

# The Nuclear Era Enters Phase Two: Entrusting the Future to Firmly Grounded Policies

## Interview with Minister Akira Amari of the Ministry of Economy, Trade and Industry (METI)

When Minister Akira Amari of Economy, Trade and Industry embarked on his career in politics 23 years ago, he chose the field of economic and industrial policies as his life work, and as minister has now climbed to the pinnacle of national policymaking in that area. During his years as a politician, he has come to view the issue of energy, especially nuclear energy, as one of the keys to national strategy. Amari has organized suprapartisan legislative study groups on energy policy and led the Energy Comprehensive Strategy Joint Subcommittee of the ruling Liberal Democratic Party (LDP). He was also instrumental in legislating the Energy Policy Basic Law in 2002, as well as formulating the Basic Energy Plan that was based on that law. In the half century since Japan first introduced nuclear energy, the industry has undergone multiple trials and difficulties, but now has overcome those to the point that the country positions it as one of the pillars of national policy. We asked Minister Amari in a recent interview about his views on nuclear energy at this juncture.



**METI Minister Akira Amari**

Please tell us about your perceptions of and thoughts about nuclear energy at this moment in history.

**Amari:** When nuclear energy was first being developed in Japan, nuclear power was welcomed as “the dream energy of the future.” The cartoonist and animator Osamu Tezuka depicted “Tetsuwan Atom” (known internationally as “Astro Boy”) as the hero of the age, inspiring dreams among many Japanese people. However, ever since the 1986 Chernobyl accident, the negative aspects of nuclear energy have come to the fore, overshadowing its advantages, and signaling the beginning of the age of

“nuclear energy bashing” worldwide. In Japan as well, the serious criticality accident that occurred in September 1999 at a nuclear fuel plant owned by the JCO Co., Ltd. created a public mood in which supporting nuclear energy became something shameful to do. On a global basis, moreover, every country but Japan and France rolled back their nuclear energy policies, with no new nuclear power plants (NPPs) being constructed at all in the United States. This era of the “nuclear energy winter” has lasted more than three decades.

However, when regarded on a more level-headed basis, nuclear energy is a technology that can be properly controlled,

and is also a wonderful form of energy that can yield humankind untold benefits. Even during the era of nuclear energy bashing, thinking members of the political, industrial, bureaucratic and academic spheres, along with related interests in local regions, withstood the severe “winter winds” and continued to believe in the future of nuclear energy, continuing to promote it. Those efforts are finally beginning to bear fruit. While that fruit may still be only in the bud stage, at least the storms of the bashing era have died down. The opinion has naturally arisen that nuclear energy is not just a stable source of energy, but also highly valuable in terms of environmental protection.

One example of that shift in attitude is the way that the activist Patrick Moore, one of the founders of Greenpeace, an international environmental organization that is negative toward nuclear energy, has converted his opinion to the support of nuclear power, having concluded that “only nuclear energy can save the earth from global warming.” Despite being characterized as a traitor by his colleagues, he has announced that he will not change his mind on this matter, and is actively working for it. Another similar example is Dr. James Lovelock, the internationally prominent ecologist who is the proponent of the “Gaia” hypothesis. The impact of such “conversions” is incalculable, and I believe that the trend in global perception is shifting in favor of nuclear energy.

However, public opinion polls show that though the number of people against NPPs is declining, the number actively supporting them is not increasing. There are probably many passive supporters of nuclear energy. The foundation formed by the supporters of nuclear energy is thus still fragile, so it is important to promote the awareness newly, one step at a time, with safety as the grand premise.

The Japan Atomic Industrial Forum (JAIF), with the strong backing of Chairman Takashi Imai, has formulated the Nuclear Industrial Safety Charter, expressing the resolve to address the issues with a

frame of mind never to allow accidents to happen in the nuclear industry. In that fashion, Japan has set the stage, treating nuclear energy as one of the keys to national strategy, with the public and private sectors drawn together under the standard of political leadership. What sort of catchphrase or slogan do you feel best captures that spirit?

**Amari:** In the early years of nuclear energy, everybody applauded it as the dream energy of the future, no matter if they understood it or not. Now, however, people can see both its advantages and disadvantages, and firmly-grounded policies must be implemented to enhance the former and overcome the latter. It is my perception that nuclear energy now entered Phase Two of its existence – a rebirth, so to speak – in which people have entrusted the future to it, both in terms of Japan's energy and the prevention of global warming.

Incidentally, the recent nuclear tests by North Korea highlight the threat the world faces from nuclear weapons, and the problem of nuclear proliferation is casting a long shadow on the peaceful utilization of nuclear energy. How can the two be reconciled?

**Amari:** Japan is only non-nuclear-weapons state to be permitted to carry out the nuclear fuel cycle, in other words, to conduct uranium enrichment and reprocessing. That is because Japan has firmly articulated its so-called Three Non-nuclear Principles of “not possessing, not producing, and not permitting the introduction of” nuclear weapons. Moreover, Japan has completely passed the inspections conducted by the International Atomic Energy Agency (IAEA), and has positioned itself as a “model” nation accepting supervision on a 24-hour basis.

However, the countries that are working toward the introduction of the peaceful utilization of nuclear energy (i.e., nuclear power), particularly those Asian countries for which great economic strides are predicted, are forced to take nuclear energy into consideration simply because the global environment will be unable to maintain itself should fossil fuel use continue at current rates. In that situation,

unless a framework is organized in which those countries construct only NPPs, while importing their nuclear fuel from overseas via a guaranteed supply, they will all want to import mined uranium, enrich it and reprocess it, leading to an increased threat of nuclear proliferation. That is precisely why it is crucial to develop an international system of guaranteed supply, by which those countries can secure their nuclear fuel in a stable fashion. I believe that Japan should cooperate in the establishment of such a framework.

Minister Amari, you have placed great emphasis on Asia up until now. Please tell us your thoughts on the forms of international cooperation that Japan can extend and the contributions it can make in the area of nuclear energy. Also speak from the viewpoint of the nuclear energy business, especially inroads being made into foreign markets – one of the main “battlegrounds” of the future.

**Amari:** Japan now has three main groups of nuclear power plant manufacturers. However, during the long period of the “nuclear energy winter,” nuclear engineering vanished as a course of study in the nation's universities, and the contraction of the nuclear business has made it difficult for manufacturers to maintain their level of engineers. So I think it is remarkable they have lasted as well as they have. Nonetheless, Japan's current light water reactors (LWRs) will not need replacement for a very long time – not until 2030 – making the issue of maintaining and supporting engineers during the interval a task of utmost importance.

In that respect, given that those other Asian countries – China, India, Vietnam, etc. – are jostling to plan and build new NPPs, it behooves Japan to give them technical cooperation. In business terms, moreover, if such cooperation by Japan can lead to the export of actual NPPs to those countries, that would serve as the motive force for the expansion and development of new technologies and engineers, and not just the handing down of old technologies as has been the case heretofore. Japan stands at the leading edge of world nuclear

technology, not only in the area of NPP reactors themselves, but also in such technologies as MOX fuel, as well as fast breeder reactors (FBRs). It is thus essential for Japan to make contributions internationally in order to help alleviate the energy crisis and help environmental protection, as well as to relay those efforts into business opportunities that will allow its manufacturers to maintain their corps of nuclear engineers. As far as the Japanese government is concerned, we would like to reinforce our partnership with the private sector from that broad perspective, providing active support so that they can expand their business activities.

The nuclear industry is heading into an era of international regrouping and mergers. What do you think about that?

**Amari:** Toshiba has acquired Westinghouse Electric, and Mitsubishi Heavy Industries (MHI) has formed a partnership with Areva. I think we should welcome such developments, for those international partnerships impart the Japanese nuclear industry with a stronger constitution. As a manufacturer specializing in boiling water reactors (BWRs), it made sense for Toshiba to acquire another manufacturer specializing in pressurized water reactors (PWRs) such as Westinghouse, as the acquisition will allow it to orient itself competitively in the international reactor market, in which both PWRs and BWRs are competing with each other. I think it is a significant and constructive move, in terms of both the accumulation of technology and the expansion of its business.

From now on, what can Japan do for the energy policy of the entire Asian region? The first thing we must do is to contribute to other countries in the area of safety management. If an accident occurs in one of the many new NPPs being constructed in Asia, the impact would be just the same as if the accident had happened domestically in Japan. We must adopt the mindset that another country's accident is our own. Whenever a new plant goes into operation in Asia, nothing wrong should happen as

long as it completely clears Japan's safety standards. That is one of the main

contributions Japan can make to Asia in nuclear energy development.

Interviewer: Hidemasa Naka (nuclear energy journalist)