

JAIFF Issues 10-Point Proposal on International Development of the Nuclear Industry

On April 11, the Japan Atomic Industrial Forum, Inc. (JAIF) issued its "Proposal for the International Development of the Nuclear Industry." Developed at a colloquium held intermittently between November 2004 and March 2005, the proposal was presented at a meeting of the Working Group on International Issues, under the Atomic Energy Commission (AEC)'s New Long-term Program Council.

The proposal notes the strategic importance of – and declares a basic commitment to – international development (i.e., the expansion of nuclear exports), and presents ten specific proposals, the first of which is clarification of the position of international development in national policy.

The colloquium was chaired by Prof. Keiji Kanda, director of the Japan Energy Policy Institute, and was organized by JAIF's Committee on the Development and Use of Nuclear Reactors. Some 29 people from industry and other experts participated, along with eight observers from the Ministry of Economy, Trade and Industry (METI), the Ministry of Foreign Affairs, and other ministries and agencies. The colloquium met seven times from November 2004 to March 2005.

The proposal states that Japan has an international obligation as an advanced nuclear nation to contribute to a stable global energy supply, as well as helping to combat further global warming. It also emphasizes that promoting international nuclear cooperation will aid in bringing a peaceful resolution to global

energy-resource issues. In addition, Japan can both play an active role promoting international development in neighboring Asian countries, ensuring that nuclear technology is used exclusively for peaceful purposes, and thereby make a contribution to the stable supply of energy and, consequently, energy security.

The strategic significance of the international development of the nuclear industry has increased from multiple viewpoints, especially (1) maintaining and developing the accumulation of technology and human resources in Japan's domestic nuclear industry, (2) reinforcing that industry's ability to compete and cope globally.

In that light, a 10-point proposal was put forth:

I. Clarify the position of international nuclear development in national policy.

In international development, it is essential that (1) the existing nuclear non-proliferation regime be respected and reinforced, (2) nuclear safety culture be nurtured, and (3) the public and private sectors make a concerted effort to regard international development as an important national issue.

II. Create a mechanism enabling related ministries and agencies to effectively coordinate the implementation of international exchange activities and assist in human resource development.

III. Facilitate the prompt and efficient confirmation of safety by the Ministry of

Economy, Trade and Industry (METI), the Japan Bank for International Cooperation (JBIC), and Nippon Export and Investment Insurance (NEXI), and individual exporters.

In the case of financing contracts based on JBIC export credits, the series of procedures (i.e., safety confirmation → export insurance → export permission) should be carried out promptly. METI, JBIC, NEXI and the exporters should cooperate closely, just as they did in the bidding in China (see the Feb. 28 article entitled “MHI Puts in Bids for Four Chinese Reactors”).

IV. Consider the resumption of loans – currently prohibited in principle – to advanced countries by the JBIC.

A general prohibition has been imposed upon loans to advanced countries from the JBIC, the main reason being to avoid loading down the operations of private financial institutions. However, many of those financial institutions find it difficult to extend financing over the ultra-long periods needed for NPP construction, even with advanced countries as the intended recipients, so the general ban on such loans ought to be reconsidered.

V. Make steady efforts to gain international support for nuclear power (e.g., include it in CDMs).

VI. Assist in the development of a system to make financial compensation for nuclear-related damage in countries that introduce nuclear power.

VII. Be flexible in the procedures for export permission.

In some cases, one limiting condition in the international competitive bidding for nuclear power-related projects has been whether or not the export permits for the items in question were completed by the time of the bidding. Accordingly, a more flexible export permit system is desirable, with nuclear non-proliferation kept as the grand overriding concern.

VIII. Have government and industry make a concerted effort to support the development of infrastructure in countries receiving

exports.

Within those countries intending to introduce NPPs, the public and private sectors should make a concerted effort to create infrastructure for such items as safeguards and physical protection, regulatory systems, operation and maintenance of plants, and quality assurance.

IX. Develop NPPs that are internationally competitive.

While the Japanese government and the nuclear industry are endeavoring to maintain domestic nuclear technology, they should also develop innovative technology and NPPs that are internationally competitive, including highly economical, small- and medium-size reactors, such as those that are under consideration and being designed now.

X. Have a top official from the Japanese government approach the governments of counterpart countries.

In countries requiring a government-level approach, a top official within the Japanese government should approach the government of the counterpart country, such as a having the head of the Ministry of Economy, Trade and Industry (METI) send a letter of support.

In response to the proposal by JAIF, the Working Group on International Issues of AEC's New Long-term Program Council discussed international development and released its own statement. It noted that in advanced nuclear countries, the industry should basically take the lead in international development on a commercial basis. Meanwhile, in those countries already moving into nuclear generation, private industry should take international agreements into consideration and cooperate with its counterparts in the other countries (for which the government should give appropriate support). On the other hand, for those countries considering the introduction of nuclear power in the future, the government should provide indirect support in such areas as: (1) developing nuclear nonproliferation systems, (2) introducing nuclear safety regulation systems, (3) issuing

policies on radioactive waste disposal, and (4) obtaining public understanding toward nuclear power.



Having launched their business with nuclear plants introduced from the U.S., Japanese manufacturers thereby acquired the necessary technology and learned to manufacture them domestically. At present, their management and operations encompass basic planning, detailed designing, preparation for licensing of facilities and equipment, on-site construction and trial operations. Japanese manufacturers have not yet exported an entire NPP, but they have exported individual components, including reactor vessels, turbines, primary coolant pumps and feedwater pumps. Given that experience (i.e., exporting large components), and given that all manufacturers are basically competitive in on-site construction, it is clear that Japanese manufacturers are for the most part able – both technologically and economically – to export entire NPPs, including on-site construction and trial operation.

In order to survive in the competitive international market – not just against advanced nuclear exports from Europe and the U.S, but also those of Korea and other countries that

intend to enter – it is important that Japan be an “NPP brand,” exporting NPPs that have been commercialized in Japan with the country’s own technology. The Japanese nuclear industry is now engaged in studies on large reactors, as well as small and medium-sized ones, to respond flexibly to different needs for generation capacity: not just as future replacements, but as competitive products for the overseas market. However, for the time being (until 2030 or so), the industry plans to export LWRs based on U.S. technology, in cooperation with American companies. Particularly, in the case of construction overseas, Japanese companies cannot fully put all their capacities to play, partially because of differences in licensing, bases for standardization, and working environments. It is thus practical for Japanese companies to export jointly with U.S. companies.

Moreover, it is not enough to talk about exporting plants only in terms of equipment and facilities: it is also necessary to consider the totality of their management and construction, providing technology related to operation and maintenance, fuel supply, and technology and services related to the treatment and disposal of waste. The day may soon come when Japan will be discussing the export of Japanese-made uranium fuel, and offering reprocessing services in Japan.

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