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AEC OMNIBUS LEGISLATION—1974

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HEARINGS

BEFORE THE

JOINT COMMITTEE ON ATOMIC ENERGY

CONGRESS OF THE UNITED STATES

NINETY-THIRD CONGRESS

SECOND SESSION

ON

AMENDING THE ATOMIC ENERGY ACT OF 1954, AS AMENDED,
AND THE ATOMIC REWARDS ACT OF 1955

APRIL 30 AND JUNE 18, 1974

**Part 1: Proposed Amendment to Section 54 of the Atomic
Energy Act of 1954, As Amended**

**Part 2: Testimony on H.R. 13896, S. 3253, H.R. 14849,
S. 3502, and H.R. 15416**

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CONTENTS

HEARING DATES

| | |
|--|-----------|
| Tuesday, April 30, 1974: Part 1. Proposed Amendment to Section 54 of the Atomic Energy Act of 1954, as amended—S. 3243 and H.R. 13896..... | Page 1 |
| Tuesday, June 18, 1974: Part 2. H.R. 15416..... | 31 |

STATEMENTS

[Part 1. Hearing of April 30, 1974]

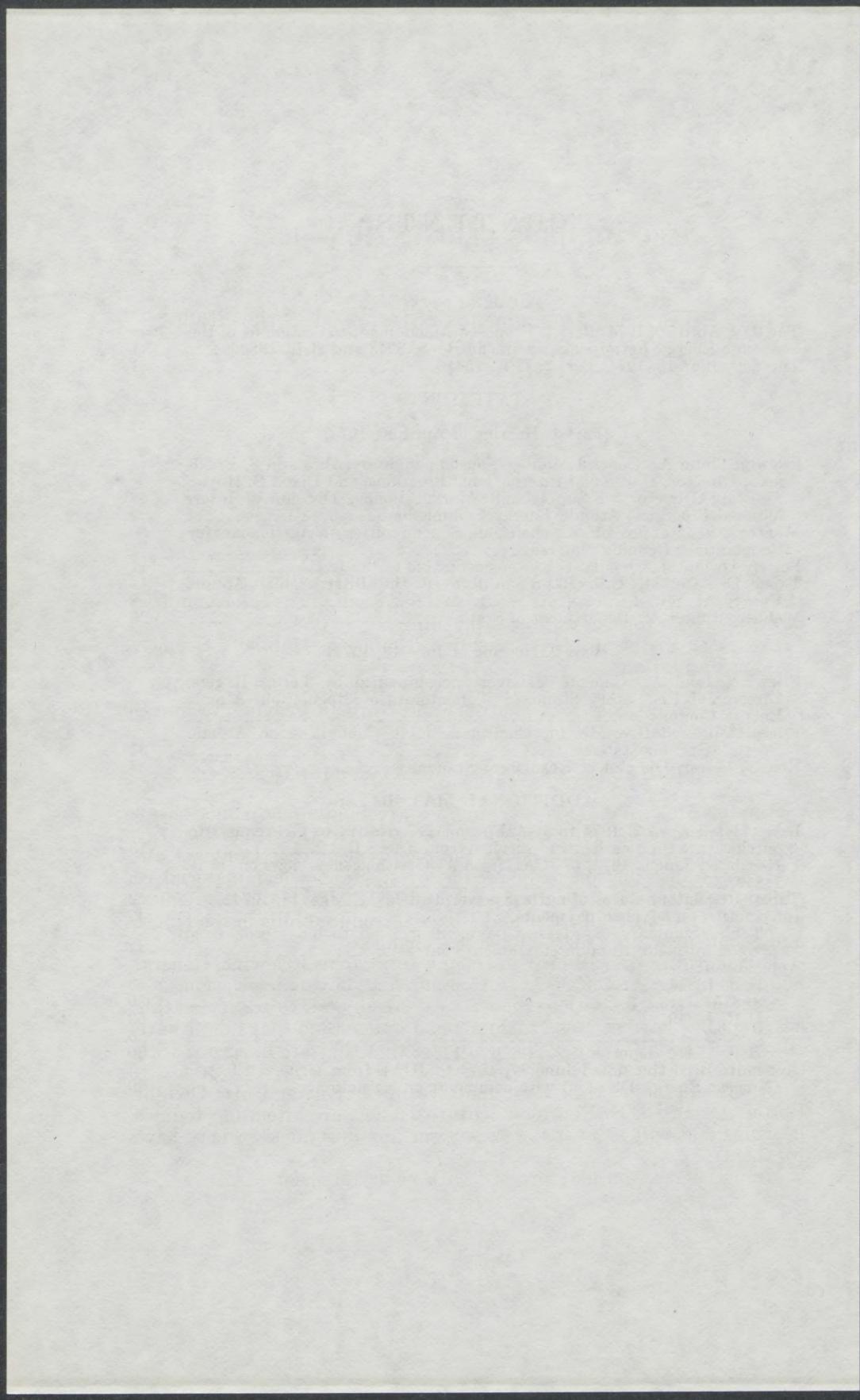
| | |
|--|----|
| Erlewine, John A., General Manager, accompanied by Abraham S. Friedman, Director, Division of International Programs, and Dixon B. Hoyle, Assistant Director for Supply and Market Policy, Division of International Programs, Atomic Energy Commission..... | 2 |
| Montoya, Senator Joseph M., chairman, Subcommittee on Agreements for Cooperation: Opening remarks..... | 1 |
| Porter, Dwight J., Deputy U.S. Representative to the IAEA..... | 11 |
| Tape, Dr. Gerald, U.S. Representative to the International Atomic Energy Agency..... | 8 |
| Webber, Robert A., Department of State..... | 26 |

[Part 2. Hearing of June 18, 1974]

| | |
|--|----|
| Erlewine, John A., General Manager; accompanied by Lester Rogers, Director of Regulatory Standards, Directorate of Regulation, Atomic Energy Commission..... | 32 |
| Price, Representative Melvin, Chairman, Joint Committee on Atomic Energy: Opening statement..... | 31 |
| Rogers, Lester, Director of Regulatory Standards..... | 52 |

ADDITIONAL MATERIALS

| | |
|--|----|
| Letter dated April 2, 1974 to JCAE from AEC relative to GE request to purchase uranium enrichment services from U.S.S.R..... | 16 |
| Letter dated June 6, 1974, to JCAE from AEC with agency views on H.R. 14849..... | 33 |
| Table: Regulatory status of nuclear powerplants as of June 18, 1974..... | 42 |
| Information on advance payments..... | 43 |
| Table: Summary of advance payments related to long term, fixed commitment uranium enrichment contracts..... | 44 |
| Appendix A: | |
| H.R. 13896..... | 56 |
| S. 3253..... | 59 |
| H.R. 14849..... | 62 |
| S. 3502..... | 66 |
| H.R. 15416 (reported)..... | 70 |
| Appendix B: Letter dated June 17, 1974 to JCAE from General Electric (Nuclear Energy Division) with comments on legislation..... | 80 |



AEC OMNIBUS LEGISLATION—1974

Part 1. Proposed Amendment to Section 54 of the Atomic Energy Act of 1954, As Amended

TUESDAY, APRIL 30, 1974

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON AGREEMENTS FOR
COOPERATION OF THE JOINT COMMITTEE,
ON ATOMIC ENERGY,
Washington, D.C.

The subcommittee met at 10:05 a.m., pursuant to call, in room S-407, the Capitol, Hon. Joseph M. Montoya (chairman of the Subcommittee on Agreements for Cooperation) presiding.

Present: Senator Montoya; and Representatives Holifield, Hosmer, Hansen, and Lujan.

Also present: Edward J. Bauser, executive director; Randall C. Stephens, professional staff member; and Norman P. Klug, technical consultant.

OPENING REMARKS OF SENATOR MONTOYA

Senator MONTOYA. This morning we are holding hearings on an amendment to the Atomic Energy Act proposed by the Atomic Energy Commission, which would delete the requirement that Congress authorize the distribution of quantities of special nuclear material to groups of nations, specifically IAEA and EURATOM. At the request of the AEC, Chairman Price and I have introduced bills in the House and Senate providing for the requested change.

This morning we will hear testimony from John Erlewine, General Manager of the Atomic Energy Commission, on this legislation.

Although the State Department was also invited to testify at this hearing, they have declined to do so but I understand they might have an observer today. We have been advised that they are in accord with the feelings of the AEC on this matter.

Dr. Gerald Tape, U.S. Representative to IAEA, and Mr. Dwight Porter, Deputy U.S. Representative to IAEA, are attending today's hearings and will be available to answer any questions we may have for them.

Mr. Erlewine, you may proceed with your statement.

STATEMENTS OF JOHN A. ERLEWINE, GENERAL MANAGER;
ACCOMPANIED BY ABRAHAM S. FRIEDMAN, DIRECTOR, DIVI-
SION OF INTERNATIONAL PROGRAMS; AND DIXON B. HOYLE,
ASSISTANT DIRECTOR FOR SUPPLY AND MARKET POLICY, DI-
VISION OF INTERNATIONAL PROGRAMS, ATOMIC ENERGY COM-
MISSION

Mr. ERLEWINE. Thank you, Mr. Chairman.

I would note that we have present also from the Department of State, Dr. Robert Webber.

From the Commission staff, we have here Dr. Abraham Friedman and Mr. John Pender, counsel, at the table.

I am pleased to be here, Mr. Chairman, to talk in support of the proposed amendment to section 54 of the Atomic Energy Act (S. 3243 and H.R. 13896).

The amendment would eliminate the special limitation on the amount of special nuclear materials which may be distributed to the International Atomic Energy Agency (IAEA) or other groups of nations without new legislation.

We believe the amendment is needed to facilitate an orderly supply of enriched uranium in the coming years to our customers abroad who elect to meet their needs for material through the International Atomic Energy and EURATOM.

The law presently limits the Commission to distributing to the IAEA no more than 5,000 kilograms of contained U-235, plus an amount which matches the sum of such material made available by all other members of the IAEA by July 1, 1960 (this is an additional 70 kilograms).

In the case of EURATOM, the Commission is now authorized to provide only that quantity of contained uranium 235 to support the fuel cycle of power reactors having an installed capacity of 35,000 megawatts of electric energy, together with 25,000 kilograms of contained U-235 and 1,500 kilograms of plutonium for other peaceful purposes. This authorization is set forth in the URATOM Cooperation Act of 1958.

With respect to supplying enriched uranium through the IAEA, electric utility groups in both Mexico and Yugoslavia have recently selected power reactors from American firms, and have indicated their desire to obtain their long-term fuel requirements through the IAEA. This could total about 37,000 kilograms of contained uranium-235 over the estimated economic life of projects having an aggregate of about 2000 megawatts electrical.

Previous requests have been primarily for research reactors and could be accommodated within the existing ceiling. The new requests are the first that have been received through the IAEA to fuel power reactors, so the statutory limitation will, for the first time, become a real problem.

The amount of enriched material needed to fuel the long-term requirements for the projects would, of course, exceed that currently authorized for transfer to the IAEA under section 54, that is, 5,070 kilograms of contained U-235. That quantity looked like a substantial amount when it was placed in the law in 1957 at a time when con-

sideration was being given mainly to the needs of research and test reactor projects sponsored by the Agency.

With the involvement of the IAEA in the area of fuel supply for power reactor projects, however, we believe that steps should now be taken in order that requests for fueling such reactors can be met through the Agency.

At the request of Mexico, a trilateral supply agreement which would authorize Mexico to enter into a long-term, fixed-commitment enrichment contract with the Atomic Energy Commission to cover fueling requirements for their first power reactor was approved by the IAEA Board of Governors in February 1974.

We understand Mexico also hopes to obtain enriched material for its second power reactor, which also is to be purchased from an American firm, under similar arrangements. A supply agreement similar to the Mexican arrangement is expected to be approved for Yugoslavia at the June 1974 IAEA Board of Governors meeting.

In both the Mexican and Yugoslavian cases, the initial delivery of enriched uranium by the AEC is such that enrichment services contracts, under existing AEC policy, must be signed by June 30, 1974.

In the case of EURATOM, enactment of legislation in August, 1973 which increased the amount of U-235 authorized for transfer under the EURATOM Cooperation Act will not provide sufficient material to cover the future requirements for enriched fuel for reactors to be constructed in the member states after about 1976.

As noted earlier, the amount presently authorized will provide sufficient contained uranium-235 to support the fuel cycle of a total installed nuclear power capacity in the Community of 35,000 megawatts of electric energy, which is equivalent to about 585,000 kilograms of contained U-235. Of the 35,000 megawatts electrical, commitments have thus far been made to provide enriched uranium for fueling reactors with a total of approximately 25,000 megawatts electrical.

As to the future needs of the Community, and the extent to which EURATOM will look to the United States to supply fuel for their nuclear program, it is very difficult to provide estimates with any precision.

Based on information available to us, however, we believe that in the next 14 or 15 years, that is, by 1988 or so, the EURATOM countries may have installed a total of about 200,000 megawatts electrical of nuclear power, including the 25,000 megawatts electrical referred to above. This takes into account, of course, the increased emphasis being placed on nuclear power as a source of energy as a result of the recent concerns about the future cost and availability of oil supplies.

The extent to which EURATOM will see enrichment services from the United States for its future needs is even more difficult to assess.

There are two enriching projects underway in Europe, that is, URENCO and EURODIF, which can be expected to provide sharp competition and have the possible added advantage, from the European point of view of being an essentially domestic source of material.

In addition, procurement of some enriching services from the Soviet Union may be expected to continue.

Thus, we are rapidly moving into an era of multiple sources of enriched material, where economics, availability of production capac-

ity, and security of supply considerations will have a strong bearing on procurement attitudes. With this in mind, we might estimate that the fraction of the EURATOM nuclear power market the United States might service would be about 50 percent—or about 100,000 megawatts electrical—of the installed capacity in the next 14 or 15 years, subject, of course, to the availability of U.S. production capacity. This would be about 65,000 megawatts electrical over the present 35,000 megawatts electrical ceiling.

Since section 5 of the EURATOM Cooperation Act is designed to implement the requirement in section 54 for specific congressional authorization for distribution of amounts of special nuclear material to groups of nations, deletion of this requirement from section 54 would render the present authorization set forth in section 5 of the Cooperation Act superfluous.

In reviewing the possible means for accomplishing the needed increases for the IAEA and EURATOM, the Commission has reviewed the basis for the inclusion in section 54 of a requirement for specific congressional authorization before amounts of special nuclear material may be distributed to a group of nations. This provision was added to the Atomic Energy Act by section 7 of the International Atomic Energy Agency Participation Act of 1957.

Some 17 years have passed since the committee felt it advisable to incorporate the special limitation into the act. At that time, both the IAEA and EURATOM were just getting established and there was uncertainty about the direction and nature of U.S. cooperation with, and commitments to, the IAEA and EURATOM.

Our experience with both organizations over the intervening years, however, indicates to us that there is no longer any need for special concern about fuel supply arrangements through these agencies.

The history of the relationship between the United States and both IAEA and EURATOM clearly demonstrates that our cooperation with these two organizations has been in support of responsible projects and has been reasonable. Moreover, there have been substantial dollar returns to the U.S. Government, as well as significant assistance to the U.S. balance of payments.

It might also be noted that such legislation is not required under our bilateral agreements for cooperation.

With the recent changes in the AEC's fuel supply policies, ceiling provisions in agreements for cooperation negotiated subsequent to such changes no longer imply any commitment or undertaking to supply the quantities specified therein.

Commitments are now made through the conclusion of supply contracts, and these contracts are made only to the extent that their delivery commitments are within the available capability of our enrichment plants.

We believe that supply to the IAEA and EURATOM should similarly be controlled through the conclusion of supply contracts. This could provide flexibility, within the control of available production capacity, to meet requirements in member States of both the IAEA and EURATOM.

Through our obligations to keep the Joint Committee fully and currently informed, we would, of course, provide the committee with information on the quantities of material to be provided to the IAEA

and EURATOM. It seems to us that through this means we can best address and resolve any concerns or problems that might arise in this area in the future.

We do not anticipate that the removal of the special congressional requirement will result in a widespread shift from the bilateral to the IAEA route for supplying materials. We believe the bilateral route will continue to be preferred in most cases. The change would, however, remove the deterrent from our capability to supply material through the IAEA when that is desirable, and to meet the expected increase in needs of the EURATOM countries.

That concludes my statement, Mr. Chairman.

Senator MONTROYA. In your own words, what do you consider the main thrust of the legislation proposed?

Mr. ERLEWINE. It is to remove the statutory ceiling on the quantity of special nuclear materials which may be transferred to groups of nations, that is, national organizations, particularly EURATOM and IAEA.

Senator MONTROYA. Is it your desire to remove the ceiling, also?

Mr. ERLEWINE. To remove the ceiling?

Senator MONTROYA. Yes.

Mr. ERLEWINE. It is in terms of being a statutory ceiling. Ceilings are no longer what they were several years ago in bilaterals where they constituted a supply commitment on the part of the U.S. Government. We have been changing ceilings in these arrangements so that they are no longer a commitment on the part of the United States to supply that. It has now become the policy to make commitments through the contracts themselves.

Senator MONTROYA. There are two types of arrangements under the present system. One is an arrangement with the EURATOM nations, and the other is the arrangement with the IAEA.

Then we have been engaged in bilateral agreements between the United States and other countries.

Is that a correct statement?

Mr. ERLEWINE. Yes, sir.

Senator MONTROYA. Is it your intention under this legislation to remove the requirement of congressional surveillance or monitoring on what AEC is doing and just to inform the Congress what you have done, not what you are going to do?

Mr. ERLEWINE. No, sir. We would be most happy to continue any form of monitoring that the committee might desire.

What is intended is to remove the legislative ceiling and we would propose that we not institute a ceiling in the agreements, themselves, in substitution therefor because of the difficulty and time required to revise the ceilings from time to time.

We have no objection whatsoever to keeping the committee advised not only of what we have done but what we propose to do in the way of negotiating contracts under these arrangements.

Senator MONTROYA. The present law requires that you come in and tell us what you are going to do. We, in turn, set the ceiling. Under the new legislation, as I understand it, that ceiling will be removed and you will proceed to make any arrangements you wish but, of course, after you make these arrangements or enter into any contract

or commitments you then come before us and tell us what you have done.

Isn't that a difference?

Mr. ERLEWINE. It is a difference, but, as I say, we have no hesitancy of informing the committee before we enter into these contracts, requests for contracts, so the committee would know in advance before these were negotiated.

Senator MONTROYA. What about the treaty nature of the agreements and also the bilateral agreements?

Are you removing any congressional approval for these arrangements, also?

Mr. ERLEWINE. If I understand the chairman, the arrangements continue in effect and, as is currently the case, they have to be extended from time to time which involves congressional review and occasionally there are amendments which have to be negotiated.

When that takes place, they come to the committee for review.

Senator Montoya. How much of an increase in the IAEA ceiling would be required to support the projected needs of that agency in the next year or 2 or 5? Give me the projection for 1, 2 and 5.

Mr. ERLEWINE. The immediate needs that we know of are two reactors for Mexico that are each 650 megawatt electric boiling water type which has required an estimated 12,200 kilograms of contained U-235. That is equivalent to 2.2 million separative work units over their estimated 30-year life. So that is a total of 24,400 kilograms for Mexico.

Senator MONTROYA. How does that compare with our present capacity?

Mr. ERLEWINE. That is a very small fraction.

Mr. Hoyle?

Mr. HOYLE. The capacity of our approved plants for a year—

Senator MONTROYA. No; our present plants.

Mr. HOYLE. I cannot give you the answer offhand. It is probably considerably less than 1 percent of our present plant capacity.

Representative HOLIFIELD. Annual capacity, you are talking about, to produce or inventory?

Mr. HOYLE. Up to 6,000 megawatts of power.

Senator MONTROYA. Is this a correct statement, that our present capacity is 17,000 and the allocation to Mexico would be about 3,000, so that would be approximately one-fifth?

Mr. ERLEWINE. The contracts under which this would be delivered would be over a long period of time. So, it would not be against any current capacity in 1 year. It would be supplied over many, many years.

Senator MONTROYA. I am averaging it out.

Mr. ERLEWINE. As I recall, the total CIP-CUP capacity is around 283 million separative work units and that would be, I think, against what you would measure the 2.2 million that these two commitments would add up to which is something about a half percent.

In addition to the Mexicans, I should indicate that there is expected to be a contract for a Yugoslavian 650 megawatt electric pressurized water type that would require about 12,400 kilograms or 2.4 million separative work units over a similar period. Those would be the contracts we currently foresee under the IAEA agreement.

Senator MONTOYA. Mr. Erlewine, why are we bowing to the desires of Mexico and Yugoslavia and going this other route rather than entering into a straight bilateral agreement?

Mr. ERLEWINE. My understanding, Mr. Chairman, is that this is the route that they have requested as being within their own internal affairs they way they would prefer to proceed.

Senator MONTOYA. Do you think they should call the shots for us?

Mr. ERLEWINE. I don't know that it really constitutes calling the shots for us. The IAEA was set up, we are participants in it and have encouraged its development. I think it is quite an acceptable way to go.

Senator MONTOYA. They are telling us in reality to deliver our product to an international broker and the international broker will deal with them. That is what the effect of this is.

Dr. FRIEDMAN. No; in our negotiation with Mexico, for example, we have been negotiating directly with Mexico. The contract will be signed with Mexico. The role of the IAEA is not really that of an international broker; in order to supply enriching services it needs to be done under an appropriate agreement for cooperation. We have such an agreement with the IAEA and it is under the umbrella of that agreement that we can negotiate our contract with Mexico.

Furthermore, the IAEA will be the safeguarding mechanism but the negotiation is directly with the country.

Senator MONTOYA. Could we not give Mexico that same assurance?

Mr. ERLEWINE. We could, but countries like Mexico and Yugoslavia have—for reasons which make it easier for them to deal with an international organization than bilaterally—they prefer this route in most of their interactions with other countries, and we see no disadvantage in that.

We would find that it would be desirable not to force them to go a route which is difficult for them for national policy reasons. There is no advantage on our part to force them to take that route.

Senator MONTOYA. As I understand it, but you are not saying it, Mexico does not want to be in a state of obligation to the United States through a bilateral agreement.

Mr. ERLEWINE. Or to any other country through a bilateral. They feel they might be obliged to deal bilaterally with other countries. It is not that they are that much concerned with dealing with the United States bilaterally but as a matter of policy they prefer to deal through an international body.

Senator MONTOYA. Is Russia doing the same thing? Does France intend to do the same thing?

Mr. ERLEWINE. We do not have a bilateral agreement with Russia. We do not deal bilaterally with France. We deal through the—

Senator MONTOYA. The question I am asking is: Does Russia deal bilaterally with other nations? Does France deal bilaterally with other individual nations? And does France intend to deal bilaterally with other nations?

Mr. ERLEWINE. Russia and France deal bilaterally with other nations, as we do. They also work through the IAEA.

Senator MONTOYA. That is on a very limited basis.

Mr. ERLEWINE. That is correct. This would be a limited basis for us, too. In other words, this is the exceptional route. It is not our usual route. Our usual route, we agree, is bilateral.

Senator MONTROYA. What about the precedents you are setting up? Wouldn't that encourage other nations to insist on the same treatment?

Mr. ERLEWINE. There is no advantage to the other nations to insist on this same treatment. Most nations find it advantageous to deal with us bilaterally.

**STATEMENT OF DR. GERALD TAPE, U.S. REPRESENTATIVE TO
IAEA**

Dr. TAPE. Mr. Chairman, may I interject a word or two?

As Mr. Erlewine and Dr. Friedman have said, the options which are open and we would like to see kept open are the bilateral routes for various countries and also the possibility of an international route.

As far as the question of our dealing with an individual nation on the supply, I don't see that there is any difference in the two areas. We require that they receive the material under some type of agreement, whether it be bilateral with us or whether it be under an IAEA type of agreement.

With respect to the question you asked about other nations, at the time the Mexicans inquired of the Agency about the opportunity and availability of the supply of reactors and services, the Agency did in effect alert and inform all possible supplier nations of this opportunity. So, there were options and opportunity for others to do so if they cared to.

In the discussions which were held with the Mexicans, we found that it was, as Dr. Friedman has said, that the Mexicans preferred an international versus a bilateral agreement for their own policy reasons.

I am not going to argue that one type is more desirable than the other; however, I would urge that we keep open this international route because I can imagine cases in which we, ourselves, might very well wish to be a supplier and yet might prefer an international vehicle such as the IAEA for handling that project.

I don't anticipate that there will be a trend toward a large number of nations going the international route. I think the bilateral route is for the most part, convenient to most nations.

In terms of forecasting the future, as you asked a few moments ago, this is difficult. We can tell you about those countries which have indicated thus far an interest in the IAEA route and, as Mr. Erlewine has said, we know of the Mexicans, we know of the Yugoslavs. There are no others in the offing.

I think it would be impossible for us sitting here today to specify the demand through IAEA in the future.

Senator MONTROYA. Is there any desire or will that happen; namely, that there will be definite commitments for supply to these countries through these bilateral agreements or through these multilateral agreements?

Dr. TAPE. I do not see this, Mr. Chairman, as a commitment to supply. It is a route by which one can arrange for supply.

As Mr. Erlewine has said, the actual supply commitment does not come under these agreements. It comes under the contract supply agreements which we then execute and in this case the Commission has contracted with Mexico directly.

Representative HOSMER. That is a commercial contract, in essence, for a product or a service?

Mr. ERLEWINE. At the present time, it is a contract with the AEC.

Representative HOSMER. It is in an arena which is developing for commercial contracts, namely, enriched uranium or the separative work that is required to enrich uranium; is that correct?

Mr. ERLEWINE. That is correct.

Representative HOSMER. The uranium that would be supplied by IAEA under the proposed legislation, except that which might go to some particular laboratory purpose, would be supplied under a future contract?

Mr. ERLEWINE. Yes, sir.

Representative HOSMER. And a commercial contract?

Mr. ERLEWINE. That is right.

Representative HOSMER. And there are others other than the United States in this business at the present time; is that correct?

Mr. ERLEWINE. Other countries; yes.

Representative HOSMER. Offering these commercial contracts?

Mr. ERLEWINE. That is right.

Representative HOSMER. And organizations of a mixed government-private nature offering these contracts?

Mr. ERLEWINE. Yes.

Representative HOSMER. EURODIF if one of them; is that correct?

Mr. ERLEWINE. Yes.

Representative HOSMER. URENCO is one of them; is that correct?

Mr. ERLEWINE. Yes.

Representative HOSMER. The Soviet Union, itself, is offering contracts on a commercial basis?

Mr. ERLEWINE. That is our understanding.

Representative HOSMER. Could the Soviet Union offer them, either directly or through the IAEA, as we do?

Dr. TAPE. That option exists. If the Soviets wish to entertain a contract, for example, with a Mexico of the future, a similar arrangement would be available to them, as well.

Representative HOSMER. If, in fact, the United States reaches the existing limit, it would then be at a competitive disadvantage because it would be unable to offer these commercial contracts; is that correct?

Mr. ERLEWINE. That is right.

Representative HOSMER. This is the purpose of the legislation then, to keep us on an even basis with these other countries that are offering this commercial service?

Mr. ERLEWINE. Certainly one of the purposes is to prevent the United States and its suppliers—

Representative HOSMER. Relating it to Mexico, it is buying its fuel on a commercial basis from IAEA; is that correct?

Mr. ERLEWINE. Under the arrangement with the United States.

Representative HOSMER. It wants to?

Mr. ERLEWINE. Yes. It will be under contract with us.

Representative HOSMER. If this legislation is not passed, they can't buy it from the United States; is that right?

Mr. ERLEWINE. That is right.

Representative HOLIFIELD. We are going a little bit too fast, in my opinion, if the gentleman will yield.

They can continue to get material under the present arrangement. This plea is to change the law so that they do not have to have a ceiling on it nor do they have to come to this committee on it, No. 1; isn't that right?

Mr. ERLEWINE. Yes, sir.

Representative HOLIFIELD. No. 2, is France or the Soviet Union offering to furnish any country material through the IAEA?

Dr. FRIEDMAN. I think the answer to that is no.

Representative HOLIFIELD. I think it is, too.

Dr. FRIEDMAN. I can make one comment on your earlier statement.

Representative HOLIFIELD. The line of questioning, my friend, and it is a good line of questioning and I think it has brought out a number of facts, but the line of questioning is putting us in a position of competing with them on contracts through the IAEA. As a matter of fact, Russia has chosen not to go through IAEA in her offers up to date. She may change it in the future. France also has chosen the bilateral route rather than to go through IAEA.

Is that not right?

Dr. FRIEDMAN. That is correct.

Representative HOSMER. I think the point, however, is that if indeed any customers want to go through IAEA, there is this limit on the United States, a limit which does not exist insofar as the Soviet Union or any of these other suppliers are concerned. We have hobbled ourselves in this one particular area that could or could not develop as a desirable way for these people to obtain their fuel.

Representative HOLIFIELD. Now, if the gentleman will yield, we will be hobbled only if the Congress and this committee refuses to lift the ceiling when that time comes. That is the only way we can be hobbled.

The present ceiling, as I understand it, is for any supplies that are requested and leading to a higher level can make it more adequate if there is an impending proffer to buy that goes above the 5,000 and some odd—

Mr. ERLEWINE. That is not adequate for any of the contracts.

Representative HOSMER. Where are we in relation to the ceiling?

Dr. FRIEDMAN. The present ceiling is 5,070 kilograms. The contracts we are currently negotiating with Mexico and Yugoslavia correspond to 36,800 kilograms.

Representative HOSMER. Anybody else could negotiate those contracts through IAEA but us.

Dr. TAPE. I would like to clarify one aspect vis-a-vis the Soviets and French. Representative Porter, who is our resident in Vienna and was present there at the time of those discussions can shed some light on the involvement of these other nations.

Senator MONTOYA. Let me ask this question, if you will yield to me.

Now you are asking us to do away with the ceiling. You are not telling us whether or not France or the Soviet Union has a ceiling im-

posed as distinguished from a legislative ceiling. Can you elucidate on that?

STATEMENT OF DWIGHT J. PORTER, DEPUTY U.S. REPRESENTATIVE TO IAEA

Representative PORTER. Yes, sir. If I may, Mr. Chairman.

The Agency is not a broker but it provides services to its member states—in this case, Mexico, a member state, went to the IAEA and said, we are building a reactor, we need so much fuel or so much enrichment services; will you undertake to try to get us a supplier?

Now, the Agency at that point turned to all potential suppliers, the Soviet Union, France, the United States, I believe even the United Kingdom, although the United Kingdom really is not in the business of exporting. In that case, all three countries offered to supply Mexico the fuel for this reactor.

There was a very heated competition and other countries tried very hard to get this business away from us. If we could not raise this ceiling, we would not be in the competition and one or the other would get the business, because they have no self-imposed or other inhibitions on what they can sell abroad other than capacity.

Senator MONTOYA. Supposing that we do not subscribe to what Mexico expects us to do, do you think that the Soviet Union would fill in and so would France through the international agency?

Representative PORTER. Yes, sir; I do. They would sell through the international agency to Mexico or any other country.

Senator MONTOYA. Have they done so in the past?

Representative PORTER. No. This is the first time this has come up in the agency's history where a power reactor as contrasted to a research reactor has gone through the agency's supply route.

Senator MONTOYA. How do you know they will do it?

Representative PORTER. They made the offer to Mexico, sir.

Representative HOSMER. These competitive suppliers have recently come into the business. Up until very recently, the United States has had essentially a world monopoly on this business. Now the other countries are coming into it and coming into it on a very competitive basis in order to try to drag the business away from us.

Now, this does not mean that we are home free insofar as selling this stuff goes because all our contract capacity of our existing plants, enhanced by CIP-CUP, will soon be contracted out in any event. We will not be able to make any more contracts.

Is that correct, Mr. Erlewine?

Mr. ERLEWINE. That is my understanding, that date is about a year off.

Representative HOSMER. We have two separate problems here. One is with respect to the imminent exhaustion of our ability to contract for the existing capacity, and the second, a very much more serious problem, of determining where new capacity is going to come from, both for domestic U.S. reactors and for the sizable amount of overseas business that presumably would be advantageous from a balance of payments standpoint for the United States to continue to enjoy.

Is that roughly the capsulized situation, Mr. Erlewine?

Mr. ERLEWINE. That is my understanding.

Representative HOLIFIELD. If we make a commitment of this very narrow band of potential supply that we have, if we make this commitment to Mexico and Yugoslavia, will not that subtract from future commitments that we can make to our domestic suppliers who are planning to buy these reactors and where our own supply of kilowatts is involved?

Mr. ERLEWINE. I think that is correct, Mr. Holifield.

Representative HOSMER. Let us get the magnitude of what we are dealing with here.

If we are dealing with a contracting gap that could occur, irrespective of what you sell to the Mexicans or this other outfit, within a window of 6 months, you are not going to save the Nation by not selling, by not doing business in this respect. All you are going to do is derogate your competitive position.

Does that essentially indicate what the situation may be?

Mr. ERLEWINE. The magnitude of this is about seven-tenths of 1 percent of our capacity involved in these three contracts.

Representative HOLIFIELD. What is the magnitude of the remaining supply that we have that is not committed, that is, what it ought to be applied against, not our total production?

We know we have a limited amount of potential supply.

I think the facts ought to be put out on the table. I don't know whether I am for this or against it. I am certainly for increasing our enrichment capacity the same as Mr. Hosmer is. But I am not in favor of giving away the last bucket of water we have until we know we are going to have more water, you see. This is the way that I think this whole thing ought to be looked at in relation to the advantages and disadvantages.

We talk about the advantages of foreign trade and I am certainly in favor of doing anything we can to help the balance of our foreign trade.

Many of these reactors that are being built overseas by combines of Westinghouse and General Electric and other companies with corporations in these other countries do not represent an export of the total price of the reactor. In fact, many of them are doing a great deal of work, as I understand it, on their own soil by their own engineers, and so forth.

Now you get to the 30-year commitment thing. What are the advantages of our sale right now except a temporary alleviation of the trade balance? What is the relation of it to this new crisis that we find ourselves in, and the impending shortage of energy?

That goes across the board not only to oil and gas but it goes across the board to enriched material.

Then, if you take the enriched units that you send abroad, what are you sending abroad? You are sending either raw material, and if we are sending raw material which is in limited supply we know that the \$8 level is going to have to be changed for many reasons, including the fact that we will be running out of that type of richness of ore, or the next thing is if they furnish the material and they buy it abroad, which is far more preferable as far as I am concerned, then what we are doing is exporting kilowatts from our present generating capacity.

I would like to know what the percentage of enriched units is in relation to the raw material that is involved and to the kilowatts that

are involved in the sales price. In other words, if we are selling it for \$10, is \$8 of that electrical kilowatts that we are sending abroad from a short supply? And the supply is going to get shorter. Some of these things have to be looked into.

I can see the advantage of our participating with a German company and maybe getting \$100 million out of a \$400 million job in export of machinery, then tying ourselves up to a 30-year contract to send them enriched material either from our own stocks or on a custom-enrichment basis. Now, I can see a large net to the United States in that and I know we are having to sell a product at about the same price that we are selling here at home and I know that the profit margin is pretty darn small because we are selling it to our own people at a small margin of profit, pretty near cost.

So, what are we doing now? Are we exporting scarce kilowatts and getting in dollars that we are going to pay for in the future with far cheaper dollars and far more dollars than what we are getting now? I would like to have an analysis of this thing.

I am not attacking this particular arrangement as such. I think the time has come in this country where conditions have changed and if we are going to have foreign trade, I think we should have it on a basis that is demonstrably advantageous to us, a substantial advantage, that can't be determined solely by the profit that is made because when you are short of water and you are giving away what water you have, with only a hope that there is going to be more water in the well you are going to dig maybe, if we get the money to dig it, then you are exporting something that is far more precious than the monetary value of the water you export.

I have supported the IAEA and I have supported this matter but I have supported it under different circumstances. I am just wondering if we have not come to the time, with this energy deficit in this country, when we had better start sharpening our pencils and looking at the net effects of what we are doing. If the net effect of what we are doing is not an advantage to the United States, or if it would be better for us to have this short supply of enrichment for our needed generating facilities here at home, we had better let charity begin at home rather than be grasping for something which has an illusory advantage instead of a real substantial balance of trade advantage.

I don't have the information before me to answer some of these questions. There may be answers to them, but I would like to see them.

Representative HOSMER. I think the gentleman basically put very well this issue of what in the world are you going to do when you run out of the capacity to separate uranium and enrich it?

The problem is that we failed to address ourselves to it very early in the game and now we are down toward the end of the capacity that we have to contract out.

So, if you save it all for home consumption, you would not really be doing anything very helpful. In order to do it that way, you practically have to change the laws and the policies of the Government that have been in existence for a long time.

Representative HOLIFIELD. Or build additional facilities.

Representative HOSMER. There are two keys to this dilemma. One key is the construction of additional separative capacity. The second key is to abandon this absolutely senseless policy in today's context of selling this work at cost. This is a thing that is inhibiting private

industry getting into this business because it has to have a profit in order to do a healthy, viable job of getting into the business.

There is no reason why the U.S. Government should any longer subsidize either American or foreign utilities by the continued production of this product without profit.

Representative Lujan. That very basic point has been bothering me, when we set the price so low to discourage competition.

Now that we do have the Russian and French competition, what is the difference in our prices?

Dr. Friedman. Theirs—that is, the Soviets—is about 10 percent less than ours.

Mr. Erlewine. It is just a policy on their part.

Representative Lujan. They are losing money, too, obviously.

Representative Hosmer. Their price is not a flat 10 percent below ours but I think the first year it is 5 and then it dribbles off. If you will examine that price, you will see it is almost identical to the American price because we require a down payment. If you subtract the interest on the downpayment, you will come out with a net payment that the Soviets obtain under their contracts.

Now, the Soviets, of course, have no basis in the world upon which to price uranium enrichment services. So, what they simply do is go and look at what the oldest established business in the world is doing and they say, "Well, those guys must know what they are doing, so we will just take what their prices are."

We find out some of these other people who are getting into the business now are trying to cut prices. They are coming in with loss leaders. They are going to get themselves into all kinds of trouble because, unlike us, they don't even know when they are just breaking even and not losing money.

EURODIF, for instance, has not even built a plant. All they have is a mimeograph machine at the present time.

URENCO has a plant that I think has 500 tons capacity. That is all they have in business.

We have 25,000 tons capacity.

Dr. Tape. 500 is under construction.

Representative Hosmer. This is a new business and some of the economic elements are very mysterious and equally or more mysterious than the technical element.

Senator Montoya. I am going to have to go to the Appropriations Committee meeting, and I would like to ask two or three questions.

I think one of the most important considerations that we must delve into here is, No. 1, what are our present proven resources of natural uranium and what is the equivalency of these resources in U-235?

I would like to have those two questions answered.

Mr. Erlewine. Mr. Chairman, in terms of its applicability to these contracts, we are just selling enriching services, not the ore. This is supplied by the person buying the services. We sell the services of our gaseous diffusion plants.

Senator Montoya. So this will not entail the selling of natural uranium which we produce here in this country?

Mr. Erlewine. No. If I could just comment briefly on the discussion that Mr. Holifield and Mr. Hosmer had, I quite agree that these are very important national policy problems. However, I don't think that

they are unique to this particular request. They apply to any contracts for sale abroad, whether bilateral or what, which we are concluding daily.

Representative HOLIFIELD. Wait a minute, Mr. Erlewine.

These are being done on a close to cost basis. I am assuming that the corporations of this country are making their exports on the basis of profit to them.

Representative HOSMER. It is all AEC sales.

Representative HOLIFIELD. I am talking about the corporate production in other fields, not in the nuclear field. Their exports are being handled on the basis of normal business profit, at least competitive business profit. Our exports of these enriched units, even though they supply the ore and we are doing a custom job on it, is still not done on the normal profit basis that commercial companies have. There is a little cushion there and I am aware of that but I want to know how much cushion there is in a unit of enrichment.

Even a custom job for them, when they are furnishing the material, I want to know the difference in the cost of that production with the profit that we are making and the price that we are selling.

I say that was under our old policy and we did this for a purpose, of course; this was the Atoms for Peace proposal, and the generous gesture of our making available technology throughout the world. Now, that technology of enrichment is already possessed by France and by Russia, and, for political reasons, if not for economic reasons, they are utilizing it.

Now I would like to see an assessment of whether our policy of low cushion profit, very narrow cushion profit, is a good policy today or whether it should be done in the regular commercial way, and I am thinking here now about continuing to give low cushion profit material or services abroad when we are trying to entice American industry to come in and build more enrichment facilities which we know we are going to need domestically and which we would like to have so that we can continue to sell it abroad but sell it at a normal commercial profit.

Mr. Hosmer has been trying very hard, and some of us have been supporting him, to get a solution to this deficit enrichment which we are now faced with by your own testimony, that we are nearing the end of our capacity. Maybe there is a 6-months' area of commitment of the production that will be in existence when CIP-CUP is finished. Then where are we as part of this very narrow surplus of enrichment that we are talking about here, this very narrow ability, and in the face of the increasing cost of kilowatts and actually the impending shortage of kilowatts for all other purposes in this nation?

This is really what we are doing. We are exporting kilowatts at cost, almost. Isn't that right?

Mr. ERLEWINE. It is full cost recovery. That is the policy of the AEC; yes.

Representative HOLIFIELD. We talk about the value of the dollar that we are getting back.

It reminds me of the old story of Jesse Jones. When they came to him and told him during World War II that all of our natural rubber supply had been burned, he said, "Thank God we have insurance on it." He did not take into consideration the fact that the rubber was gone.

Now, what I am talking about here is, let us look at the potential "rubber" we have and the limitation of the amount of "rubber" we

have in this enrichment capacity and the cost of it in kilowatts and say, what are we doing? Are we going to go ahead with this policy which all of us have supported, or are we going to look at it in the light of changed world conditions and our changed capacity to have a potential surplus? That is the thought I am bringing out.

Representative HOSMER. I think again the gentleman is entirely correct, and I think also that the draft of possible legislation for a U.S. enrichment corporation that the committee has put together addresses itself to those very policy questions which thus far we really haven't decided upon. I think the USEC drafting will be a logical vehicle upon which those decisions will be made.

In the meantime, so far as business is concerned, certainly the Soviet Union is not turning down any of its business because it recognizes the value of foreign exchange.

Just recently, the committee was notified that the General Electric Corp., the U.S. General Electric Corp., wants to make a deal for 110,000 to 120,000 separative work units with the Russians for use in its plants overseas. This is quite a remarkable thing insofar as the status of the U.S. business is concerned.

Senator MONTONA. Would you want to put this letter in the record?

Representative HOSMER. Yes; I would like to ask unanimous consent to put the April 26, 1974 letter to Edward J. Bauser, Executive Director, from the assistant general manager, relative to this subject into the record.

Senator MONTONA. Without objection, it is so ordered.

[The letter referred to follows:]

U.S. ATOMIC ENERGY COMMISSION,
Washington, D.C., April 2, 1974.

MR. EDWARD J. BAUSER,
Executive Director, Joint Committee on Atomic Energy, Congress of the United States, Washington, D.C.

DEAR MR. BAUSER: This letter is to advise you of a request by the General Electric Company (GE) to purchase uranium enrichment services from the USSR for nuclear fuel to be supplied to GE customers in foreign countries.

General Electric Company has requested Commission authorization, pursuant to Section 57.b. of the Atomic Energy Act and 10 CFR, Part 110, of the Commission's regulations, to purchase from the USSR 110,000 to 120,000 separative work units (SWU) under a short-term agreement and 3.5 million SWU under a long-term arrangement (1974-1994). The enriched uranium would be used for manufacture of nuclear fuel for GE's foreign customers in countries which have entered into an Agreement for Cooperation with the U.S. and a Safeguards Agreement with the International Atomic Energy Agency (IAEA).

The Commission has been considering the factors associated with this application very carefully in conjunction with a high level interagency study of the implications for the United States of worldwide purchases of enrichment services from the Soviet Union. It has taken into account the fact that the Europeans are purchasing enrichment services directly from the USSR. Approval would permit a domestic company an opportunity to secure part of the business of supplying fuel for such foreign reactors whereas denial could impair GE's ability to compete for such business and deny employment of U.S. citizens.

As a result of this study, the Commission is disposed to authorize GE to purchase the enrichment services under the limited short- and long-term arrangements proposed by GE for fuel to be supplied to foreign GE customers subject to the proviso that the tails from the enriching operation are to be returned from the USSR.

We would be glad to discuss our views with you or the Committee, if desired.

Sincerely,

ROBERT A. KOHLER,
(For the General Manager).

[See Appendix B, p. 80, for statement by General Electric on omnibus legislation.]

Mr. ERLEWINE. Mr. Holifield, the point I was trying to make is that the issues that you are raising, which are certainly very valid national policy issues, are applicable to all the contracts that have been signed abroad, not just to IAEA.

Representative HOLIFIELD. I understand that. My point is that under the changed conditions that we are in right now it is time for us to assess more carefully our policy.

What you are asking for, aside from the method by which you would go about it—which is to remove the congressional control of it—is in entire accord with our present policy. I realize that.

Mr. ERLEWINE. The other point that I think should be made is that these long-term contracts do provide, of course, for price adjustment.

Representative HOSMER. On the basis of cost escalation but none of them will factor in a profit that you have not contracted for to begin with; is that correct?

Dr. FRIEDMAN. No; the contracts are based on the cost of the product at the time of delivery; is that correct?

Mr. HOYLE. Yes. That is published in the Federal Register.

Dr. FRIEDMAN. If the Congress and the Commission at some time in the future modify the criteria and the pricing procedures, the contracts do not need to be renegotiated. These contracts will accommodate to that price.

Representative HOLIFIELD. What the gentleman is saying is exactly right but the present publishing of the price per unit of enriched material is based on this low cushion theory of profit and therefore not to be looked at as certainly a net income to the United States in relation to the gross price.

If we take a figure that does not mean anything, if we spend \$8 for electrical cost, domestic electrical cost, to produce a unit that we sell for \$10, what we are talking about is an inflow of \$2, not an inflow of \$10, because, while the inflow might be \$10 the cost of that unit domestically in scarce kilowatts is \$8. This is what I am saying.

Also, when we sell a reactor abroad, no longer are we selling it in many instances as a complete reactor.

We have these international agreements with the Germans and with the Japanese and a lot of other nations over there where we, in essence, do part of it. Part of it is export but as much of it as they can possibly do in their own countries they are doing with their own funds.

So, when you are talking about a \$500 million reactor, you are not talking about an export of \$500 million worth of reactor. You may be talking about an export of \$250 million or an export of \$100 million of that \$500 million.

What I am saying is that the cost of the reactor does not represent a gross inflow of that amount into the United States, nor certainly does it involve a net inflow of foreign exchange.

Dr. TAPE. Mr. Holifield, you have raised, as Mr. Erlewine has said, some rather major issues.

I would describe them as pricing policy, whether we are talking about domestic or foreign.

Representative HOLIFIELD. International policy, as well.

Dr. TAPE. Second, is the whole question of what type of trade items do we wish to really emphasize in our foreign trade. Although we have been talking about nuclear systems here, nuclear is only one part of the whole question. There are many other items we export which are energy intensive, too, and one could try to decide whether or not that makes sense or does not make sense.

I would like, however, to come back to the point that Mr. Hosmer made earlier and also to reemphasize something which was said earlier, namely, that if, and I underline "if", the Agency is asked by a member to inquire of potential suppliers who would be willing and interested in providing such supply, if we answer in the affirmative then I would like to see any statutory restrictions be such that the interested party would realize that he had some assurance of long-term supply if he contracts with us.

I think the point that Mr. Hosmer was making earlier, that when they see a limitation in the statutes which they realize some future Congress must eliminate before they are able to really have the assurance of what might be the contractual supply, that is a deterrent to them.

Now I come back to my "if" in the first place.

We are not obligated to enter into that arrangement with IAEA.

Representative HOLIFIELD. You would because the pressure is on you to do that and that is why you are up here. This is not in derogation of your being here but we would not be performing an idle act on the part of the committee to change the statute and lift the ceiling. We would be performing it so that what is being requested by Mexico, Yugoslavia, IAEA, and the Commission would be approved by the Congress.

Dr. TAPE. That is correct.

Representative HOLIFIELD. And with the full knowledge that if we do change it and if we do go ahead, that you would be under no compulsion not to go ahead because you forthrightly laid before us the problem.

Dr. TAPE. I don't think that is true.

There is still this question of total United States capacity and whether we can or cannot supply, and that, to me, is not an issue of the statutory ceiling in the act. That is a question of the total procurement of service, whether they be foreign or domestic.

Representative HOSMER. If I may say, Mr. Chairman, insofar as the actual deal with Mexico and Yugoslavia goes, it is important in the context that it has been under way but in relation to the total that might be contracted from overseas purchasers of separate work it is a very small amount. So, even plugging this hole up, you would still leave the great big hole open.

Even if you plug this hole up on this IAEA contract, the big amount of contracting is direct. So, you would accomplish a very small measure by not opening this up.

If we do anything, we should close the whole door.

Representative HOLIFIELD. I agree, until we look at it or until we get the assurance either from the Government or from private industry that we are going to have the enrichment capacity that we need and we can afford and also our very low profit pricing matter is raised,

we know we are going to and when we do that we will raise it to our own people, too.

Representative HOSMER. The problem is that the AEC did suspend any contracting for a considerable number of months but they did not address themselves to these questions. They fiddled around for some little pipsqueak type of questions—that is not a good description, but they did not address themselves to this bigger question. It is because the AEC handling of enrichment is spread practically all over AEC. There is some in its international division. There is some down at Oak Ridge, at its production places in various parts and pieces, and it is not handled as a whole and therefore it is not handled as a coherent activity of the Government.

What is going to happen when the gentleman's ERDA bill goes through is something weird and wonderful to contemplate because all of this production business, incidentally, is going to be wrenched out of the AEC and put in ERDA and ERDA is going to be headed by a research and development man intensely interested in research and development of new energy sources and who probably does not give a damn about enriching uranium. This will be a real orphan when that occurs.

Representative HOLIFIELD. That is true if the Congress makes that decision. If they make the decision to take the heart and guts out of research and development and decrease capital spending in the nuclear field and put it into coal or some other thing—all of which could be done, of course—but if it is done at the cost of future appropriations to atomic energy, to the new ERDA which will take over enrichment and take over those things, I am not looking upon it as a wrench. If there is any wrenching going on, the wrench will be taking the regulatory out and putting it to one side. The rest of it is essentially AEC. You can call it ERDA or AEC, whatever you want to.

The bulk of the laboratories and the bulk of the projects and the bulk of the manufacturing of weapons and the bulk of the manufacturing of peacetime applications materials is ERDA. So, your wrench is taking out the regulatory and leaving the rest.

Now, the time will come, if that is accomplished—and everybody is for it, AEC is for it, the administration is for it, the committee has been for it for various reasons—when that time comes, some future Congress is going to make the determination as to whether we are going to go ahead in an aggressive way to bring into existence improvement in the nuclear generation field and LMFBR and so forth, or if we are going to have that money pulled away by probably another committee and cripple us on this thing, which we had foreseen so long ago, the need for this new enrichment capacity.

Yet, we are not getting the leadership from the administration or from the AEC on this.

Mr. Hosmer, particularly, and I have followed him and supported him all the way on this need for new enrichment capacity, we have been trying to call to the attention of the administration and the AEC this problem, but we have not had very much cooperation.

I think, myself, you have missed a golden opportunity. Whether that opportunity will be in future Congresses or not, why, even Mr. Hosmer and I cannot foresee or foretell. We just don't know.

That is the situation. That is why I would like to see this subject matter gone into and gone into expeditiously and review our policy and say, "All right, today we are going to double the rice of enriched units," knowing full well that then it is going to be against the domestic users but that that profit could be run into a new enrichment plant which would give us additional domestic capacity and additional export capacity.

You see, we are playing with a little thing here when this big thing has been hanging over our heads, like the sword of Damocles, for a long time and no one seems to be really very much concerned about it.

After many years, we got CIP-CUP, and I am very happy about that, but we are approaching the end of the potential production of CIP-CUP. So, we don't have much of a margin to play on. That is my general thinking on this.

I think there are advantages to doing this: I think there are disadvantages. I think our policy should be reviewed as a matter of urgent priority. I think the administration should come forward. I assure you that this committee would welcome their coming forward with something that lets us look down the road a little further than just lifting the ceiling on this particular thing.

Representative HOSMER. Mr. Chairman, may I ask a question about the timing? Have these two reactors been ordered?

Mr. HOYLE. They are ordered. They have either a contract signed or letter of intent signed. There are three reactors, two in Mexico and one in Yugoslavia.

Representative HOSMER. In accordance with the usual practices of signing fuel contracts simultaneously with the initiation of a project, we don't have a lot of time to fiddle around with this. It is a matter that should be handled expeditiously; is that correct?

Dr. FRIEDMAN. We would hope the legislation would be passed before June 30. We need to sign the enrichment contract before June 30.

Representative HOSMER. That is why you are up here at this present time.

We have been slow in response to your original request to have a hearing to take care of this matter, have we not?

When did you first bring it up here?

Dr. FRIEDMAN. It was submitted the 1st of October of last year.

Representative HANSEN. Mr. Chairman?

Representative HOLIFIELD. [presiding]. Mr. Hansen.

Representative HANSEN. I gather from your last comment that the slowness to respond on the part of this committee could be characterized as part of the deterrent that you speak of in your testimony. In other words, time is somewhat of the essence on these matters and if there cannot be a fairly prompt response to a request for an adjustment of the ceiling then this does operate as a deterrent to your capacity to negotiate and enter into new agreements; is that correct?

Mr. ERLEWINE. I think, Mr. Hansen, this is one of the problems of ceilings, whether in legislation as this is or in bilateral agreements that it takes a great deal of time often to adjust.

This becomes a problem in the bilateral area, while there are still ceilings even though they no longer constitute commitments on our part. We are going more and more to making commitment synonymous with the contract only and that is really what we would like to do here.

Representative HANSEN. If I understand the case that you present for this modification it is that we are now moving and appear to be moving more in the direction of the kind of contracts you refer to as involving Mexico and Yugoslavia. In other words, if we were to supply IAEA, for example, with its projected needs and assuming that the Congress could respond fairly promptly to a request for change, that it would not operate so much as a deterrent.

But now there is this new dimension in the form of opportunities to negotiate agreements, in effect, with individual countries through IAEA, that then changes the whole basic assumption on which the ceiling was erected; is that correct?

Mr. ERLEWINE. That is correct for IAEA. The ceiling was one of 5,000 kilograms which is aimed primarily at research reactors, things of this sort.

Now, a single one of these contracts would be larger than that. The supply of fuel for power reactors is a new development so far as IAEA is concerned. The supply contract would simply be under the IAEA arrangement but the contract would be with Mexico.

In the case of EURATOM, which is also here, there are really two ceilings. One pertains to the supply of power reactors where we have a ceiling of 25,000 megawatts electric plus another ceiling for other uses. We are proposing here that both of these ceilings so far as legislative requirements go be removed.

Representative HANSEN. The failure to remove would have the effect of limiting the options available to us, in some respects our flexibility in taking advantage of what may be a very attractive opportunity in a fairly competitive situation.

Mr. ERLEWINE. Certainly all the considerations that Mr. Holifield and Mr. Hosmer have raised as to the desirability or lack thereof of selling abroad is a basic question. But, up to this point, it has been assumed to be a desirable thing in helping both the countries to develop nuclear capacity and to our own industry to sell our reactors abroad and so forth.

Now times are changing, as Mr. Holifield, has well pointed out.

Representative HOLIFIELD. We are facing \$10.25 oil today. We were facing \$1.50 oil when we were adopting this policy to run electric plants and make kilowatts. I don't have to tell you what the increase in our electrical contracts has been in recent years. You know; you have been on the firing line on that. They can still operate under the bilaterals, can't they?

Mr. ERLEWINE. Yes. You have to have a bilateral arrangement negotiated to do these particular contracts. That is the mechanism by which most of these other contracts are being executed right now.

Representative HOLIFIELD. That is right. But you are under a compulsion there in regard to contracting over and above our capacity.

Mr. ERLEWINE. That is the issue that goes across the board.

Representative HOLIFIELD. It comes down to this: Do we want to utilize the remaining balance of our capacity for a couple of deals like this or do we want to look at the energy crisis in this country, the increasing cost of kilowatts, and export some kilowatts on almost a recovery of cost basis?

That is what we are up against on this. It is not your fault. It may not be the committee's fault. We didn't know about the Arab oil em-

bargo and the blackmail which has occurred in my opinion on the part of the countries that have oil and the contest for that supply by Western Europe and Japan. Now these things have hit us.

If we are not going to be country boys and shut our eyes to what is happening, I see no reason why we should not go ahead on this thing. The point is if we go ahead on it will there be any attention paid to this basic problem that Mr. Hosmer and I have been talking about, which is increased enrichment capacity?

Representative HOSMER. Private enterprise will take it over.

Mr. ERLEWINE. Mr. Holifield, I certainly do not want to debate the prospects of private enterprise. I do know that the Commission spends a great deal of time talking with the people who are examining getting into the enrichment business and are actively doing what they can to encourage this. They are very conscious of the so-called contracting gap that is coming down the line toward us.

Representative HOSMER. What amount of attention and time do you pay not just talking to these people who want to get into the business but in seeing whether there are enough of them who want to install enough capacity to take care of the actual fuel gap, let alone the contracting gap. This is apparently a fuzzy focus when we talk in nebulous terms of private industry and talking to firms that want to get into the business because it is irrelevant to the problem unless they want to take the whole gap and fill it up. If they don't want to do that, the U.S. Government is still going to have to prepare to fill that gap; otherwise, we won't have the fuel for our own reactors, let alone having any to make foreign exchange on by selling overseas.

My problem with you and the AEC and the very people within the AEC who are dealing with it and the budget and the State Department is again to get anybody to look at the whole problem. All they want to do is talk about the slices of the pie and see whether the various slices add up to the whole pie or that there is a gap there.

If you gentlemen can talk in these rounder concepts, I would certainly appreciate it. You haven't done it so far when you have come to this committee on this subject. You are real good when it comes to money or something else.

Representative HANSEN. I want to pin down this question of time table.

Do I understand from what you have said that either we should remove the ceiling altogether or should adjust the ceiling in some way that will permit negotiation to go forward by the end of June?

Mr. ERLEWINE. What we specifically proposed was a modification of section 54 of the act to delete the ceiling. This would permit the contracts to be executed under the IAEA arrangement.

We are proposing that if that action were to be taken by the Congress that we would not put into the arrangement, itself, a new ceiling as we do have in bilaterals. We have reason for that.

In the case of the IAEA arrangement, there could be a problem with the Statute of the Agency, itself, which read as follows:

On the request of the Agency a member shall, from the materials which it has made available, without delay, deliver to another member or group of members such quantities of such materials as the Agency may specify.

Now, those words "without delay" give us the trouble in that it might be thought to be inconsistent with our requirement for an 8-year advanced commitment on the supply contracts.

Thus, we would propose that there not be a ceiling in the IAEA agreement.

In the case of EURATOM, we also propose there be no ceiling. If there were a ceiling and it was necessary to adjust it, the unanimous agreement of all the members of EURATOM would be required.

There are EURATOM members who have differing interests with regard to the U.S. furnishing enrichment services. A ceiling in the agreement might become a stopper which we could not relieve if it were in this country's interests to sell to the countries of EURATOM.

Representative HANSEN. So, you are saying anything less than the removal of the ceiling provisions of the statute would still leave some elements that could inhibit your capacity to enter into an agreement such as this that you are proposing?

Mr. ERLEWINE. Yes.

Now, insofar as assuring the committee and the Congress that it is not our intention to go overboard or fail to keep them informed, we would have no problem having an understanding with the committee as to an informal ceiling. If so desired, we would come back and tell you in advance of any request for supply that we are being asked to furnish.

Representative HANSEN. As I understand what you are proposing, it would increase our capacity to develop a stronger competitive position in the furnishing of uranium enrichment services.

It seems to me that this is the goal and ought to be a major test against which we apply some of these policy decisions.

I would just echo the words you have already heard here this morning and expressing my own very strong convictions about what I believe to be the value to this country of becoming a major supplier of enrichment services over the next few decades. If anything, the dimensions of the energy crisis and the shortages that we are facing have reinforced that conviction. I say that not only because of what I believe to be the enormous economic value to this country but because of other strategic and other advantages that could accrue.

So, I would hope that certainly before we lose what has been the driving force of Craig Hosmer on this committee, and while we remember rather clearly some of the implications of the energy crisis, that we can develop with whatever changes are required to the statutes and whatever policy decisions may be required in the reordering of priorities within the administration, that we move forward on all the fronts necessary so that we can develop that very strong base to serve what I think are going to be the interests of this country for the coming decades and into the next century.

Thank you, Mr. Chairman.

Representative HOLIFIELD. Mr. Lujan.

Representative LUJAN. Thank you, Mr. Chairman.

We have been all over the lot this morning in talking about the general problem and I think that it is necessary to do that. I would like to zero in on perhaps three questions that apply to this specific request.

The first one perhaps is more in terms of a comment than a question.

We keep talking about having private enterprise getting in and increasing the capacity that we have but we are never going to get that unless we increase the price that we receive for the work; unless you can give private enterprise a reasonable profit they are certainly

not going to go into it as long as we keep the price so low they can't make that profit.

The second point was that they are asking for services just for us to do the work for them. Do we have any spare time in our enrichment facilities that we can devote to that?

Dr. FRIEDMAN. We currently have available capacity to sell approximately 280,000 megawatts worth of enrichment services which we intend to sell or to contract for by June 30. Of this, approximately 100,000 is overseas sales. Of this 100,000, 2,000 represents these three contracts, two in Mexico or 1,300 megawatts, and the one in Yugoslavia, 650.

So, to answer your specific question: this is a very small perturbation of the contracting capacity.

Representative LUJAN. You say by June we will have the 280,000 megawatts capacity?

Dr. FRIEDMAN. No. We are in the process of contracting for that much. We need to complete the contracting by June 30 for us to be able to satisfy the requirements of the user who will need his fuel by 1982.

Representative LUJAN. You say we will have those commitments by June 30 for all the contracts that we will sign, is that right, including these three plants?

Mr. ERLEWINE. By this June, the total capacity will not all be contracted for.

As discussed earlier, there is probably another year left beyond this June before you reach that point of total capacity being contracted for sale.

Representative LUJAN. So, we do have some room to accommodate them without its putting us in any kind of bind. As you point out, 2,000 is not going to make that great big a difference and it can be very well accommodated within the facilities that we now have. So, what we are really looking at again is additional facilities so that we can go on with other work.

Representative HOSMER. What we are looking at is the bottom of the barrel that is staring us in the face a year from now, or 1 year and 2 months from now, at the latest.

Representative LUJAN. Which simply tells us to get moving on new enrichment facilities if we are going to keep up.

Representative HOLFIELD. That is what Mr. Hosmer has been shouting for the last 4 years.

Representative LUJAN. We get to a point where if we don't allow people to make a profit they are not going to get into it and we will have to build new facilities and raise the price.

Representative HOSMER. Some of these people ought to be willing to take the risk of loss, too. Some of them, all they seem to want is assurance of profit.

Representative LUJAN. I don't blame them. Anybody who goes into business wants to make money. They don't go into business to lose money.

The third one is, of course, the question of either increasing or removing the ceiling, plus, as I gather, authority to be able to do it outside the structure of IAEA.

Why would it be necessary to do it outside of the structure?

Mr. ERLEWINE. It would not be outside the structure.

The ceiling that is now in the IAEA agreement of 5,070 kilograms would remain, but that would be used only for research reactors. This would be under another provision of the agreement, other material being supplied, and would not be subject to that ceiling.

Representative LUJAN. Adding a second category to it basically is what you are saying but still through the existing mechanisms that we have?

Mr. ERLEWINE. That is correct.

Dr. FRIEDMAN. But it would have to be added, you might say, unilaterally, because if it had to be negotiated with the IAEA, then it could be subject to the same provisions or the same conditions that the 5,000 kilograms are and this we wish to avoid.

Representative LUJAN. What condition changes would you need?

Dr. FRIEDMAN. The 5,000 kilograms we need to agree to supply without delay, and that condition on additional material would put our contracting criteria under question.

Representative HOLIFIELD. And for R. & D.?

Dr. FRIEDMAN. The agreement does not specify R. & D. That was the intention originally but it never did specify R. & D.

Representative HOLIFIELD. But we have not done it for anything else.

Dr. FRIEDMAN. That is right.

Representative HOLIFIELD. As you said, Mr. Lujan, our commitment is now 5,070 kilograms for R. & D. purposes. That is the only history we have. We didn't want to put them in the brokerage business of selling uranium for fuel. Now, 36,000 kilograms are needed to supply Mexico and Yugoslavia; that material goes for fuel enrichment.

Now, I don't know about the transmittal through IAEA, whether they get a 5-percent commission on it or what; I don't know what the situation would be there for handling purposes. They are not an eleemosynary institution. Regardless of what it is, it opens up a new avenue of selling other than bilateral.

What is EURATOM's arrangement?

Mr. ERLEWINE. The current arrangement?

Representative HOLIFIELD. Yes.

Mr. ERLEWINE. It provides both ways. There is a ceiling in it for research reactors, and there is a separate ceiling for power reactors.

Representative HOLIFIELD. What is that separate ceiling?

Mr. ERLEWINE. It is for 35,000 megawatts electric.

Representative LUJAN. Total?

Representative HOLIFIELD. That would be for fuel?

Mr. ERLEWINE. Yes, sir.

Representative HOLIFIELD. But they are not asking to go through EURATOM and get this 35,000 that is there, are they?

Dr. FRIEDMAN. No.

Mr. ERLEWINE. These two countries?

Representative HOLIFIELD. Yes.

Mr. ERLEWINE. No.

Representative HOLIFIELD. Is any of this 35,000 left in EURATOM that has not been used?

Mr. ERLEWINE. That is intended for EURATOM members' supply.

Representative HOLIFIELD. And they are not a member of EURATOM, of course?

Mr. ERLEWINE. No; neither one of them.

Representative HOLIFIELD. Therefore, they have no access to that?

Mr. ERLEWINE. That is right.

Representative HOLIFIELD. They only have access to IAEA if we set up this new category by removing the ceiling or they would have access to come to us and deal with us bilaterally as do other nations?

Mr. ERLEWINE. That is right.

Representative HOLIFIELD. On bilaterals, you don't need any legislation but you do need legislation if it comes through IAEA. No one has testified as to why they want to go through IAEA rather than bilaterals when other nations have used bilaterals. Is it an antagonism to the United States? They just said they don't want to deal with us?

Dr. FRIEDMAN. It might be speculation on my part to speak for them.

Representative HOLIFIELD. Don't speculate unless you want to.

Dr. FRIEDMAN. I will do it, anyhow. In the case of a country like Yugoslavia, I think they are trying to deal as much as they can through international organizations so that they are not put in the position of appearing that they are choosing sides.

Representative HOLIFIELD. They also may not depend too much on the assurances they get from the U.S.S.R.

Dr. FRIEDMAN. That may be correct.

Representative HOLIFIELD. I am speculating there.

Dr. FRIEDMAN. I think they want to be very careful to maintain their position as a country that doesn't get too involved bilaterally with the East or the West and wants to deal with the IAEA when they can. This is something, and I perhaps should defer to the State Department, but I don't think that the United States has any reason not to want to deal through the IAEA.

Representative HOSMER. These reasons you have given are what I would term fairly scrutable. Isn't there something inscrutable about this whole thing?

Dr. Webber, we have not heard from the State Department. Why don't you give us a real explanation?

STATEMENT OF ROBERT WEBBER, DEPARTMENT OF STATE

Mr. WEBBER. I think my understanding and speculation go along closely with Dr. Friedman's.

We have the usual set of reasons why we are interested in making sales of uranium enrichment services. There is a balance of payment consideration which Congressman Holifield suggests is not terribly important because we are not making perhaps as much profit as we could but we are still making some money. This helps to pay for Arab oil as well as other imports.

Representative HOLIFIELD. Pay for the Arab oil that we use to make electricity, for which we are paying \$10.25 a barrel to make the enrichment units.

Mr. WEBBER. Let me suggest where the profit comes. It comes in two or three other areas.

One of them, of course, is that it helps us to sell rather substantial amounts of equipment not only reactors but also perhaps turbines and other types of nuclear and conventional equipment. In other words, it increases our presence in an engineering sense and industrial sense in a variety of countries. This is big money, in many cases.

Second, because we are the supplier of the enrichment services over a very long period, up to 30 years, this does give us an opportunity of influencing these customer nations in directions we find favorable and helpful in such things as nonproliferation and safeguarding of nuclear facilities.

Representative HOLIFIELD. On that safeguarding, what is the status of IAEA safeguarding arrangements at this time?

Mr. WEBBER. You mean worldwide?

Representative HOLIFIELD. Yes. What have they done in this field?

Mr. WEBBER. They have a safeguarding staff. I will have to defer to Ambassador Porter for the exact size.

They have arrangements with many countries which they are implementing today and they are gradually expanding, for example, with understandings in the EURATOM area which were entered into in 1973.

Would you like to supplement that?

Representative HOLIFIELD. Tell us how much staff they have and how they are operating, if you will, Mr. Ambassador.

Mr. PORTER. Thank you, Mr. Chairman.

In 1970, the IAEA had a meeting of what it called a Safeguard Committee, which is composed of about 45 member states that created the technical structure, for implementing NPT safeguards around the world. Each country which has ratified the NPT has entered into a safeguards agreement with the IAEA which embodies the structure of that fundamental safeguards document.

Representative HOLIFIELD. Yugoslavia and Mexico not being members of IAEA, they are not obligated to that.

Mr. PORTER. They are both members of IAEA and both signatories of NPT.

Representative HOLIFIELD. And they would be obligated?

Mr. PORTER. Both of them, if I may say so, are going for the NPT.

Now, with respect to the Agency's staff, itself, the safeguarding problem is running along two tracks. Safeguards are expensive. We are trying in every way we can to keep the cost down, and at the same time to make them credible, to have good safeguards, if you will.

So, the two tracks are: one, an R. & D. track in which our country has been helping in many ways to try to mechanize safeguards, if you will; and reduce the high personnel cost. There are now about 100 professional staff, including international inspectors operating on a worldwide basis.

The big area not yet covered is the EURATOM area. We are still waiting for Italy to ratify the NPT—well, other states, too—the Germans have now ratified and we expect sometime around the end of the year that all of the EURATOM states will have ratified with the exception, of course, of France which is non-NPT.

At that point, EURATOM safeguards will, in effect, be complemented by agency international safeguards in the eight EURATOM states. Japan has not ratified. There is a movement toward ratification. Japan, of course, is safeguarded now under agreements that have been applied through trilateral arrangements. In other words, when we export nuclear materials to Japan these are exported under the cover of an IAEA-Japan-United States trilateral agreement which provides for safeguards.

Representative HOLIFIELD. This would obtain in the Mexican case, too?

Mr. PORTER. The Mexicans have really been leaders in the whole question of the NPT and safeguards. They, of course, were also leaders in developing the treaty of Tlateloko which imposed a nuclear freeze, in effect, on all the participatory states in the Latin American area.

Representative HOLIFIELD. Under the present arrangement of the Mexican Government with the IAEA, explain for me, if you will, the way they would handle nuclear material. As I understand it, there would be a bilateral with them.

Could we impose on them any additional safeguards over the IAEA or would we in transferring to the IAEA lose our own safeguarding privilege and responsibility and accept the IAEA safeguard? And, if so, under the circumstances, where would the spent fuels go? Would they go to IAEA for chemical separation or would they come to the United States for chemical separation? Who would own the spent fuel rods under these arrangements?

Mr. PORTER. To answer the first question, we, of course, exercise bilateral safeguarding rights only if we have a bilateral agreement with a particular country.

We have accepted, in lieu of a bilateral agreement, the trilateral agreement which imposes agency safeguards in lieu of bilateral safeguards. We have, of course, a residual right which is built in. If the trilateral is ever revoked by any party, the United States still has the right to assume, or reassume, in some cases, bilateral safeguards.

Your second question: What happens to the spent fuel?

In this particular case, I might have to refer to AEC.

I don't know what arrangement GE, which is the supplier, is working out.

Mexico at this point certainly has no indigenous capacity to handle it, so that I assume that the fuel would be sent to the United States for reprocessing. Under the circumstances, it would be up to the Mexicans to decide what happens at that point.

Any plutonium that comes as a result of that reprocessing, regardless of whether it is returned by Mexico is, and remains, under agency safeguards.

Representative HOLIFIELD. Under IAEA?

Mr. PORTER. That is right.

Representative HOSMER. Under the IAEA safeguards implementation, would you give us a feel for how that plutonium would be safeguarded by IAEA, the personnel and the machinery involved?

Mr. PORTER. It is a very technical problem. If it were reincorporated, and I am a layman and I am not a nuclear engineer, but if it were, say, reincorporated into fuel, the agency would be watching this, inventorying it and following the whole process to assure that that plutonium were incorporated. If it is stored, that is an easier matter. The agency has it under seal and periodically inspects that it is there where they first saw it being put.

Representative HOSMER. I think we should recognize, Mr. Porter, that the agency has not 1 cubic foot of storage space.

Mr. PORTER. That is correct.

Representative HOSMER. The agency is woefully undermanned with respect to safeguard inspectors and the magic words of, "Oh, well, that is under agency safeguards," are really not magic words at all.

They do not describe the situation which exists. Therefore, perhaps some attention may be focused on the international agency as has been focused recently in a domestic sense upon the inadequacy of the accountability of nuclear material.

I don't like to lecture but I don't think this record should go unchallenged as to the sanctity or even the existence of what is known as "agency safeguards."

Mr. PORTER. If I may respond, there is a semantics problem here.

The agency, of course, is in business to implement the NPT. That means to detect diversion of nuclear materials for weapons purposes. It is not now in business and we have a philosophical problem here that must be resolved, I agree with you; it is not in the business of what I would call the physical security aspect of the handling of special nuclear materials. It does not have a mandate for a charter which would put it in that arena, if you will.

Now, I think the membership of the agency is becoming aware of this problem and is going to try to tackle it. I can't tell you what the answer will be. Certainly, the agency has to get more involved, I think, in what I would call physical security which, in the United States, is also called safeguards.

Representative HOLIFIELD. Now, as I understand it, and this is really for the record, there is no ceiling on the special nuclear materials in either the IAEA or EURATOM agreements.

Mr. ERLEWINE. In the agreements, themselves.

Representative HOLIFIELD. It is in the law.

Mr. ERLEWINE. That is right.

Representative HOLIFIELD. Now, would those organizations be amenable to modifying the agreements to incorporate ceilings in the agreement?

Mr. ERLEWINE. I think they might, Mr. Holifield, but I think it is questionable in our minds whether this is to the interest of the United States to propose that they do. There are two different reasons.

Representative HOLIFIELD. But if we remove the statutory ceiling you are going to make that kind of agreement with them, aren't you? Or are you just going to go ahead on an open basis as though there is no ceiling, no potential ceiling, or anything?

In other words, is your commitment to furnish them the 36,000 kilograms going to be a specific agreement with no additional agreements, or do you anticipate that if we lift the ceiling you can go and make as many other agreements as you want to?

Mr. ERLEWINE. Those would be specific supply agreements.

Representative HOLIFIELD. But you would have the authority if the statutory ceiling is lifted to go ahead and make additional agreements?

Mr. ERLEWINE. That is correct.

Representative HOLIFIELD. With what kind of limitation?

Mr. ERLEWINE. No limitation, as such.

Representative HOLIFIELD. How about the limitations within the potential production capacity?

Mr. ERLEWINE. Oh, yes; I think that is implied on anything we do.

Representative HOLIFIELD. That is implied?

Mr. ERLEWINE. Yes, sir.

Representative HOLIFIELD. That is not a matter of statute, either, is it? It is a matter of agreement between the AEC and the committee?

Mr. ERLEWINE. The direction from the committee on that; yes, sir.

I did say, Mr. Holifield, that in terms of any arrangement between the Commission and the committee as to an understanding on a ceiling, we would be perfectly happy to do that so that there is nothing entered into in advance that the committee does not know about. We would recommend that we not put it in the Agreement for Cooperation itself.

Representative HOLIFIELD. Then the only control that Congress would have over the distribution of special nuclear materials without the present statutory ceiling, if we amend section 54, would depend upon an agreement between the committee and the Commission?

Mr. ERLEWINE. Yes, sir.

Representative HOLIFIELD. And also the former agreement which says that you cannot commit beyond our capacity. Is that substantially right?

Mr. ERLEWINE. That is right.

Representative HOLIFIELD. Now, outside of lifting the statutory ceiling, have you considered any means of congressional control over such distribution that would be less direct than the 30-day approval for changes in agreements for cooperation but which would be more direct than the fully and currently informed technique you propose?

Have you considered any other approach to this?

Mr. ERLEWINE. Only in the sense that I have just suggested: We could have an informal ceiling specified for an agreement, that when any proposed arrangement under it would exceed it we would be back to discuss it with the committee.

Representative HOLIFIELD. Am I right in understanding that in your testimony you did say that there would be 36,000 kilograms of U-235 needed to supply these two Agencies?

Mr. ERLEWINE. Two countries; yes, sir.

Representative HOLIFIELD. Now, you don't know what other commitments are in the offing that might be considered for release of material in the next 5 years? I assume this would be in the next 2 years that you will release this to Mexico and Yugoslavia?

Mr. ERLEWINE. As I believe Dr. Tape testified, they do not know anything beyond those two. Certainly, we will be glad to consult with the committee if we get a request or know of any. We just don't know of any.

Representative HOLIFIELD. Do you have anything to tell us this morning, or would you rather testify in executive session on the recent meeting which was held here in Washington in regard to any changes in the present security classification posture of information in the enrichment area?

Mr. ERLEWINE. No, sir; I don't think I do.

Representative HOLIFIELD. Is there anything you would like to give us in executive session on that?

Mr. ERLEWINE. Could I call the committee about that?

Representative HOLIFIELD. Yes. Let us know about that.

Do you gentlemen have any further questions?

If there is no further testimony to be offered and there are no further questions, why, we will adjourn the meeting at this time. We will be in touch with you.

Mr. ERLEWINE. Thank you.

[Whereupon, at 12:05 p.m., the subcommittee adjourned, subject to the call of the Chair.]

AEC OMNIBUS LEGISLATION—1974

Part 2. Testimony on H.R. 13896; S. 3253; H.R. 14849; S. 3502;
and H.R. 15416

TUESDAY, JUNE 18, 1974

CONGRESS OF THE UNITED STATES,
JOINT COMMITTEE ON ATOMIC ENERGY,
Washington, D.C.

The Joint Committee met at 2:25 p.m., pursuant to call, in room S-407, the Capitol, Hon. Melvin Price (chairman of the Joint Committee) presiding.

Present: Representatives Price, Holifield, Roncalio, McCormack, Hosmer, Anderson, Hansen, and Lujan; and Senator Aiken.

Also present: Edward J. Bauser, executive director; George F. Murphy, Jr., deputy director; James B. Graham, assistant director; Randall C. Stephens and Brig. Gen. Albion Knight (USA Ret.), professional staff members.

OPENING STATEMENT OF CHAIRMAN PRICE

Chairman PRICE. The Joint Committee will be in order.

Today's hearings concern omnibus legislation for the Atomic Energy Commission. Specifically, the subject is H.R. 15416. The bill incorporates three separate legislative proposals by the Commission which have been combined for more efficient handling by the committee.

The first of these proposals was a request by the Commission for the removal of the requirement for congressional authorization for transfers of special nuclear material to groups of nations.

Senator Montoya, chairman of the Subcommittee on Agreements for Cooperation, held hearings on this proposal. A bill was introduced as an alternative measure which I understand is agreeable to the Commission. We have received a letter from the Commission indicating support for this measure and we will receive further testimony on it today. It has been included as section 2 of H.R. 15416.

The second proposal was the AEC omnibus bill. This provides for an amendment to the Atomic Weapons Rewards Act to include in its coverage some activities not now specifically included and also for three changes to the Atomic Energy Act of 1954 as amended.

One of these changes related to distribution of byproduct material to licensees of agreement states.

Another would provide explicit authority for the Commission to require clearances for persons who will be handling significant quantities of special nuclear material.

The third change would authorize the Commission to exempt certain classes or quantities of special nuclear materials from licensing by the committee, when the Commission finds that such exemptions will not be detrimental to the Nation's security or to public health or safety. The provisions of that omnibus bill are incorporated in H.R. 15416 as section 1, part of section 2, and sections 3, 4, 5 and 7.

The third proposal which is included as section 6 of H.R. 15416 was one which was introduced and which was shortly thereafter also proposed by the Commission and which provides for a 5-year extension of the Commission's compulsory patent licensing authority. This authority will expire on September 1, 1974, unless extended. These proposals were described briefly in our June 6 press release announcing today's hearing and in more detail in a June 17 memo to the members of the Joint Committee.

Each member has copies of these two documents before him. Each member has a copy of each of the three original bills and a short outline of H.R. 15416 before him. Copies of H.R. 15416 are not yet available.

Our first witness is Mr. John Erlewine, general manager of the Atomic Energy Commission.

Mr. Erlewine, will you begin please?

STATEMENT OF JOHN A. ERLEWINE, GENERAL MANAGER, ATOMIC ENERGY COMMISSION; ACCOMPANIED BY LESTER ROGERS, DIRECTOR OF REGULATORY STANDARDS, DIRECTORATE OF REGULATION, ATOMIC ENERGY COMMISSION

Mr. ERLEWINE. Thank you, Mr. Chairman.

With me at the table this afternoon is Marcus Rowden, General Counsel of the Commission.

We are pleased to appear before you today to discuss several legislative proposals in H.R. 15416 which would amend the Atomic Energy Act of 1954, as amended, and the Atomic Weapons Rewards Act.

The Atomic Energy Commission supports enactment of the proposed amendments.

I will briefly describe and discuss the need for four of these proposals: The first concerns certain international distributions of specified materials; the second concerns compulsory patent licensing authority; the next involves distribution of byproduct materials to persons licensed by Agreement States, and the last involves certain amendments of the Atomic Weapons Rewards Act. Mr. Lester Rogers, the Director of Regulatory Standards, will discuss the remaining two proposals, material access clearances, and authority for exemption from licensing requirements of minimal quantities of special nuclear material, and related amendments to special nuclear material export provisions.

INTERNATIONAL DISTRIBUTIONS

The amendment of section 54, regarding international distributions seeks to accomplish two objectives. First, the amount of contained

uranium-235 which the Commission is authorized to distribute to the International Atomic Energy Agency pursuant to the Agreement for Cooperation between the United States and the Agency would be increased to a total of 75,000 kilograms from the current total which consists of 5,000 kilograms together with the sum of all quantities of special nuclear materials made available by all other members of the Agency to July 1, 1960, a total of 5,070 kilograms.

Second, a new procedure would be established whereby this newly authorized amount, and any amounts authorized for distribution to other groups of nations, could in the future be established or modified. The procedure would permit the Commission to distribute such amounts and for such periods of time as are established in writing by the Commission, provided, however, that before they are established, such proposed amounts and periods shall be submitted to the Joint Committee for a specified 30-day period.

The Atomic Energy Commission had previously proposed legislation to achieve flexibility in the future supply of enriched uranium to the IAEA and the European Atomic Energy Community. Hearings were held on these bills, H.R. 13896 and S. 3253, which had been introduced pursuant to the Commission's proposal, on April 30, 1974, before the Joint Committee's Subcommittee on Agreements for Cooperation. As a result of those hearings, H.R. 14849 and S. 3502 were developed by the committee.

[See Appendix A, p. 56, for bills referred to.]

As stated in the General Manager's letter of June 6, 1974, to Mr. Bauser, the Commission believes that this proposal is consistent with the objectives of the Commission and, therefore, supports its enactment.

[Letter referred to follows:]

U.S. ATOMIC ENERGY COMMISSION,
Washington, D.C., June 6, 1974.

Mr. EDWARD J. BAUSER,
Executive Director, Joint Committee on Atomic Energy, Congress of the United States.

DEAR MR. BAUSER: Thank you for your letter of May 22, 1974, requesting the views of the Atomic Energy Commission on H.R. 14849.

The Commission understands that this bill is intended to be enacted in lieu of H.R. 13896 and S. 3253, which were introduced following their submission to the Congress by the Atomic Energy Commission on October 30, 1973.

The bill would amend Section 54 of the Atomic Energy Act of 1954, as amended, in two primary respects. First, the amount of contained uranium-235 which the Commission is authorized to distribute to the International Atomic Energy Agency (IAEA) pursuant to the Agreement for Cooperation between the U.S. and IAEA would be increased from five thousand kilograms, together with the sum of all quantities of special nuclear materials made available by all other members of IAEA to July 1, 1960 (a total of 5700 kilograms of contained U²³⁵), to a total of seventy-five thousand kilograms. Second, the bill would create a new procedure whereby this newly-authorized amount, and any amounts authorized for distribution to IAEA or other groups of nations, could in the future be established or modified. The procedure would permit the Commission to distribute such amounts and for such periods of time as are established in writing by the Commission, provided, however, that before they are established, such proposed amounts and periods shall be submitted to the Joint Committee for a specified 30-day period.

The Commission believes that the objective of this bill, which is to provide increased flexibility in the future supply of enriched uranium to the IAEA and the European Atomic Energy Community, is consistent with the objective of H.R. 13896 and S. 3253, and, therefore, supports the enactment of H.R. 14849. Such

added flexibility is created by providing for future increases in the amounts of special nuclear material authorized for distribution to groups of nations without the need for legislation. Further, by immediately increasing the presently-authorized ceiling on transfers of U²³⁵ to LAEA, the bill facilitates the implementation of the Commission's uranium enrichment contracting policy, which was established pursuant to the revised Uranium Enrichment Services Criteria, with respect to the Commission's overseas enrichment customers who desire to obtain enrichment services through IAEA.

The Office of Management and Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely,

JOHN A. ERLEWINE,
General Manager.

COMPULSORY PATENT LICENSING

Mr. ERLEWINE. I shall now turn to the proposal to amend section 153 of the Atomic Energy Act of 1954, as amended. This section provides that either the Commission or a private party may institute a proceeding to compel a patent owner to license a patent for a reasonable royalty. In its letter of May 28, 1974, to the committee, the Commission recommended enactment of such legislation.

Section 153 (a) permits the Commission, after notification and a hearing, to declare any patent to be affected with the public interest if the Commission finds that one, the invention or discovery "is of primary importance" in the atomic energy field, and two, its licensing "is of primary importance to effectuate the policies and purposes" of the act.

Subsection (b) provides that certain private parties may apply to the Commission for a license to use an invention or discovery in the atomic energy field covered by a patent. If the Commission makes the further findings that (1), such licensing is of primary importance to the applicant's activities, and (2), the applicant cannot otherwise obtain a license on reasonable terms, the Commission is authorized under Section 153 (e) to license the applicant to use the invention on equitable terms. Subsection (f) limits any license to the express purpose in the compulsory license.

Subsection (g) provides that the patent owner is entitled to a reasonable royalty fee from the licensee, either as agreed upon or, in the absence of agreement, as determined by the Commission pursuant to standards set forth in section 157 (c) of the act.

The original authority of the Commission to compel the licensing of certain patents was based on subsection 11 (c) of the Atomic Energy Act of 1946. In its present form, the authority has been in the Atomic Energy Act since 1954. It was enacted for a 5-year period to assure that a limited number of companies could not establish a dominant patent position to exclude others desiring to enter the field. As participation broadened, it was intended that the authority would be allowed to lapse. Subsequent 5-year extensions in 1959, 1964, and 1969, have extended the provisions to those patents based on applications filed prior to September 1, 1974.

Unless subsection (h) of section 153 is amended, patents applied for on or after September 1, 1974, will not be subject to the provisions of that section. This proposal would extend operation of the section for another 5 years, to patent applications filed before September 1, 1979.

The ability of the Government to use a patented invention without interference, but on payment of just compensation, derives from section 1498 of title 28 of United States Code. Hence, the Government's use does not depend upon extension of section 153, nor could Government operations be enjoined to prevent the use of private patents.

With respect to commercial, non-Government uses, a patent owner, absent the section 153 authority of the Commission to compel licensing of the invention, could prevent use of the invention by others. He could seek injunctive relief even though such use would be clearly in the public interest including, for example, furtherance of the public health and safety.

During previous Joint Committee hearings on extending the authority, it was recognized that section 153 was intended to cover a transitional period until atomic energy acquired a broader industrial base. While the industrial base is now broader than at the time of the initial legislation in 1954 and the extensions in 1959, 1964 and 1969, it is still limited in certain fields to a relatively few companies.

In addition, important new developments in atomic energy are just emerging from the research phase to a possible commercial phase. As examples of such new fields, we note fast breeder reactors, the uranium enrichment field, and the laser fusion field. Furthermore, patenting may take place in areas directly affecting public health and safety. The section's authority, therefore, can still provide a useful "standby" safeguard to private industry and the public.

While the Commission has received only one application for compulsory licensing under section 153—an application later withdrawn following a settlement by the parties—the existence of this reserve authority may have had a salutary effect in inducing patent owners to negotiate licenses under fair terms. In any event, we have no indication that the authority has been, nor do we expect it to be, a programmatic impediment.

In view of all of these considerations, the Commission recommends that section 153 be extended for a further 5-year period.

DISTRIBUTION OF BYPRODUCT MATERIALS

The proposed amendment of section 81 of the Atomic Energy Act is highly desirable. Section 81 would be amended to make clear that byproduct material may be made available to persons licensed by Agreement States as well as to persons licensed by the Commission. A narrow reading of section 81 as it is now worded may limit such distribution only to persons licensed by the Commission. A substantial number of States, 24 at the end of fiscal year 1973, are now Agreement States and they are all active in evaluating applications for licenses for receipt of byproduct material. This byproduct material is useful in a great number of commercial activities ranging all the way from radiographs of welds to analyses of air and river water with respect to potential environmental problems. When the Commission enters into an agreement with a State under section 274 of the act, the State's standards and procedures for licensing nuclear materials, including byproduct material, are very carefully evaluated. Therefore, there is no reason to differentiate between those persons authorized under Agreement States and AEC licensees. Thus, the proposed amendment

of section 81 would be a logical, conforming change facilitating the distribution of byproduct material.

ATOMIC WEAPONS REWARDS ACT

As a part of its continuing program to upgrade the protection of special nuclear material and atomic weapons, the Commission is recommending that the Atomic Weapons Rewards Act of 1955 be broadened and that certain conforming and technical changes be made.

The act presently covers, among other things, payment of rewards to persons furnishing original information with respect to the illegal attempted introduction into the United States or attempted manufacture or acquisition therein of special nuclear material or an atomic weapon. The proposed amendment would extend the coverage of the act to information regarding one, the actual introduction of special nuclear material or an atomic weapon, two, actual manufacture or acquisition, and three, conspiracy to introduce or manufacture or acquire such material or weapon. The amendment would also extend coverage to information with respect to the export, attempted export, or a conspiracy to export, special nuclear material or an atomic weapon contrary to the laws of the United States.

We believe that this expansion of the act along with other aspects of our safeguards and security programs will serve to discourage any attempt to divert special nuclear material or atomic weapons.

That completes my prepared statement. Commission staff members familiar with the legislative proposals I have discussed are present with me today and we will be pleased to respond to any questions the committee may have.

Chairman PRICE. Thank you, Mr. Erlewine.

When you are talking about the foreign distribution of special nuclear materials in subsection 54(a), you are not talking about the same types of materials that are involved in the Agreements for Cooperation as with Israel or Egypt, are you?

Mr. ERLEWINE. We are not talking about the same?

Chairman PRICE. Are you or are you not?

Mr. ERLEWINE. We are talking about material for fueling power reactors.

Chairman PRICE. Then you are talking about the same material.

Mr. ERLEWINE. Yes, special nuclear material, yes sir.

Chairman PRICE. I note that the only determination by the Commission in regard to foreign distribution of plutonium-238 would relate to the common defense and security. Is it intended that all health and safety aspects involved in the custody and use and disposition of the material will be the sole responsibility of foreign persons or government?

Mr. ERLEWINE. Mr. Price, if I may, I think you are talking to an amendment that Mr. Rogers is going to present. I have not covered it in my statement. If you would like him to be present to answer that question—

Chairman PRICE. I think it would be a good point to do it right now.

Mr. ROGERS. Mr. Chairman, that is correct. The sole responsibility would be that of the country to which the material was exported with respect to health and safety.

Chairman PRICE. Mr. Erlewine, I note you changed the word "nations" to "persons." You say that that is desirable. If it is desirable to use "person," why would you have to drop the use of the word "nations"? That is subsection 54(b) and 54(c), the word "person" is used rather than "nation." I think you mentioned the use of the word "person," that you thought it was desirable.

Mr. ROWDEN. Mr. Price, if I may comment on that, there may be a confusion between the two different amendments that are being proposed to section 54. The one would deal with permitting export of special nuclear material under an agreement for cooperation to groups of nations, such as the International Atomic Energy Agency and the European Atomic Energy Community as primary examples.

Section 54(b) deals with permitting exports not under an agreement for cooperation to persons of certain quantities and types of special nuclear material, including, for example, plutonium containing 80 percent or more by weight of Pu-238.

Chairman PRICE. Are you talking of things like medical devices such as the pacemaker?

Mr. ROWDEN. The pacemaker would be a primary example of that.

Chairman PRICE. Do you have any other example?

Mr. ROGERS. Yes, sir, I think there are other examples that involve very small quantities of special nuclear material such as calibration sources using very small quantities of U-235 or plutonium, lab counting standards that involve a few micrograms of plutonium or uranium, X-ray fluorescent devices containing very small quantities, provided those kinds of devices have been exempted from our regulations for use here in the United States.

Chairman PRICE. Now, in regard to the finding provided for in proposed subsection 57(d), would the Commission make a formal announcement of such a finding and of its prior intention of making such a finding so that interested segments of the public would be advised?

Mr. ROGERS. Mr. Chairman, the implementation of the authority to exempt under this section would follow normal rulemaking procedures under the Administrative Procedures Act. The public would have an opportunity to comment on any proposed rule to provide an exemption in our regulation and, of course, the Joint Committee as overseer of the AEC would also have an opportunity to make their views known on any such exemption.

Chairman PRICE. While it is on my mind, was the GE pacemaker that was recently recalled even after it had been installed—was that a nuclear device?

Mr. ROGERS. As I understand, it was not a nuclear device.

Chairman PRICE. That was my understanding also but I wanted to be certain of it.

Mr. ROGERS. It was a chemical device.

Chairman PRICE. Senator Aiken?

Senator AIKEN. No questions.

Chairman PRICE. Mr. Holifield?

Representative HOLIFIELD. I haven't had a chance to look this over very carefully. In another bill we have lifted limitations on the obligations of the Commission to fuel reactors in Mexico and Yugoslavia from 5,000 kilograms up to 75,000, I believe.

Mr. ERLEWINE. Yes, sir.

Representative HOLIFIELD. That was done because that 75,000 would approximate the production of the enrichment plans when the CUP is completed? In other words, that would bring the commitment up to approximately the total commitment of our capacity to produce material for fuel rods.

Mr. ERLEWINE. I don't believe, Mr. Holifield, that the amount was determined in that fashion. It was based on the needs of the reactors.

Representative HOLIFIELD. I understand that but adding those needs to the other commitment, we have again the productive capacity of the enrichment plants, this did bring it up as far as we could determine to be the approximate amount we will be able to produce when the CIP-CUP is in effect.

Mr. ERLEWINE. Yes, together with the other contracts being signed.

Representative HOLIFIELD. Yes, sir. In the last week we have had these announcements as to commitments for power reactors in Egypt and in Israel.

Mr. ERLEWINE. Yes, sir.

Representative HOLIFIELD. We are asked not only to make a commitment by the President to build these reactors in these countries but we will also be asked to make a commitment of fuel to operate those reactors on the basis of a 30-year lifetime; is that not true?

Mr. ERLEWINE. That is my understanding.

Representative HOLIFIELD. If we do that, we are making a commitment which we cannot at this time, nor at the time the CIP-CUP is finished, fulfill.

Mr. ERLEWINE. I believe, Mr. Holifield, that the Commission's current policy is to accept contracts through June 30 of this year. If contracts were to come under these arrangements which the President announced, they would have to be entered into by the end of the month to qualify in that regard.

Representative HOLIFIELD. We only have a few days between now and the end of the month. There have been no negotiations with Egypt or with Israel on these particular arrangements, have there?

Mr. ERLEWINE. Not to my knowledge.

Representative HOLIFIELD. Do you think that the time element of 13 more days will give us enough time to have the negotiations consummated and then have the proposals submitted to the Joint Committee to lie before it for 30 days?

Mr. ERLEWINE. Not the Agreement for Cooperation, Mr. Holifield. What could be done in that time is the negotiation of a conditional sales contract for fuel which would be subject to later consummation of an Agreement for Cooperation, to make it binding.

Representative HOLIFIELD. There is nothing the committee can do on that one way or the other. If it were military, we have a provision in the act that we can by concurrent resolution have both Houses stop any kind of military agreement to transfer material.

Mr. ERLEWINE. Yes, sir.

Representative HOLIFIELD. But the proposal for peacetime use, which this would be, in peacetime central power stations in Egypt and in Israel, we have no such provision of passing a concurrent resolution in the House or the Senate in order to stop it if that were the will of the Congress, right?

Mr. ERLEWINE. It does not expressly say so.

Representative HOLIFIELD. The law does not give the Congress the same control that it has over the military.

Mr. ERLEWINE. That is right.

Representative HOLIFIELD. What is the Congress going to do in view of the fact that with the consummation of the authorization in another bill to authorize the commitment of enough fuel to Yugoslavia and to Mexico for those two reactors, what position is the Congress in on any subsequent commitments for reactors which have no backup of potential capacity to manufacture the fuel that is needed?

Mr. ERLEWINE. My understanding is that the Commission regards its contracting actions as being in compliance with the limitations that the Congress imposed on contracting to capacity.

Representative HOLIFIELD. Assuming that the Mexican and the Yugoslav commitment is consummated in a contract and that with other commitments total the amount of productive capacity which we will at that time have with present enrichment capability and with the anticipated CIP-CUP improvement in addition to the present capability, then where do we stand in regard to making good on a commitment to fuel reactors in Israel and Egypt?

Mr. ERLEWINE. My understanding, Mr. Holifield, is that any commitment that the Commission will enter into between now and June 30 it regards as being within the capabilities of its plants and within the limitations that the Congress has said. Beyond that period is a different proposition.

Representative HOLIFIELD. No. You could very easily over commit. You asked for unlimited power to commit and we specifically took into consideration the Mexican and the Yugoslavian agreements or commitments to build reactors in those countries and negotiations to do it. That is why we put the limitation of 75,000 kilograms on that because according to the best information we had, that was about all we could take and that is about all we would be able to commit because of reaching the limit of capability which we would have when the CIP-CUP goes into effect.

Mr. ERLEWINE. The first part of your statement accords with my understanding. As to the second, the two contracts, along with others coming in in the same period, will go against that same ceiling so that those contracts in and of themselves do not constitute reaching the production ceiling of our plants. They are considered along with other contracts that the Commission is continuing to negotiate through this month.

Representative HOLIFIELD. We raised it from 5,000 kilograms to 75,000 kilograms on the request that it was for the purpose of fulfilling the commitments to Yugoslavia and Mexico.

Mr. ERLEWINE. That is correct. The ceiling was not sufficient to permit IAEA to supply these requests. The ceiling as it now stands is 5,000 kilograms which would not supply either reactor. Raising the ceiling to 75,000 permits supplying both the Yugoslav and Mexican reactors.

Representative HOLIFIELD. Through the IAEA?

Mr. ERLEWINE. Through the IAEA, yes sir.

Representative HOLIFIELD. What about other commitments that go beyond that? I am not aware that we have an excess capability outside

of this 75,000. I am not aware that we have that for a number of other reactors abroad.

Mr. ERLEWINE. The commitments under our arrangements with the IAEA and EURATOM are made by the individual contracts themselves, that are signed and will be signed through this month. The 75,000 does not represent a commitment. It is a ceiling. But the actual contracts will set the commitment. That is what the Commission is totaling now in determining its ability to contract through this month.

Representative HOSMER. Will the gentleman yield?

Representative HOLIFIELD. Yes, I will yield.

Representative HOSMER. This is just with overseas people?

Mr. ERLEWINE. No, sir.

Representative HOSMER. What you are telling us is that after June 30 of this year, anybody in this country who has a nuclear reactor for which he has not already gotten a contract to fuel, is going to have to go over to EURENCO or EURODIF or some other foreign source, South Africa, in order to make a contract for nuclear fuel for his reactor? Is that what you are telling us?

Mr. ERLEWINE. I don't believe we have said that yet, Mr. Hosmer.

Representative HOSMER. That certainly is the result, the consequence.

Mr. ERLEWINE. It could be the result if the Commission stops contracting as of the end of this month.

Representative HOSMER. And the Commission has to stop contracting because its contracts by that time will apparently be up to its capacity.

Mr. ERLEWINE. I believe that the Commission, when it comes in next week to testify to this committee on its enrichment plants, will talk to its plans.

Representative HOSMER. That is right. The policy, and the only policy that the AEC and the U.S. Government has at this moment is that "private enterprise will supply this demand." Is that correct?

Mr. ERLEWINE. It is certainly trying to encourage that; yes, sir.

Representative HOSMER. In the meantime, whatever the foreign exchange consequences of having to buy separative work overseas, the U.S. policy and the AEC policy is that they should be suffered; is that correct?

Mr. ERLEWINE. I wouldn't say it is a policy.

Representative HOSMER. It is a consequence, is it not?

Mr. ERLEWINE. If that is the case.

Representative HOSMER. And the lack of doing something is as much a policy as doing something in this instance as in many other instances; is it not?

Mr. ERLEWINE. What I am saying, Mr. Hosmer, in terms of the Commission's policy, in terms of complying with the legislative mandate to stay within the capacity of the plants, is that the Commission is contracting through this month.

Now it has not made a policy what it does beyond this month. I tried to respond to Mr. Holifield's question as to whether we were within that limitation. It is my understanding that the Commission believes it is.

Representative HOSMER. You have some of your money cut off by Congress for CIP and CUP and that has some effect on the contracting capacity, does it not?

Mr. ERLEWINE. There is certainly some degree of variables in the production capacity of the plant, as you well know.

Representative HOSMER. You have had a power outage and shortage for a number of months from one of those tornadoes. That has some effect on your contracting capacity, does it not?

Mr. ERLEWINE. To some degree.

Representative HOSMER. Thank you.

Representative HOLIFIELD. We are building how many reactors in this country now, in the United States? Construction permit granted, 51,000-megawatt electric.

Representative HOSMER. Forty-four licensed to operate, 54 construction permits granted, 62 under construction, 53 orders and 18 more publicly announced.

Representative HOLIFIELD. Has the Commission given assurance that all of these will have enough fuel to operate their plants when they are built?

Mr. ERLEWINE. The Commission operates on the same basis with domestically as abroad requiring the 8-year leadtime. The June 30 deadline on that applies to both domestic reactors and foreign reactors.

So if the companies are deciding to come in and contract their contracts are being taken.

Representative HOLIFIELD. It is not an entirely satisfactory answer although it is an answer. What I am concerned about is the utilities in this country where a construction permit has been granted and where 35 of them are under operating license review for a total of 33,000 megawatts electrical and 19 operating licenses are not yet applied for, 18,000 megawatts electric.

Have those particular domestic utilities been given any kind of contract commitment for the supply of fuel to operate those domestic reactors?

Mr. ERLEWINE. To the best of my knowledge, Mr. Holifield, anyone who has asked for it has been given a contract.

Representative HOLIFIELD. If they have not yet asked for it, it is obvious they are going to need it and they are domestic and we need energy in this country very badly.

Your answer, therefore, may be correct but it is not responsive because what I want to know is, have those 54 where construction permits have been granted, been given assurance that they will have fuel enrichment material to fuel those reactors?

Mr. ERLEWINE. I don't know the answer specifically, Mr. Holifield, but if a construction permit had been granted, I would feel certain they had their contract fuel signed.

Representative HOLIFIELD. How about the 19 operating licenses not yet applied for? Thirty-five have applied for operating license review and 19 have not yet applied for it and they will need enough to produce 18,000 megawatts electrical. Then there are another 62 under construction permit review, 11 where site work has been authorized, safety

reviews in process, and safety and environmental reviews in process. Have all of those domestic reactors been assured of enriched material to operate those reactors which we are going to sorely need?

Mr. ERLEWINE. Mr. Holifield, I can supply for the record what the contracting situation is with each of those categories. The process, though, to the best of my knowledge is one of contracting on the 8-year leadtime as being the assurance that is given. It is a contractual assurance when the company wants it. That has been the basis on which business has been done.

Representative HOLIFIELD. I would like to have that information. As you know, I am not against overseas commitments to export reactors. I have supported that all along. I am not against, at this time, supporting a reactor for either Egypt or Israel. What I want to know is, No. 1, where will our domestic reactors that are in process, the 54 with construction permits granted and 62 under construction permit review, get their fuel rod material?

Will our capacity take care of those and will it continue to take care of our export sales or transfers of reactors under any conditions?

Representative HOSMER. That information ought to be easy enough to supply. You know whom you have your contracts with.

Mr. ERLEWINE. Yes, sir; we will supply it for the record.

[The contracting information subsequently furnished follows:]

REGULATORY STATUS OF NUCLEAR POWERPLANTS AS OF JUNE 18, 1974

| | Net mega-watts ¹ (thousands) | Num-ber | Contracts executed | Contracts out for signature | Contracts in preparation | Contacted AEC but contract required after transition period | No con tac |
|---|--|---------|--------------------|-----------------------------|--------------------------|---|------------|
| Licensed to operate..... | 28 | *44 | 44 | 0 | 0 | 0 | 0 |
| Construction permit granted: | | | | | | | |
| Under operating license review..... | 34 | 35 | 35 | 0 | 0 | 0 | 0 |
| Operating license not yet applied for..... | 18 | 19 | 16 | 3 | 0 | 0 | 0 |
| Subtotal..... | 52 | **54 | | | | | |
| Under construction permit review: | | | | | | | |
| Site work authorized, safety review in process..... | 11 | **11 | 11 | 0 | 0 | 0 | 0 |
| Safety and/or environmental review in process..... | 57 | 51 | 39 | 11 | 0 | 1 | 0 |
| Subtotal..... | 68 | 62 | | | | | |
| Ordered..... | 57 | 52 | 34 | 7 | 0 | 5 | 6 |
| Publicly announced..... | 22 | 19 | 10 | 3 | 0 | 1 | 5 |
| Total..... | 227 | 231 | 189 | 24 | 0 | 7 | 11 |
| Other possible plants ² | 40 | 35 | 12 | 4 | 3 | 3 | 13 |

*In addition, there are two operable AEC-owned reactors with a combined capacity of 940 megawatt electrical.

**Total of plants under construction (Construction permit granted plus site work authorized): 70 plants.

¹ Includes plants either under contract or under negotiations for uranium enrichment contracts with the AEC, plus other plants announced in news releases and informally to the AEC but not yet included in the ordered or publicly announced categories.

² Based on data supplied by utilities to the AEC for contracting purposes.

Representative HOSMER. You also know that the utilities have been waiting until the last possible moment in order to put their name on the dotted line because they have to put in a check for, what is it, 10 percent of the cost at that time?

Mr. ERLEWINE. It is substantial for the first core.

Representative HOSMER. A substantial amount of money for which they forego the receipt of interest on the money.

Chairman PRICE. Will you supply the information?

Mr. ERLEWINE. Yes, I will.

[The information furnished follows:]

INFORMATION ON ADVANCE PAYMENTS

The advance payments related to long-term fixed-commitment uranium enrichment contracts are based on megawatts of electrical generating capacity for each reactor, for example, \$3.3 million for a 1000 MW(e) reactor, and are payable annually in three equal installments. A summary table of these advance payments follows:

U.S. ATOMIC ENERGY COMMISSION
SUMMARY OF ADVANCE PAYMENTS RELATED TO LONG-TERM, FIXED COMMITMENT URANIUM ENRICHMENT CONTRACTS
[In millions of dollars]

| | Fiscal year— | | | | | | | | | | | Total |
|---|--------------|-------|-------|-------|-------|-------|--------|--------|--------|------|---|--------|
| | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | | |
| Contracting to sustaining capacity of 320,000 MWe: | | | | | | | | | | | | |
| Domestic: | | | | | | | | | | | | |
| Advance payments received..... | 139.5 | 162.6 | 158.9 | 24.2 | — | — | — | — | — | — | — | — |
| Advance payments applied to deliveries..... | -1.1 | -7.3 | -3.2 | -14.0 | -18.9 | -67.4 | -87.9 | -144.3 | -139.7 | -1.4 | — | 485.2 |
| Net..... | 138.4 | 155.3 | 155.7 | 10.2 | -18.9 | -67.4 | -87.9 | -144.3 | -139.7 | -1.4 | — | -485.2 |
| Foreign: | | | | | | | | | | | | |
| Advance payments received..... | 41.8 | 65.3 | 55.7 | 21.5 | — | — | — | — | — | — | — | — |
| Advance payments applied to deliveries..... | -1.5 | -7.4 | -21.1 | -20.1 | -23.0 | -32.5 | -29.8 | -26.5 | -22.4 | — | — | 184.3 |
| Net..... | 40.3 | 57.9 | 34.6 | 1.4 | -23.0 | -32.5 | -29.8 | -26.5 | -22.4 | — | — | -184.3 |
| Total, 320,000 MWe level: | | | | | | | | | | | | |
| Advance payments received..... | 181.3 | 227.9 | 214.6 | 45.7 | — | — | — | — | — | — | — | 669.5 |
| Advance payments applied to deliveries..... | -2.6 | -14.7 | -24.3 | -34.1 | -41.9 | -99.9 | -117.7 | -170.8 | -162.1 | -1.4 | — | -669.5 |
| Net..... | 178.7 | 213.2 | 190.3 | 11.6 | -41.9 | -99.9 | -117.7 | -170.8 | -162.1 | -1.4 | — | — |

Representative HOLIFIELD. You see what I am driving at, Mr. Erlewine?

Mr. ERLEWINE. I do, Mr. Holifield. Without a doubt that will be a topic next week in talking about what the Commission's policies are beyond the end of the month.

Representative HOSMER. By the end of the month that will be an academic question anyway because there won't be a contract for anybody, will there?

Mr. ERLEWINE. I don't know.

Representative HOSMER. Until somebody does something.

Mr. ERLEWINE. Somebody has to sign contracts, that is right.

Representative HOLIFIELD. This is why Mr. Hosmer and I have been so concerned about the enrichment capacity because we could see down the road and see the point where we would no longer be able to supply the domestic reactor builders with fuel to run those reactors to make the electricity that this country is going to sorely need.

That is why we have been pushing along with other members of the committee on increasing the supply of enrichment material.

Mr. ERLEWINE. Yes, sir.

Representative HOLIFIELD. That is why we put into the legislation that the AEC was not to make commitments beyond the total capacity which we could estimate would be available at the end of CIP-CUP improvement of existing reactor fuel capacity. This is why I am asking these questions. Unless those questions can be satisfactorily answered, then we are in an imbalance and we are committing fraud on these people who are building reactors and we are committing fraud on any foreign export of reactors that we might contemplate.

Mr. ERLEWINE. I would hope that we are not doing that, Mr. Holifield.

Representative HOLIFIELD. We are not doing it from the standpoint of being vicious or anything like that, but we are doing it from the standpoint of not adequately dovetailing productive capacity with domestic need plus foreign need.

That is the point I am making.

Mr. ERLEWINE. Yes. The Commission, as you know, has been endeavoring to encourage private industry to pick up and commit itself to production of special nuclear material.

Representative HOLIFIELD. I understand that, but you haven't gotten the commitment and you are going ahead as though you have the commitment. That is the point I am talking about.

Representative HOSMER. Even if you get commitments for some of them to go ahead with the work, you don't know whether those commitments will take care of but a fraction of the separative work capacity that is required. Those are some of the things we are going to get into next week, Mr. Erlewine.

Mr. ERLEWINE. Yes, I appreciate that.

Representative HOSMER. Even though you are an obedient servant of the President, when he says that this policy of private enterprise getting into the business is a Government policy, we will expect you to frankly discuss with us the consequences if the policy fails, which apparently a number of people have the opinion that it will fail.

Chairman PRICE. Aren't you getting a little concerned about the supply situation?

Mr. ERLEWINE. I would say we are concerned about it; yes, sir.

Representative HOLIFIELD. Although you are concerned, you are going ahead making commitments which you can't fill.

Representative HOSMER. They think they can jimmy the tails and do all these other things. When it turns out they can't get the feed material to do it, they are going to have to rework the tails if things start panning out like they are looking right now on the raw material side.

Mr. ERLEWINE. Without any question there are policy questions to be addressed on the future production of special nuclear material.

Representative HOSMER. It seems to me that the Commissioners and you yourself, have some obligation to advise the administration that to sit placidly and watch a policy which might be one of doom to be adhered to in this area, is failure of obligation and duty, at least in my view.

Representative HOLIFIELD. It is a failure of responsibility if you are irresponsibly doing things where you see no way of fulfilling the obligations that are incurred by your original commitments.

Chairman PRICE. Mr. Roncalio.

Representative RONCALIO. I am just worried. I have no questions. I have enjoyed the questions.

Representative ANDERSON. I did not quite understand from the colloquy with Mr. Holifield and Mr. Hosmer, Mr. Erlewine, do we have at the present time executed contracts for the sale of this enriched uranium for special nuclear material with both of these countries?

Mr. ERLEWINE. No, we do not. You are speaking of which countries?

Representative ANDERSON. Yugoslavia and Mexico.

Mr. ERLEWINE. Of that I am not so certain. We could well have in that case.

Representative ANDERSON. I wasn't familiar enough with the contractual arrangement to know whether the contract arrangement runs to the IAEA or whether it runs to the individual countries.

Representative HOLIFIELD. It runs to the request of Mexico and Yugoslavia to buy fuel for the reactors that we are going to build for them from the IAEA and the IAEA does not have it. The only place they can get it from is here.

Representative ANDERSON. So our contractual arrangement is with them rather than the individual countries?

Mr. ERLEWINE. No, sir; the contractual arrangement is with the AEC.

Representative HOLIFIELD. The contractual obligation exists with the AEC to furnish the IAEA enough material so that the IAEA can contract with Yugoslavia and Mexico for the fueling of these two reactors. We are not "pure" enough for them to buy direct from us.

Chairman PRICE. Let Mr. Erlewine explain exactly where the contractual relationship is.

Mr. ERLEWINE. The contractual relationship is between AEC, Mexico, and Yugoslavia. It goes against the quota of the ceiling to IAEA but it is a direct contractual relationship so far as the commitment goes between AEC and the country.

Representative ANDERSON. But you do not know in these two cases whether or not that commitment is actually in existence now in a legal sense? I am trying to tie this down to the cutoff date of June 30, that is all.

Dr. FRIEDMAN. May I try to answer the question? We have negotiated, but not yet signed, contracts with Mexico and Yugoslavia for the supply of fuel for these reactors we have been discussing. In order to have a contract it needs to be pursuant to an agreement for cooperation. These contracts are pursuant to our agreement for cooperation with the IAEA, of which Mexico is a party.

It is pursuant to our agreement for cooperation with the IAEA. These contracts are conditional on the eventual passage of the necessary legislation to raise the ceiling of the IAEA. If that legislation is not passed these contracts are not valid.

Representative HOLIFIELD. What is different from what I said? I said we have to furnish this material to IAEA so that they can furnish it to Mexico and Yugoslavia because they don't want to buy it direct from us. They want to buy it from an international body; is that correct?

Dr. FRIEDMAN. I was not correcting you, Mr. Holifield. I was summarizing.

Representative HOLIFIELD. You said it a different way. What I said originally is just as true as what you said.

Representative HOSMER. Another thing implicit in his statement is that the supply for these two reactors has already been counted in, calculated in the June 30 cutoff. So this is not on top. It has already been included.

Mr. ERLEWINE. That is right.

Representative ANDERSON. Thank you. That is all I have, Mr. Chairman.

Representative HOLIFIELD. I want to be sure I understand this. As I understand it we have negotiated with Yugoslavia and Mexico. What we negotiated was their need for fuel; is that right?

Mr. ERLEWINE. Yes.

Representative HOLIFIELD. They did not want to deal with us directly like a lot of other nations have. They wanted to deal with the international agency, the IAEA. The only way they could deal with IAEA was for us to lift their ceiling and give them the title of the material and they in turn would contract with Mexico and Yugoslavia for delivery of that material which goes through IAEA. Am I right or wrong?

Dr. FRIEDMAN. May I make a slight modification of what you said? We are contracting with these countries directly. We are not supplying the material to the IAEA for further resupply to these countries. We will supply the material directly to these countries. The involvement of the IAEA is as follows: In order to supply material, we need to assure ourselves of safeguards and all of the other assurances we require. These assurances are spelled out in an agreement for cooperation. As you pointed out, we do not have a bilateral agreement for cooperation with either Mexico or Yugoslavia.

Representative HOLIFIELD. That is right, and they don't want a bilateral with us.

Mr. ERLEWINE. I think Mexico prefers not to have one. I am not sure about Yugoslavia.

Dr. FRIEDMAN. Therefore, the agreement for cooperation with the pertinent safeguard restriction is the one that the IAEA has so that

what you said is right except that the contract and the supply is directly with the countries involved.

Representative HOSMER. But the safeguarding, the accountability, is through the IAEA?

Mr. ERLEWINE. All of these statutory requirements that we need to follow before we can initiate and carry out a contract are with the IAEA.

Representative HOLIFIELD. Does Israel and Egypt participate in IAEA?

Mr. ERLEWINE. Both countries are members of the IAEA. They have expressed a preference for dealing directly with us. They have asked to negotiate with them a bilateral agreement for cooperation.

Representative HOLIFIELD. And safeguards?

Mr. ERLEWINE. Which would include sufficient and adequate safeguards. The President has agreed to that mechanism.

Representative HOLIFIELD. I am not criticizing the President in this matter at all. I supported the lifting of the ceiling on IAEA's quota—if you want to call it that—to be chargeable for transfer through IAEA or transferred direct and carried on their books. Where does the obligation on safeguards go from Mexico and Yugoslavia? Does it go to the IAEA?

Mr. ERLEWINE. The safeguards to be applied will be essentially the same as those applied in our bilateral agreements for cooperation.

Representative HOLIFIELD. But with different people?

Mr. ERLEWINE. No, the safeguards, even in our bilateral agreement for cooperation, are carried out by the IAEA safeguard inspection team.

Representative HOLIFIELD. All of them?

Mr. ERLEWINE. That is the general procedure.

In the early days we carried out bilateral safeguards. Our bilateral agreements all have a provision for bilateral safeguards but we don't carry those out as long as the IAEA is carrying out its safeguards section.

Representative HOLIFIELD. A great deal of criticism has been given to the President because he has made those two commitments. I have not joined in that criticism, I might say. I have reserved my opinion on it until I know exactly what the arrangement is. If at that time I think I should criticize, I would do so, but I have not jumped into print as some people have and started criticizing the President. I am giving him the benefit of the doubt that I might have until I know more about it.

But there are other people who haven't been that forbearing, let us say, that patient. I might also say that I think it would have been better if the President had touched base with this committee that has to approve these arrangements instead of going off by himself and make these commitments. The thing that I am really concerned about is not making arrangements with these two nations; the thing I am concerned about is our ability to furnish the enriched material that is going to be necessary for those reactors when they are finished and ready for fueling. That is my concern at the present time, my great concern.

I can't see where we will have that material unless there is a change made in the supply capability of this country for enriched material to go into fuel rods. I assume that is our concern too?

Representative HOSMER. That is right.

Representative McCORMACK. Mr. Chairman.

Representative HOSMER. It would be embarrassing to have to go buy it from EURODIF for them.

Representative HOLIFIELD. Or the Soviets.

Representative McCORMACK. Mr. Erlewine, under our contracts with Yugoslavia and Mexico, what happens to the fuel elements after they are taken from the reactor, the irradiated fuel elements?

Mr. ERLEWINE. What happens to the fuel elements?

Representative McCORMACK. Yes, after they are irradiated.

Mr. ERLEWINE. You mean reprocessing, where does it occur?

Representative McCORMACK. Yes.

Dr. FRIEDMAN. The fuel element and all products of the fuel elements remain subject to international atomic energy safeguards. They are reprocessed in an approved safeguard plant. The product plutonium is the property of the country which has bought the enriching services, they then are stored and can only be used under appropriate IAEA safeguards. They cannot be used in any nuclear explosive device. They cannot be used for a peaceful nuclear explosion.

Representative HOLIFIELD. And they do not have the chemical processing plant in Egypt to process spent fuel rods. Therefore it means either they will have to build these plants or they will have to export the spent fuel to a country that does have the chemical facilities to process it; is that correct?

Dr. FRIEDMAN. That is not only right but in our yet to be negotiated arrangements with both Egypt and Israel, we intend to pay particular attention to such matters as where material is processed, where it is stored, how it is shipped, and we will have as a principal negotiating position that we have to have a veto on where these things happen.

Representative McCORMACK. What is an example of an approved IAEA reprocessing plant?

Dr. FRIEDMAN. The Eurochemique plant in Belgium has been approved—actually it has been approved by several safeguard systems. It is approved by the IAEA, by the EURATOM safeguards procedure and by others. In order to approve a plant IAEA first needs in its early stages to have access to the design of the plant so that they can determine whether the plant is “safeguardable,” if I may coin a word.

Subsequently they must have access to the areas of the plant which they find necessary for appropriate inspection and sampling. I think in a very brief way this is the kind of thing that is involved. Depending on the quantity of material in the plant it would require either frequent or, in a reprocessing plant, more likely constant inspection which means a resident inspector, one or more resident inspectors in the plant at all times while significant quantities are being processed.

In fact, the IAEA and we pay unusual attention and place unusual emphasis on reprocessing plants because that is one of the key places to look. When a slightly enriched fuel is sent to a reactor it is important but it is not weapons grade material. When fuel is in a reactor that is important but it is not weapons grade material.

When the spent fuel is taken out of the plant it is important but it is not in a form that can be used for weapons. When it goes through

the chemical processing plants, that is when it is critical. Safeguarding of the chemical processing is one of the most critical elements.

Representative McCORMACK. What sort of security system existed in India?

Dr. FRIEDMAN. India has several reactors. They have a small research reactor which was supplied by Canada. They have two Tarapur reactors, twin reactors, each 200 megawatts, which has been supplied by the United States under an agreement for cooperation with the United States.

The small research reactor which Canada supplied did not have any safeguard system applied to it. The reactor which has been supplied by the United States under our agreement for cooperation has IAEA safeguards applied to the reactor and to the products of the reactor. We have had no reason to doubt the efficacy of the IAEA safeguards on our reactors.

Representative McCORMACK. I take it then that the spent fuel being taken from our two reactors in India that we have provided will go to an approved IAEA separations plant?

Dr. FRIEDMAN. I am not sure whether they have sent any for reprocessing but they cannot do it unless it is to a plant which is under IAEA inspection.

Representative McCORMACK. Apparently they have a separations plant of their own.

Dr. FRIEDMAN. They have a small pilot separation plant of their own which they have apparently used to process the fuel which they had obtained through a nonsafeguard reactor.

Representative HOLIFIELD. Could I ask a question, Mr. McCormack.

Representative McCORMACK. Certainly.

Representative HOLIFIELD. I was at the Tarapur site at the time they were building that. Am I wrong in thinking that they finished it in about 1966 or 1967?

Dr. FRIEDMAN. I can check that, but I believe the first reactor went critical in 1969. I did not mean to leave the impression that they are not reprocessing. I only meant to say that I am not familiar enough with it to know what the status is.

Representative HOLIFIELD. We both know there would have to be replenishing of fuel rods. They could not have lasted this long.

Dr. FRIEDMAN. I am sure of that. I am not sure whether they have kept—you see, many of our reactors are keeping the spent fuel in storage until we get a reprocessing plant that can handle it. I just don't know what they have done.

Representative McCORMACK. But they do apparently have a reprocessing plant.

Dr. FRIEDMAN. They have facilities for reprocessing plutonium, that is correct.

Representative McCORMACK. Does the IAEA supervision include supervising the storage of spent fuel?

Dr. FRIEDMAN. It does if it is from a plant that is under IAEA safeguards which means in all but that small Canadian research reactor.

Representative HOLIFIELD. And that is a heavy water reactor which is capable of making the material they used in their recent test, peaceful test.

Dr. FRIEDMAN. And one might presume it was used for that.

Representative McCORMACK. Do I take it that we can assume that the agreement that is made with Egypt and Israel, if there is one made, would involve no separations plant in Egypt or Israel and that they would be exchanging their spent fuel elements for new ones?

Dr. FRIEDMAN. First of all, the agreement is yet to be negotiated. I think we can assure you that the AEC will have the prime role in the negotiations of the agreement and the AEC will not be satisfied with an agreement which does not give us the kind of assurances that we and the Joint Committee agree are necessary.

Now whether it means that the fuel is exchanged or whether it means that we will have the right to say where it is stored, I can't at this stage say.

Representative McCORMACK. Isn't that really fundamental? If we are going to have an agreement in which the American public can have any real confidence, isn't it fundamental that we not reprocess the fuel in these countries but bring it out and reprocess it someplace else?

Dr. FRIEDMAN. I think that it would give us a lot more assurance and therefore this is a direction that we will proceed in in our negotiations. But it is very difficult before the agreement is negotiated to spell out in detail all of the conclusions.

I agree with you that that is a very key issue. We will bear that in mind.

Representative McCORMACK. I realize we cannot spell out all the details in the contract but it seems to me that is a fundamental condition that we should be attaching.

Dr. FRIEDMAN. I agree it is fundamental and we will bear that in mind in our negotiations.

Representative HOSMER. In your negotiations thus far, unfortunately you have had negative contact with Dr. Kissinger. I just wonder if Dr. Friedman is going to have a chance to have any of these inputs to Dr. Kissinger or is Dr. Kissinger going to wing it on his own?

Dr. FRIEDMAN. I have not had any conversations with Dr. Kissinger, but we have been working with the State Department and the National Security Council in spelling out our negotiating position. The AEC is satisfied at this stage that these are valid and meaningful positions.

The AEC has played a significant—I would say a major—role in developing these positions. I think that we can assure you that the AEC will be the prime movers and that the State Department and the National Security Council and the other involved agencies concur in the positions that we will be taking.

Chairman PRICE. Is there any further testimony from the Commission on the bill?

Mr. ERLEWINE. Mr. Rogers has a statement.

Chairman PRICE. The committee has an executive session at 3:30 in the executive committee room. So the Commission will be excused.

Mr. ERLEWINE. Mr. Price, Mr. Rogers has a statement.

Mr. ROGERS. I will be pleased to submit the statement for the record.

Chairman PRICE. Which section were you testifying on?

Mr. ROGERS. I was testifying on section 57, section 54-b, and section 161.

Chairman PRICE. Does the Commission support those sections as contained in the bill?

Mr. ROGERS. Yes, sir, we support those sections.

Representative HOLIFIELD. May I say for clarification of the record that these pertain to very small amounts of material which can be used in pacemakers and other medical devices and that they are not to be considered as being in quantities of enriched material that have anything to do with weapon capability.

Mr. ROGERS. That is correct, sir.

Representative HOLIFIELD. I have glanced through this. I think it is in accord with what we should do but I would like to have the privilege of reading it completely.

Mr. Chairman, if we need any additional information, we can either have the gentleman come back or submit questions to him for answers in writing.

Mr. ROGERS. We will be pleased to do that.

Chairman PRICE. We will accept it for the record.

[The statement of Mr. Lester Rogers follows:]

STATEMENT OF LESTER ROGERS, DIRECTOR OF REGULATORY STANDARDS, ATOMIC ENERGY COMMISSION

Mr. ROGERS. Mr. Chairman and members, I am pleased to appear before you today to discuss these legislative proposals in the committee omnibus bill, H.R. 15416, which relate primarily to the Commission's regulatory program—the proposed authority for the Commission to exempt from licensing requirements small quantities of special nuclear material and related changes to special nuclear material export provisions, and special nuclear material access provisions.

The amendment to section 57 of the act in H.R. 15416 would give the Commission authority to exempt small quantities of special nuclear material from licensing requirements similar to its present authority to exempt byproduct material and source material from the requirements for a license. That section presently requires, without qualification, a Commission license for transfer, possession, import or export of special nuclear material.

In contrast, the act authorizes the Commission to exempt from the requirements for a license (1) unimportant quantities of source material and (2) classes or quantities of byproduct material or kinds of uses or users when it finds that the exemption of such classes or quantities or such kinds of uses or users will not constitute an unreasonable risk to the common defense and security and to the health and safety of the public.

The Commission has exercised this authority to exempt small quantities of source and byproduct material, and products containing small amounts of either source or byproduct material which have enabled the domestic use of those products and quantities without adverse effects upon the public health and safety or the common defense and security.

Developments in technology have led, and are expected to lead to the production and use of products and devices incorporating special nuclear material as a power source in such quantities and forms that an AEC license for the ultimate user may not be necessary. An example is surgically implanted cardiac pacemakers fueled with small amounts

of plutonium-238, now being developed, which may provide improvements in the treatment of "heartblock," a relatively common cardiac abnormality. These pacemakers are being designed and built to standards that assure the safe containment of special nuclear material under conditions of normal use and disposal and in accidents involving the bearers of pacemakers.

Small amounts of plutonium-238 and enriched uranium which do not involve quantities or forms of significance to the health and safety of the public or to the common defense and security are being used in fabricated products such as calibration standards, accelerator targets, fission chambers for neutron measurements, and X-ray fluorescence analyzers. Equipment and materials in the nuclear industry are sometimes contaminated with levels of special nuclear material which cannot practically be removed but which are low enough that they do not constitute a radiation safety problem. An exemption from licensing of such special nuclear material would allow the reuse or recycling of the contaminated equipment and materials in an economic manner which would also conserve resources, rather than requiring the otherwise unnecessary controlled disposal of such contaminated equipment and materials as radioactive wastes.

Proposed new subsection 57 d. to be added to the act by H.R. 14901 would authorize the Commission to exempt certain classes or quantities of special nuclear material or kinds of uses or users from the requirements for a license set forth in the act when it makes a finding that the exemption of such classes or quantities of special nuclear material or such kinds of uses or users would not be inimical to the common defense and security and would not constitute an unreasonable risk to the health and safety of the public. This standard for exercise of the Commission's exemption authority is the same as that for by-product material in section 81.

This authority for the Commission to exempt certain quantities, classes or uses of special nuclear material from licensing requirements would not be self-executing. The new subsection would require the Commission to make the determination set out above before exempting any class or quantity of special nuclear material, or any kind of use or users from licensing requirements. The determination would be made, and a class or quantity of special nuclear material or of a kind of use or user exempted in a rulemaking proceeding pursuant to the Administrative Procedure Act, in which opportunity for members of the public and other agencies to comment on proposed rules or otherwise participate, would be afforded. Such rulemaking action would also be subject to the environmental impact procedures of the National Environmental Policy Act of 1969.

The proposed amendments of section 54 would liberalize the requirement of present section 54, which prohibits the Commission itself from exporting or issuing a license for, or otherwise authorizing export of special nuclear material except under the terms of an agreement for cooperation arranged pursuant to section 123.

All such agreements have limited language as to type, amount and end-use of the special nuclear material which may be exported. Further, there are a number of countries with which we have no agreements for cooperation. In addition, special nuclear material exported

pursuant to an agreement for cooperation is subject, while in the foreign country, to the guaranty in the agreement that it will be safeguarded and will not be reexported to a third country unless the third country has an appropriate agreement for cooperation with the United States and the United States agrees to the retransfer.

The amendments of section 54 of the act would permit the Commission to export, and to authorize others to export, other than under an agreement for cooperation, special nuclear material in classes or quantities or of kinds of uses or users that had been exempted pursuant to section 57 d. as amended, and any quantity of plutonium containing 80 percent or more by weight of plutonium-238.

The proposed amendments would eliminate unnecessary expenditure of time and effort required to process license applications for export of special nuclear material for peaceful applications under the current provisions of the act and the prohibition on exports of special nuclear material for peaceful purposes to countries which have not entered into agreements for cooperation when such exports would not adversely affect the common defense and security.

The proposed provision for export of plutonium containing 80 percent or more by weight of plutonium-238 is consistent with the guidelines of the International Atomic Energy Agency for exempting plutonium-238 from safeguards requirements of agreements under the Treaty on the Non-Proliferation of Nuclear Weapons.

Since it is not practical to utilize plutonium-238 as fissile material, because of the decay heat, adequate control of plutonium-238 exports can be exercised through the licensing process without the need for an agreement for cooperation.

The amendments for simplifying the requirements for export of the specified special nuclear materials track the criteria for the export of byproduct materials in section 82 of the act.

The amendments to subsection 161 i. (2) of the Atomic Energy Act would clarify and make explicit the authority of the Commission to institute a clearance program for inquiry into the associations and backgrounds of persons who have access to or control over significant quantities of special nuclear material.

Such a program is important because of the ever increasing amounts of high strategic value special nuclear material associated with development and expansion of commercial nuclear energy. For example, the domestic annual production of fissile plutonium by commercial power reactors is expected to grow from the present level of about 1,000 kilograms per year to over 10,000 kilograms per year by 1980. Moreover, as fissile plutonium can be used as fuel in commercial reactors, plutonium could be employed to that end, resulting in large amounts of plutonium being processed into fuel elements each year. With the advent of high temperature gas cooled reactor technology, we can, as well, anticipate large material flows of highly enriched uranium and uranium-233. Success of the liquid metal fast breeder reactor and the light water breeder reactor programs would further add to the quantities of plutonium and uranium-233, respectively, to be utilized in the generation of electricity.

These materials—plutonium, highly enriched uranium, and uranium-233—are all materials that could be used in making nuclear

weapons. Moreover, plutonium and uranium-233 are highly radiotoxic. This means that concomitant with the growth of commercial nuclear energy there will be an increase in the amount of materials which could be used in a manner inimical to the common defense and security, either by clandestine fabrication of an illicit nuclear weapon, by dispersal of radiotoxic plutonium or uranium-233, or by sabotage to a nuclear fuel plant or a power reactor in an effort to cause widespread contamination. Thus, it is of the utmost importance that there be a high degree of confidence in the trustworthiness of persons having access to or control over significant quantities of special nuclear material.

If this legislation is enacted, we would establish a clearance program of varying levels ranging from no clearance to a full field investigation of those who have ready access to high strategic value special nuclear material of particular vulnerability. We anticipate that the cost of clearance investigations—\$7.50 for an “L” clearance and about \$750 for a “Q” clearance—would be borne by the licensee.

To establish a clearance program, we need legislation that clearly gives the Commission authority to establish and conduct such a program. Under the present provisions of the Atomic Energy Act of 1954, as amended, the Commission has statutory authority to establish “minimum criteria” for licenses for special nuclear material (subsection 53 b.), for standards and instructions to govern the possession and use of special nuclear material as desirable to promote the common defense and security (subsection 161 b.), and certain authority to issue regulations or orders to guard against loss or diversion of special nuclear material (subsection 161 i.). But a decision of the U.S. Supreme Court appears to require explicit statutory authority to institute a personnel security program.

In *Schneider v. Smith*, 390 U.S. 17 (1968), the Supreme Court invalidated a personnel security program intended to prevent subversives from serving on U.S. merchant vessels. The Court held that the Magnuson Act, which authorized the President in general terms to safeguard merchant vessels from sabotage or other subversive acts, did not authorize a personnel screening program and in any event did not authorize inquiry into “associations or opinions.”

Although chapter 12 of the Atomic Energy Act provides in section 145 authority for the security clearance program for access to restricted data and other classified information, it speaks only in terms of access to information and not of access to or control over materials. Unless legislation is enacted explicitly authorizing a clearance program with respect to materials, questions may be raised as to the legal validity of such a program in view of the *Schneider* case. It is for this reason that we are requesting explicit statutory authority through an amendment to the Atomic Energy Act before embarking upon an access approval program.

Chairman PRICE. I suggest that the Joint Committee recess to the executive committee room and if we are fortunate enough to have a quorum down there, we will start further considerations of this bill.

[Whereupon, at 3:30 p.m., the committee recessed, to proceed to executive session.]

[Appendixes follow:]

APPENDIX A

93^D CONGRESS
2^D SESSION**H. R. 13896**

IN THE HOUSE OF REPRESENTATIVES

APRIL 2, 1974

Mr. PRICE of Illinois (by request) introduced the following bill; which was referred to the Joint Committee on Atomic Energy

A BILL

To amend the Atomic Energy Act of 1954, as amended, to delete the requirement that Congress authorize amounts of special nuclear material which may be distributed to a group of nations.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 That section 54 of the Atomic Energy Act of 1954, as
4 amended, is amended to read as follows:

5 "SEC. 54. FOREIGN DISTRIBUTION OF SPECIAL NU-
6 CLEAR MATERIAL.—The Commission is authorized to coop-
7 erate with any nation, or group of nations, by distributing
8 special nuclear material and to distribute such special nu-
9 clear material, pursuant to the terms of an agreement for

1 cooperation to which such nation or group of nations is a
2 party and which is made in accordance with section 123.
3 Unless hereafter otherwise authorized by law, the Commis-
4 sion shall be compensated for special nuclear material so
5 distributed at not less than the Commission's published
6 charges applicable to the domestic distribution of such mate-
7 rial, except that the Commission to assist and encourage
8 research on peaceful uses or for medical therapy may so
9 distribute without charge during any calendar year only a
10 quantity of such material which at the time of transfer does
11 not exceed in value \$10,000 in the case of one nation or
12 \$50,000 in the case of any group of nations. The Commis-
13 sion may agree to repurchase any special nuclear material
14 distributed under a sale arrangement pursuant to this section
15 which is not consumed in the course of activities conducted
16 in accordance with the agreement for cooperation, or any
17 uranium remaining after irradiation of such special nuclear
18 material, at a repurchase price not to exceed the Commis-
19 sion's sale price for comparable special nuclear material or
20 uranium in effect at the time of delivery of such material to
21 the Commission. The Commission may also agree to pur-
22 chase, consistent with and within the period of the agree-
23 ment for cooperation, special nuclear material produced in a
24 nuclear reactor located outside the United States through
25 the use of special nuclear material which was leased or sold

1 pursuant to this section. Under any such agreement, the
2 Commission shall purchase only such material as is deliv-
3 ered to the Commission during any period when there is in
4 effect a guaranteed purchase price for the same material
5 produced in a nuclear reactor by a person licensed under
6 section 104, established by the Commission pursuant to sec-
7 tion 56, and the price to be paid shall be the price so estab-
8 lished by the Commission and in effect for the same material
9 delivered to the Commission.”.

93^D CONGRESS
2^D SESSION

S. 3253

IN THE SENATE OF THE UNITED STATES

MARCH 27, 1974

MR. MONTOYA (by request) introduced the following bill; which was read twice and referred to the Joint Committee on Atomic Energy

A BILL

To amend the Atomic Energy Act of 1954, as amended, to delete the requirement that Congress authorize amounts of special nuclear material which may be distributed to a group of nations.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That section 54 of the Atomic Energy Act of 1954, as
4 amended, is amended to read as follows:

5 “SEC. 54. FOREIGN DISTRIBUTION OF SPECIAL NU-
6 CLEAR MATERIAL.—The Commission is authorized to co-
7 operate with any nation or group of nations by distributing
8 special nuclear material and to distribute such special nuclear
9 material, pursuant to the terms of an agreement for coopera-

II

1 tion to which such nation or group of nations is a party and
2 which is made in accordance with section 123. Unless here-
3 after otherwise authorized by law, the Commission shall be
4 compensated for special nuclear material so distributed at not
5 less than the Commission's published charges applicable to
6 the domestic distribution of such material, except that the
7 Commission to assist and encourage research on peaceful uses
8 or for medical therapy may so distribute without charge dur-
9 ing any calendar year only a quantity of such material which
10 at the time of transfer does not exceed in value \$10,000 in
11 the case of one nation or \$50,000 in the case of any group
12 of nations. The Commission may agree to repurchase any
13 special nuclear material distributed under a sale arrangement
14 pursuant to this section which is not consumed in the course
15 of activities conducted in accordance with the agreement for
16 cooperation, or any uranium remaining after irradiation of
17 such special nuclear material, at a repurchase price not to
18 exceed the Commission's sale price for comparable special
19 nuclear material or uranium in effect at the time of delivery
20 of such material to the Commission. The Commission may
21 also agree to purchase, consistent with and within the period
22 of the agreement for cooperation, special nuclear material
23 produced in a nuclear reactor located outside the United
24 States through the use of special nuclear material which was
25 leased or sold pursuant to this section. Under any such agree-

1 ment, the Commission shall purchase only such material as
2 is delivered to the Commission during any period when
3 there is in effect a guaranteed purchase price for the same
4 material produced in a nuclear reactor by a person licensed
5 under section 104, established by the Commission pursuant
6 to section 56, and the price to be paid shall be the price so
7 established by the Commission and in effect for the same
8 material delivered to the Commission.”

93^D CONGRESS
2^D SESSION

H. R. 14849

IN THE HOUSE OF REPRESENTATIVES

MAY 16, 1974

Mr. PRICE of Illinois (for himself and Mr. HOSMER) introduced the following bill; which was referred to the Joint Committee on Atomic Energy

A BILL

To amend the Atomic Energy Act of 1954, as amended, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That section 54 of the Atomic Energy Act of 1954, as
4 amended, is amended to read as follows:

5 “SEC. 54. FOREIGN DISTRIBUTION OF SPECIAL NU-
6 CLEAR MATERIAL.—The Commission is authorized to coop-
7 erate with any nation or group of nations by distributing
8 special nuclear material and to distribute such special nu-
9 clear material, pursuant to the terms of an agreement for
10 cooperation to which such nation or group of nations is a
11 party and which is made in accordance with section 123.

1 Unless hereafter otherwise authorized by law the Commis-
2 sion shall be compensated for special nuclear material so
3 distributed at not less than the Commission's published
4 charges applicable to the domestic distribution of such ma-
5 terial, except that the Commission to assist and encourage
6 research on peaceful uses or for medical therapy may so dis-
7 tribute without charge during any calendar year only a
8 quantity of such material which at the time of transfer does
9 not exceed in value \$10,000 in the case of one nation or
10 \$50,000 in the case of any group of nations. The Commis-
11 sion may distribute to the International Atomic Energy
12 Agency, or to any group of nations, only such amounts of
13 special nuclear materials and for such period of time as are
14 authorized by Congress: *Provided, however, That, (i)*
15 notwithstanding this provision, the Commission is hereby
16 authorized, subject to the provisions of section 123, to dis-
17 tribute to the Agency seventy-five thousand kilograms of
18 contained uranium-235, five hundred grams of uranium-233,
19 and three kilograms of plutonium; and (ii) notwithstanding
20 the foregoing provisions of this section, the Commission may
21 distribute to the International Atomic Energy Agency, or to
22 any group of nations, such other amounts of special nuclear
23 materials and for such other periods of time as are estab-
24 lished in writing by the Commission: *Provided, however,*
25 That before they are established by the Commission pur-

1 suant to this subdivision (ii), such proposed amounts and
2 periods shall be submitted to the Joint Committee, and a
3 period of thirty days shall elapse while Congress is in session
4 (in computing the thirty days there shall be excluded the
5 days in which either House is not in session because of ad-
6 journment for more than three days) unless the Joint Com-
7 mittee by resolution in writing waives the condition of, or
8 all or any portion of, such thirty-day period. The Commis-
9 sion may agree to repurchase any special nuclear material
10 distributed under a sale arrangement pursuant to this section
11 which is not consumed in the course of the activities con-
12 ducted in accordance with the agreement for cooperation, or
13 any uranium remaining after irradiation of such special nu-
14 clear material, at a repurchase price not to exceed the Com-
15 mission's sale price for comparable special nuclear material
16 or uranium in effect at the time of delivery of such material
17 to the Commission. The Commission may also agree to
18 purchase, consistent with and within the period of the agree-
19 ment for cooperation, special nuclear material produced in
20 a nuclear reactor located outside the United States through
21 the use of special nuclear material which was leased or sold
22 pursuant to this section. Under any such agreement, the
23 Commission shall purchase only such material as is delivered
24 to the Commission during any period when there is in effect
25 a guaranteed purchase price for the same material produced

1 in a nuclear reactor by a person licensed under section 140,
2 established by the Commission pursuant to section 56, and
3 the price to be paid shall be the price so established by the
4 Commission and in effect for the same material delivered to
5 the Commission.”

93^D CONGRESS
2^D SESSION

S. 3502

IN THE SENATE OF THE UNITED STATES

MAY 16, 1974

MR. MONTROYA introduced the following bill; which was read twice and referred to the Joint Committee on Atomic Energy

A BILL

To amend the Atomic Energy Act of 1954, as amended, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That section 54 of the Atomic Energy Act of 1954, as
4 amended, is amended to read as follows:

5 “SEC. 54. FOREIGN DISTRIBUTION OF SPECIAL NU-
6 CLEAR MATERIAL.—The Commission is authorized to co-
7 operate with any nation or group of nations by distributing
8 special nuclear material and to distribute such special nuclear
9 material, pursuant to the terms of an agreement for coopera-
10 tion to which such nation or group of nations is a party and

1 which is made in accordance with section 123. Unless here-
2 after otherwise authorized by law the Commission shall be
3 compensated for special nuclear material so distributed at
4 not less than the Commission's published charges applicable
5 to the domestic distribution of such material, except that the
6 Commission to assist and encourage research on peaceful uses
7 or for medical therapy may so distribute without charge dur-
8 ing any calendar year only a quantity of such material which
9 at the time of transfer does not exceed in value \$10,000 in
10 the case of one nation or \$50,000 in the case of any group
11 of nations. The Commission may distribute to the Interna-
12 tional Atomic Energy Agency, or to any group of nations,
13 only such amounts of special nuclear materials and for such
14 period of time as are authorized by Congress: *Provided, how-*
15 *ever, That, (i) notwithstanding this provision, the Commis-*
16 *sion is hereby authorized, subject to the provisions of section*
17 *123, to distribute to the Agency seventy-five thousand kilo-*
18 *grams of contained uranium-235, five hundred grams of*
19 *uranium-233 and three kilograms of plutonium; and (ii)*
20 *notwithstanding the foregoing provisions of this section, the*
21 *Commission may distribute to the International Atomic En-*
22 *ergy Agency, or to any group of nations, such other amounts*
23 *of special nuclear materials and for such other periods of*
24 *time as are established in writing by the Commission: Pro-*
25 *vided, however, That before they are established by the Com-*

1 mission pursuant to this subdivision (ii), such proposed
2 amounts and periods shall be submitted to the Joint Com-
3 mittee, and a period of thirty days shall elapse while Congress
4 is in session (in computing the thirty days there shall be
5 excluded the days in which either House is not in session
6 because of adjournment for more than three days) unless
7 the Joint Committee by resolution in writing waives the
8 condition of, or all or any portion of, such thirty-day period.
9 The Commission may agree to repurchase any special nu-
10 clear material distributed under a sale arrangement pur-
11 suant to this section which is not consumed in the course
12 of the activities conducted in accordance with the agree-
13 ment for cooperation, or any uranium remaining after irra-
14 diation of such special nuclear material, at a repurchase
15 price not to exceed the Commission's sale price for com-
16 parable special nuclear material or uranium in effect at the
17 time of delivery of such material to the Commission. The
18 Commission may also agree to purchase, consistent with
19 and within the period of the agreement for cooperation,
20 special nuclear material produced in a nuclear reactor located
21 outside the United States through the use of special nuclear
22 material which was leased or sold pursuant to this section.
23 Under any such agreement, the Commission shall purchase
24 only such material as is delivered to the Commission during
25 any period when there is in effect a guaranteed purchase

1 price for the same material produced in a nuclear reactor
2 by a person licensed under section 140, established by the
3 Commission pursuant to section 56, and the price to be paid
4 shall be the price so established by the Commission and in
5 effect for the same material delivered to the Commission.”.

Union Calendar No. 545

93^D CONGRESS
2^D SESSION**H. R. 15416**

[Report No. 93-1155]

IN THE HOUSE OF REPRESENTATIVES

JUNE 17, 1974

Mr. PRICE of Illinois introduced the following bill; which was referred to the
Joint Committee on Atomic Energy

JUNE 26, 1974

Reported with an amendment, committed to the Committee of the Whole House
on the State of the Union, and ordered to be printed

[Omit the part struck through and insert the part printed in italic]

A BILL

To amend the Atomic Energy Act of 1954, as amended, and
the Atomic Weapons Rewards Act of 1955, and for other
purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That the Atomic Weapons Rewards Act of 1955 is amended
4 as follows:

5 (a) The initial section of the Act is amended by strik-
6 ing out the words "Atomic Weapons Rewards Act of 1955"
7 and by substituting in lieu thereof "Atomic Weapons and
8 Special Nuclear Materials Rewards Act."

1 (b) Sections 2, 3, and 5 of the Act are amended to
2 read as follows:

3 "SEC. 2. Any person who furnishes original information
4 to the United States—

5 " (a) leading to the finding or other acquisition by
6 the United States of special nuclear material or an atomic
7 weapon which has been introduced into the United States
8 or manufactured or acquired therein contrary to the laws
9 of the United States, or

10 " (b) with respect to the introduction or attempted
11 introduction into the United States or the manufacture
12 or acquisition or attempted manufacture or acquisition of,
13 or a conspiracy to introduce into the United States or
14 to manufacture or acquire, special nuclear material or an
15 atomic weapon contrary to the laws of the United
16 States, or

17 " (c) with respect to the export or attempted ex-
18 port, or a conspiracy to export, special nuclear material
19 or an atomic weapon from the United States contrary
20 to the laws of the United States,

21 shall be rewarded by the payment of an amount not to
22 exceed \$500,000.

23 "SEC. 3. The Attorney General shall determine whether
24 a person furnishing information to the United States is
25 entitled to a reward and the amount to be paid pursuant to

1 section 2. Before making a reward under this section the
2 Attorney General shall advise and consult with the Atomic
3 Energy Commission. A reward of \$50,000 or more may not
4 be made without the approval of the President.”.

5 “SEC. 5. (a) The Attorney General is authorized to hold
6 such hearings and make, promulgate, issue, rescind, and
7 amend such rules and regulations as may be necessary to
8 carry out the purposes of this Act.

9 “(b) A determination made by the Attorney General
10 under section 3 of this Act shall be final and conclusive and
11 no court shall have power or jurisdiction to review it.”.

12 (c) Section 6 of the Act is amended by deleting the
13 words “Awards Board” and by substituting in lieu thereof
14 the words “Attorney General”.

15 SEC. 2. Section 54 of the Atomic Energy Act of 1954,
16 as amended, is amended to read as follows:

17 “SEC. 54. FOREIGN DISTRIBUTION OF SPECIAL NU-
18 CLEAR MATERIAL.—a. The Commission is authorized to
19 cooperate with any nation or group of nations by distributing
20 special nuclear material and to distribute such special nuclear
21 material, pursuant to the terms of an agreement for coopera-
22 tion to which such nation or group of nations is a party and
23 which is made in accordance with section 123. Unless here-
24 after otherwise authorized by law the Commission shall be
25 compensated for special nuclear material so distributed at

1 not less than the Commission's published charges applicable
2 to the domestic distribution of such material, except that the
3 Commission to assist and encourage research on peaceful
4 uses or for medical therapy may so distribute without charge
5 during any calendar year only a quantity of such material
6 which at the time of transfer does not exceed in value
7 \$10,000 in the case of one nation or \$50,000 in the case of
8 any group of nations. The Commission may distribute to the
9 International Atomic Energy Agency, or to any group of
10 nations, only such amounts of special nuclear materials and
11 for such period of time as are authorized by Congress: *Pro-*
12 *vided, however, That (i) notwithstanding this provision,*
13 *the Commission is hereby authorized, subject to the provisions*
14 *of section 123, to distribute to the Agency seventy five*
15 *thousand kilograms of contained uranium-235, five hundred*
16 *grams of uranium-233, and three kilograms of plutonium;*
17 *and (ii) notwithstanding the foregoing provisions of this*
18 *subsection, the Commission may distribute to the Interna-*
19 *tional Atomic Energy Agency, or to any group of nations,*
20 *such other amounts of special nuclear materials and for such*
21 *other periods of time as are established in writing by the*
22 *Commission: Provided, however, That before they are*
23 *established by the Commission pursuant to this subdivision*
24 *(ii), such proposed amounts and periods shall be submitted*
25 *to the Joint Committee, and a period of thirty days shall*

5

1 elapse while Congress is in session (in computing the thirty
2 days there shall be excluded the days in which either House
3 is not in session because of adjournment for more than three
4 days) unless the Joint Committee by resolution in writing
5 waives the condition of, or all or any portion of, such thirty
6 day period. *Provided, however, That, (i) notwithstanding*
7 *this provision, the Commission is hereby authorized, subject*
8 *to the provisions of section 123, to distribute to the Agency*
9 *five thousand kilograms of contained uranium-235, five hun-*
10 *dred grams of uranium-233, and three kilograms of pluto-*
11 *nium, together with the amounts of special nuclear material*
12 *which will match in amount the sum of all quantities of spe-*
13 *cial nuclear materials made available by all other members*
14 *of the Agency to June 1, 1960; and (ii) notwithstanding the*
15 *foregoing provisions of this subsection, the Commission may*
16 *distribute to the International Atomic Energy Agency, or to*
17 *any group of nations, such other amounts of special nuclear*
18 *materials and for such other periods of time as are estab-*
19 *lished in writing by the Commission: Provided, however,*
20 *That before they are established by the Commission pursuant*
21 *to this subdivision (ii), such proposed amounts and periods*
22 *shall be submitted to the Congress and referred to the Joint*
23 *Committee and a period of sixty days shall elapse while*
24 *Congress is in session (in computing such sixty days, there*
25 *shall be excluded the days on which either House is not in*

1 session because of an adjournment of more than three days):
2 And provided further, That any such proposed amounts and
3 periods shall not become effective if during such sixty-day
4 period the Congress passes a concurrent resolution stating
5 in substance that it does not favor the proposed action: And
6 provided further, That prior to the elapse of the first thirty
7 days of any such sixty-day period the Joint Committee shall
8 submit a report to the Congress of its views and recommenda-
9 tions respecting the proposed amounts and periods and an ac-
10 companying proposed concurrent resolution stating in sub-
11 stance that the Congress favors, or does not favor, as the
12 case may be, the proposed amounts or periods. The Com-
13 mission may agree to repurchase any special nuclear ma-
14 terial distributed under a sale arrangement pursuant to this
15 subsection which is not consumed in the course of the activ-
16 ities conducted in accordance with the agreement for coopera-
17 tion, or any uranium remaining after irradiation of such spe-
18 cial nuclear material, at a repurchase price not to exceed the
19 Commission's sale price for comparable special nuclear ma-
20 terial or uranium in effect at the time of delivery of such
21 material to the Commission. The Commission may also
22 agree to purchase, consistent with and within the period of
23 the agreeent for cooperation, special nuclear material pro-
24 duced in a nuclear reactor located outside the United States
25 through the use of special nuclear material which was leased

1 or sold pursuant to this subsection. Under any such agree-
2 ment the Commission shall purchase only such material as is
3 delivered to the Commission during any period when there
4 is in effect a guaranteed purchase price for the same material
5 produced in a nuclear reactor by a person licensed under
6 section 104, established by the Commission pursuant to
7 section 56, and the price to be paid shall be the price so
8 established by the Commission and in effect for the same
9 material delivered to the Commission.

10 "b. Notwithstanding the provisions of sections 123, 124,
11 and 125, the Commission is authorized to distribute to any
12 person outside the United States (1) plutonium containing
13 80 per centum or more by weight of plutonium-238, and (2)
14 other special nuclear material when it has, in accordance
15 with subsection 57d., exempted certain classes or quantities
16 of such other special nuclear material or kinds of uses or
17 users thereof from the requirements for a license set forth in
18 this chapter. Unless hereafter otherwise authorized by law,
19 the Commission shall be compensated for special nuclear ma-
20 terial so distributed at not less than the Commission's pub-
21 lished charges applicable to the domestic distribution of such
22 material. The Commission shall not distribute any plutonium
23 containing 80 per centum or more by weight of plutonium-
24 238 to any person under this subsection if, in its opinion, such
25 distribution would be inimical to the common defense and se-

1 curity. The Commission may require such reports regarding
2 the use of material distributed pursuant to the provisions of
3 this subsection as it deems necessary.

4 "c. The Commission is authorized to license or otherwise
5 permit others to distribute special nuclear material to any per-
6 son outside the United States under the same conditions, ex-
7 cept as to charges, as would be applicable if the material
8 were distributed by the Commission."

9 SEC. 3. Section 57 of the Atomic Energy Act of 1954,
10 as amended, is amended by adding at the end thereof the fol-
11 lowing new subsection:

12 "d. The Commission is authorized to establish classes of
13 special nuclear material and to exempt certain classes or
14 quantities of special nuclear material or kinds of uses or users
15 from the requirements for a license set forth in this section
16 when it makes a finding that the exemption of such classes
17 or quantities of special nuclear material or such kinds of uses
18 or users would not be inimical to the common defense and
19 security and would not constitute an unreasonable risk to the
20 health and safety of the public."

21 SEC. 4. Section 81 of the Atomic Energy Act of 1954,
22 as amended, is amended by deleting the word "licensees"
23 and inserting in lieu thereof the words "qualified applicants"
24 in the third sentence of such section and by deleting the fifth
25 sentence of such section.

1 SEC. 5. Sections 123, 124, and 125 of the Atomic En-
2 ergy Act of 1954, as amended, are amended by substituting
3 the term "54 a." for the term "54."

4 SEC. 6. Subsection 153. h of the Atomic Energy Act of
5 1954, as amended, is amended by striking the figure "1974"
6 and substituting therefor the figure "1979".

7 SEC. 7. Subsection 161. i of the Atomic Energy Act of
8 1954, as amended, is amended to read as follows:

9 "i. prescribe such regulations or orders as it may
10 deem necessary (1) to protect Restricted Data received
11 by any person in connection with any activity authorized
12 pursuant to this Act, (2) to guard against the loss or
13 diversion of any special nuclear material acquired by
14 any person pursuant to section 53 or produced by any
15 person in connection with any activity authorized
16 pursuant to this Act, to prevent any use or disposition
17 thereof which the Commission may determine to be
18 inimical to the common defense and security, including
19 regulations or orders designating activities, involving
20 quantities of special nuclear material which in the opin-
21 ion of the Commission are important to the common de-
22 fense and security, that may be conducted only by per-
23 sons whose character, associations and loyalty shall have
24 been investigated under standards and specifications
25 established by the Commission and as to whom the Com-

1 mission shall have determined that permitting each such
2 person to conduct the activity will not be inimical to
3 the common defense and security, and (3) to govern
4 any activity authorized pursuant to this Act, including
5 standards and restrictions governing the design, loca-
6 tion, and operation of facilities used in the conduct of
7 such activity, in order to protect health and to minimize
8 danger to life or property;”.

APPENDIX B

GENERAL ELECTRIC, NUCLEAR ENERGY DIVISION,
Bethesda, Md., June 17, 1974.

Mr. MELVIN PRICE,
*Chairman, Joint Committee on Atomic Energy, U.S. Atomic Energy Commission,
Washington, D.C.*

DEAR MR. PRICE: The Nuclear Energy Products Division of the General Electric Company wishes to present the following written testimony for consideration by the Joint Committee on Atomic Energy at its hearing on June 18, 1974, concerning the 1974 "omnibus" bill and other legislation.

The Nuclear Energy Products Division has reviewed the Atomic Energy Commission's proposed "omnibus" bill and wishes to express its support of it.

In particular, General Electric wishes to support Sections 4, 5 and 6 of the bill which would authorize the AEC to exempt certain classes or quantities of special nuclear material or kinds of uses or users from requirements for a license set forth in the Atomic Energy Act of 1954, as amended, when it makes a finding that the exemption will not constitute an unreasonable risk to the common defense and security and to the health and safety of the public.

It is General Electric's experience that application for special nuclear material licenses for use or export of products and devices utilizing miniscule quantities of special nuclear material can be relatively expensive and result in significant time delays. This results not so much from the complexity of the review, but from the higher priority matters for which licensing personnel are responsible and the detail of the paperwork required.

The expenditure of time, manpower and money would not be objectionable were some important public policy to be furthered by such review. However, the quantities involved are measured in milligrams and grams and are often intimately combined with other materials so as to make separation very difficult.

There is no significant public health and safety or common defense and security consideration involved with these items containing miniscule quantities of special nuclear material in nonmetallic or special form, e.g., neutron sensors, batteries in pacemakers or oil-well logging neutron sources.

Therefore, to permit more efficient use of small quantities of special nuclear material, the Joint Committee on Atomic Energy should report this legislation.

Very truly yours,

A. N. TSCHAECHÉ,
Administrator-Licensing.