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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

APRIL 14, 1981

ENERGY AND MINERALS
DIVISION

B-159687



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The Honorable James B. Edwards
The Secretary of Energy

Dear Mr. Secretary:

Subject: [Uranium Enrichment Pricing] (EMD-81-75)

In view of the vigorous emphasis by the Administration and the Congress on balancing Federal revenues and expenditures, this letter is to apprise you, as the Administration's Secretary of Energy, of our longstanding position in favor of changing the basis of the Department of Energy's price for uranium enrichment services from "cost recovery" to a so-called "fair value" price. Such a change would eliminate an existing subsidy to the commercial nuclear industry, and would assist in balancing the Federal budget by increasing Federal revenue from enrichment services. On June 9, 1980, we reported that, based on the price then in effect, this change would increase enrichment service revenues by an estimated \$1.3 billion from fiscal years 1981 to 1985. ^{1/} This estimate included about \$500 million which would come from foreign countries.

A change in the pricing policy will require amending section 161(v) of the Atomic Energy Act of 1954, as amended, to depart from the cost recovery basis and instead, use a basis which would permit recovery of costs plus other charges that a private enriching enterprise would otherwise levy (factors for taxes, return on equity, etc.). On three occasions since 1975, the Department has proposed changing the basis for charging its customers from a cost recovery to a fair value price. Unfortunately, except for the Department's fiscal year 1978 authorization bill, the Congress has not acted upon these proposals. The 1978 bill authorized fair value pricing, but former President Carter vetoed the bill because it authorized the continuance of the Clinch

^{1/}Letter to the Chairman, Subcommittee on Energy and Water Development, House Committee on Appropriations, entitled "Uranium Enrichment Pricing," B-159687, June 9, 1980.

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River Breeder Reactor. The Department also proposed fair value pricing for fiscal years 1977 and 1979 but for a variety of reasons these proposals were not adopted. We understand that there currently are no initiatives within the Department to resurrect this issue, and in fact, some of your staff now oppose fair value pricing.

BACKGROUND ON URANIUM
ENRICHMENT PRICING

Uranium enrichment is a process which prepares uranium for use as a nuclear reactor fuel. Since 1969, the Federal Government--through the former Atomic Energy Commission, the former Energy Research and Development Administration, and now the Department of Energy ^{1/}--has been offering services to enrich privately-owned uranium. Today, some 70 nuclear powerplants in the United States, and many others throughout the world, are fueled with uranium enriched by the Department of Energy.

The Department is a sole supplier of enriched uranium in the United States. It currently has three enrichment plants capable of producing about 27 million separative work units ^{2/} each year--enough capacity to service over 200 large nuclear powerplants. The Department estimated for our June 1980 report that it expected to receive about \$1.3 billion in enrichment service revenues from foreign and domestic customers during fiscal year 1980. The Department then had contracts for the sale of enrichment services over a 30-year period totalling 920 million separative work units at a value of \$71 billion.

Federal charges for uranium enrichment services are set in accordance with section 161(v) of the Atomic Energy Act of 1954, as amended. This section requires the Department

^{1/}The Atomic Energy Commission was abolished on January 19, 1975, and its enrichment activities were transferred to the Energy Research and Development Administration. On October 1, 1977, pursuant to the Department of Energy Organization Act (Public Law 95-91), the Energy Research and Development Administration's enrichment responsibilities were transferred to the Department of Energy.

^{2/}A measurement of the effort needed to separate uranium into a product containing the desired concentration of the isotope U-235.

to recover all costs for enrichment services over a reasonable period of time. This authority, however, does not allow inclusion of factors for Federal and State taxes, return on equity, and other factors that a private enricher would otherwise charge, if private industry were to own and operate a uranium enrichment facility. Thus, the current pricing policy constitutes a subsidy for commercial nuclear power.

We have been extensively involved in the debate over whether the existing uranium enrichment pricing basis should be changed to reflect the fair value concept. In fact, we issued three reports 1/ since 1975 in addition to our June 9, 1980, letter on this subject--all voicing general agreement with the concept. Our basic position in these reports is that the existing subsidy should be eliminated through adoption of fair value pricing legislation.

ADDITIONAL REVENUES TO
THE U.S. GOVERNMENT

An obvious advantage of fair value pricing to the Federal Government is the sizable amount of additional revenues that would be generated. For example, the data in the table below, which we presented in our June 9, 1980, letter, estimates increased revenues of about \$1.3 billion through fiscal year 1985. At the time the Department made this estimate for us, it was charging \$98.95 per separative work unit and expected that this price would increase about \$30.00 under fair value pricing. We recognize that the Department's cost recovery price has increased from \$98.95 to \$110 per separative work unit, and that estimates of enrichment services sales may have changed since we issued our earlier letter. Nevertheless, we believe the data in the table reasonably illustrates the potential magnitude of additional enrichment services revenues attainable with fair value pricing.

1/"Comments on Proposed Legislation to Change Basis for Government Charge for Uranium Enrichment Services" (RED-76-30, September 22, 1975), "Comments on Proposed Uranium Enriched Pricing Legislation" (EMD-77-73, September 25, 1977), "Fair Value Enrichment Pricing: Is It Fair?" (EMD-78-66, April 19, 1978).

Additional Revenues to the U.S. Government
By Using Fair Value Pricing
(Data as of June 9, 1980)

<u>Fiscal year</u>	<u>Source</u>		<u>Total</u>
	<u>Domestic</u> (millions of dollars)	<u>Foreign</u>	
1981	\$ 94	\$ 50	\$ 144
1982	140	92	232
1983	164	108	272
1984	204	110	314
1985	<u>214</u>	<u>138</u>	<u>352</u>
Total	<u>\$816</u>	<u>\$498</u>	<u>\$1,314</u>

The estimated \$498 million in additional revenues from foreign customers could aid the U.S. balance of payments.

A SUMMARY LOOK AT ADVANTAGES
AND DISADVANTAGES OF FAIR
VALUE PRICING

Advantages of adopting the new proposal include (1) removing a subsidy to the nuclear industry by eliminating the current price which is lower than what it would be if the service were available in the commercial market, (2) sizable revenues for the U.S. Government and enhancing the U.S. balance of payments position, and (3) permitting U.S. enrichment pricing to be on a more businesslike basis. Although fair value pricing will result in an increase in cost of electricity to the ultimate consumer, the Department has projected that the impact of this price increase will be quite small--less than 1 percent through 1983.

With regard to the disadvantages of the new pricing concept, we reported earlier that such increases could potentially have a negative impact on the Nation's nuclear non-proliferation goals. We stated that an excessively high price, with little or no consideration of the prices charged by foreign competitors, could encourage foreign customers to seek services elsewhere, or perhaps construct their own enrichment plants. We also indicated at that time, however, that we believed such impacts could be avoided through carefully formulated criteria for implementing

the fair value concept, and by close monitoring by the Congress and the administration.

Our recent work on the Nuclear Non-Proliferation Act of 1978, however, has revealed that U.S. enrichment prices do not appear to be a determining factor in whether or not the United States gains new enrichment customers. 1/ Even with its very competitive enrichment prices, the United States has not been very successful in gaining many new foreign customers since the Department reopened its enrichment order books in 1978. In fact, the United States lost customers during this time through contract cancellations. Furthermore, we have since concluded that from a non-proliferation perspective, the emergence of a multinational enrichment capacity in Europe should not be viewed as completely undesirable.

Although the United States has less direct control, the opportunities for diversification of supply offer far more assurance of supply to customers than did the earlier U.S.-controlled market. Multinational enrichment facilities in politically stable countries also offer advantages in promoting interdependence among nations, in limiting the number of sensitive nuclear facilities built, and at the same time, in offering greater assurances that the facilities will not be used for unauthorized purposes. Additionally, the opportunities to diversify sources of supply make it harder for countries to justify to the world community development of indigenous enrichment capabilities.

Certainly, circumstances surrounding the supply of enrichment services have changed dramatically in recent years. The demand for enriched uranium is down and the United States is indeed facing increasing competition from foreign countries. Undoubtedly, these changes impact on the price that could be charged for enrichment services under the fair value concept. For example, we would expect that a policy decision on a desirable U.S. share of the worldwide enrichment services market would be an important factor in determining and adjusting a fair value price. This does not, however, change our basic arguments that the price of enrichment services should be based on the fair value of those services if a private enricher were operating the plant, the present subsidy should be eliminated, and the Government's uranium enrichment operations should be operated on a businesslike basis.

1/"Evaluation of Selected Features of U.S. Nuclear Non-Proliferation Law and Policy," EMD-81-9, Nov. 18, 1980.

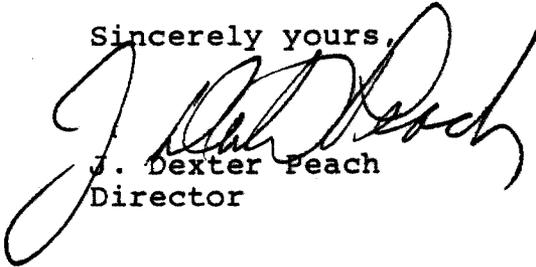
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In view of the Administration's efforts to balance Federal revenues and expenditures, we believe you should again seek legislation which would change the basis for the enrichment services price to the fair value concept. Enclosed for your information is the most recent fair value pricing legislation supported by the Department. The legislation was included as Title V of the fiscal year 1979 authorization bill for the Department of Energy.

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We are sending copies of this report to the Director, Office of Management and Budget; the Chairman, House and Senate Committees on Appropriations; the Chairman, Subcommittee on Power, House Committee on Energy and Commerce; the Chairman, Subcommittee on Energy Research and Development, Senate Committee on Energy and Natural Resources; and other interested parties. We will also make the report available to others upon request.

Sincerely yours,



J. Dexter Peach
Director

Enclosure

TITLE V--CHARGE FOR URANIUMENRICHMENT SERVICESBASIS FOR GOVERNMENT CHARGE
FOR URANIUM ENRICHMENT SERVICES

Sec. 501, Subsection v. of section 161 of the Atomic Energy Act of 1954, as amended, is amended--

- (1) by striking out "Commission" each time it appears and inserting in lieu thereof "Secretary of Energy" or "Department of Energy," as appropriate;
- (2) by striking out clause (iii) in the first proviso of such subsection and inserting in lieu thereof the following: "(iii) any prices established under this subsection shall be on such a basis as will assure the recovery of not less than the Government's costs over a reasonable period of time, and when combined with a percentage of such costs and the normal and ordinary business expenses, taxes, and return on equity which would otherwise be reflected in the prices charged by a private operator providing similar services"; and
- (3) by striking out the third proviso in such subsection and inserting in lieu thereof the following: "PROVIDED, That before the Secretary establishes such criteria, the Secretary shall transmit the proposed criteria to the appropriate committees of the Congress and allow a period of forty-five days to elapse (not including any day in which either House or Congress is not in session because of adjournment of more than 3 days), unless before the expiration of such period each such committee has transmitted to the Secretary written notice stating in substance that such committee has no objection to the proposed action."