria fostered by Prince Philip’s environmentalist movement, and the fraudulent argument that non-proliferation of nuclear weapons required a halt to peaceful uses of nuclear power. Now, the nations of Asia have definitively rejected British imperial dictates, asserting their long-term development to be centered, necessarily, upon expanded nuclear power capacities.

Unfortunately, the West is still mired in the British Empire’s muck. While Asian nations are currently engaged in the construction of 43 nuclear plants, the entire rest of the world is constructing only 12. The United

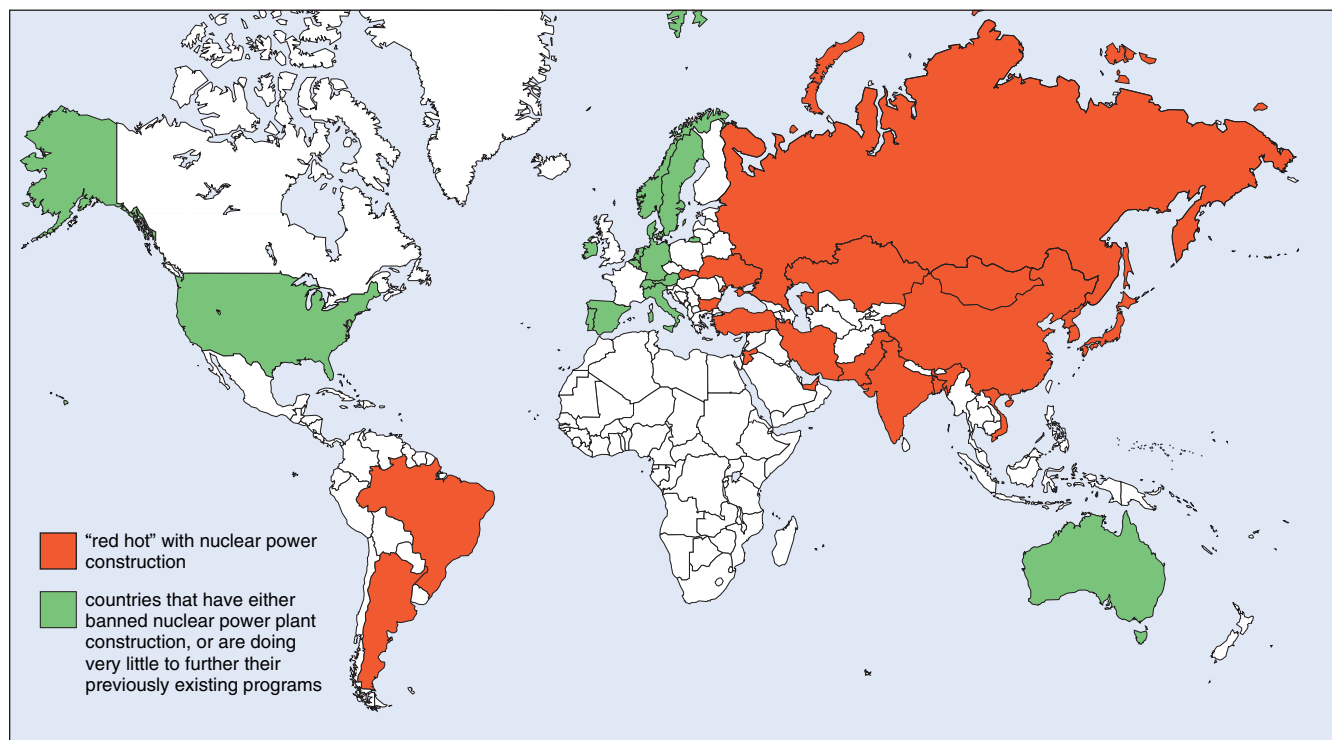
States, once the unquestioned leader in nuclear power development, is now constructing but one facility—and that is simply the completion of a mothballed TVA plant, suspended in the 1980s. All of Western Europe is constructing only two plants, while Germany and Sweden have determined to phase out all their nuclear power plants—although the global economic collapse is forcing a reconsideration of that lunacy.

In the United States, 224 nuclear scientists, engineers, and others issued a public letter this week to President Obama’s Science Advisor John Holdren, himself an anti-nuclear, anti-science zero-growther, warning that “the world is leaving us behind.” The letter reads in part: “Our nation needs to proceed quickly—not twenty or fifty years from now—while the people who pioneered this science and engineering can still provide guidance to a new generation of scientists and engineers. There is no political, economic, or technical justification for delaying the benefits that nuclear power will bring to the United States, while the rest of the world forges ahead.”

Contrast this to South Korea, where the Ministry of Knowledge Economy announced Jan. 13 that South Korea intends to export 80 nuclear plants, with a total value of \$400 billion, by 2030. South Korea recently became only the sixth nuclear exporter, by winning a contract to build four nuclear units for the U.A.E.

FIGURE 1

Nuclear Power Scorecard



Lyndon LaRouche described this situation starkly: “What you are seeing in the trans-Atlantic region is a dying civilization, a dying, self-doomed civilization. What you are seeing in the trans-Pacific region—especially on the Asian side, and the Indian Ocean side of that—you’re seeing progress! When you look at the Pacific economy, the Pacific Ocean orientation, you find nuclear power increasing all over the place. But when you look at the trans-Atlantic area, you find nuclear power is almost banned, and backwardness goes back almost to the depths of the cavemen.”

Russia Leads the Way

The Oct. 13, 2009 agreements signed between Russia and China during Prime Minister Vladimir Putin’s visit to Beijing, which centered on cooperative development of nuclear power and high-speed rail transportation systems, characterize the transformation of all of Asia taking place today. Similar agreements were signed by India, with both Russia and China. The three-way development process between Russia, China, and India, which is to be financed, in part, by China’s use of its huge dollar reserves, was described by LaRouche as an historic step towards realizing the “Four Power Alliance”

among Russia, China, India, and the United States, an alliance proposed by LaRouche as the necessary bedrock for creating a new world credit system to replace the current bankrupt world monetary system.

Asia was historically divided up for looting among the European colonial powers, and, after the Second World War, divided by those same powers along “Cold War” lines. Today, for the first time in history, the Eurasian nations are cooperating on the idea of Great Projects, understanding that their sovereign interests lie in the mutually beneficial development of the entire region. One question is repeatedly posed by leaders of these powers: Why has the West, and the U.S.A. in particular, not joined them in this physical-economic solution to the collapse of the world financial system?

Russia has pledged to China that it will both expand its aid in developing the Tianwan nuclear complex in Lianyungang, and provide China with two breeder reactors, which will breed as much or more fuel than is used up in the energy-generation process. Russia is also building a uranium enrichment facility for China, and providing a supply of uranium.

India’s long-standing economic cooperation with Russia had been stalled for several years after the fall of

the Soviet Union, but the relationship is now back on a fast track. Sergei Kiriyenko, the head of Russia's state nuclear corporation, Rosatom, told Prime Minister Putin in December, that Russia "will supply 12-14 units made according to Russian technology," based not on individual units, but "series of such power units." Kiriyenko added that Russia's nuclear industry is "planning a signal event—the resumption of mass construction of nuclear power plants, and these are not just plans, but practice." Russia will commission at least one new nuclear power unit per year, starting in 2010, with Unit 2 of the Rostov nuclear plant in Russia itself, and the Bushehr plant in Iran, followed by the Kudankulam plant in India, in 2011.

"I have just recently returned from India. This country really needs power," said Academician Nikolai Ponomaryov-Stepnoy, the vice president of the Russian Nuclear Center-Kurchatov Institute, on Jan. 15, as reported by Regnum.ru. "India is thinking about the future. And we should think about the future, too. The reactors we build will need fuel for their entire service life, i.e., into the 2070s. Therefore we have to be thinking about new nuclear technologies, for which there will be a guaranteed fuel supply. I mean fast breeder reactors, with a complete fuel cycle. I think we now need to be offering India cooperation in this area. In the course of that, we shall provide our partners not only with electric power, but also fuel for hydrogen or electric cars. And so, it is necessary to develop yet another component of the nuclear power industry, and that is nuclear hydrogen power."

In a webcast on Dec. 3, 2009, Putin answered a question from a machinist, on the future of the nuclear industry: "We have grand plans for the development of nuclear power generation. Whereas, during the Soviet years, a mere 35-38 major nuclear power generating units were built, we plan to build 30-32 over the next decade. This is a colossal project. The Rosatom state corporation has enough funds, and we have provided additional support."

Rosatom is also ready to launch its first "floating nuclear plants," small reactors in the 70-250 MW range, modeled on the nuclear reactors used in Russian submarines and ice-breakers. They are to be mass produced, placed on barges, and towed to areas for immediate use, generating electricity sufficient for a city of 200,000, or for water desalination. The first plant is due off the production line this year, with many nations lining up to take advantage of this unique capacity.

China and India

China, with only 11 commercial nuclear power plants (compared to 104 in the U.S.), is far in the lead in terms of units under construction, at 20. Russia follows, with 9, South Korea with 6, and India with 5. Many more are planned, with the intention of increasing China's nuclear capacity sixfold, to 60 GW or more, by 2020, and then tripling that by 2030. Although still importing most of its nuclear plants, China plans to become self-sufficient in reactor design and construction, using the Westinghouse AP 1000 as the primary basis of technology development, according to the World Nuclear Association. China is working towards developing a complete fuel-cycle capacity, with the Russian-provided enrichment facilities and breeder reactors crucial to that effort.

India, with 18 commercial nuclear plants (of which, 16 are indigenous), and 5 under construction, has developed its own nuclear technology, in large part because it does not want to be held hostage to the international nonproliferation mafia, since it has not signed the Nuclear Non-Proliferation Treaty; India has refused to give up its right to develop nuclear weapons, unless worldwide disarmament of nuclear weapons take place. Holding one of the world's largest reserves of thorium, India has taken the lead in the development of the thorium-cycle reactor.

India intends to have 20 GW of nuclear power capacity by 2020, and to more than triple that by 2032. By 2050, it intends to have 25% of its electricity generated by nuclear facilities.

The Bush Administrations's nuclear agreement with India, which won the approval of the IAEA in 2008, lifted most of the restraints on nuclear trade with India. Although the United States itself has been slow to set up any nuclear trade with India—and is not likely to, under the anti-nuclear Obama Administration—Russia and China have quickly moved to expand nuclear cooperation with their fellow Eurasian power.

South Korea Steps Forward

South Korea clinched the \$40 billion agreement with the U.A.E. for four nuclear reactors on Dec. 27, beating out both a French, a joint U.S./Japan bid, and giving the people of South Korea a burst of pride that they had emerged as a fully developed nation. The subsequent announcement of plans to export 80 nuclear plants by 2030 clearly demonstrates the role of nuclear power in turning underdeveloped countries

into modern industrial nations.

Dr. Chang Kun Lee, the former Commissioner of South Korea's Atomic Energy Commission, in his article "Korea's Nuclear Past, Present, and Future" (*21st Century Science and Technology*, Winter 2007-08; http://www.21stcenturysciencetech.com/Articles%202008/Korea_Nuclear.pdf), described how South Korea, under President Syngman Rhee, agreed, in 1958, to work with the United States to rescue his country from the devastation of colonialism and war, through the development of nuclear power, both for electricity, and as a science driver for the economy and the education of the nation's youth at the frontiers of physics. South Korea, Dr. Lee wrote, "is the only country in the world that has transformed its status from an LDC [Less Developed Country] to a nuclear-developed nation in the past 50 years."

Korea was delighted, but not surprised, that it won the bid for the U.A.E. plants. It has 30 years of nuclear experience without mishap, enjoys a 93.3% reactor utilization rate (the highest in the world), and can build plants faster and cheaper than its competitors.

While Korea has geared up its nuclear plant production capability, its fusion program is providing worldwide leadership. Korea's KSTAR superconducting tokamak is carrying out research, and training scientists and engineers, in preparation for Korean participation in the international ITER fusion program, and Korea will start design work on a commercial demonstration fusion power plant over the next two decades.

President Lee Myung-bak, upon his return from the Copenhagen Change Climate Conference in December, announced that his nation was intent on achieving "technology independence" in the next few years. This referred to the standing nuclear trade agreement with the United States, which is due to be renewed in 2014. As it stands, South Korea may not develop a "full cycle" for its nuclear industry, but must depend on foreign suppliers for enriched uranium, and must store its spent fuel, rather than reprocessing it to be used again. This is unacceptable for a modern nation, which must be able to assure those countries



Courtesy of Korea Hydro & Nuclear Power Co., Ltd.

South Korea plans to export 80 nuclear plants, at a total value of \$400 billion by 2030. It recently won a contract to build four units for the U.A.E. Shown: South Korea's Yongwang six-reactor nuclear power complex.

who are purchasing Korea's nuclear facilities that it can supply full material support. Under the NPT, of which South Korea is a signator, they have the absolute right to the complete cycle.

While the "non-proliferation" gang in the United States has enormous power over the negotiations, and will use that power to try to block South Korea's sovereign rights, South Korea has the weight of the emerging Asian renaissance in nuclear power on its side, and it may be near impossible for the anti-nuclear mob to stand in the way. President Lee, in fact, said that his government "plans to advance the target year of technology independence, which was originally set for 2015, by a few years."

Southeast and Southwest Asia

South Korea's breakout as a nuclear exporter is especially important for the countries of Southeast and Southwest Asia. In addition to the U.A.E., Seoul will be building a research reactor for Jordan, and potentially, full-scale reactors, as well. There are also discussions with Turkey.

Southeast Asia has been given a wake-up call by the South Korean move. The nuclear plant constructed in the Philippines by Westinghouse in the 1970s and '80s was completed but never turned on, due to the Washington-orchestrated coup against President Ferdinand Marcos in 1986, as the U.S.A. itself was being taken over by anti-development, pro-British neoconserva-



EIRNS/James Rea

German greens call for a return to the Stone Age in Berlin last September: The banner says, “Down with Nuclear Power NOW!” Germany’s insane commitment to phase out all nuclear power is now running up against the reality of the global economic collapse.

tives such as George Shultz and Paul Wolfowitz. The Philippine plant at Bataan is of the same design as several plants Westinghouse built in Korea, and the standardized model being used for Korea’s export program is based on the Westinghouse light-water reactors. A team from Korea visited the mothballed Philippine plant last year and confirmed that it could be refurbished and put to use, after these 25 long years in limbo—and Korea would be glad to build other plants in the Philippines as well.

The same is true for Malaysia, Thailand, and Indonesia, which should all have gone nuclear long ago, if not for the anti-nuclear psychosis, organized and paid for by the British and Dutch Royals. South Korea is both the model for industrial modernization through nuclearization, and now, also, the source of access to nuclear capacity, for developing countries. Several hundred youth from Southeast Asia have already been trained in nuclear science in Korea, and the program is now expanding.

The first Southeast Asian nation to go nuclear may well turn out to be Vietnam, the nation subjected to 30 years of colonial warfare by the French and the United States between 1945 and 1975. Having defended its sovereignty, at huge expense, Vietnam has now proudly declared that it will commence construction on four nuclear plants in 2014. Vietnam has signed nuclear agree-

ments with Russia, Japan, and South Korea, although the final decision on who will build the plants has not yet been made.

Japan, for decades the nuclear powerhouse of Asia, suffered the post-1980s “Western-style” anti-nuclear pull-back on nuclear energy, until recently. Japan now plans to add 12 new reactors at home by 2019, and increase nuclear production of energy from 25% to at least 40% by 2030. Through its ownership of U.S.-based Westinghouse, and partnership with General Electric, its substantial industrial manufacturing capacity is a major player in the expanding world market for new plants.

The West’s Decline

The impact of the collapse of nuclear power development in the West in the 1980s has demonstrated clearly that the human race cannot survive without a return to nuclear. However, the destruction of the nuclear industry itself, and the demoralization and brainwashed state of governments and populations of Europe and the United States, pose severe restraints on the emergency programs required to reverse the current rush into a new dark age.

James Muckerheide, the state nuclear engineer for the Commonwealth of Massachusetts, in a June 24, 2005 *EIR* article (http://www.larouche.com/other/2005/3225build_6000_nukes.html), calculated that, if the world’s population is to achieve a decent living standard by 2050, the world must produce about 6,000 nuclear plants by that time, while committing adequate resources to nuclear fusion development, so that commercial fusion energy can be phased in by mid-century.

However, the world as a whole, at this time, has a productive capacity of only about 30 nuclear reactors per year. Only Japan, Russia, and China are even capable of producing the pressurized containment vessels for light-water reactors. The United States, which estimated, in the 1970s, that it would have 1,000 nuclear plants on line by the year 2000, now has only 104 com-

mercial plants, and only 1 in the works. The U.S. shut down its only breeder reactor, and slashed the fusion program to a shadow of its original scope. Technologies, machine tools, scientists, and skilled labor of that caliber cannot be easily brought back together after this type of destruction.

In oligarchy-ridden Europe, the madness is worse. Sweden held a referendum in 1980, in which the only options were different rates for phasing out nuclear power altogether; and Germany's Red-Green government, elected in 1998, established laws mandating the elimination of nuclear. Italy closed the last of its nuclear reactors after the Chernobyl accident in 1986. All three are now considering reversing that idiocy, but at a snail's pace.

France, with 59 nuclear plants, has the world's highest rate of nuclear power usage, providing 76% of its electricity from nuclear generation. While French industries are still building nuclear plants around the world, there is only one under construction within the country, while the government subsidizes producers of solar power at 58 euro-cents per kw-hour produced, even though electricity from nuclear costs 3 euro-cents! Similarly insane subsidies for solar and windmills are in force across much of Western Europe, while its nuclear industries dwindle into nothing.

Perhaps the most insane of all, the European Union (EU) set as a condition for membership for the former Soviet bloc nations of eastern European, that they must shut down their old, Russian-built nuclear reactors! Bulgaria grudgingly closed two functioning reactors in 2006; Slovakia shut its last plant in 2008; and, just this month, Lithuania, which stood at second in the world after France in the percentage of electricity generated by nuclear power, at 72.89%, was forced to close down its only nuclear facility, in order to be allowed into the self-destructive alliance of European nations. Ironically, Lithuania has thus been left totally dependent on energy from Russia. These nations are all moving to construct new, "approved" nuclear plants, but the destructive impact will take decades to be reversed.

The task, then, is enormous, and vital, if civilization is to survive the current madness. Nuclear power is the keystone, and the East is showing the West the necessary direction.

Marsha Freeman and Ramtanu Maitra contributed to this article.

Africa and the Four Powers

Sudan Inaugurates Continental Railway

by Hussein Askary

Jan. 14—As three of the "Four Powers" (Russia, China, and India, with the United States lagging behind) are working intensively to shape the new world economic order as prescribed by Lyndon LaRouche, through national credits for financing large national and international infrastructure, scientific, industrial, and agricultural projects, African nations have vowed to join that new order. That intention was pronounced at the Copenhagen Climate Change Summit in December 2009, when African participants joined China and India in defying their former colonial powers and the current U.S. Administration. This is being backed by a real physical economic plan for development of a large part of the continent. While governments and political elites on both sides of the Atlantic are signing a suicide pact through their commitment to unscientific "climate change criteria," by putting a limit to their industrial development, Eurasia and Africa want real economic development, similar to that which was prevalent in the United States and Europe before the 1968 countercultural revolution and reborn British imperial "globalization and free trade."

African nations, with the Republic of Sudan taking a leading role, have given life to the project of connecting and integrating West and East Africa through a modern railway network. The dreams of a Dakar-Djibouti railway and a Cairo-Cape Town line, were born more than a hundred years ago, but colonialism and imperial schemes to divide and conquer Africa have prevented them from being realized. Now, the time has come for their renaissance.

A conference of the transport ministers of member-states of the Organization of the Islamic Conference (OIC) was held in Khartoum, Sudan, Dec. 10-12, 2009, to discuss launching what is officially known now as the Dakar-Port Sudan Railway Line. The OIC is an assembly of 57 predominantly Muslim nations, extending from Asia through the Middle East to Africa.