DUMPING REACTORS IN ASIA:

The U.S. Export-Import Bank and (1) Nuclear Power in South Korea

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Introduction

South Korea has become central to the plans of the U.S. nuclear industry to re-establish its global dominance in the international reactor market. This strategy links the industry's traditional international marketing practices with transnational production of reactors, combining American capital investments with inexpensive Korean labor — a new twist to an old story.

The leading company in this strategy is Westinghouse, which built south Korea's one operating plant and is currently building five of the seven nuclear power plants under construction. The prime targets of the strategy are south Korea's domestic market—one of only two growth markets in the world for the nuclear industry—and the enormous and underutilized Changwon Industrial Complex on Korea's southeast coast.

The government-owned and managed Korea Heavy Industries Corporation (KHIC) is now pondering how to utilize the complex, a multimillion dollar project built during the expansive, final days of the Park regime. Widely considered a financial disaster, KHIC is hoping to turn Changwon into an export platform for foreign reactor, turbine, and other heavy equipment manufacturers. Seven major companies — Westinghouse, a combination of General Electric and Combustion Engineering, Mitsubishi, Brown Boveri of Switzerland, Framatone, and Kraftwerk Union of West Germany — are submitting (or considering submitting) bids on the project. Winning the contract will give a firm virtual control over the Korean nu-



clear market. "If you want access to the Korean market, this is the only way to get it," an industry source told the authoritative Nucleonics Week. 1

Given the past U.S. domination of the Korean nuclear market and the close political ties between the Chun and Reagan governments, however, it is likely that the KHIC joint venture will go to an American firm — most likely Westinghouse.

Westinghouse is planning to use the Changwon complex as a base — using inexpensive and unorganized Korean workers — to manufacture reactors for Korea's nuclear power program, and to export reactor components to both the U.S. and Third World markets. In an upcoming Mexican plant, for example, a three-way deal is envisioned: Westinghouse will build the reactors, a foreign company (Mitsubishi is considered likely) will build the turbines, and the labor-intensive components will be made in south Korea. Similar transnational production plans are

being made by Bechtel and its nuclear subsidiary in Taiwan.

The American nuclear industry is desperately hoping that their proposals to south Korea will be accepted. Faced with mounting public opposition to nuclear power, a rapidly shrinking home market, and financial and environmental mismanagement, the industry is looking to the markets in Taiwan and south Korea to get them through the next few years—after which they are counting on a "new climate" for nuclear power in the U.S. "With no new domestic reactor sales expected for the foreseeable future." Business Week commented recently, "manufacturers including General Electric, Westinghouse, and Combustion Engineering see overseas sales as the only sources of new business."2

The most important weapon in their battle is the U.S. Export-Import Bank (Eximbank), which has funded more than 80 per cent of all U.S. nuclear sales to south Korea and other Pacific Rim countries. Despite the Reagan Administration's public commitment to "get the government out of business," the Eximbank — once a target of budget cutter David Stockman's scissors — has retained its financial power to lend money for capital goods exports from the U.S. The industry is also hoping for more relaxed nuclear export restrictions from the government, such as less stringent proliferation rules. Nuclear companies claim that export regulations under Carter cost the industry \$9 billion in sales.

These developments in the U.S. nuclear industry can be used to illustrate important trends in the Pacific Basin and world economies and sharp contradictions in the U.S.-Japan-south Korea alliance.

The survival tactics of the U.S. nuclear industry indicates not only a crisis for the producers of reactors and reactor components, but expresses the general weakness of the U.S. economy. This weakness – not contained to the U.S., of course – is leading to a higher level of international competition. In south Korea, for example, U.S. nuclear and auto firms want to use their joint ventures as a base for competing with Japan in Third World markets. A political ramification of this strategy is the close relationship between the U.S. and south Korea, symbolized by the Reagan-Chun summit meeting of February, 1981. Both south Korea and the U.S. are now urging Japan to rearm and spend more for south Korea's – and supposedly Japan's – security.

Yet at the same time, the crisis in the world capitalist system is leading to increased economic collaboration between Japanese and American firms, such as the linkages between Westinghouse and Mitsubishi, or General Motors and Isuzu.

These contradictions manifest themselves in the U.S.-Japan Security Treaty, and in the differing approaches of the U.S. and Japan to the proposed "Pacific Economic Community." We will discuss these and other issues in the conclusion.

This article is divided into three parts. Part One, entitled "The Rush to Nuclear Nirvana," is an analysis of how the U.S. Export-Import Bank has "bailed out" the U.S. nuclear industry by loaning money for

U.S. nuclear plants in the Third World. Part Two, entitled "Riskmakers and Risktakers," looks specifically at south Korea, and how Westinghouse "cornered" the Korean market through its friends in the U.S. government. Part Three, the conclusion, analyzes these events in the context of the U.S./Japan-south Korean alliance and the Pacific Basin economy.

Much of the material for this article is based on confidential cables between the U.S. Embassy in Seoul, south Korea and the State Department and Eximbank in Washington, D.C. The cables were acquired by the authors through the Freedom of Information Act, a law now under attack from the Reagan Administration.

We have been researching the subject of nuclear power in south Korea for one and a half years. In February and March one of the authors travelled to south Korea to interview U.S. and Korean government and business officials, as well as opposition figures. This article is from our upcoming book, *Power Failure*, to be published in spring, 1982.

PART 1

The Rush to Nuclear Nirvana

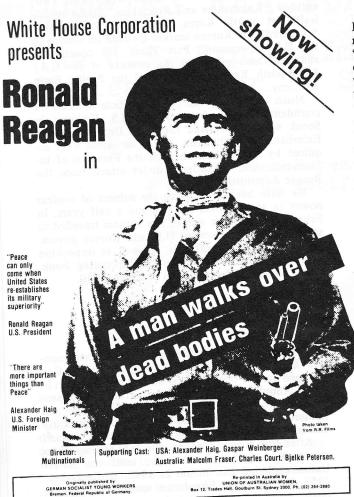
The nuclear industry was born a deformed monster in Japan when the U.S. warplane Enola Gay dropped atomic bombs on Hiroshima and Nagasaki in 1945. About 70,000 Koreans pressed into the Japanese war effort, along with 100-200,000 Japanese, and numerous Allies Prisoners of War were killed instantly and from lingering after-effects of the atomic blasts.

After this atomic atrocity, the U.S. attempted to monopolize nuclear technology, until the Soviet Union exploded this dream in 1949. In December, 1955, U.S. President Eisenhower announced a second birth in the nuclear family, the "Atoms for Peace" program.5

This child of less obvious deformity played off Third World and European lust for nuclear weapons against their desires for nuclear power technology — which was to be provided by U.S. companies. By 1956, the U.S. Atomic Energy Commission and the U.S. Export-Import Bank (Eximbank) had agreed to assist two dozen countries which entered "Agreements for Cooperation" with cheap money, enriched uranium, and technical assistance worth \$250 million.6

But this commercial "kid brother" of the nuclear bomb grew slowly. While the military spawned dozens of nuclear-powered submarines — a lucrative market for nuclear vendors like Westinghouse — the first flush of nuclear enthusiasm produced mostly small research reactor sales. Power reactor sales in the U.S. were stalled during the late 1950s by the debate over private-versus-public atomic power. It was the European stampede for nuclear power known as "eurotom" that provided the first great opportunity for U.S. nuclear vendors — an opportunity precluded at home by political forces and economic constraints. This story was repeated in Asia in the 1970s.

From their European springboard, the U.S. light



A poster published by German Socialist Young Workers.

water reactor manufacturers plunged aggressively into the Turnkey market in the U.S., beginning with the Oyster Creek General Electric plant in 1963.8 This sale was quickly followed by eight more "loss leader" plants where vendors charged buyers less than cost to establish a market. From the Turnkey market, the industry leapt to the "bandwagon" market, with U.S. utilities jostling to place 104 orders between 1966 and 1970.9

After 1962, the adolescent U.S. industry moved quickly to adopt string partners in importing countries. In Japan, General Electric licensed Toshiba and Hitachi; and in France Westinghouse licensed Framatone. John Kreuthmeier of Westinghouse's International Marketing Division explains this strategy:

The reason to establish a licensee is because in the long run you assume that market may be closed to you or maybe it's closed to you now; [to] get inside the tariff wall... you link up with somebody inside the tariff wall. 10

But when the Japanese and Europeans closed their nuclear markets to U.S. suppliers, says Kreuthmeier, "You're left only with the Third World . . . other industrialized areas would never import a product which they themselves could manufacture, especially with today's unemployment." 11

Nuclear orders peaked in the U.S. at 50 GWe in 1973 – 50 huge 1,000 MWe* reactors – with cumulative orders of 232 plants or 227 GWe of reactors on the books by the end of 1974⁷² (*A MWe is a unit of electrical power sufficient to light 10,000 100 watt light bulbs).

Then it happened: the Bandwagon crashed into a wall of anti-nuclear action, safety regulations, escalating cost, declining electricity demand, utility generating over-capacity, and technological failure — all culminating in Three Mile Island in 1978. By 1979, Washington Analysis Company was warning investor clients to steer clear of nuclear power as its prospects were "highly unfavorable." 13 A wave of order cancellations and deferrals hit the industry in the stomach.

Today the nuclear industry teeters on the edge of a market precipice. According to some analysts, Westinghouse's nuclear business may topple into extinction as early as 1987

tinction as early as 1987. This is where the Third World markets have become crucial to the nuclear industry. In the heady days of the 1960s, the industry established beachheads in several Third World markets. At that time, Eximbank listed 201 reactors amounting to 165 GWe as the potential Third World market for U.S. nuclear companies. Eximbank President William Casey predicted in 1975 that U.S. nuclear exports would reach \$5-7 billion by 1985.14 At the same time the International Atomic Energy Agency (IAEA) confidently predicted a potential capitalist Third World market of 190 GWe. 15 Countries such as Indonesia were told by the IAEA that "These modern technologies will enable many developing countries to 'leap-frog' the various stages of evolution in industry and to modernize other economic sectors as well."16

U.S. companies early propagated to the Third World the persuasive illusion — based on their own circular flow of self-congratulatory claims ¹⁷ — that nuclear power was the prestige fuel of the future. The U.S. government also spread pro-nuclear sentiments with its "Atoms-in-Action" exhibits in Taiwan, Korea, Venezuela, and Argentina in 1968, and the Philippines, Brazil, and Romania in 1969. ¹⁸ Their message received a receptive audience in the ranks of U.S.-trained Third World technocrats, military officers, and engineers.

By 1979, U.S. nuclear companies were surviving on a meagre diet of order backlogs and maintenance and fuel contracts for built reactors. Cashing in on their earlier investments in Third World countries was not only profitable, but increasingly central to the very survival of the nuclear companies in the 1970s and 1980s.

A confidential U.S. Department of Energy 1980

memo leaked to Nautilus states that:

the developing countries represent the potential market for the unused capacity in western nations. This market has been estimated at 2,000 to 5,000 MW for the next few years. This can do little to solve the overall problem of potentially unused production capacity, estimated to be at least 25,000 [MWe]. Yet it may be a means for some U.S. producers to stay in the nuclear business or a means of helping preserve the nuclear capability of Sweden and possibly Western Germany.

Thus those companies (such as Combustion Engineering) that were slow to start out on the international road, are gearing up for an export push. Says Joseph Parrina, Vice-President of Combustion Engineering's International Division, "There's a very significant foreign market we are trying to penetrate." 20

U.S. companies floundering in a swamp of difficulties are not alone. Opposition and technological problems have also wrestled European and Japanese nuclear companies to a deadlock in their home markets. All are seeking international sales along with U.S. companies. With the collapse of the Iranian, Southeast Asian, and Chinese markets, the heat is on to grab the remaining morsels in Eastern Europe (Romania, Yugoslavia), Mexico, and East Asia (Taiwan and south Korea). As Klaus Berthelt, Chairman of the West German Kraftwerk Union says, "Competition in Third World markets has become fierce, with many hungry dogs fighting over a few bones."21 One Korean writer says, "South Korea is the site of an unseen war waged by nuclear exporters to obtain nuclear orders."22 But a Korean newspaper put it most accurately: "It's like a life and death struggle as if to show their business slump."23

Structural changes in the nuclear industry are thus inevitable; the world-wide supply capability of the industry of 50-60 GWe exceeds demand by at least 50

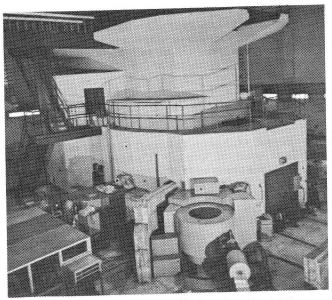
percent. Somebody has to go.

U.S. companies have been quick to bite the bullet, rationalizing and retrenching to cut costs and increase productivity. Babcock and Wilcox have mothballed their nuclear manufacturing facility in Mt. Vernon, Indiana;²⁴ General Electric's nuclear division is likely to phase down to subsistence level;²⁵ and Westinghouse recently laid off 190 workers at its Blairsville, Pennsylvania nuclear tubing plant, and announced it will close its Tampa, Florida reactor core internals plant before 1982, putting 950 workers out on the street.²⁶

Many key subcontracting firms such as Messenger Bearing in Philadelphia — the only large bearing manufacturer in the U.S. — have also gone out of business, forcing nuclear producers to turn overseas for forgings and other materials suppliers. 27 Says an executive in the nuclear valve industry, "The demand is flat city from here on out. The industry is moribund." 28

Down, maybe, but not out. Says Combustion Engineering executive Eugene Montelone, "The attitude here is that nuclear is something we feel will return, and we're planning to stay!"29

In their book The Viability of the Civilian Nuclear



Research and isotope production facilities at Kaeri.

Industry, Lonnroth and Walker explain that making reactors:

Requires the assembly and training of teams of highly skilled workmen. On the one hand, there are the engineering and design teams whose skills and technical knowledge have been developed rather specifically for nuclear production; on the other hand, there are the teams of skilled workers occupied mainly on the shop floor and the construction site (machine operators, welders, die and jig makers, fitters, supervisors, project managers. . .)30

Being at the front end of the order back-log, the crucial design and engineering teams are the most vulnerable to declining demand. The strategic problem for the nuclear industry is how to sustain these teams and at the same time fight off competitors in markets within the U.S. sphere of influence.

The remedy is clear: first, the U.S. market must be made to "come to its senses" through strong federal action. The Reagan Administration has announced reduced safety regulations and increased subsidy of research, insurance, waivers, enrichment, and waste disposal. 31 As House representative Ed Markey has commented, "Reagan is hooking up a government life-support system to a dead industry." 32

Second, the Administration is being pressured to reduce export regulations, and to increase Eximbank loans to ensure that exports go to U.S. vendors.

Behind these two short run strategies for the nuclear industry's survival lies another strategy: setting up offshore production to reduce wage costs. To obtain further Korean and Taiwanese contracts, Westinghouse and General Electric are attempting to establish joint ventures. Participation in such projects will avail these giants of a fresh crop of cheap labor to make reactors, unlike former licensees in Japan and Europe which pay relatively higher wages with time than U.S. vendors.33

In these transnational nuclear production cycles, the U.S. manufacturer will retain the design and management functions - employing those irreplaceable teams; and joint venture partners in south Korea and Taiwan will specialize in the labor-intensive production activities being shut down in the U.S. Westinghouse and a General Electric-Combustion Engineering partnership are bidding to join in Korea Heavy Industries Corporation's venture to produce and to export reactor components from the massive, World Bankfunded Changwon Industrial Complex on the southeast coast of Korea.34 Companies would thereby obtain a cheap labor offshore platform from which to supply the U.S. market should it rebound, and to tap the Korean and Taiwanese pipeline into Eximbank dollars. Runaway reactors are rapidly superseding the old international marketing/licensing strategy and also promise greater freedom from U.S. proliferation and environmental concerns. Bechtel's Pacific Engineering and Constructors Ltd., for example, formed in 1979 with Sinotech Engineering Consultants in Taipei to oversee Taiwan's reactor construction, is seeking International work.35

The key to these plans is the U.S. government, which, with the election of Reagan, has become the nuclear industry's best friend. President Reagan has announced that nuclear proliferation concerns will not obstruct nuclear exports, and an informal interagency group has emerged to promote nuclear export. The Reagan team finally swung behind Eximbank funding in the budget fights of last spring, apparently swallowing Eximbank's argument that "Foreign orders today appear to be the stimulant needed to ensure adequate industry capacity to meet tomorrow's demand." Facilitating exports, say Lonroth and Walker, "Is the simplest form of support for a beleaguered reactor industry that a government can arrange." 38

Intravenous Subsidy: Eximbank

Never weaned from the U.S. government, the prematurely geriatric nuclear industry naturally fled back to its parent for protection in the form of Eximbank loans. "None of the nuclear power plants sold abroad since 1967," says a Congressional report," would have been ordered without Exim loans." 39

Eximbank is not a household word for most Americans. Indeed, it shuns publicity, preferring to bathe in the limelight at closed corporate conferences and at the occasional Congressional hearing. Yet former Eximbank President John Moore bragged to a 1980 Atomic Industrial Forum conference that "Eximbank has provided more financial support for nuclear exports than has any other institution in the world." 40 Little wonder that he could say, "Historically, the Export-Import Bank has probably been the nuclear power export industry's best friend in the U.S. government." 41

This "best friend" is ostensibly a federal agency, created in 1934 as part of the New Deal. Today, it has a staff of 400 who loan billions of dollars of government money each year to foreign buyers of U.S.

goods.⁴² Eximbank makes low-interest, long-term, direct loans to buyers of nuclear reactors. Since 1970, it also guarantees payment of private loans extended to the buyers. Eximbank — and thereby the American people — absorb the risk.

Eximbank is a tool of U.S. foreign political and economic policy. Its geographical concentration thus follows the dictates of the U.S. State Department and the targets of U.S. exporters.⁴³ Since the 1960s, this has meant an increasing commitment to Pacific Rim countries, the U.S.'s fastest growing trade partners (see Chapter 6). In 1979, Asia accounted for 37 percent of Eximbank's exposure, displacing Europe and Canada from the leading exposure.

Eximbank's Nuclear Loans

Each year Eximbank announces that there is a huge nuclear export potential and declares its readiness to go to bat for the nuclear industry. For example, Eximbank President William Casey said in 1975:

A few years ago we were the acknowledged leader in supplying this market. Nuclear reactors were touted as our biggest future breadwinner in world markets. Between 1955 and 1965, we had almost 100 percent of the market. By 1974, our share had fallen to 60 percent. So far in 1975, we have less than half of the business. Although our rate schedule now calls for 9 percent to nine and a half percent on a loan having the repayment period usually required by a nuclear power plant, we are prepared to go lower when necessary to meet more favorable financing terms which other countries may offer in order to increase their share of this market. 44

Between 1959-80, Eximbank authorized \$7.1 billion in direct loans and financial guarantees for 49 reactor exports — with 56 percent going to the Pacific Rim (south Korea, Taiwan, and the Philippines). Two-thirds or \$4.7 billion was loaned since 1973 when the Nuclear Bandwagon crashed (with 70 percent of this going to the Pacific Rim). South Korea alone accounts for \$2.4 billion or 34 percent of these loans.

Eximbank's nuclear financing within each Pacific Rim country dominates non-nuclear Eximbank loans. "The days when the U.S. dictated to the rest of the world are gone," says John Kreuthmeier of Westinghouse, "So the countries likely to continue to buy from the U.S. are, I hate to use the term, almost client states. People who have any freedom of choice whatever are not likely to remain customers of the U.S." 45

(To be continued in the next issue.)

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Continued from p.21

The third rationalization program of the steel industry in the early half of the '60s generalized this labor control system across the industry. NSC's Kimizu steel mill, completed under the third program, is commanded almost totally by the NSC head-office at which the mill was connected to on-line computer. Autonomy has been taken not only from the workshop, but also from the mill itself. There, the automated production processes isolate each worker from his fellows. Workers, strewn over the vast premises of the factory with chance even to talk with one another suffer from deadly isolation. Tekko Roren continued, in fact prospered as a big union, but the union as the cement of worker solidarity no longer existed at the workshop.

Before this process started, Tekko Roren under the leftwing Mindo leadership had been able to put up vigorous resistance to capital. In 1957, the steel workers carried out 11 successive 24-hour strikes for higher wages. During the 1960 anti-treaty struggle, workers at Nippon Kokan Kaisha spearheaded the bold action against Eisenhower's visit to Japan by taking his press secretary captive for several hours in his stranded car. But the undermining of the workers power at the workshop rapidly changed the union and gave rise to a new type of pro-management leadership headed by Miyata Yoshizo who in 1959 became a national leader of Tekko Roren.

The new rightwing trend headed by Miyata and his group should be distinguished from the traditional rightwing unionism represented by Domei. Both were equally anti-communist and pro-management, but while the Domei-type unions had their identity as union movements, which from their ideology chose to collaborate with management, the new trend is toward unions which are not labor unions at all but rather direct agents of management. This new trend, later to be known as the IMF-JC trend, is the product of the total control of the workshop by the management established in the first half of the '60s.

(This Chapter continues in the next issue.)