

# The Consumer's Viewpoint

## by Y. Tanaka, Executive Vice-President, The Japan Atomic Power

### INTRODUCTION

It is my pleasure to have the opportunity of making a speech on the occasion of the 4th Pacific Basin Nuclear Conference.

We in Japan have gained much in experience through the 20 years that we have undertaken nuclear power generation since 1963. Nuclear power has achieved its place as the mainstay of electrical power supply from both technical and economical viewpoints. However, as you may be well aware, Japan is a nation poor in resources, and depends almost all of her uranium resources on import. Therefore, securing uranium resources has far-reaching implications on the future of Japan.

In the light of these circumstances, I will venture to proceed in putting forth my views regarding Japan's status quo, problems and her future in the securing of uranium resources, namely from the viewpoint of Japanese uranium exploration activities overseas, participation in overseas uranium development, uranium procurement, and uranium stockpile.

### JAPANESE URANIUM EXPLORATION ACTIVITIES IN OVERSEAS COUNTRIES

In Japan, overseas uranium exploration has been led by the Power Reactor and Nuclear Fuel Development Corporation (PNC) since the latter half of the 1960's.

PNC is actively promoting uranium exploration in three major areas: Canada, Australia, and Western Africa, with a goal of launching uranium production in the 1990's.

That is to say, PNC plans to select two projects for each of the three areas, secure fund allocation as important projects of PNC, and determine the possibility of starting production in such regions in a couple of years.

The major regions, targeted for the projects are Thekulthili Lake in Canada, Officer Basin in Australia and Sekiret in Niger.

The Overseas Uranium Resources Development Ltd. (OURD) is now conducting research in Afast, Niger, with France (COGEMA) and Niger (ONAREM). Furthermore, International Resources Co., Ltd. is promoting its investigations with ONARAM at Air area in Niger. In case of success, we expect about 2000 tons of uranium

resources per year in total will be made available to Japan from the two projects.

Furthermore, the Japanese utilities are conducting research on quantity, distribution and exploration of overseas uranium resources through the Uranium Resources Development Committee (URDC) organized by the industries concerned. It has thus far been difficult for Japan to obtain exploration permits at promising areas in the world due to its late start. However, this is now an easier task than before due to the slowdown in uranium exploration.

(The Nuclear Almanac '82: Japan Atomic Industrial Forum)

### Participation in Overseas Uranium Development

Besides uranium exploration overseas, we are also undertaking participation in management of overseas uranium development which is reflected in the activities of Compagnie Minière d'Akouta (COMINAK) in Niger. COMINAK is a joint venture established by OURD, France (COGEMA), Spain (ENUSA) and Niger (ONAREM) in 1974, and is currently mining uranium at the Akouta project. Commercial production at Akouta was launched in 1978, and an approximate total of 6600 tons was reached by the end of 1981. Japan is scheduled to receive 43.4% of the uranium concentrates produced, and the contribution of this project is invaluable for Japan's efforts in securing uranium resources.

Active participation is being made by the Japanese utilities, in the development of uranium through investment activities in overseas projects. Kansai, Kyushu and Shikoku Electric Power Companies as well as C. Itoh have jointly invested in Energy Resources of Australia Ltd. (ERA) in Australia. ERA has commenced its production of uranium from the Ranger project in October 1981. A total of about 15 000 tons of uranium resources is expected to be supplied to Japan from the project for a period of 15 years, starting in 1982.

Furthermore, Shikoku and Kyushu Electric Power Companies have financing and purchasing contracts with Queensland Mines Ltd. (QML) in Australia. QML has been developing the Nabarlek project and started mining in May 1979. These two utilities are expected to receive a supply of about 3800 tons of uranium in total.

(The Nuclear Almanac '82: Japan Atomic Industrial Forum)

#### Status of Securing Uranium Resources and Future Prospects

Status of Securing Uranium Resources. Japan has thus far secured the supply of about 152 000 tons of uranium, which approximately covers the total uranium demand in Japan up to the mid-1990's. Procurement measures of the 152 000 tons are as follows:

|                                    |     |
|------------------------------------|-----|
| exploration and development        | 10% |
| participation in management        | 9%  |
| financing and purchasing contracts | 2%  |
| long-term purchasing contracts     | 79% |

And supplier countries are as follows:

|              |     |
|--------------|-----|
| Canada       | 31% |
| UK           | 22% |
| South Africa | 15% |
| Australia    | 11% |
| Niger        | 10% |
| France       | 7%  |
| USA          | 4%  |

There are two major features which are apparent in the procurement of uranium in Japan. Firstly, we depend up to 80% of our uranium procurement on long-term purchasing contracts, and secondly, supply source is unevenly distributed; namely approximately 70% of our supply is provided by the three major supplier countries. Under the status quo, it is necessary that we actively promote uranium exploration on our own, and take an active part in the management of overseas uranium development. While we make an effort to secure our uranium resources through long-term purchasing contracts, we must at the same time direct our efforts toward the diversification of supply source.

Future Prospect of Uranium Procurement. With the stagnation in world economy, nuclear power development has apparently slowed down in Japan as well, and new demand for uranium resources is not likely to increase in Japan, nor elsewhere, for that matter. Hence we can say that Japan will not be required to conclude a large number of new contracts in the near future.

(Japanese Atomic Industries: Ministry of International Trade and Industry)  
(Long-Term Plan for Development and Utilization of Nuclear Power: Atomic Energy Commission)

#### Uranium Stockpile

As I have already mentioned earlier, we are working to secure our uranium supply through overseas

exploration, participation in development of overseas mines, long-term purchasing contracts, etc., but the situation whereby we depend all of our uranium resources abroad remains unchanged. Hence our energy supply is subject to any change in policy of the supplier nation or suspension of mining operation due to various causes, which all amount to the potential instability of our energy supply.

In this regard, ensuring a uranium stockpile is important for establishing the indigenous nuclear fuel cycle in Japan. We presently have secured a buffer stock which covers a few years' requirement through all steps of the nuclear fuel cycle, and in addition, stockpiling of a certain amount of natural uranium is now under consideration as an emergency countermeasure.

As for the amount of uranium to be stockpiled, a larger stockpile will certainly contribute to its effectiveness; however, this would involve enormous costs. Hence in forming any conclusions as to the desirable amount of stockpile, we must take into account, the international circumstances surrounding nuclear fuel, such as the worldwide supply and demand of uranium, status of overseas uranium development, international, political, and economical situation with reference to the status of uranium stockpile abroad.

(Report of the Atomic Energy Commission, Nuclear Fuel Cycle Subcommittee, February 1982)

(Report of the Nuclear Fuel Research Committee, Uranium Stockpiling Subcommittee, February 1983)

I hope I have been able to provide you with an idea of the status quo and outlook of Japan's uranium procurement activities.

I am convinced the situation is more or less the same in our neighbouring countries in the Pacific Basin Area.

It is often the case that countries which are actively promoting nuclear power development, with the exception of Canada and the U.S., have limited uranium resources, while countries which need not do so are often abundant in uranium resources.

The close cooperation and collaboration among both consumer and supplier nations will provide the key to ensuring the uninhibited supply of uranium resources. With these remarks, I would like to conclude my speech.

Thank you for your kind attention.