

ANNUAL REPORT
OF THE
EURATOM SUPPLY AGENCY
FOR 1977

I.

The external influences described in the 1976 Annual Report, which were largely responsible for a slowdown in the construction of nuclear power stations, were also decisive in the year under review. Apart from the general economic situation, the discussions on the pros and cons of nuclear energy, which were carried on with wide public participation, as well as the associated disruptions and protest campaigns, and the difficulties connected with the licensing procedures, resulted in sometimes considerable delays in the implementation of the respective nuclear energy programmes in most of the Member States.

Consequently, during the period under review, the Agency again received no new orders relating to the long-term coverage of additional requirements of natural uranium and uranium enrichment services.

To an even greater extent than in the preceding years, the effects of decisions by political and administrative bodies on the form and the performance of contracts for the delivery of uranium or fissile material were clearly and, for the users in the Community, sometimes sorely felt. In general, it can be said that the boundaries between the industrial and commercial sector on the one hand and the political and public-law sector on the other are fluid. Besides determining general conditions, intervention by the public authorities affects, inter alia, contract matters such as pricing, stockpiling and the use of the material. Furthermore, the actual performance of contracts is largely dependant on the additional procedures under public law, such as those relating to export and transfer licences.

It is unnecessary here to go into these questions in detail but, on the other hand, it should not be overlooked that the continuously increasing administrative hurdles and bureaucracy in the fuel-cycle field may bring about a situation in which the users are no longer prepared to stake their money on the reliability, planability and practicability of the nuclear option.

There is no doubt that the aims of the non-proliferation policy meet with the full accord of the users. What is desired, however, is that the necessary procedure is so drawn up that the longterm dispositions, which are characteristic of the nuclear power sector, can be made with confidence in the reliability and foreseeability of the framework conditions.

The problems mentioned above gave rise in 1977 to practical difficulties in the performance both of natural uranium contracts, and of contracts for enrichment services and for the supply of special fissile material. This was consequently the Agency's principal sphere of activity during the year under review. The Agency is, however, of the opinion that all the legal and other possibilities were exhausted with a view to taking the necessary and desirable measures that are in the interest of the Community's users and producers. The Agency will make an effort in future to do still more in respect of prevention and also to be equipped to take remedial action as regards individual bottlenecks.

II.

NATURAL URANIUM SECTOR

In particular for natural uranium supply, 1977 was a difficult year. Not only two major producing countries were out of the market, but also the political constraints surrounding natural uranium supply were increased.

The tendency of the public authorities of certain producing countries to intervene in the conditions of supply of uranium occurred not only in the area of a reinforcement of "safeguards" in the usual sense (i.e. diversion of nuclear materials to military use) and of physical protection, but also in a restrictive sense, namely, with respect to the conditions of use. There were also efforts to control and limit uses, such

as reprocessing, enrichment beyond 20 % and stockpiling of nuclear fuels. Moreover, as will be seen later, in some cases those terms of supply contracts which are regarded as commercial matters, are also being submitted to the intervention of public authorities.

Canada

1. The significant event of 1977 was the discontinuance, with effect from 1 January 1977 of uranium deliveries by the Government of Canada to the Community. The reason for this embargo was that no agreement had been reached between the Canadian Government and Euratom on amending the 1959 Agreement, as requested by the former, after its decision at the end of 1974 to require more stringent safeguards on sales abroad of Canadian material, equipment and information in the framework of its non-proliferation policy.

At the end of December, the two parties reached an interim agreement, which, inter alia, makes the enrichment (to more than 20 %) the reprocessing and the stockpiling of plutonium and highly enriched uranium of Canadian origin subject to certain rules; the uranium delivered to the Community up to the end of the interim period (end of 1980, but might be extended) can undergo these "sensitive" operations after the Government of Canada has been duly notified (and consulted, as necessary).

For 1977, the quantities under embargo were equivalent to 2 500 tonnes of uranium.

This situation obliged the Community consumers affected to cover their needs by concluding short-term lease contracts or to make spot purchases, and this has helped, if not to raise the spot price, at least to maintain it for the time being at around \$ 43 per lb of U₃O₈.

2. The next important development in the year under review was the letter which the Minister of Energy, Mines and Resources addressed to Canadian producers in March, and made public in August, in which the ground

rules for a state pricing policy were laid down, viz :

" With regard to all contracts not yet approved by the Atomic Energy Control Board, and all future contracts, the Government will expect that terms of sale will provide for an annual renegotiation of price based on then existing world prices giving consideration to such factors as term and size of contract and any special financing arrangements. Provision should also be made for an escalating floor price which will protect investment in production facilities."

The result of that decision has been that the Canadian Government has in fact extended its intervention in the area of uranium export prices. There is some confusion in the minds of Canadian uranium producers and consumers over this "world market price" concept and so far, the Canadian Government has not put forward any precise criteria, despite the fact that this problem has been raised on several occasions, notably during the meetings between Canadian officials and Commission and Agency representatives at Ottawa in July and during the hearings held in connection with the Cluff Lake deposit.

As long as this policy is maintained and the criteria for its implementation are not known and prices are ultimately determined by state instances and not by the contractual partners, serious uncertainties result for users, for they do not know the prices to be paid on a long term basis. Prices may only be known shortly before delivery, a situation which undoubtedly would confront them with severe financial planning problems.

The Supply Agency considers that such a situation is unacceptable and that a satisfactory solution to these problems must be found. In this connection discussions will be held with the appropriate Canadian authorities.

Australia

On 25 August 1977, the Australian Prime Minister announced, following Mr. Justice Fox's Report, his country's new policy towards uranium exploitation and production under strict safeguards conditions.

In addition to the requirements for safeguards and the conditions for the use of this uranium, which must be covered by prior agreements with the respective public authorities, questions arise as to the scale of Australian uranium production and conditions governing its marketing. However, some points have already been clarified:

- As a consequence of the demands on environmental grounds and the measures for the safeguarding of the rights of the aboriginals, production from the various Australian mines will be developed and exploited in stages (under the -desired - ^{control} 75% of Australian interests) in line with the findings of Mr. Justice Fox's enquiry. Nevertheless, the Ranger deposit (85 000 tonnes of U) should be the first to come into production, in 1981-82, followed by Nabarlek and Jabiluka.

- The Government will not take a final decision on the Marketing Authority recommended by the Fox Report, until the legal implications in regard to foreign laws on competition have been examined. As stated in the published documents, the Australian Government wishes to have permanently, in any event, knowledge, supervision and control of the commercial arrangements by which the uranium will be exported, so that the "orderly development" of Australian resources will be assured.

To what extent the political requirement of "fair and reasonable terms" in respect of the uranium trade in Australia will lead to intervention by the state authorities and thereby restrictions on the form of contracts between users and producers is still open.

In the interests of users it is to be hoped that the opportunities for intervention will remain limited.

The Supply Agency will try to clarify this situation. Under the existing conditions, it is not possible to say definitely to what extent Australia will become a long term and reliable supplier of uranium for the Community.

Other non-Community producing countries

The flow of supplies contracted from South Africa, Niger and Gabon has continued without interruption, although events elsewhere have had some effect on availability and price.

Supplies from South West Africa/Namibia were lower than expected due to technical problems at the mine and plant.

Community production and exploration

Production of natural uranium within the Community during 1977 amounted to an estimated 2 250 tonnes. Nearly all the production took place in France, the remainder being in Germany.

Exploration for uranium is under way at many sites in the geologically favourable areas within the Community, assisted in many cases by Community financial support. So far encouraging finds have been made in Greenland. The most recent estimates show reasonably assured resources of 27 000 tonnes and estimated additional resources of 16 000 tonnes.

Community situation

As was stated in the 1976 Report, Community consumers' requirements are covered by contracts up to the early 1980's. At the present time it is impossible to be more precise owing to the well-known difficulties encountered by electricity producers in fulfilling their programmes for building new nuclear power stations.

The number of contracts concluded by Community consumers in 1977 was very small.

Contracts involving a financial interest in prospecting were signed by some electricity producers with Community mining companies. Thirteen purchase contracts and one exchange contract, involving quantities less than 20 tonnes, as well as ten purchase and four lease contracts in respect of quantities exceeding 20 tonnes for a total of 1 600 tonnes in all were also concluded through the Agency. All the purchase contracts, except one, were for immediate deliveries (1977-78). Those for substantial quantities being needed, inter alia, to offset the repercussions of the discontinuance of the deliveries from Canada.

No long term contracts were reported to the Agency. However, four contracts were renegotiated at the request of the suppliers. Concerning other source materials, one contract was concluded in respect of monazite and seven in respect of depleted uranium.

The average price in respect of "spot" purchase contracts of over 20 tonnes concluded by the Agency was \$ 41 per lb U_3O_8 . That the spot price was maintained at around this level during the year seems at least partially to have been influenced by the uncertain situation in Australia and Canada. The Agency considers, however, that such a price is not representative of the prices that in more normal conditions would have been applicable for long term contracts in 1977 and consequently that a price at that level will not serve as a reference price for future transactions.

Finally it can be mentioned that no significant average price can be calculated for deliveries under "old" contracts, since no deliveries were received from Canada.

III.

SPECIAL FISSILE MATERIALS AND ENRICHMENT SERVICES SECTOR

In this area too, the general energy-policy and economic difficulties referred to in the introduction were experienced more keenly during the year under review.

The chief country supplying enriched uranium and enrichment services has still been the U.S.A. About half of all the low-enriched uranium delivered to the Community after enrichment came from the USSR. These deliveries proceeded without any difficulties worthy of mention. If the contract situation stays as it is, the USSR's share of enrichment services will continue to decline. URENCO also began making deliveries during the year, initially to the extent of just 1 % of the overall demand.

In particular, the following measures were taken: a short-term enrichment contract (one only) was concluded with the USERDA for 19 kg of highly enriched and 1.5 tonnes of low enriched uranium. In addition, a contract was concluded with URENCO. Besides these, several contracts were concluded with the USERDA, mostly for the supply of very small (milligram) quantities of specific fissile isotopes; 15 purchase contracts were concluded for 162.6 t U (<5% U 235) and 13 for almost 250 kg U (>5% U 235) mostly with various Community customers - and 16 contracts involved the sale of plutonium (about 1.5 tonnes in all). Enriched uranium prices are as a rule determined by the value of the natural uranium fed into the enrichment process and the separative work involved. In the year under review, the USERDA raised the price of the kilogram unit of separative work for requirements contracts to US \$ 69.75 (ceiling charge) on 27 January. As from 1 July, however, the price fell to US \$ 67.58 but was raised provisionally on 1 January 1978 to US \$ 69.80. A further rise to US \$ 83.15, or the ceiling charge, has been announced for Spring 1978. The price for fixed-commitment contracts went up at the end of November to US \$ 74.85. Efforts during the year to set a "commercial" price for enrichment services met with no success. As a corollary to the American President's veto on the appropriation allocated by Congress for the fast-breeder reactor in the DOE budget, the decision on the "fair value" or "commercial" price was also postponed. It has been announced that this matter is to be taken up again in 1978 with renewed emphasis.

The plutonium price as a rule ranged, depending on quantity, isotopic composition, chemical form and other relevant factors, from US \$ 10 to US \$ 15 per gram of fissile material.

It should be mentioned here that in November 1977 the price of natural uranium was also increased. From the beginning of the 1960s up to 1976 it had been US \$ 23.46 per kg U and had then been raised to US \$ 31.97. For existing long-term contracts it now amounts to US \$ 46.01 and for emergency purchases US \$ 108.93 per kg U.

As has already been mentioned in the introduction, during the year the Agency had to exert considerable effort to obtain performance of the existing enrichment contracts with the USA and the licences needed for transferring nuclear material from and to non-member countries. Difficulties arose not only in this connection but also, and above all, as regards concluding further enrichment contracts for highly-enriched material (especially with respect to the requirements of research reactors) or obtaining US export licences for such material. In the year under review only in one case and only under stringent safeguards measures was highly enriched uranium imported. The export licences announced at the end of the year have so far not been issued. Deliveries of low enriched uranium were subject to lengthy procedures but in general were made on time. At the year-end a further batch of export licences was issued.

In addition to the delays in the new Administration's decision-making process caused by fundamental proliferation-policy considerations, purely administrative problems increasingly came to the fore, such as those concerning the membership of the Nuclear Regulatory Commission (NRC), which for a time had no quorum, and others in connection with the NRC procedures, which are considerably influenced by the Natural Resources Defense Council petitions. Mention should also be made of the transfer of ERDA to the newly-formed Department of Energy and the removal of the USERDA's Contracts Division from Washington to Oak Ridge. With the goodwill of all concerned it was possible, however, to overcome the resulting practical difficulties.

To conclude, it should be pointed out that the "open season" desired by many users, which the ERDA announced in April last year and in the context of which changes in contractually binding delivery dates under long-term fixed-commitment contracts were to be made permissible - each case being judged on its merits - for electricity supply undertakings affected by delays in building and commissioning power reactors, had not opened by the end of the year. The new standard form of contract, called "adjustable fixed-commitment contract", was published for comment only in February 1978, without the "open season" being announced at the same time.

IV.

ADVISORY COMMITTEE

Following the expiry of the term of office of Members of the Committee at the end of 1976, the Council of Ministers in March appointed a new Committee with a membership largely unchanged from that of its predecessor. The term of office of the new Committee will run until 28 th March 1979.

The Committee elected from its members Mr. Hans STRUCK as Chairman and Mr. Erik BASTRUP-BIRK and Mr. Maurizio ZIFFERERO as Vice-Chairmen for the year.

During 1977 the Committee held two meetings. It re-established its Working Party on natural uranium and approved revised terms of reference for it.

In addition the Committee will receive in future specialist advice in geological matters from a sub-group of geologists from Member-States previously set up by the Working Party.

Apart from formal matters, the Committee was occupied mainly in the discussion of topical developments and their effect on the

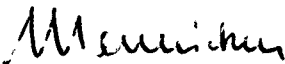
DIRECTOR GENERAL

On 6th May 1977 the Director General of the Supply Agency, Mr. Felix OBOUSSIER retired after 18 years service. With effect from 16th August 1977, the Commission of the European Communities appointed Mr. Jan Baldem MENNICKEN as the new Director General. In the intervening period Mr. Jean-Claude BLANQUART was in charge of the Agency's affairs.

V.

This report has been drawn up in accordance with Article XVI paragraph 5 of the Statutes of the Euratom Supply Agency. As provided for in Article XI paragraph 9 the Advisory Committee at its meeting on 9th March 1978 was consulted.

Brussels, 10 th March 1978


Dr. Jan-Baldem Mennicken
Director General