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UTILITY PROPOSAL FOR POWERPLANT
ADDITION TO HANFORD NEW
PRODUCTION REACTOR

GOVERNMENT

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HEARINGS
BEFORE THE
JOINT COMMITTEE ON ATOMIC ENERGY
CONGRESS OF THE UNITED STATES
EIGHTY-SEVENTH CONGRESS
SECOND SESSION
ON THE
UTILITY PROPOSAL FOR POWERPLANT ADDITION TO
HANFORD NEW PRODUCTION REACTOR

JULY 10 AND 11, 1962

Printed for the use of the Joint Committee on Atomic Energy

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Note.—The Joint Committee staff has recently prepared a compendium of the basic documents related to the proposed electric plant addition to the new production reactor at Hanford, Wash. This material is contained in Joint Committee print entitled "Utility Proposal for Powerplant Addition to Hanford New Production Reactor," July 1962. All references to pages in JCAE print in this hearing refer to the above-mentioned print.

UTILITY PROPOSAL FOR POWERPLANT ADDITION TO HANFORD NEW PRODUCTION REACTOR

TUESDAY, JULY 10, 1962

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

The Joint Committee met at 10 a.m., pursuant to call, in room AE-1, the Capitol, Hon. Chet Holifield (chairman of the Joint Committee) presiding.

Present: Senators Jackson and Aiken; Representatives Holifield, Price, Aspinall, Morris, Van Zandt, Hosmer, Bates, and Westland.

Present also: James T. Ramey, executive director; Edward J. Bauser, technical adviser; David Toll, staff counsel, and Jack R. Newman, professional staff member.

Chairman HOLIFIELD. The committee will be in order.

The purpose of this hearing is to receive testimony on proposed arrangements for the construction and operation of electric generating facilities at the Hanford new production reactor by a group of utility districts in the Pacific Northwest.

These utility districts in the State of Washington, which comprise the Washington Public Power Supply System (WPPSS), propose to build and operate the NPR electric generating facilities at their own expense. They would buy the otherwise wasted NPR steam from the AEC and generate electricity which will be transmitted, at their own expense, to the Bonneville Power Administration under appropriate power exchange agreements.

For purposes of convenience, we can refer in these hearings to the proposed arrangements between AEC and WPPSS as phase I. We can refer to the arrangements between Bonneville and WPPSS as phase II.

We understand that the contract terms for these arrangements have been carefully negotiated over the past year, and that all contract terms have been mutually agreed upon. The contracts are ready for signature, although no signing has taken place as yet. Copies of these contracts are before each member of the committee and will be found in the Joint Committee print on this subject.

(Contracts will be found on JCAE print, p. 9.)

Chairman HOLIFIELD. On Friday, July 7, in response to a request from the Chairman of the Atomic Energy Commission for an opinion as to the legality of these arrangements, the Comptroller General ruled that the AEC could not proceed with this proposal without further congressional authorization. Copies of the AEC letter and

the Comptroller General's decision have been furnished to all members and will be placed in the record.

(Decision referred to follows:)

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, D.C., June 4, 1962.

Hon. JOSEPH CAMPBELL,
Comptroller General of the United States.

DEAR MR. CAMPBELL: The Atomic Energy Commission is constructing at Hanford, Wash., a new production reactor (NPR) utilizing funds appropriated pursuant to the authorization contained in section 101(a)5 of Public Law 85-590. In connection with this project, the Commission has received a proposal from the Washington Public Power Supply System (WPPSS) under which excess steam produced during the course of operating the NPR would be utilized to generate electric power in generating facilities to be privately constructed by WPPSS. I am attaching for your information a copy of the WPPSS proposal dated November 28, 1961, and a copy of the Commission's response thereto dated April 6, 1962.

As part of the Commission's evaluation of the WPPSS proposal, the Commission's Office of the General Counsel analyzed whether the Commission has existing legal authority to consummate arrangements as proposed by WPPSS. The Acting General Counsel concluded that the Commission did have existing authority to enter into arrangements based upon the WPPSS proposal, as modified by the Commission's letter to WPPSS of April 6, 1962. Attached is a copy of the opinion of the Commission's Acting General Counsel, dated May 31, 1962.

We would appreciate receiving your views concerning the Commission's authority to enter into arrangements based upon the WPPSS proposal, as modified by the Commission's letter to WPPSS of April 6, 1962.

Sincerely yours,

A. R. LUEDECKE, *General Manager.*

Attachments: (1) Copies of letters to Chairman Seaborg from Owen W. Hurd, managing director, WPPSS, dated November 28, 1961, and February 2, 1962 (see JCAE print, p. 101); (2) copy of letter to Mr. Hurd from Chairman Seaborg, dated April 6, 1962 (see JCAE print, p. 97); (3) copy legal opinion of the Acting General Counsel, AEC, dated May 31, 1962 (see JCAE print 70).

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, July 6, 1962.

B-149083

B-149016

Hon. GLENN T. SEABORG,
Chairman, U.S. Atomic Energy Commission.

DEAR DR. SEABORG: By letter of June 4, 1962, signed by the General Manager, our views have been requested on the authority of the Commission to enter into a proposed agreement with the Washington Public Power Supply System (WPPSS), a public agency of the State of Washington, whereby steam to be produced at the new production reactor (NPR), authorized for construction as project 59-a-5 under Public Law 85-590, would be utilized for the production of electric energy in a generating plant to be constructed by WPPSS. Under a proposed agreement between WPPSS and the Bonneville Power Administration (BPA) the resulting electric energy would be delivered to BPA on an exchange basis.

Section 101 of Public Law 85-590 provides, in pertinent part, as follows:

"SEC. 101. PLANT OR FACILITY ACQUISITION OR CONSTRUCTION.—There is hereby authorized to be appropriated to the Atomic Energy Commission, in accordance with the provisions of section 261 a. (1) of the Atomic Energy Act of 1954, as amended, the sum of \$386,679,000 for acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction, or expansion, as follows:

"(a) SPECIAL NUCLEAR MATERIALS.— * * *

"5. Project 59-a-5, production reactor facility for special nuclear materials, convertible type, Hanford, Washington, \$145,000,000."

The primary purpose of the project is the establishment of a plant for the production of plutonium. The plant is to be so constructed as to permit its con-

version to the production of electric energy either in lieu of, or in addition to, the plutonium. An amendment introduced in the Senate to reduce the appropriation authorization to \$120 million, having as its purpose the elimination of the convertibility feature, was defeated on July 15, 1958.

On June 8, 1961, there was introduced in the House of Representatives H.R. 7576, 87th Congress, which in its original form would have authorized an appropriation for—

“Project 62-a-6, electric energy generating facilities for the new production reactor, Hanford, Washington, \$95,000,000.”

That project was deleted by amendment on the floor of the House on July 13, 1961. The Senate reinstated the project at an authorization of \$58 million, but receded from its position and the resulting Public Law 87-315 excluded project 62-a-6.

Agreements between WPPSS and AEC and BPA, respectively, have been proposed by WPPSS as a means of converting the NPR to dual purpose operation and to utilize the resulting energy without any additional appropriation of Federal funds or congressional authorization. By letter of November 28, 1961, WPPSS proposed certain basic terms and criteria for the agreements with the two Federal agencies. With respect to BPA these have ripened into a series of draft agreements, the latest of which, to our knowledge, is preliminary draft No. 6, dated June 5, 1962. As to AEC we are not aware of the existence of any draft agreement. However, the basic terms and criteria have been reviewed by AEC and certain modifications have been suggested as a result in a letter of April 6, 1962. Our review of the legality of the AEC-WPPSS agreement is based on the assumption that the ultimate understanding would reflect the basic terms proposed by WPPSS as modified by AEC.

Briefly, the agreement between AEC and WPPSS would provide that—

(1) AEC would lease to WPPSS land adjacent to the NPR for the construction and operation of the electric generating facilities.

(2) WPPSS would design, construct, and operate the electric generating facilities.

(3) Additions or changes in the NPR in connection with dual-purpose operation would be performed by AEC with funds advanced by WPPSS. AEC would take title to and exercise complete control over the resulting equipment.

(4) WPPSS would issue revenue bonds to defray the capital cost of the project.

(5) WPPSS would purchase from AEC steam resulting from the operation of the NPR by AEC. During periods when the NPR was not being operated by AEC, WPPSS would lease the facility for production of steam, subject to immediate recapture at the option of AEC.

(6) The term of the agreement would be not less than the time necessary to amortize the bonds sold by WPPSS to finance the project. At the expiration of the agreement, or when the bond indebtedness was retired, the Government could, at its option, take title to the electrical generating and related facilities. In addition, the Government could acquire title to the facilities at any prior time by payment of an amount sufficient to satisfy the obligations incurred under the project.

Section 261a of the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2017, includes the following:

“a. There are hereby authorized to be appropriated such sums as may be necessary and appropriate to carry out the provisions and purposes of this Act, except—

“(1) Such as may be necessary for acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction or expansion: *Provided*, That for the purposes of this subsection a., any non-military experimental reactor which is designed to produce more than 10,000 thermal kilowatts of heat (except for intermittent excursions) or which is designed to be used in the production of electric power shall be deemed to be a facility. * * *”

The section up to the proviso is identical in form with the enactment in 1954. As originally introduced, H.R. 9757, 83d Congress which became the Atomic Energy Act of 1954, contained a section 261, providing in pertinent part—

“SEC. 261. There are hereby authorized to be appropriated such sums as may be necessary and appropriate to carry out the provisions and purposes of this Act except such as may be necessary for acquisition or condemnation of real property or for plant construction or expansion. * * *”

The purpose of the provision in its original form was stated at page 31 of House Report No. 2181, 83d Congress, to be to require the Commission "to obtain congressional approval of new construction, or expansion, of its plants." The Senate amended that portion of section 261 to read—

"Sec. 261. There are hereby authorized to be appropriated such sums as may be necessary and appropriate to carry out the provisions and purposes of this Act except such as may be necessary for acquisition or condemnation of real property or for plant construction or expansion (other than for such acquisition, condemnation, construction or expansion as may be undertaken under the authority of section 45a. of this Act. * * *"

Section 45a., referred to above, contained the following:

"a. The Commission is empowered to produce or provide for the production of electric power and other useful forms of energy derived from nuclear fission in its own facilities or in the facilities of other Federal agencies. * * *"

The Senate amendment was eliminated in conference. The conference report, House Report No. 2666, 83d Congress, explains the deletion at page 48 as follows:

"Since there was no thought that the Commission, in carrying out its obligations under this act, should not be required to get congressional approval for its operations, the amendment made by the Senate to section 261 which exempted the Commission from the necessity of obtaining congressional approval for certain construction and acquisition projects was deleted by the conference substitute."

From the foregoing it is clear that the Congress intended that an authorization be first obtained for the construction of electric power generating as well as other facilities. The Joint Committee on Atomic Energy in reporting out S. 4051, 85th Congress, which became Public Law 85-590 stated in Senate Report 1793 (also H. Rep. No. 2108) at page 8 with respect to the project—

"Project 59-a-5 would authorize the expenditure of \$145 million for a convertible type of production reactor which would permit optimum production of plutonium consistent with minimum cost of product. The reactor initially would be operating solely for plutonium production. It would be designed in such a way, however, that it could be converted with modification to produce electric power; *such conversion would be contingent upon future congressional authorization and appropriations.* The conversion of otherwise wasted heat to electric power would substantially lower the cost of production of plutonium. This conversion capability is also considered prudent to permit practical utilization of the reactor in the future event that enforceable international disarmament agreements are entered into whereby production of reactor products for military uses are curtailed or stopped. Under such conditions the reactor could be converted to peaceful purposes in the production of electricity. In the interim, during construction and operation, such a convertible type of production reactor will assist the advancement of the art of reactor development." [Italic supplied.]

As indicated earlier, a measure to specifically authorize construction of electric energy generating facilities in connection with the NPR failed of enactment in Public Law 87-315.

We think that the following summarization may fairly be derived from the foregoing:

(1) The legislative history of the Atomic Energy Act of 1954 shows an intent by the Congress that no electric energy generating facility should be built by AEC without congressional authorization.

(2) In authorizing project 59-a-5 the Congress intended that conversion of the NPR to dual-purpose operation follow congressional authorization and appropriation.

(3) The Congress, after thorough consideration, refused to authorize AEC to construct an electric generating plant at Hanford.

It may be argued that the above conclusions are not relevant to the proposed agreements because the construction and operation would neither be performed nor paid for by the Government. Nevertheless project 59-a-5 is being constructed by AEC under an authorization contemplating the inclusion in the NPR of a convertibility factor without actual conversion except pursuant to congressional authorization and appropriation. Under the proposed WPPSS-AEC agreement the NPR would, in fact, be converted to dual-purpose capability. We do not know the precise extent to which the NPR will thus differ from the project authorized by the Congress. It appears, however, from the correspondence between AEC and WPPSS and from information we have obtained informally that addition to the NPR of the features and equipment necessary to carry out the proposed agreement with WPPSS will involve expenditures presently estimated at about \$25 million, subject to change pursuant to engineering and eco-

conomic decisions yet to be made and agreed to by AEC and WPPSS. (This amount is aside from the substantially larger expenditures that would be made for the main generating facilities.) We are, therefore, of the view that the proposed agreement would result in materially changing the form of project 59-a-5 from that authorized by the Congress and, therefore, requires specific congressional approval, even though the additional amount would be paid by WPPSS and the cost to the Government would not be increased (34 Comp. Gen. 599).

Our views on the matter are also being furnished the chairman of the Joint Committee on Atomic Energy and Congressman John Taber at their request. Sincerely yours,

FRANK H. WEITZEL,

Assistant Comptroller General of the United States.

Chairman HOLIFIELD. Although I do not intend to go into the merits of the Comptroller's decision at this point, I believe it desirable for there to be a full and complete explanation of the proposed arrangements between AEC and WPPSS (phase I) and between Bonneville and WPPSS (phase II), so that the Joint Committee and the Congress can decide as to an appropriate future course of action, in view of the Comptroller's decision, including any necessary amendments to the AEC authorization bill. This is the purpose of these hearings.

I think it is appropriate at the outset to distinguish the WPPSS proposal from last year's debate on the NPR.

In 1958, AEC was authorized to construct a convertible production reactor which would optimize plutonium production with steam as a secondary byproduct. In 1961, the administration proposed a \$95 million authorization to the Atomic Energy Commission for the design and construction of the NPR electric plant. Under the authorization, AEC would have been responsible for operation of the plant. The Congress rejected this proposed authorization.

The WPPSS proposal calls for no expenditure of Federal funds, and does not involve the Federal Government in generating electric energy. Any benefits which accrue to the AEC, including the possible receipt of up to \$125 million from the sale of steam, will be without any outlay of Federal money. The WPPSS proposal therefore has no relation to last year's discussion.

With these basic facts in mind, I hope in these hearings to determine in greater detail the precise contractual arrangements between AEC and WPPSS and between Bonneville and WPPSS in connection with this proposal.

Our first witness this morning is Commissioner Robert E. Wilson of the AEC.

Dr. Wilson, will you proceed, please.

Representative HOSMER. Mr. Chairman, this meeting was called as of yesterday, and as a consequence I have not been fully informed on it. Now, as I understand, there is no legislation before us, and the AEC authorization bill has already been reported.

Is it the Chairman's feeling that this hearing would involve an amendment on the floor to this bill, or what is the purpose?

Chairman HOLIFIELD. Well, the Chair will let events develop as they develop. This committee can always control its own actions and make its own decisions as to procedure.

Representative HOSMER. Oh, yes.

Chairman HOLIFIELD. Mr. Van Zandt has circulated an amendment,¹ which he plans to offer, according to his memorandum and his

¹ See JCAE print, p. 52.

press release, and certainly this is a matter of legitimate consideration for the committee.

If other amendments are proposed during the consideration, they will also be considered.

Representative HOSMER. Is this, then, in the nature of a supplementary hearing to our authorization hearings?

Chairman HOLIFIELD. This is in the nature of, you might call it, a supplementary hearing.

Representative HOSMER. Now, specifically—

Chairman HOLIFIELD. Brought about by certain events.

Representative HOSMER. Yes. That is leading to one further question, which I think should be clarified in the record.

As of yesterday, I was informed of the existence of the Comptroller General's opinion, and in a telephone conversation with Mr. Ramey, was told that it had been sent to me on Saturday. The search of my office disclosed that it had not been received Saturday or subsequently, and I asked that a copy be sent by messenger, which was sent.

This morning, the copy to which Mr. Ramey apparently referred arrived in my office in the mail, and it is different from the one that was sent over by messenger in this respect: The one sent by messenger contains an additional document consisting of a letter under date of July 6 to the Chairman of the Joint Atomic Energy Commission by the Assistant Comptroller General, Mr. Weitzel.²

I think the staff should explain why this mail is not getting through. This is the second instance in about the last 3 weeks where we have had a complaint. (See app' 5, p. 143, for interoffice memo concerning this matter.)

In the last instance, the July 6 letter refers to the proposed Van Zandt amendment and indicates that the chairman of the committee contacted the Comptroller General on the theory that the existence or the proposal of the Van Zandt amendment amounted to an evidence of congressional intent that the law as written last year would permit contracting without further authorization. Mr. Weitzel's letter says no, this is not true; an action by one member would not outweigh the reasons for the position of the Comptroller General in the matter of the decision.

Senator JACKSON. Would my friend yield at that point?

Representative HOSMER. Just one moment.

I want to make it clear that at this point it is not my feeling that the conduct of this hearing would be evidence in any way to change the intention of Congress as evidenced by the Comptroller General's opinion.

Insofar as I am concerned, this hearing this morning may have been called for the purpose of admonishing the WPPSS and AEC for taking time to write up a contract that was probably illegal or at least was declared illegal by the Comptroller General.

So insofar as this meeting is gathering information as to something that might come on the floor in the future, that is one thing; but I want to make certain that the record shows that it is not to be used as any evidence of a past intent of Congress in passing the legislation last year or in any prior Congress.

Chairman HOLIFIELD. The gentleman is seeing hobgoblins under the bed. The Chair made a statement, at the opening, of the purpose of

² See JCAE print, p. 59.

the meeting. If the gentleman wants to be suspicious and see hobgoblins where no hobgoblins exist, that is his privilege. And this hearing is for the purpose that the chairman called the meeting for. There is a notice of the meeting.

I might say to the gentleman that most of us were out of town and did not get back until Saturday night, on a holiday, as the gentleman was, and I was not personally aware of the General Accounting Office's letter until late Sunday night, when I returned from a weekend trip. So we worked yesterday to get this hearing together. The Chair takes responsibility for calling it together. It is not for the purpose of admonishing in any way the Commission or any of the participants in the negotiation.

These negotiations have been known to the members of the committee for several months, and there is no purpose except to place upon the record, so that the committee members can have a more complete knowledge, what the final agreement was.

Now, you do not interfere with negotiations while they are going on, but when they once reach an agreement, which they only reached last week, as I understand it, as to the terms of the different documents, why, then it has been the practice of this committee in the past to explore documents, different types of contractual documents, and this is what we are doing today. It is completely in line with precedent, and without any ulterior motive.

Dr. Wilson, will you proceed?

STATEMENTS OF COMMISSIONER DR. ROBERT E. WILSON; GEN. A. R. LUEDECKE, GENERAL MANAGER; GEORGE F. QUINN, ASSISTANT GENERAL MANAGER FOR PLANS AND PRODUCTION; JOSEPH F. HENNESSEY, ACTING GENERAL COUNSEL; BERTRAM SCHWARTZ, CHIEF, CHEMICAL PROCESSING BRANCH, DIVISION OF PRODUCTION; RICHARD X. DONOVAN, SPECIAL ASSISTANT FOR CONGRESSIONAL RELATIONS; AND ROBERT D. BOURNE, OFFICE OF THE GENERAL COUNSEL, AEC; HON. CHARLES LUCE, ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION; AND OWEN W. HURD, MANAGING DIRECTOR, WPPSS

Dr. WILSON. Mr. Chairman and gentlemen of the committee, Chairman Seaborg regrets that it is not possible for him to be present at the hearing this morning because of his involvement in meetings at the White House, and has asked me to represent him.

The Commission and its staff are pleased to appear before you this morning in connection with proposed arrangements between the AEC and the Washington Public Power Supply System under which the supply system would design, construct, and operate electric power generating facilities to utilize steam produced in the Commission's new production reactor at Hanford, Wash.

The contemplated arrangement, based upon a proposal submitted by the supply system to AEC and the Bonneville Power Administration, differs from that considered by the Congress last year, and is supported by the Commission. Under this proposal, the capital investment required for converting the NPR to dual purpose and, later, power-only operation, would be made by the supply system rather than

by the Federal Government; operation of the power generating facilities would be by the supply system rather than by the Federal Government; and the power generated by the supply system will be transferred to BPA under exchange agreements between BPA and the supply system participants.

As you know, last year Dr. Seaborg appeared before your committee supporting a project which would have authorized appropriations for AEC to construct these generating facilities at the NPR. Since this authorization was not approved by the Congress, the State of Washington, through its department of conservation, began to explore the possibilities of having such a project undertaken by the State or some other non-Federal body.

As a result of these explorations, the supply system, a non-Federal organization composed of 16 public utility districts in the State of Washington, on November 28, 1961, submitted its proposal to AEC and the Bonneville Power Administration.

At this point, I would like to insert in the record a copy of the supply system's proposal and its supplemental letter dated February 2, 1962.

Chairman HOLIFIELD. Without objection, it will be received.

(Proposal and supplemental letter referred to will be found in JCAE print, p. 100.)

Dr. WILSON. After a thorough analysis of the supply system's proposal, the Commission responded by indicating its interest in undertaking formal negotiations of definitive contractual arrangements.

At this point, I would insert in the record a copy of AEC's response of April 6, 1962, to the supply system's proposal.

Chairman HOLIFIELD. Without objection, it will be received.

(Letter referred to appears in JCAE print, p. 97.)

Representative HOSMER. Reserving the right to object, what was the nature of that reply?

Mr. QUINN. The nature of the reply, Mr. Hosmer, was that the Commission felt that the supply system proposal was a suitable basis upon which negotiations could commence. There were a few proposed changes that we suggested in our letter, and these were acceptable to the supply system.

Representative HOSMER. I withdraw my objection.

Chairman HOLIFIELD. Incidentally, this letter was sent to all of the members, the staff informs me. Proceed.

Dr. WILSON. Negotiations between AEC and the supply system have been conducted over the past few months. These negotiations have now been essentially completed, and draft contracts³ have been prepared. We understand that negotiations which have been going on concurrently between BPA and the supply system in connection with this project have also been completed.

Under this contract, the Commission would lease to the supply system certain land adjacent to the NPR on which the electric generating facilities would be built. The supply system would install and operate the generating equipment to produce large quantities of power, approximately 800,000 kilowatts, utilizing excess steam energy produced during the period of the Commission's operation of the NPR. The resulting power would be delivered to BPA and integrated with BPA's existing power supplies under the aforemen-

³ See JCAE print, p. 9.

tioned exchange agreements. During periods when the Commission would not be operating the NPR for its own programs, the reactor would be leased to the supply system, subject to appropriate licensing requirements, in order to permit continued electric power production.

The Commission is pleased with the successful completion of these negotiations, because conversion of the NPR for electric power recovery under the terms of the proposed arrangements between the Commission and the supply system will provide substantial benefits to the AEC. The Commission, by the sale of excess steam energy produced incident to the operation of a Commission production facility, would recover appreciable sums of money, thus reducing the cost of plutonium to be produced in the NPR.

Furthermore, programmatic objectives of the Commission would be accomplished through contribution to the Nation's nuclear power development program. Chairman Seaborg discussed the technical benefits of NPR conversion with the committee in testimony last year. Of special significance, these benefits would be obtained with no additional cost to AEC.

Particular attention should be given to the payments for steam energy which the Commission would receive under the proposed contract. If the period of both plutonium and power production, what we call the dual purpose period, continues for 7 years, the Commission would receive payments totaling \$3 million. Should the dual purpose period continue for 10 years, the Commission would receive payments totaling \$31 million, and, with a dual purpose period of 24 years, the Commission would receive a total of \$125 million.

We have discussed the steam payment schedule with the Federal Power Commission. On the basis of FPC's advice and careful analysis by the AEC staff, the Commission has concluded that the schedule of payments is reasonable.

In summary, we believe that the proposed arrangements with the supply system present an opportunity for the Federal Government to cooperate closely with a non-Federal group in the utilization of a valuable national resource. In so doing, the Commission will have an opportunity to further the development of nuclear power technology; and, with no additional cost to the AEC, the Commission, through its sale of excess steam energy, may be able to recoup a significant portion of the costs of construction of the NPR, particularly if the dual purpose period of operations continues for more than 7 years.

This concludes my prepared statement.

General Luedecke and Messrs. Quinn and Hennessy and others of the staff are here and would be pleased to help me to answer any further questions that the committee may have.

Chairman HOLIFIELD. As I understand it, Mr. Quinn and Mr. Hennessy were the two negotiating agents for the AEC in these contacts with the Washington Public Power Supply System.

Mr. QUINN. The negotiating team for AEC, Mr. Holifield, consisted of two representatives from our Hanford Operations Office, with Mr. Travis as chairman, and Mr. Schwartz, of the AEC headquarters in Washington. Mr. Schwartz is with us today.

Chairman HOLIFIELD. Mr. Bert Schwartz?

Mr. QUINN. Yes.

Chairman HOLIFIELD. Now, these negotiations lasted, as I understand, over a period of several weeks or months. Is that true?

Mr. QUINN. Yes, sir. As is indicated in Dr. Wilson's testimony, our intention to enter into negotiations was given to the supply system in our letter in April, and since that time discussions have been going on between the AEC and the supply system and the Bonneville Power Administration.

Chairman HOLIFIELD. Now, there did come a time when the negotiators of the AEC and the WPPSS came to an agreement on terms and conditions and formulated those terms and conditions into a document. Is that so?

Mr. QUINN. Yes, sir.

Chairman HOLIFIELD. And the document which has been introduced by Dr. Wilson today is that document?

Mr. QUINN. No, sir. The document has not been introduced. Copies of the proposed contract⁴ are available in draft form, and I understand have been made available to the committee.

Chairman HOLIFIELD. They are in front of all members, the staff tells me, and so it will be to the contents of that document that we will direct our questions, Dr. Wilson; and you may designate whom you wish to reply to them.

Mr. QUINN. With your permission, Mr. Chairman, I have here a summary of the provisions of the proposed contract, which, if there is no objections, I would like to submit into the record at this point.

Chairman HOLIFIELD. We will be very happy to receive it.

(Summary referred to appears as JCAE print, p. 7.)

Chairman HOLIFIELD. Have you additional copies of the summary? Or have they been given to the staff?

Mr. QUINN. We have a limited number of copies available, sir.

Representative ASPINALL. Mr. Chairman, reserving the right to object, and I shall not object if the Commission wishes this, it seems to me the record should show some finality of operations. This is good material, as are the drafts of contracts, for the file, but I see no reason to clutter up the record with something that has not been determined upon at the present time.

Dr. WILSON. This has been agreed upon. This contract has been essentially agreed upon between the two of us, providing we have authority to sign it.

Representative HOSMER. Will you yield?

Reserving the right to object, Mr. Chairman: Dr. Wilson, you said "between the two of us." Between the three of you, is it not?

Dr. WILSON. No; I think our contract was with the supply system.

Representative HOSMER. I see. You are solely contracting with the supply system, and the supply system, then, has some other kind of a contract?

Dr. WILSON. With Bonneville.

Representative HOSMER. With Bonneville.

Chairman HOLIFIELD. That is why we are dividing the hearing, Mr. Hosmer, into two sections, phase I and phase II, which I referred to in my opening statement. Phase I will be to explore the contract, the proposed contract terms, between the AEC and the WPPSS. Then when we get to phase II, we will explore the contractual arrangements between the WPPSS and Bonneville.

That is for the purposes of keeping the record clear on this matter, because it results in a three-way deal.

⁴ See JCAE print, p. 9.

Representative BATES. What is the schedule for these hearings, Mr. Chairman?

Chairman HOLIFIELD. Today.

Representative BATES. Just today?

Chairman HOLIFIELD. If it is necessary, we will go over until tomorrow.

Representative BATES. There are a lot of things that I have never seen.

Chairman HOLIFIELD. I have never seen them, either.

Representative BATES. Do you not think we had better take a look at them, so that we can better question the witnesses?

Chairman HOLIFIELD. The staff has prepared questions.

Representative BATES. There might be a few we might think up ourselves.

Chairman HOLIFIELD. I am sure you will as you go along.

Representative BATES. I do not see how we could, unless we read through this.

Are we meeting this afternoon, Mr. Chairman?

Chairman HOLIFIELD. I hope we can.

Representative VAN ZANDT. Mr. Chairman, this hearing was called all of a sudden. The minority was not consulted. I think that the gentleman should recognize the fact some of us have constituents in town today.

There is a lot of background information the committee should have. For instance, I did not see the report of the Comptroller General until just an hour ago.

Chairman HOLIFIELD. I have not even seen it, so the gentleman has the advantage of me.

Representative VAN ZANDT. I think that the committee should have a chance to study that.

Chairman HOLIFIELD. They will have.

Representative VAN ZANDT. This agreement between the Supply System and the AEC was just made available to me.

Chairman HOLIFIELD. It was only agreed upon last week, I might say.

Mr. RAMEY. Mr. Van Zandt's office was notified Friday afternoon of this opinion. We sent over a copy of the opinion to his office.

Representative VAN ZANDT. Mr. Van Zandt was not in town.

Chairman HOLIFIELD. Neither was Mr. Holifield.

Representative VAN ZANDT. Notifying the office and the member is something different, entirely. There are many resolutions pending on this subject, introduced by at least 25 or 30 Members of the House.

Chairman HOLIFIELD. Seventeen, to be exact.

Representative VAN ZANDT. I think some consideration should be given to the sponsors of these resolutions.

I am not saying we should not hold this hearing; all I am asking is that the minority should be given some consideration. When the minority had control of this Joint Committee, the other side always received its share of consideration.

I can see no hurry about this. Why all the rush?

Chairman HOLIFIELD. Let the Chair explain, if he may.

Representative ASPINALL. Let my chairman yield to me.

Now, my colleague has circulated an amendment⁵ to a piece of legislation that this committee has passed out.

⁵ See JCAE print, p. 52.

Representative VAN ZANDT. That is right.

Representative ASPINALL. My colleague has given no notice to us.

Representative VAN ZANDT. I beg to differ with you.

Representative ASPINALL. And I did not see that amendment myself until yesterday.

Representative VAN ZANDT. I made it available to the committee last week.

Representative ASPINALL. My colleague has said nothing during the hearings about this proposed amendment, not one single word. Now, these hearings are being held this morning, as I understand it, so that we can talk this thing over. As far as any final determination is concerned, I expect we will have plenty of time for that.

Representative BATES. That is the reason I asked what the schedule was. If it is only going to be today, I think we ought to know that, and we might as well adjourn right now.

Representative PRICE. May I say something?

The mere fact that it is an open hearing shows there is no skuldugery here; otherwise, there would be no open hearing.

Chairman HOLIFIELD. Let the Chair explain the predicament in which he finds himself.

There is a likelihood that the legislation that this committee has considered for so long will be scheduled for Thursday of this week. I say a likelihood; I am hoping that it will not be, I might say. I am hoping that it will be next week when it is considered. But I was informed by the leadership that if the farm bill was not given a rule to be brought up on Thursday, they might call up this bill.

Now, on Friday night, a letter was released by the General Accounting Office.⁶ I happened to be out of town, as were many of the members. I did not see the letter. The staff did get it on Friday, however, and had a chance to look it over.

Yesterday we notified the Atomic Energy Commission and the WPPSS and the Bonneville people that it would be necessary for us to have hearings beginning this morning, because of the likelihood of the legislation being considered on Thursday.

Now, the pertinence of the hearings is to the point of two considerations—the amendment which the gentleman from Pennsylvania has circulated with a press release,⁷ that he intends to introduce on the floor, and the General Accounting Office letter, which came out on Friday, and the fact that the contractual entities agreed upon final terms of a contract, also, as I understand.

Let me get the final date of that, so that I will be accurate on this.

When was there a final agreement? The last discussion was when?

Mr. QUINN. Last Friday, sir.

Chairman HOLIFIELD. The final terms at that time were agreed upon as being satisfactory to both parties. Is that right?

Mr. QUINN. That is right.

Chairman HOLIFIELD. Incidentally, I have not had a chance to look at the contracts, either.

Now, with the imminent offering of the amendment by the gentleman from Pennsylvania on the floor this coming Thursday, or next week, which was not produced in the committee nor considered by the committee, and with the General Accounting Office letter coming out Friday with a certain position which it took, which was in contradiction to both the staff, the legal staff of the AEC,⁸ and the legal staff of

⁶ See p. 2, this hearing.

⁷ See JCAE print, p. 52.

our committee, I thought that the Chair was justified in calling the members together as quickly as possible.

Now, it may be that we will have to adjourn this afternoon, because of certain very important events which I understand will take place.

Representative BATES. And also to read all this information, Mr. Chairman.

Chairman HOLIFIELD. Well, we are going to try to help you read it this morning, if we can get to the witnesses, and let them explain. And if I can obtain a reading from the leadership between now and the time we adjourn as to whether this will be carried over, we can have an additional number of days this week in order to explore completely and fully and to discuss these matters.

Representative BATES. I would suggest that the chairman request the leadership to put the bill off until next week.

Chairman HOLIFIELD. Well, the gentleman has requested it, but the gentleman is not in control.

Representatives BATES. The gentleman is a very influential member.

Representative WESTLAND. Mr. Chairman, I am pleased that these hearings are being held. I think it is good for all the members of the committee to find out what is in these contracts, so that we will be knowledgeable when, as, and if this matter comes to the floor.

However, in view of the report or the opinion of the GAO, I wonder whether or not we are discussing something that is moot. I think we ought to get some opinion from the AEC while their witness is here, as to what they are going to do as a result of this opinion.

Are they going to fold up the tent and say this is an illegal contract that we are discussing here, or are they going to keep on going, or is this the final word?

There is no point in discussing a contract that, if the GAO's word is final on this thing, has been declared illegal.

Chairman HOLIFIELD. It is not an illegal contract at all.

Representative WESTLAND. It is not legal until it is signed. I understand that.

Chairman HOLIFIELD. But there is the question of congressional authorization. Now, we may want to consider the problem of authorization.

Representative WESTLAND. Many of us have supported this program and put our feet on what we thought was solid ground—the opinion of counsel of the AEC that they had authority to do this, the opinion of counsel of the Bonneville Power Administration that they had authority to do this. And now I get this curve thrown by GAO. I want to know what the attitude of these two organizations is.

Chairman HOLIFIELD. Well, if the gentleman will bear with the Chair, I assure you that there will be opportunity to explore the points that you are interested in; but let us go about it in an orderly way.

Representative WESTLAND. This is the \$64 question, it seems to me.

Chairman HOLIFIELD. We will get to the \$64 question, but first we want to explore the contractual arrangements.

I might say for the gentleman's edification that I have known the General Accounting Office's opinions to be reversed a considerable number of times in my career in Congress, and I do not accept personally the General Accounting Office's opinion and approve of it.

Representative WESTLAND. That is fine; but what is AEC doing?

⁸ See JCAE print, p. 70.
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Chairman HOLIFIELD. But that is beside the point. That is not the point under consideration at this time. But we will get to the point of the General Accounting Office's opinion on it, if we can proceed.

Representative VAN ZANDT. Mr. Chairman, I would like to continue my statement.

Chairman HOLIFIELD. The gentleman from Pennsylvania.

Representative VAN ZANDT. When we finalized the hearings on the authorization bill, the record will show that I made a reservation about amendments, and this reservation was made contingent on a request that was made by certain members of the House Committee on Appropriations, who wrote a letter to the Comptroller General, asking his opinion.⁹ And I had hopes that we might have the opinion of the Comptroller General, which of course would affect any effort on my part to offer an amendment to the bill when it was on the floor.

The decision of the Comptroller General was not available, and the chairman will recall that he asked me, and I assured him, that before I would offer any amendment he would be notified.

When the decision was made to offer the amendment, in view of the fact that the decision of the Comptroller General was not available, word was passed immediately to the Executive Director of the Joint Committee, who I imagine informed you, that I would offer an amendment, and a copy of my statement and the amendment was immediately made available to the committee.

Chairman HOLIFIELD. The Chair has no complaint at the gentleman's procedure. The Chair would like to affirm everything the gentleman has said.

Representative VAN ZANDT. The decision of the Comptroller General is now made available, and is a public document. The decision supports my position and makes unnecessary the amendment I had planned to offer.

Now, I understand that another amendment is now being considered to the authorization bill, which will authorize this project, and that is the purpose of these hearings; and if we are going to listen to the proponents of the amendment, I think we should listen to the opponents of the amendment.

Chairman HOLIFIELD. There is no amendment before the committee at this time. The only thing before the committee is the exploration of the terms of the contracts.

I am sure the gentleman would not deny the committee the right to offer an amendment to its own bill. The Chair would not deny any member the right to offer an amendment. And certainly if an amendment develops out of these hearings, which might be in the nature of a committee amendment, I am sure the gentleman would recognize the right of the committee to consider such amendment.

But until there is such an amendment before the committee, the gentleman will bear with the Chair.

Representative VAN ZANDT. I am sure the chairman is quite familiar with the fact that my congressional district is not too far from Washington, and numerous constituents are in town today for a very important occasion. My office is crowded. The President of the United States is going to witness this affair today. I am in hope that these hearings may be concluded, so the gentleman from Pennsylvania may get back to his constituents.

⁹ See JCAE print, p. 67.

Chairman HOLIFIELD. The Chair will always do everything he can to accommodate the members, and the public business awaits the pleasure of the gentleman from Pennsylvania. We might proceed, and I am hopeful that we will be able to accommodate him.

Senator JACKSON. Why do we not go ahead? The ball game is this afternoon.

Representative VAN ZANDT. The gentleman from Pennsylvania did not mention the ball game.

Senator JACKSON. Well, I decided that, you know, the time is enough for that. Why do we not get on?

Representative HOSMER. Mr. Chairman, I still have a reservation in.

Chairman HOLIFIELD. A reservation on what?

Representative HOSMER. The right to object to the introduction of something, and I want to find out what I object to. I presume it is this proposed operating and construction contract.

Is that right, Mr. Chairman? I think that is the pending unanimous consent request.

Representative PRICE. No; I think it is a summary.

Chairman HOLIFIELD. Mr. Quinn offered a summary of the contract so that the gentleman can understand the contract quickly.⁹

Representative HOSMER. The operating and construction contract¹⁰ as proposed—is that to be offered in evidence?

Mr. RAMEY. It has already been accepted.

Representative HOSMER. I ask, then, unanimous consent that following the proposed contract in the record, there appear the following document: The June 4 letter¹¹ to Joseph Campbell from General Luedcke, the General Manager, relative to the opinion; the July 6 Comptroller General's letter¹² to Dr. Seaborg, which is the opinion; the June 29 and July 3 letters¹³ of the chairman of the Joint Committee to the Comptroller General relative to the proposed contract; and the reply of the Comptroller General under date of July 6.¹⁴

Senator JACKSON. Mr. Chairman, I ask that there also be included the original letter from, I think, Congressman Taber and others to the Comptroller General requesting an opinion.¹⁵

Representative HOSMER. Subject to availability.

Senator JACKSON. Well, it is circulated all over. It is like lots of these things. It is available. There is a copy of it.

Chairman HOLIFIELD. The gentleman would not like to put just one side in the record; he would like to have both sides?

Representative HOSMER. I would like both sides before the committee. We only have the three participating contracting parties here, who apparently are all pro. I am not well enough informed about this matter to make a decision without—

Chairman HOLIFIELD. The Chair is going to state this for the gentleman's consideration. The majority is going to set up these hearings the way they consider it right to set them up, and the minority can object if they wish. This is their privilege. But we are doing this in an orderly way, and all of these documents were going to be inserted into the record during the hearings in an orderly and a proper place for their consideration.

⁹ See JCAE print, p. 7.

¹⁰ See JCAE print, p. 9.

¹¹ See JCAE print, p. 2.

¹² See p. 2, this hearing.

¹³ See JCAE print, p. 60.

¹⁴ See JCAE print, p. 59.

¹⁵ See JCAE print, p. 67.

Now, if the gentleman wants to cooperate, that is one thing. If he wants to filibuster, that is another.

Without objection, the documents will be received.

Representative HOSMER. Mr. Chairman, are we going to hear the people who are against this proposal?

Chairman HOLIFIELD. There is nobody requested for a hearing before the committee.

Representative HOSMER. The notice was just given yesterday. They have not had a chance to.

Chairman HOLIFIELD. This is to explore the documents themselves. The Chair will certainly consider any witness, as he has always done, that wants to come before the committee.

Representative PRICE. As I understand it, this is a hearing to examine the documents, and to have an explanation from the parties involved. Is that correct?

Chairman HOLIFIELD. That is right.

Representative VAN ZANDT. Mr. Chairman, the minority has always cooperated with the majority.

Chairman HOLIFIELD. The Chair hopes that the minority will; but the filibuster that is going on, and the time that is being taken up at this time, is preventing an orderly discussion and an orderly operation of the hearings.

Representative VAN ZANDT. No; I think that the gentleman has to be fair about this matter. I did not get back in town until last night. I walked into my office this morning and found this notice. I have not had a chance to read the Comptroller General's letter in its entirety and, frankly, I am somewhat confused by all this rush.

Chairman HOLIFIELD. If the gentleman will bear with the Chair, he will have time to read it, and he will have time to have the General Accounting Office before the committee as soon as we proceed with first part of the hearings.

Representative VAN ZANDT. Well, now, Mr. Chairman—

Chairman HOLIFIELD. And he will have time to study the letter before then. This does not concern the General Accounting Office's letter. These are contracts.

Representative VAN ZANDT. The gentleman knows the usual practice is for the majority to consider the minority.

Chairman HOLIFIELD. We are taking the minority into consideration.

Representative VAN ZANDT. Had you talked to me on this subject, I would have cooperated.

Chairman HOLIFIELD. How could I have talked with the gentleman when he was not in Washington?

Representative VAN ZANDT. Well, that was not my fault.

Chairman HOLIFIELD. It certainly was not mine.

Let us get along with the hearing.

Representative PRICE. We could have read the letter in the half hour we have been bickering here.

Representative VAN ZANDT. Mr. Chairman, I can see what is developing here. This is going to be a very controversial subject. It is going to be very technical. At this time I would like to request of the chairman that the minority be assigned two members of the staff to assist us in the preparation of our position. We are without staff assistants. You extended to us this courtesy last year, and we

would like to have it again. I would like to request Mr. Toll and Captain Bauser to assist us.

Chairman HOLIFIELD. Well, now, the gentleman knows that the staff is available to him. The staff helped the gentleman in the drafting of his amendment. There is no inclination on the part of the Chair, and never has been, not to allow the minority complete access to the staff. And the gentleman can be assured that he can have access to such staff as he needs.

Representative VAN ZANDT. You granted the request last year, and we have appreciated it.

Representative PRICE. I would like the record to show the minority has never been without staff assistants, here, not only in this instance, or last year, but this staff has never been set up on a basis other than that every member of the staff is available to every member of the committee.

Chairman HOLIFIELD. That is right. And they have been given orders by every chairman that ever sat in the chair to render every assistance possible to the members of the minority, and I do not think there is any complaint on the part of the gentleman about the staff assistants in the past.

Representative VAN ZANDT. We are not complaining. I want it understood we would like to have the assistance of these two individuals.

Chairman HOLIFIELD. The gentleman has that assistance, and that assurance.

Now may we proceed?

Senator JACKSON. Where did we leave off?

Representative HOSMER. Senator Jackson and I had a unanimous consent request pending.

Senator JACKSON. Well, I do not think these things require unanimous consent.

Chairman HOLIFIELD. The documents have been received.

Mr. Quinn, you had offered a summary, for the benefit of the committee, of the operating contract, operating construction contract No. AT(45-1)-1355.

Is there objection to receiving the summary for the benefit of the members?

It has not been reproduced, and we will have it reproduced and immediately distributed to the members.¹⁷

Now, we will proceed with some of the questions for the AEC.

What benefits are expected to accrue to the Commission under the proposed arrangements?

Dr. WILSON. The benefits will be the ones referred to, the financial benefits, which, if it operates dual purpose for more than 7 years, will be rather substantial, and if it amounts to a long period of operation, will be very substantial.

And secondly, the experience of operating a large powerplant, a plant which is double the capacity of the nuclear power installations now in operation in the country, and about equal to all the additional plants that are going into operation in the next 3 years—that is to say, 800,000 kilowatts, which just about corresponds to all the other plants that are coming into operation in this country in the next 3 years.

¹⁷ See JCAE print, p. 7.

And thirdly, it will give us experience with operating very large turbines on wet steam, which is a matter of interest to the power industry generally and should give more assurance to the building of really large powerplants, which are the type that are going to be most economical.

We would not learn anything in particular from a nuclear viewpoint, of course, because these are designed to be optimized during the period of dual purpose operations for the making of plutonium, and therefore, from a nuclear standpoint we do not learn so much. But we do learn quite a bit about the operation of large turbogenerators under these wet steam conditions.

Mr. RAMEY. Is not the WPPSS going to sponsor some research and development on fuel element improvement in connection with this plant, of rather substantial amount?

Mr. QUINN. We understand that that is their intention, Mr. Ramey. This fuel element development would pertain to the so-called power-only period of operation, when the Supply System would be operating the reactor.

Mr. RAMEY. How much money would be involved in that?

Mr. QUINN. I understand the amount is approximately \$3½ million.

Representative HOSMER. Is it called for in the contract?

Mr. QUINN. No, sir, it is not called for in the AEC-WPPSS contract.

Representative HOSMER. This is merely a statement of intention on the part of the WPPSS?

Mr. QUINN. There is a statement of intention in preparation for the power-only period.

Representative HOSMER. Why was it not included in the contract?

Mr. QUINN. Because the responsibility for power-only operation rests with the Supply System. This is their choice.

Representative HOSMER. Would it be advantageous from the standpoint of advancing technology and so forth to require them to do it?

Mr. QUINN. As I understand it, Mr. Hosmer, the main portion of this research and development work is peculiar to the reactor in question, so it would not be generally applicable, although there will be some fuel element development work associated with it that may be applicable in other cases.

All technical information developed by WPPSS under this contract will be available to AEC.

Chairman HOLIFIELD. Mr. Wilson, there are certain modifications to the reactor itself which are contained in the contract at the expense of the WPPSS?

Dr. WILSON. If they decide to put them in, they will pay all the expenses, including the design, and there are certain advantages in putting those in during what remains of the construction period, and they have indicated their intent of doing that if this contract is signed promptly.

But we cannot be sure of that; and they have not made a contractual commitment to do that.

Chairman HOLIFIELD. But if those are done, it would be of benefit to them from the standpoint of obtaining higher pressure steam, and also it would be of benefit in the production of plutonium, would it not?

Dr. WILSON. No, I do not think it would be of any particular benefit in the production of plutonium.

Chairman HOLIFIELD. There were some figures which were given us, which are classified, which indicated that there would be an increased percentage of availability for the production of plutonium.

Will you answer that question, Mr. Quinn?

Mr. QUINN. Yes, sir. The bulk of the modifications that would be made to the reactor would be to improve the steam pressure, without affecting plutonium production. However, certain of the modifications could have the effect of increasing the on-steam time of the reactor, and to the extent this is realized, plutonium production would benefit.

Chairman HOLIFIELD. Does the proposed contract commit the AEC to any Federal expenditures, now or in the future?

Dr. WILSON. No, it does not.

Chairman HOLIFIELD. What was the basis for the determination of the steam prices which WPPSS will pay to the AEC?

Mr. QUINN. The steam prices which have been agreed upon between AEC and WPPSS were arrived at following negotiations between the parties. Preparatory to these negotiations, the AEC solicited the advice of the Federal Power Commission to assist in determining a proper steam value. The schedule of payments which developed in the negotiations has been reviewed by the Federal Power Commission, and based on the advice of FPC, the Commission has concluded that this schedule of payments is a reasonable one.

As indicated by Dr. Wilson, this would amount to over a 7-year dual-purpose period, payments of \$3 million; over a dual-purpose period of 10 years, \$31 million; and should the dual-purpose period run for 24 years, the payments would sum \$125 million.

Representative PRICE. Could you explain the reason for the jump from \$3 to \$31 million just in a period of 3 years?

Chairman HOLIFIELD. Could I ask at this point: It is in the summary?

Dr. WILSON. It is in the summary and the contract also, I believe.

Chairman HOLIFIELD. And page 12 of the contract.¹⁸

Senator JACKSON. The proposed contract.

Dr. WILSON. The reason for the rather uneven progression in the size of the payments is that if the dual-purpose period does not last longer than 7 years, this will not be an economical power-producing project, considering the cost of the facilities that WPPSS has to put in, because during the period of single-purpose operation, there is a small loss. On the other hand, during the period of dual-purpose operation, there is a large gain per year.

However, for the first 7 seven years, you really are just building up a cushion. If the period of dual-purpose operation should last less than that, the WPPSS would really lose money in the long range or have to raise their rates to the Bonneville to cover it.

Therefore, their payments to us during those first 7 years are very small. Actually, they might have justified no payments at all during that period, but they make payments which total \$3 million.

Then in each of the next 2 years, they make very heavy payments of \$10 million, and in the third year, of \$8 million, to bring the total up to \$31 million at the end of 10 years. That is because they have paid for their cost, or assured their cost being paid out, and then they give us a break on the extra costs that we had to undergo in making the

¹⁸ See JCAE print, p. 16.

reactor convertible. And then, beyond that point, roughly, we share the benefits of the fact that we have a long dual-purpose operation.

Chairman HOLIFIELD. The first 7 years gives them an opportunity to place their capital investment on a sounder basis than would otherwise occur?

Dr. WILSON. Yes.

Chairman HOLIFIELD. And there has been some talk as to the duration of the contract. The utilization of the numbers of 7 and 10 are estimates of the probable dual-purpose operation of the reactor only?

Dr. WILSON. No; we frankly do not know, on the Commission, how long the dual-purpose period is going to continue. And that is why there was a considerable amount of gamble in the proposition that was put up a year ago. The Commission had to make the whole investment, and take the whole gamble as to how long the dual-purpose operation would continue. Now it is taken by the Washington Public Power Supply System, and eventually by the consumers. And the people that will share the benefits, if any, will also share the risks. And it may work out to their advantage, or it may work out to their disadvantage, depending on how long the dual-purpose operation is.

I want to emphasize we are not trying to estimate how long the dual-purpose period will be, because we frankly do not know, any more than this committee knows.

Senator AIKEN. Mr. Chairman, may I ask: Would the rates for the electricity purchased by the Hanford operation be affected by this development? Would there be a saving in transmission costs over and above what we now pay?

Chairman HOLIFIELD. We will have Mr. Luce of Bonneville on the stand later on.

Would you like to answer that direct question at this point, Mr. Luce, as long as the Senator has asked it?

Mr. LUCE. I would be happy to.

There would be no saving on transmission, because of Bonneville policy establishing a postage stamp rate throughout our marketing area. So the fact that this plant is located right on the Hanford site would not result in any transmission savings in our bill, power bill, to the AEC, for power that is used on the project.

Senator AIKEN. Then the only saving to the Government would be the receipts from the sale of steam to the Washington Public Power?

Mr. LUCE. Yes. Speaking of the Government as the general taxpayer, I think that is correct.

Dr. WILSON. And the experience from operating these large reactors.

Senator AIKEN. And the costs are going to continue along about \$7 million a year, as it is now?

Dr. WILSON. Yes, I think there is no change in that.

Mr. QUINN. Our Hanford power requirements are purchased from Bonneville at their current rate. It runs about \$7 million, currently, yes, sir.

Senator AIKEN. That is all.

Chairman HOLIFIELD. Were the negotiated prices, which appear on page 12 of the contract, reviewed by the FPC and approved as reasonable prices?

Mr. QUINN. Yes, Mr. Chairman, they were reviewed by the Federal Power Commission following the negotiating session in which they

were developed. And based upon the advice of FPC, the Commission has concluded that they are reasonable.

Chairman HOLIFIELD. Without objection, that schedule of prices that was referred to will be included in the record at this point; also a letter from the FPC, which treats of this point.

(The letter referred to follows; the rate schedule appears in JCAE print, p. 16.)

FEDERAL POWER COMMISSION,
Washington, D.C., July 3, 1962.

HON. GLENN T. SEABORG,
Chairman, Atomic Energy Commission,
Washington, D.C.

DEAR MR. SEABORG: Your letter of June 26 asks us to review the manner in which your staff has employed the data which were provided in your letter of June 15, and to give our opinion as to whether the AEC calculations result in a reasonable price for NPR steam.

After examining thoroughly the AEC calculations, our staff advises that the data were used correctly in the method selected by the AEC staff for computing an optimum price for NPR steam. However, it is our opinion that a schedule of payments for NPR steam in the order of that proposed by the negotiating teams would be more equitable because of the numerous uncertainties involved.

The AEC calculations of the price for NPR steam include equal escalation percentages for power values and for costs in order to account for inflation in costs of construction. A smaller escalation percentage might be justified in the case of power values because of expected continued technological improvements. In addition, the estimates of future electric loads together with the assumptions relating to use of Canadian power and with respect to construction of extra-high voltage interconnection between the Pacific Northwest and Southwest result in a highly favorable potential market for NPR output. A smaller market may be available, which would decrease the NPR plant factor and result in a lower schedule of payments than those derived by the AEC.

Sincerely yours,

JOSEPH C. SWIDLER, *Chairman.*

Chairman HOLIFIELD. Under the proposed arrangements, are there any conditions under which the AEC would be required to assume financial responsibility for the project?

Dr. WILSON. No.

Chairman HOLIFIELD. Does the Commission have an option to buy the plant from WPPSS?

Dr. WILSON. It does, under certain conditions.

Chairman HOLIFIELD. Would you state those conditions, Mr. Quinn?

Mr. QUINN. Under terms of the lease agreement under which land would be made available to the Supply System on which the generating plant would be built, there is a possibility of default on the part of the Supply System of the terms of that lease, in which case the AEC would have an option to acquire the generating station through payment of the remaining indebtedness. This, of course, in our opinion, would require congressional authorization before such an option could be exercised.

Chairman HOLIFIELD. In other words, before the option was exercised, this would require an act of Congress, and in the event that the Congress did not authorize it, the option could not be exercised?

Mr. QUINN. It could not be exercised. That is correct, sir.

Representative VAN ZANDT. Could the chairman restate what he just said?

Chairman HOLIFIELD. As I understand the option, the provision of the option, it is that in the case of default by the Washington Public Power Supply System of their plant, the Federal Government would

have an option to purchase the plant, but before such purchase would be made by the AEC, it would require the authorization of the Congress, under certain statutes which are already in existence.

Representative HOSMER. Mr. Chairman, I would like to get an idea of the costs involved.

Dr. WILSON. It depends on how many bonds are outstanding. All you have to do is pay off the outstanding bonds.

Representative HOSMER. What is the estimated amount of the bonds that will have to be sold in order to build this facility?

Mr. QUINN. I would prefer to have the representative of the Washington Public Power Supply System respond to that, Mr. Hosmer. I believe it is in the order of \$120 to \$130 million.

Representative HOSMER. Mr. Hurd, are you in the audience?

Mr. HURD. Yes, sir.

Representative HOSMER. What is your contemplated issue of bonds?

Mr. HURD. Studies we have made on cost estimates indicate \$130 million worth of bonds will be required.

Representative HOSMER. And what is the amortization of those bonds? Over a period of how many years?

Mr. HURD. Thirty years.

Representative HOSMER. Thirty years. And is it roughly an equal amount each year?

Mr. HURD. That is right.

Representative HOSMER. So that after 10 years, you would have paid off \$13 million?

Dr. WILSON. No.

Mr. HURD. It will be a level debt service, sir, as I recall.

Dr. WILSON. That is after 3 years.

Representative HOSMER. Yes. After 3 years you would have paid back \$39 million?

Dr. WILSON. I think, as he said, that service is level, which means more goes to interest and less to payment of principal in the first 2 years, and more to the payment of principal and less to interest in the latter part.

Representative HOSMER. If the Government had to recapture the plant within the first 10 years, it would substantially pay pretty close to \$130 million?

Dr. WILSON. No; not pretty close to it. You would get about a 25 percent discount, roughly, I would say; in that order of magnitude.

Chairman HOLIFIELD. Of course, that would be an option which the Government could exercise or not exercise, according to its desires at that time, and also according to the action of Congress at that time.

Dr. WILSON. That is right.

Chairman HOLIFIELD. So there is no contractual obligation that you exercise this option. Is that right?

Dr. WILSON. That is right.

Senator JACKSON. Mr. Chairman, right on that point, I might ask one question.

At the end of the 30-year period, when the bonds are paid out, would title to the generating facilities, the property which has been leased by the Washington Public Power Supply System, revert to the Federal Government?

Mr. QUINN. Under the proposed contract, the Government would have an option to take over the facilities at no cost at that time.

Chairman HOLIFIELD. At the conclusion of the 24-year period?

Mr. QUINN. At the conclusion of the bond repayment period.

Chairman HOLIFIELD. Now, let us consider the problem of standby. Assuming a time comes in which the dual purpose is no longer necessary, and the single power purpose become operable, would the Government at that point have any advantage in having the plant operating and in a standby condition?

Mr. QUINN. Yes, it would substantially lessen the amount of time required to get back into plutonium production, if we should want to, and we have the option at any time to take back the plant and put it into plutonium production, if we have the requirement for plutonium.

Chairman HOLIFIELD. For the record, many of the plutonium producing plants in the Soviet Union, we understand, are dual purpose. Is that your understanding, Dr. Wilson?

Dr. WILSON. Yes; and also in England.

Chairman HOLIFIELD. And also in England. Now, in the case of shutting down a single purpose plant, as all the rest of our plutonium producing plants are, of that type, are you allowed to state the approximate time that it would take to get a single purpose plant back into plutonium production?

Mr. QUINN. I think, Mr. Chairman, that the time required to reactivate a facility put in standby would depend on the condition of standby. I think it would be fair to say that at the time the production period ended, when plutonium requirements for weapons had been met, we would plan to put this facility into a more or less cold standby. The costs involved in doing this would be perhaps \$1½ to \$2 million, initially.

Dr. WILSON. Are you talking about this particular unit?

Mr. QUINN. I am talking about this particular reactor, now. And we would have a continuing standby cost of \$300,000 per year.

Should it be required to reactivate the plant for plutonium production, the reactivation cost might be on the order of \$5 million.

Now, if the plant were turned over to the Supply System and operated as a power reactor during this time, there would be no expenditure for shutdown, nor would there be a continuing standby cost. We further believe that the startup cost would only amount to perhaps \$1 million, instead of the \$5 million.

Chairman HOLIFIELD. And that would be involved in the changing of the rods?

Mr. QUINN. Yes, sir; to return to dual-purpose operation.

Dr. WILSON. And reactivating of the plutonium separation facilities and all that.

Mr. QUINN. If the reactor were in operation by the Supply System, there would be trained operators available, who could actually run the reactor for plutonium production, whereas if the plant had been put into cold standby, we would have to go out and recruit personnel, and this might require upward of 2 years to get a full crew on hand and get the reactor into operation.

Chairman HOLIFIELD. So if we look forward into the future at a time when there might be a disarmament agreement to shutdown plutonium production on the part of the United States and England and the Soviets, and such other nations as might have them at that time, we would be in the position in this one plant of being able to

restart plutonium production within a few days; where in the instance of the single purpose plants, it would be estimated to be approximately a year, as I understand it, to start up a single purpose plant.

Mr. QUINN. I think it would be more likely 2 years, if we had to go out and recruit the operators for the facility, Mr. Chairman.

Chairman HOLIFIELD. So if the Soviets wanted to abrogate an agreement, they would be in the position of being able to start into plutonium production almost immediately, here in our country, due to the fact that our plutonium plants are single purpose plants, we would not be in the position of being able to start up immediately except in this particular plant. Is that a correct statement?

Mr. QUINN. That is correct, sir; unless we went to the very heavy expense of maintaining operating crews at all of our shutdown reactors, pending such a development; and this would be very costly.

Representative HOSMER. Mr. Chairman, does the committee have any information in connection with such a contingency, as to whether it would be of such an immediate and emergency nature that you would have to operate with what supply of plutonium you had on hand at that particular time, and therefore this might not be of any value?

Dr. WILSON. There are so many forms that the disarmament agreement might take in the disposal of plutonium stocks that it is just impossible to forecast what that would be.

Representative VAN ZANDT. Mr. Chairman, could I develop further the possibility of shutting down a dual purpose reactor, along the lines the chairman developed a moment ago?

Now, is it my understanding that if you were to shut down the dual purpose reactor and put the plutonium producing phase of it in mothballs, the production of both power and plutonium could be reactivated within a matter of a few days?

Dr. WILSON. I would not say within a few days, because we must have our separation facilities and certain other things get into operation. On the other hand, you could start actually producing plutonium in situ very quickly.

Representative VAN ZANDT. The chairman said "a few days." Is it a few days? A few months? Or how long is it?

Dr. WILSON. Well, it depends on what you mean by producing plutonium. If you are talking about getting metal out, it would be a few months.

Representative VAN ZANDT. A few months?

Dr. WILSON. But if you are talking about starting to make it again, in condition that you could recover it, why, it would be a few days.

Representative VAN ZANDT. Does this mean that you would maintain the personnel for the dual purpose reactor?

Dr. WILSON. It is the same personnel. You operate the reactor for the single purpose operation, and of course all you have to do is to change your conditions somewhat, and you are on dual purpose operation.

Representative VAN ZANDT. Then what you are telling me is this: that to maintain a single purpose of a dual purpose reactor, you would continue the personnel that would be necessary to actually maintain a dual purpose reactor.

Dr. WILSON. No, that is not quite true. You would continue the personnel that was necessary to operate the reactor, but you would not

continue the personnel that was necessary to operate the separation plant, and so forth.

Representative VAN ZANDT. Percentagewise, if you put the plutonium producing phase of the reactor in mothballs, what would the personnel look like?

Mr. QUINN. There is really nothing in the reactor that would go into mothballs, Mr. Van Zandt. The reactor would continue to be operated with a full operating crew. The major difference would be the type of fuel element that is used. And the things that would be put into mothballs would be the facilities, say, at Hanford for manufacturing the production type fuel elements and for performing the chemical separations.

Representative VAN ZANDT. The same personnel would be on hand?

Mr. QUINN. In the reactor; that is correct, sir.

Chairman HOLIFIELD. But there is one distinctive point to be brought out on that. During the single purpose operation, the salaries of the reactor operators would be paid for by the WPPSS, and not the AEC. But they would be available. There would be a continuity of reactor operation, but the expense of that operation would shift from AEC to the WPPSS.

Dr. WILSON. And all the mothball expense and so forth, or what would otherwise be mothball expense, is shifted to WPPSS.

Representative BATES. Is there any split in the cost during the dual purpose operation?

Dr. WILSON. We operate the reactor. They operate the powerplant.

Representative BATES. How about the cost of the reactor? Are those people involved there? Is any of that paid for?

Dr. WILSON. No; it would not be paid for except by these payments during the period of dual purpose operation, by the payments they would make to us.

Representative VAN ZANDT. Would the gentleman yield?

Commissioner, can you give us the number of people required to operate the dual purpose reactor?

Mr. SCHWARTZ. If I may respond, sir, approximately 200 people in the reactor area, plus approximately 65 at the generating station; so approximately 265 in total.

Representative VAN ZANDT. You said 65 people at the generating station. Their cost would be absorbed by the WPPSS. Is that right?

Mr. SCHWARTZ. Yes, sir.

Representative VAN ZANDT. In the event the plutonium phase of the reactor is shut down, does this mean that the WPPSS would therefore assume the responsibility, then, of the cost of 265 people?

Mr. SCHWARTZ. Yes, sir.

Chairman HOLIFIELD. So that would give us the standby, the cost of standby operation, of the reactor. It would give the Government the benefit of that during that period of time when it was operating for the single purpose of steam. It would give them the benefit of having the reactor in operation without the expense of keeping the operating crew in a standby condition. That was the point of my question.

Are there any further questions of these gentlemen at this time?

They are going to be available, I might say, throughout the hearings.

Representative VAN ZANDT. I would like to ask the Commissioner a few questions.

Commissioner Wilson, on page 1, you say that the contemplated arrangements, based upon a proposal submitted by the Supply System to AEC and the Bonneville Power Administration differs from that considered by the Congress last year, and is supported by the Commission.

Was it unanimous on the part of the Commission?

Dr. WILSON. Yes, it was.

Representative VAN ZANDT. Was this decision made prior to the resignation of Commissioners Olson and Graham?

Dr. WILSON. Well, not the final approval of the contract. They were generally favorable to the negotiations, and so forth. The final approval of the contract occurred after they had left.

Representative VAN ZANDT. After they had left. So it was without the presence of Commissioners Olson and Graham.

Dr. WILSON. But they had expressed sympathy with it during the period that we discussed it, for over a period of several months.

Representative VAN ZANDT. The expression of sympathy—was it an expression that they were sympathetic, or did they indicate how they would have voted on the proposal?

Dr. WILSON. Well, all I can say is that they were in agreement with the other members of the Commission on all these negotiations, and interposed no objection. But they did not vote on the final proposition, so I cannot really state exactly.

Chairman HOLIFIELD. Well, they were no longer Commissioners. But during the time they were Commissioners, in 1961, they did vote for the Government building of the generating facilities, did they not?

Dr. WILSON. Yes. I believe that is true.

Mr. QUINN. Yes.

Representative VAN ZANDT. Mr. Chairman?

Mr. Wilson, on page 2 you say:

Under this contract, the Commission would lease to the Supply System certain land adjacent to the NPR on which the electric generating facilities would be built.

Who owns the real estate on which the reactor is located?

Dr. WILSON. The Federal Government.

Representative VAN ZANDT. And therefore the AEC is going to lease Federal real estate to this Supply System?

Dr. WILSON. That is right.

Representative VAN ZANDT. Is the lease so drawn that it will circumvent section 44 of the law?

Dr. WILSON. Mr. Hennessey?

Chairman HOLIFIELD. Will you please repeat the question?

Representative VAN ZANDT. Is the lease so drawn as to comply with the provisions of the law?

Mr. HENNESSEY. Yes, sir. As far as section 44 is concerned, we are simply exercising the authority in that section to dispose of excess steam that is produced incidental to the operation of our production facilities, and the disposal is being made to or would be made to a preference customer, as required by section 44. Our authority for the lease we find in section 163(g) of the Atomic Energy Act.

Chairman HOLIFIELD. Pardon me. Is that not 161(g)?

Mr. HENNESSEY. 161(g). I am sorry.

Chairman HOLIFIELD. 161 (g). And I think it would be well to read that in at this point, as it is pertinent.

It is under paragraph (g), page 53, of the Atomic Energy legislation.

The Commission is authorized to acquire, purchase, lease, and hold real and personal property, including patents, as agents of or on behalf of the United States * * *

and so forth—

to sell, lease, grant, and dispose of such real and personal property as provided in this Act.

Mr. HENNESSEY. I might add that in submitting our request to the Comptroller General for an opinion, the Office of the General Counsel did state its opinion that under these provisions of the act we did have authority to lease the land for the construction of the generating facilities. The Comptroller General did not object to the position that we took on that issue.¹⁹

Representative VAN ZANDT. Mr. Chairman?

Did he object, however, to the selling of energy for commercial purposes?

Mr. HENNESSEY. As I read the Comptroller General's opinion, it is directed solely to the question of his belief that congressional authorization would be required for pursuing the project.

Representative VAN ZANDT. Now, in view of the decision of the Comptroller General, which I believe soundly interprets congressional intent, will you proceed without congressional authorization?

Dr. WILSON. We would not propose to proceed, under the present ruling of the Comptroller General.

Representative VAN ZANDT. In other words, what you are saying is that the Commission would not proceed, in view of the decision of the Comptroller General.

Dr. WILSON. I may say we have not actually considered that, because we have not had a quorum here since that opinion was received. In fact, Dr. Haworth just got a copy of it when he was leaving. But the Chairman and I have discussed the matter, and our conclusion is that we would not proceed under the present ruling. If that ruling should be changed, we of course would—

Representative PRICE. Does not the Comptroller General act in reverse, here? Ordinarily the Comptroller General comes into the picture only after expenditures, does he not?

Dr. WILSON. No; I think he gives advice.

Representative PRICE. Do you go to him frequently for advisory opinions before you enter into contracts, and so forth?

Mr. HENNESSEY. Yes, sir. We have found it necessary in some instances in the past, where large bond issues were involved, to satisfy bond counsel.

Representative PRICE. Have you ever been in a position before where you might have disagreed with his opinion, and gone ahead with the contract, notwithstanding an adverse report from the Comptroller General?

Mr. HENNESSEY. I do not know of any case, Mr. Price, where we have proceeded to execute a contract after the Comptroller General had advised us of a lack of authority.

Representative HOSMER. Dr. Wilson, as respects the document that is before us, the proposed contract, when was it finished up?

¹⁹ See p. 2, this hearing.

Dr. WILSON. Friday. Last Friday.

Representative HOSMER. Last Friday. Was that before or after the Comptroller General's opinion?

Mr. QUINN. That was before.

Representative HOSMER. No revisions in it were made, based on the Comptroller General's opinion?

Mr. QUINN. No revisions were made, sir.

Representative HOSMER. In that event, I direct your attention to exhibits A and B,²⁰ and specifically page 1 thereof, paragraph C, of the recitals, which reads:

The Commission, pursuant to authority contained in the Atomic Energy Act of 1954, as amended, on _____, 1962, entered into the contract hereinafter called the operating and construction contract.

Did not that indicate a contemplation by the negotiators that there was not in fact authority to enter into this agreement, except in the event of the amendment of the Atomic Energy Act of 1954, at some date in 1962?

Mr. HENNESSEY. No, sir. I am afraid in context it was intended to read otherwise.

We are speaking of the authority that we have under the Atomic Energy Act as amended to enter into the contract; and the date to be inserted here is the date on which we would have signed the contract.

Representative HOSMER. Wait a minute, now. Read that again. It says:

The Atomic Energy Act of 1954, as amended on _____ 1962.

That means on _____ 1962, entered into a contract?

Mr. HENNESSEY. It should read "entered into a contract on _____ 1962."

Representative HOSMER. Is this the operating and construction contract?

Mr. HENNESSEY. Yes, sir.

Representative HOSMER. And is this the exhibit to the operating and construction contract?

Mr. HENNESSEY. Yes, it is.

Representative HOSMER. That certainly is irregular language for an exhibit which is a part of a contract.

Mr. HENNESSEY. It was contemplated that the lease would not be signed until after execution of the contract.

Representative HOSMER. But the exhibit is an integral part of the lease.

Mr. HENNESSEY. It is an agreed form of lease which, under the contract, we agreed to enter into.

Representative HOSMER. In other words, you are satisfied, and you assure us, that that phraseology does not refer to any lingering doubts respecting the authority of the Commission, but rather is an identification of the date of the principal document?

Mr. HENNESSEY. Yes, sir; I assure you it does not represent any doubt as to our authority.

Dr. WILSON. That comma after "amended," of course does not appear in your reading, but that is very significant, I think.

Representative HOSMER. Well, in general, when you refer to an act as amended, I think that the phrase has commas.

²⁰ See JCAE, pp. 23 and 32.

Mr. HENNESSEY. I think the comma would have been omitted if that were the intent, sir.

Chairman HOLIFIELD. As a matter of fact, the Commission's position from a legal standpoint is that section 44 of the basic statute gives you the right to go ahead with this contract. Is that not true?

Mr. HENNESSEY. This was the basis of our position, as stated in our opinion that was submitted to the Comptroller General, yes.

Chairman HOLIFIELD. That is right. And it is very interesting to note that the Comptroller General in his decision referred to various quotes in reports, but ignored completely section 44, which is the basic statute giving the Commission the authority to sell byproduct steam from a production facility.

This is one of the interesting parts of the Comptroller General's decision, which will be gone into later, at the proper time.

Representative VAN ZANDT. Mr. Chairman, may I continue?

Chairman HOLIFIELD. Yes.

Representative VAN ZANDT. Mr. Wilson, what is the overall cost, at the moment, including the amounts in the authorization bill, of the plutonium-producing reactor at Hanford?

Mr. QUINN. Mr. Van Zandt, the current estimate is \$195 million.

Representative VAN ZANDT. \$195 million. That means that the authorization bill, which is now awaiting floor debate, increased the overall cost \$43 million. Is that correct?

Mr. QUINN. That is correct, sir.

Representative VAN ZANDT. Of this \$43 million, how much can be attributed to the power phase of the reactor?

Mr. QUINN. We really do not know the answer to that, Mr. Van Zandt. Certainly I think it would be fair to say that some portion of it is attributable.

Representative VAN ZANDT. Is it not true that the testimony of the AEC before the Joint Committee revealed that at least \$10 million was necessary to do R. & D. on a type of pipe that would take the pressure necessary for the power phase of the reactor?

Mr. QUINN. I believe, Mr. Van Zandt, the testimony was to the effect that the cost of the pipe for the NPR in our current estimate is some \$11 million higher than it was in the original estimate.

Representative VAN ZANDT. If my memory serves me correctly, Dr. Seaborg testified that because of the high temperature and pressure it was necessary to go to the manufacturer and have him conduct research and development for the purpose of producing a new type of pipe entirely, and this type was necessary because of the power phase of the reactor.

Dr. WILSON. I would not say that was entirely for research and development. They got into trouble in fabricating it, and they had to do some research and development, but they had to refabricate a great deal of pipe, and have a great deal of rejected pipe, because it did not meet the specifications. It is in part research and development, and in part manufacturing difficulties.

Representative VAN ZANDT. You are right, Commissioner. But is this not correct: that had we been producing plutonium only, this type of pipe would not have been necessary?

Dr. WILSON. If we had been authorized to build a single-purpose plant, it would not have been necessary. We were authorized to build

a dual-purpose plant, and this was necessary to make it dual purpose, or make it convertible, I should say. We were authorized to make it convertible.

Representative VAN ZANDT. What did we authorize in the way of dollars for the convertibility feature phase of the reactor?

Mr. QUINN. There was no specific authorization for the convertibility feature.

Representative VAN ZANDT. What cost tag did you apply to it?

Mr. QUINN. Back in 1958, the design studies that had been made on different kinds of reactors indicated that \$25 million was the difference between the convertible reactor and the plutonium-only reactor.

Representative VAN ZANDT. All right; \$25 million of \$145 million originally. Now are you going to add this \$11 million to the \$25 million?

Mr. QUINN. I think that the \$25 million figure is questionable today, as to its accuracy. Actually, in going into the NPR, we are building a new kind of reactor. If the authorization had been for a single purpose reactor, we still would have built a different kind of reactor from our previous ones. The decision was that for any new reactor at Hanford, we would use a recirculating coolant, in order to reduce, or not add to, the amount of radioactivity released to the environment.

Chairman HOLIFIELD. Mr. Ramey had a question at that point.

Mr. RAMEY. Might you have used this same type of piping on a single purpose and gotten into trouble on piping, just the same as you have now?

Mr. QUINN. Because of the differences from our previous experience at Hanford, that would have been involved in a new single purpose reactor, we probably would have gone to a different type of pipe than had been used in the past.

Now, of course, it is speculative what kinds of difficulties we might have encountered in that case. I think in that case the pressure would have been somewhat less than in the NPR, and the temperatures would have been somewhat less.

Representative VAN ZANDT. I think you are confirming the statement of Dr. Seaborg before this committee.

It is an accepted fact, at least as far as the House debate was concerned, that the convertibility feature cost \$25 million.

I ask the question again: Are you going to add the \$11 million to the \$25 million, which will make the total \$36 million, the cost of the convertibility feature?

Mr. QUINN. In trying to assess what the cost of convertibility is today on the basis of the \$195 million total cost, we do not know what a single-purpose reactor would have cost had we proceeded with it. So that the amount of the total cost of convertibility is something that we do not know.

Now, it may be \$36 million, or it may be some other figure.

Representative VAN ZANDT. We discussed \$11 million out of the \$43 million. Can you break down for us the remainder of the \$43 million? Is it not true that some of the remainder of the \$43 million can be charged to the convertibility feature, because of the administrative costs, overhead, and so forth?

Mr. QUINN. I think another element in the \$43 million results from the extension in the completion date for the reactor. At the present

time, the piping is the item controlling the schedule. However, there are other items in the construction program which could be controlling if unfavorable developments in procurement are encountered.

So that if we did not have the piping problem, it is difficult to say how much the completion date would have had to be extended in any event.

Representative VAN ZANDT. Well, in other words, it is my understanding that because of the piping problem, you had this \$11 million cost, and then in addition, the delay from an administrative and an engineering standpoint was going to cost more money.

Now, could you give us an estimate of how much the delay, as far as administrative and engineering costs are concerned, will amount to?

Mr. QUINN. We have estimated the increase in indirect construction costs at close to \$6 million.

Representative VAN ZANDT. \$6 million. So that makes \$42 million.

In the event you did not have the pipe problem, from a delay standpoint, your plutonium-producing reactor would have been on schedule. Is that right?

Mr. QUINN. I could not say that, Mr. Van Zandt. The NPR involves many areas of new technology in which we have not had previous experience. We have encountered difficulties in a number of areas such as research and development work and in the procurement of such things as instrumentation which have not been produced before.

Representative VAN ZANDT. Well, this is typical.

Mr. QUINN. It is typical of a new project involving as much new technology as this reactor does.

Dr. WILSON. Congressman Van Zandt, I think you can go into it just as carefully as possible, and just as earnestly as possible, and you still would not be able to tell whether it was \$30 or \$45 million extra cost due to convertibility. But I think it is someplace in that range, and that will always remain uncertain, because you just cannot tell what would have happened.

Chairman HOLIFIELD. But in any event, the Congress authorized the convertible type reactor, it was designed as such, and once having started on the construction of it, whether the convertibility feature was used or not, you had to go through with it. Is that right?

Dr. WILSON. That is right.

Chairman HOLIFIELD. In other words, there was no point—the Commission supported the convertibility part of it. I remember Admiral Strauss testified in behalf of it when he was Chairman of the Commission.

And once having decided to go down that path, you were forced to follow these expenditures, whether the steam was ever used or not.

Dr. WILSON. And if we decided to abandon convertibility at this time, we could not make any substantial saving.

Representative VAN ZANDT. Mr. Chairman, may I continue my questions?

Commissioner, I agree with this uncertainty which relates itself to the cost, and the completion date. Is it possible you may come up here and ask for more money, because of additional difficulties, and the completion date may be pushed further away?

Dr. WILSON. We think we can see the end of this situation fairly definitely.

Mr. Quinn is more familiar with the details, but he can tell you what progress we made in solving the remaining problems.

Mr. QUINN. Our current estimates are that we will be able to complete the job on the basis of our present time schedule, and the present cost estimates.

Dr. WILSON. Pipe delivery is coming through in good shape, now.

Representative VAN ZANDT. But did you not make this same statement just about a year ago?

Mr. QUINN. Yes, sir. As of last summer we expected to complete the job for the original estimate.

Representative VAN ZANDT. And is it not true that just a moment ago you said there was a degree of uncertainty in this project?

Mr. QUINN. There will always be some degree of uncertainty until it is completed.

Representative VAN ZANDT. Now, is it not true that the Supply System could be affected dollarwise if certain uncertainties develop? Are they not becoming part of a proposition, here, that could cost them money?

Mr. QUINN. I believe that the cost of completing the reactor would not affect the Supply System. Actually, the commencement of power generation would be some 2 years following completion of construction of the reactor itself.

Representative VAN ZANDT. Are they not going to put \$25 million into the construction of facilities?

Mr. QUINN. Under the construction program which has been discussed, there would be modifications made to the reactor and to the heat dissipation facilities for the purpose of improving power production, and the total cost of these will be approximately \$25 million.

Representative VAN ZANDT. Is there a degree of uncertainty in this estimate of \$25 million?

Mr. QUINN. On the basis of our experience to date in building the same sort of thing, we think we have a good cost estimate.

Representative VAN ZANDT. It could be \$30, \$35, or probably \$50 million?

Dr. WILSON. But it would be entirely on WPPSS, if it were.

Representative VAN ZANDT. They would assume that additional cost?

Dr. WILSON. That is right.

Representative VAN ZANDT. What I am trying to point out is that they have to accept a certain amount of this uncertainty. So instead of the cost to them being \$25 million, it could be \$50 million.

Dr. WILSON. No, I do not think it is possible, because it is a much more conventional type of investment that they have to make in power generating facilities and heat exchangers, and so forth. It is much more conventional than designing a new type of reactor.

Representative VAN ZANDT. In connection with the cost of the steam, what was the figure used a moment ago, in selling the steam to the Supply System?

Mr. QUINN. The payments for the steam under the agreed-upon schedule would amount to payments to AEC of \$3 million at the end of 7 years of dual purpose operation.

Representative VAN ZANDT. Can you break this down to a unit of B.t.u.?

Mr. QUINN. It is different year by year, sir.

Representative VAN ZANDT. Let us take the initial year.

Dr. WILSON. That is only paying \$100,000 during that period. It is a token payment.

Mr. QUINN. The exact amount of steam that would be used by the Supply System is something that is not definitely known.

Representative VAN ZANDT. So there is uncertainty here, also.

Mr. QUINN. But not in the amount of the payment. One of the main values of having the plant converted is the availability of this capacity, in the event, for example, that waterflows in the Columbia River are low. This could meet deficits that might occur in 1965.

Representative VAN ZANDT. Then this is just simply a token payment?

Dr. WILSON. For the first 7 years it is token.

Representative VAN ZANDT. For the first 7 years?

Dr. WILSON. Yes.

Representative VAN ZANDT. In establishing this dollar figure, what was taken into consideration, from the Government's standpoint? Was the \$195 million?

Mr. QUINN. No, sir, it was not.

Representative VAN ZANDT. What percentage of it, or what portion of it?

Mr. QUINN. We did not approach the question of determination of the price for steam on the basis of AEC costs. We recognized that if a certain portion of the costs were assigned to power, it could result in a very unfair situation in the event of a very short dual purpose period. This could result in costs of power considerably higher than what the power would cost from an alternate source.

So that in approaching our negotiations with the Supply System, we based our position on a determination of the value of the steam for the intended purpose of power production. We sought the advice of the Federal Power Commission for this purpose.

The payments which have been negotiated are on the basis of what its value is, as a source of energy to a turbine generator plant to produce power competitive with other sources of power in that area.

Representative HOSMER. Not based on day by day or month by month, but based on operation over a period of a year?

Mr. QUINN. Based on operation over a period of years, and based on estimates by the Federal Power Commission of what percentage of the time this plant would be needed for power production. And this varies with time, increasing up to its maximum capability.

Representative HOSMER. In other words, the justification for the delivery of steam at a token price during the first few years is the risk to the contractor that is involved?

Mr. QUINN. Yes, sir.

Representative HOSMER. But in the overall sense, if the contract were to last for any length of time, say you get into the eighth and ninth years, then those payments more or less recapture?

Mr. QUINN. The initial risks will be overcome, and from then on there will be substantial annual payments.

Dr. WILSON. There is, of course, a factor of the certainty of the steam supply, in that this is operated mainly for production of

plutonium, and there is always some down time, when you are making changes in the system, which is borne by the WPPSS.

Representative HOSMER. You are actually guaranteeing in a sense. All that they are contracting for is—

Dr. WILSON. What we have.

Mr. QUINN. This is byproduct steam, and it is made available to them on that basis.

Chairman HOLIFIELD. And any recovery the Government gets out of this byproduct steam is that much. If they get \$3 million in the first 7 years, that is that amount they would not get if it is shot into the tanks. If it is \$31 million, that would be a \$31 million recovery the Government would get which otherwise it would not get. Is that not true?

Mr. QUINN. That is correct, sir.

Representative VAN ZANDT. In the event the reactor breaks down, does the Government have any responsibility?

Mr. QUINN. We have no liabilities to the Supply System. If it broke down during the period when it is needed for plutonium, we would, of course, put it back into operation.

Representative VAN ZANDT. Well, suppose it broke down so that it was not producing steam. Does the Government have any responsibility here, as far as the Supply System is concerned?

Mr. QUINN. No, sir, we do not.

Representative VAN ZANDT. What about the \$25-plus million, we will say, that they have invested?

Mr. QUINN. That is not involved in the agreement between AEC and the Supply System, at all.

Chairman HOLIFIELD. Will the gentleman please clarify what \$25 million he is speaking of?

Representative VAN ZANDT. For the facilities that have to be built into the reactor.

Dr. WILSON. They pay that.

Chairman HOLIFIELD. The WPPSS pays that, and immediately title goes over to the Government. This is a risk WPPSS takes immediately, on their own, and immediately they are built into the reactor the Government obtains title.

Is that not true?

Mr. QUINN. That is correct, sir. I am sorry I misunderstood your question.

Representative VAN ZANDT. There is no liability?

Mr. QUINN. There is no liability, sir.

Representative VAN ZANDT. In the event this proposition becomes a reality, could this pattern be followed in regard to other plutonium producing reactors?

Dr. WILSON. Not those that are now built. We might build some more. But there is no possibility of getting useful energy at reasonable cost from any of the existing plutonium reactors except this.

Representative VAN ZANDT. Well, is not the cost a factor in this proposal?

Dr. WILSON. Well, we had it in mind in negotiating. But actually, as you will see, if you had a long dual purpose period, you would recover far more than your total cost of convertibility.

Representative VAN ZANDT. Beyond 7 years.

Dr. WILSON. On the other hand, if it is a short period, we would recover very little of our cost.

But the gamble, as I say, is on the person that is going to benefit, instead of being on the AEC, which I think is a considerable improvement.

Representative VAN ZANDT. Suppose world conditions developed to the point where the United States became part of an agreement shutting down plutonium-producing reactors, both dual purpose and single purpose?

Dr. WILSON. I do not think they would ever dare make it a thing like that, because practically every power reactor would have to be shut down, then. I think they would have to limit it to some control over the plutonium that came out of it.

Senator JACKSON. It would be a disarmament conference to end peace, because you are talking about the elimination of peaceful uses of the atom. I do not understand the gentleman.

Representative VAN ZANDT. Senator, anything can happen nowadays.

Senator JACKSON. Well, I know; but that is pretty absurd. I hope we will never get ourselves in that position.

Chairman HOLIFIELD. We would have to close down Commonwealth Edison.

Senator JACKSON. And Shippingport.

Chairman HOLIFIELD. And all the rest of them. And Peachbottom.

Representative VAN ZANDT. My question relates only to those reactors with capabilities of weapon plutonium production.

Dr. WILSON. So are all the British and Russian reactors.

Representative VAN ZANDT. That is right.

Dr. WILSON. So I do not think there is any reasonable chance of that happening.

Chairman HOLIFIELD. And although Commonwealth Edison and some other peacetime reactors are built primarily for steam, they do produce plutonium.

Representative VAN ZANDT. Yes; but token amounts of a very low grade and not weapon material.

Senator JACKSON. If you are going to eliminate it, you are going to have to eliminate all of it. I just cannot understand that we are going to have a disarmament to end the peaceful uses of the atom. It is completely contradictory.

Representative VAN ZANDT. That is all, Mr. Chairman.

Chairman HOLIFIELD. Mr. Hosmer?

Representative HOSMER. I want to assure the chairman at this point that I am neither for nor against this contract. I am anxious for the Government to get its money, as much as it can, out of this facility, but I am also anxious that it not take an unreasonable risk of losing something, and that the contract will be fair.

Dr. Wilson, as I understand from the reading of the summary—well, let me ask you this, first: Washington Public Power Supply System is a municipal corporation of the State of Washington?

Dr. WILSON. I do not know whether you call it a municipal corporation.

Mr. HENNESSY. It is; yes, sir.

Representative HOSMER. And was this corporation formed up for the purpose of getting into this contract? Or is it a preexisting operating corporation?

Senator JACKSON. The organization was set up several years ago by the State legislature, making it possible for more than one body to go together and go into the hydro business if they so desired to pool and purchase power. Mr. Hurd I think can testify to that in detail.

Representative HOSMER. Can we just get a rough idea of who the other party is in this, just for the record?

Mr. HURD. The Supply System was organized in 1957, as Senator Jackson said, under the law which permits one or more public utility districts and/or cities to join together to do what each can do individually.

We have undertaken other projects, and are now constructing a hydroelectric project. We have a license application pending for another project.

Representative HOSMER. In other words, you are an operating corporation, with assets and liabilities, and conducting a business as of the present time?

Mr. HURD. That is right.

Representative HOSMER. And this would be in addition to what you have done before?

Mr. HURD. That is right.

Representative HOSMER. Very well.

Now the corporation will be leasing the land for its facilities at Hanford. As I understand that, the lease charge is just a nominal charge.

Mr. HURD. That is right.

Representative HOSMER. And that amounts to a thousand—

Chairman HOLIFIELD. Would you yield?

At that point, could you inform us how much land the AEC has at Hanford, and if there is a great expanse of vacant land on the AEC property?

Dr. WILSON. Oh, a tremendous expanse of vacant land.

Chairman HOLIFIELD. It runs into thousands of acres, as I understand it. Will you please give us the figure for the record?

Mr. QUINN. About 575 square miles, sir.

Chairman HOLIFIELD. And how much are you leasing to the WPPSS?

Mr. QUINN. Approximately 13 acres, sir.

Representative HOSMER. The reason for the nominal rental is the other considerations being received by the AEC on account of the contract; is that correct?

Mr. QUINN. Yes, sir.

Representative HOSMER. I am sure the people who rent houses out there regard the land as being worth something.

Dr. WILSON. Not on the edge of a reactor site. People do not build houses there.

Representative HOSMER. The corporation is assured of no steam, or some amount of steam. It has no minimum guarantees, as I understand.

Mr. QUINN. That is correct, sir.

Representative HOSMER. Is that one of the considerations for this nominal rental? Is that it?

Dr. WILSON. Well, for the nominal payments; the scale of payments that are set forth. That is one of the considerations.

Representative HOSMER. It would also apply to the rental of the land, would it not?

Mr. QUINN. Yes, sir.

Chairman HOLIFIELD. At that point, is there a separate payment for the land, or is that included in the schedule of payments?

Mr. QUINN. That will be a separate payment, sir, as well as any services the AEC performs for the Supply System, or any incremental costs the AEC incurs because of the presence of the Supply System. These will be reimbursed separately.

Chairman HOLIFIELD. From the WPPSS to the AEC?

Mr. QUINN. From the WPPSS to the AEC, in full.

Representative HOSMER. However, if for any reason the corporation decided to discontinue its operation of the generator, the Government would not be able to go in and take over, under the arrangement that you mentioned earlier, by paying off the balance of the bonds, so long as the corporation continues to pay its \$10 a year rent?

Mr. QUINN. No, sir. If there is a default in the terms of the lease on the part of the Supply System, AEC has the right to terminate the lease. Now under these circumstances—

Representative HOSMER. It agrees to take the steam and continuously operate the generating facilities to the best of its ability?

Mr. QUINN. No, sir. The AEC would make no commitment with respect to operating the generating facilities.

Representative HOSMER. I am talking about the corporation. Would they be in default of their lease if they just decided to shut down their generating facilities?

Mr. HENNESSEY. May I answer that?

Under article VI of the lease, they would be in default if they failed to use the land for the generation of electric power, and AEC would have the option to cancel the lease under those conditions.

Representative HOSMER. Very well. Let us get over to article VIII and find out what happened to end up the dual-purpose period.

The corporation can either terminate its option and sell off its generating facilities, or take a lease of the reactor facilities from the AEC?

Mr. QUINN. Under the contract, we would agree to lease to the Supply System the reactor at the end of the dual-purpose period.

Representative HOSMER. However, if the corporation did not desire to take such a lease, it would not have to do so, would it?

Mr. QUINN. No, sir.

Representative HOSMER. It could dismantle this plant and sell it for junk?

Mr. QUINN. Yes, sir.

Representative HOSMER. Now, if it should take the lease, what compensation would the AEC receive?

Mr. QUINN. Again, as in the land lease, the lease payments in consideration for the other conditions of the contract would be nominal payments, \$1,000 for the first year, and \$10 per year thereafter.

Representative HOSMER. For this \$130 or \$140 million facility?

Mr. QUINN. For the reactor which would otherwise be idle.

Representative HOSMER. Do the reactor and its related auxiliaries have some salvage value?

Dr. WILSON. We would not destroy it. They would have to keep it in operation and in more than standby condition. We save quite a substantial sum of money, as pointed out, if they took over the operation, as against putting it in mothballs.

Representative HOSMER. But not as against actually taking it apart and realizing a salvage value out of it?

Dr. WILSON. Well, that would be very small compared to the value of it for the purpose for which it was intended.

Representative HOSMER. In other words, you can assure us that there is every reasonable possibility and desirability of maintaining the reactor in being, even in a standby condition, and thereby the Government is receiving some consideration in addition to this \$10 a year for the lease?

Mr. QUINN. We have the right to recapture the reactor at any time should it be needed for AEC purposes.

Chairman HOLIFIELD. And in their operation of the reactor, they would operate it along the lines laid out for its operation by the AEC, I presume.

Mr. QUINN. Absolutely. The conditions under which the reactor would be operated by the Supply System are subject to review by the AEC in order to assure that the reactor is maintained as we would have maintained it ourselves if we had been operating it.

Representative HOSMER. All right.

From another standpoint, here, I have a question in connection with the number of kilowatts of generating capacity. And it occurs to me that when we were talking about it last year, we were talking in the order of magnitude of some 650,000 kilowatts, and the corporation appeared to be talking in terms of some 800,000.

Mr. QUINN. Last year, Mr. Hosmer, if I may comment on that, we were continuing to make evaluations of the optimum size of power-plant and of the performance of the reactor in the power-only period. Along about last May or June, the General Electric Co. completed a study which indicated that the available steam pressure in the power-only period would be somewhat higher than had been assumed earlier. These studies led to the possibility of producing further amounts of power in power-only, and for the dual-purpose period the increase was to the 800,000 level.

Representative HOSMER. Is the installation of this extra loop going to cause delays in getting the reactor into operation?

Mr. QUINN. We do not believe it will affect the startup date of the reactor. No, sir.

There will be a period of time, perhaps 6 weeks, when the reactor will be shut down, in order to tie in the generating station and the additional loop to the reactor.

Dr. WILSON. It might, however, cause some delay if for one reason or another we should delay the execution of this contract for several months.

Representative HOSMER. In other words, whatever delays, either by delay in execution of the contract or by the technical tie-ins, and so forth, would be an expense to the United States which would not be compensated by the contract.

Dr. WILSON. Under the proposed arrangements, what costs AEC would incur during this shutdown period would be compensated by

the Supply System. These would be continuing costs for labor and utilities.

Representative HOSMER. But not anything on the investment?

Dr. WILSON. Not on the investment, nor for the delay in production of plutonium.

Representative HOSMER. And I suppose that whatever delay you contemplate as being involved does not affect the national security?

Mr. QUINN. We do not believe it would, sir.

Representative HOSMER. I think that is all.

Senator JACKSON. Mr. Chairman, I just had a couple of brief questions.

What this really boils down to is that, No. 1, we need plutonium.

Dr. WILSON. That is right.

Senator JACKSON. At the present time, with the present program underway, which contemplates merely the operation on the reactor on a single purpose basis, but having built-in features, you would not have the opportunity of disposing of usable steam from the reactor?

Dr. WILSON. As a matter of fact, we would have to dissipate that heat in a cooling system, and that load is somewhat decreased by converting part of it into power.

Senator JACKSON. So by disposing of waste heat, two things will happen. One is that the Government will receive as indicated in your statement, a schedule of payments under certain assumptions, which run up over a 30-year period of—

Dr. WILSON. Twenty-four years of dual purpose operation.

Senator JACKSON. \$125 million for 24 years of dual purpose? oped. Is that not correct?

Dr. WILSON. That is right.

Senator JACKSON. Secondly, you will be saved contingent costs in the event of a shutdown of the reactor due to possible international agreements on the control of nuclear weapons and production. Is this not correct?

Dr. WILSON. That is right; particularly the standby and maintenance costs.

Senator JACKSON. That is what I mean, the contingent costs that would occur to keep the facilities in standby condition, ready condition.

In addition, under this arrangement, they would be in a better standby or startup condition, I should say, because the most important thing that you have to deal with in that situation, of course, is to have the know-how readily available so that you can get the people in there to start it up.

Is this not the great asset? Is this correct?

Dr. WILSON. Yes.

Senator JACKSON. Now, one last point. Much has been said about the additional costs in connection with this project. Is it not a fact that there is a long history that sort of indicates that this was sort of inevitable? In other words, in our other reactors, we have had to incur additional costs, especially where new types were being developed. Is that not correct?

Dr. WILSON. That is true. I think this is maybe fairly high in percentage, but on the other hand, we did not try to make accurate estimates during the war, when we were most experimental.

Senator JACKSON. Yes; and as a matter of fact, some of the private utilities have found that their reactors have been costing more than they had indicated to the stockholders.

Dr. WILSON. Very much so.

Senator JACKSON. That is all, Mr. Chairman, I think.

Chairman HOLIFIELD. Thank you, gentlemen, for your testimony. The committee will adjourn until tomorrow morning at 10 o'clock. At that time, we will have Mr. Hurd of the WPPSS and Mr. Luce of Bonneville before the committee for questioning.

(Whereupon, at 12:07 p.m., Tuesday, July 10, 1962, the committee adjourned, to reconvene at 10. a.m., Wednesday, July 11, 1962.)

UTILITY PROPOSAL FOR POWERPLANT ADDITION TO HANFORD NEW PRODUCTION REACTOR

WEDNESDAY, JULY 11, 1962

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

The Joint Committee met at 10 a.m., pursuant to adjournment, in room AE-1, the Capitol, Hon. Chet Holifield (chairman of the Joint Committee) presiding.

Present: Senators Jackson, Hickenlooper, and Dworshak; Representatives Holifield, Price, Aspinall, Van Zandt, Hosmer, Bates, and Westland.

Present also: James T. Ramey, executive director; Edward J. Bauser, technical adviser; David Toll, staff counsel; Jack R. Newman, professional staff member.

Chairman HOLIFIELD. The committee will be in order.

The committee will continue hearings this morning on the Washington Public Power Supply System's proposal for the construction of electric generating facilities at the Hanford New Production Reactor.

Yesterday, the committee received testimony on the portion of the arrangements between AEC and WPPSS, phase I.

Today, we will receive testimony on phase II of the arrangements, the contract between the BPA and WPPSS, and we will have witnesses representing both parties. In addition, representatives of the AEC will be available to answer questions.

Our two witnesses this morning are Mr. Charles F. Luce, Administrator of the Bonneville Power Administration, and Mr. Owen Hurd, managing director, Washington Public Power Supply System. Will both of you come forward, please? Then you will be available, and we will avoid the arising in the audience of a witness for testimony.

STATEMENTS OF HON. CHARLES LUCE, ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION; OWEN HURD, MANAGING DIRECTOR, WASHINGTON PUBLIC POWER SUPPLY SYSTEM; JOSEPH F. HENNESSEY, ACTING GENERAL COUNSEL, ATOMIC ENERGY COMMISSION; AND EDWARD WEINBERG, ASSOCIATE SOLICITOR FOR WATER AND POWER, DEPARTMENT OF THE INTERIOR

Mr. LUCE. Mr. Chairman, may Mr. Weinberg, Associate Solicitor of the Department of the Interior for Water and Power, come forward with us.

Chairman HOLIFIELD. Yes; you may bring your counsel up with you.

Now, Mr. Luce, why don't you start off, now, as the other Government witness before us, and give us as clear an explanation as you can of the part that Bonneville will play in this; your relation to AEC, and your relation to WPPSS.

Mr. LUCE. Thank you, Mr. Chairman.

My name is Charles F. Luce. I am Administrator of the Bonneville Power Administration, with headquarters at Portland, Oreg. The Bonneville Power Administration is an agency within the Department of Interior.

I have not prepared a written statement, but have instead submitted to the committee an outline of the testimony which I will present, together with a summary of the exchange agreement between the Bonneville Power Administration and the Washington Public Power Supply System, and the various participating utilities, in connection with the non-Federal addition of generating facilities at the Hanford new production reactor.

In my outline, I begin with a discussion of the need for the electric generators at Hanford, much of which has already been covered by the witnesses for the Atomic Energy Commission. They covered particularly the fact that unless this proposal is consummated, a very large quantity of steam will be wasted, with the result of a waste of energy and a waste of dollars, which otherwise could be recovered.

I will say with regard to the need for these generating facilities from the standpoint of the region's power needs, which is what Bonneville Power Administration is concerned with, that we anticipate in the next 10 years a doubling of our power loads in the Pacific Northwest; that this block of 905,000 kilowatts of firm power that we could obtain by adding the output of Hanford plant into the present Bonneville system and Northwest power pool, would go a long way toward helping to meet these additional loads that everyone anticipates in the Northwest, not only the Bonneville Power Administration, but also the private utilities.

Representative HOSMER. How much firm power? Nine hundred what thousand?

Mr. LUCE. 905,000, as I recall, Mr. Hosmer.

Representative HOSMER. 905,000. That conflicts with yesterday's testimony of some 800,000.

Mr. LUCE. No; it does not.

Representative HOSMER. How do you explain it?

Mr. LUCE. Testimony yesterday was to the effect that the installed generation proposed at Hanford are two 400,000-kilowatt generators. Our system load factor is about 73 percent. The Bonneville Power Administration has quite a large quantity, something in the neighborhood of a million kilowatts, of excess peaking capacity. Taking into account our system load factor and our excess peaking capacity, we can, by adding Hanford to our system, sell about 905,000 kilowatts of additional firm power during the dual-purpose period, and approximately 978,000 kilowatts of additional power during the single-purpose period. This, of course, is one of the main reasons we are interested in this plant.

Chairman HOLIFIELD. This would enable you to firm up some of your present dump hydropower, to achieve that difference.

Mr. LUCE. That is correct. And specifically to provide the energy to go with excess peaking capacity for which we just don't at the

present time have a market. And I might say that any hydrosystem, such as Bonneville, which has enough generators installed to get the full energy out of the river, will necessarily have excess peaking capacity. This is nothing peculiar to Bonneville. It is a characteristic of such a hydrosystem.

I have also mentioned in my outline the advantages to fish conservation that we see in this Hanford project. The Bonneville Power Administration is not directly concerned with fish conservation, but as the power marketing agency for the Federal projects in the Pacific Northwest, we are constantly confronted with the fish problem. We try, as best we can, consistent with the meeting of the power loads of the region, to do so in a way that will cause minimal damage to other resources, including the fish. This is an 800,000 or, as added to our system, a little more than 900,000, kilowatt block of power, that would involve no structure in the river. The only effect of this Hanford plant on fish would be beneficial.

Representative HOSMER. What do you mean by that? Will it make the river cooler?

Mr. LUCE. A certain amount of heat would be taken out of the steam by these turbines. I don't think that that is a principal advantage to the fishery resources, Mr. Hosmer.

Representative HOSMER. You tell us that you have got an additional need for 600,000 kilowatts of firm power a year in the Pacific Northwest. So you are going to utilize all of your hydro facilities there eventually anyway. So you are trading off a year or two of fish time, which isn't too valuable.

Mr. LUCE. Well, I would say that the time is valuable in the protection of this fishery resource. We have underway in the Department of Interior, with the direction of the Congress, a so-called crash study to seek to find better ways to get the fingerling salmon down over high dams or past high dams, such as we foresee being constructed in the next decade. And any time that we can buy in the way of postponing the construction of such structures gives us that much more time to perfect this research.

Representative HOSMER. What is your next proposed high-dam construction above Bonneville, or that other big one down there?

Mr. LUCE. There is now pending in Congress a revision of the Corps of Engineers 308 Report, which proposes a number of high projects.

Representative HOSMER. They are pretty far upstream, are they not?

Mr. LUCE. Well, some of them are, yes, but not all of them.

Representative HOSMER. The salmon get up there?

Mr. LUCE. Yes. The characteristic of the spring salmon is that it spawns in the headwater tributaries of the Columbia River.

Representative HOSMER. We are going to give you about 20 to 22 months delay in building these big high hydro dams, is that correct?

Mr. LUCE. I think you are referring to a load-growth figure of 600,000 kilowatts that was printed in last year's hearing before this committee.

Representative HOSMER. As a matter of fact, it was the testimony of one Mr. Luce, who was Administrator of the BPA.

Mr. LUCE. That is right, who was on the job at that time about 3 months. I was a little bit wrong. It is 400,000, Mr. Hosmer. But I think your point is that only about a 2-year regional load growth is

represented by the Hanford project. That is true. I think it is also true that 2 years of additional time is valuable in protecting an important fishery resource.

Representative HOSMER. Mr. Chairman, originally I think it was intended that these hearings be just to explain the contracts, and now we are getting into the pros and cons side of it. Have we invited other people to come in?

Chairman HOLIFIELD. There have been no requests for appearances and no invitations, except the people that are involved in the contracts. But that doesn't necessarily mean that there can't be in the future.

However, I might point out that it is the gentleman's line of questioning that has brought out the fishery matter, and not the chairman's.

Representative HOSMER. The witness initiated this, and I wanted to get a lot of stuff on the record about the fisheries, so that we could use that as a precedent for talking about other things if anybody wants to later.

Mr. LUCE. The commercial fisheries interests and many of the wildlife groups in the Northwest are supporting this project, for many of the reasons I mentioned.

I will pass then, if the chairman wishes, to a discussion of the contract which is proposed to be entered into between Bonneville, the Washington Public Power Supply System, and the various participating utilities.

This is a contract which is called an exchange agreement. Under the terms of this contract, the Washington Public Power Supply System a municipal corporation of the State of Washington, and the participating utilities would deliver to the Bonneville Power Administration the output of the Hanford plant, near Vantage, Wash. As I have mentioned, this output would enable the Bonneville Power Administration, by adding it to our present system, to have approximately 905,000 kilowatts of firm power. In exchange for the delivery of the output of the Hanford plant, the Bonneville Power Administration would deliver to each of the participating utilities at their respective load centers an amount of power which, under Bonneville rates, would equal in value the operating expenses of the Hanford plant. This means that during the dual-purpose period—

Chairman HOLIFIELD. Of the Hanford generating plant?

Mr. LUCE. Of the Hanford generating plant. This means that during the dual-purpose period, we would be taking into our system more power than we would be delivering back to the participating utilities. Because during the first 7 years of operations, the cost of the operating of this plant is something below our average cost of generation on the Bonneville system.

Chairman HOLIFIELD. Now, would that power be available to both public and private power purchasers?

Mr. LUCE. That is correct. The exchange agreements are available not only to the public agencies but also to the private utilities of the area.

Chairman HOLIFIELD. At the present time, are you selling to both private users and public utilities?

Mr. LUCE. That is correct. The Bonneville Power Administration from the beginning has sold to both private users and public agencies.

Chairman HOLIFIELD. And would you contemplate that the WPPSS would absorb all of this power within the first 10 years, or would there be power available not only for the needs of the WPPSS group but also for the private utilities in the area that are now buying or might buy in the future from the Bonneville people?

Mr. LUCE. The private utilities, were they to enter into an exchange agreement of the type that I am discussing here, could obtain immediately upon the completion of the Hanford generation, a firm supply of power on a long-term basis at the Bonneville rates.

Chairman HOLIFIELD. Now, let me clarify one point. The private investor-owned utilities are not in the WPPSS group, are they?

Mr. LUCE. No, they are not.

Chairman HOLIFIELD. And they are not bonded, as are your different groups in the Washington Supply System group? They are not bonded under this \$131 million bond?

Mr. LUCE. If they decided to execute an exchange agreement and purchase a share of the output of the Hanford plant from the Public Power Supply System, they would be in effect bonded. That is to say, the credit of the company would be pledged to paying for a proportion of the share of the operating expenses of Hanford, the proportion to be determined by the amount of the output that they purchased.

I might say that there are other public agencies that would have an opportunity to participate, which are not members of the Supply System. The Supply System is composed of 16 public utility districts created under the laws of the State of Washington. But it would make available not only to its own members and to the private utilities but also to municipal systems, of which we have some large ones in the Northwest, and other publicly owned systems, the opportunity to sign one of these exchange agreements and buy a share of the output of the Hanford power.

Representative WESTLAND. Mr. Chairman?

Chairman HOLIFIELD. Could I ask just one question? Then I will yield.

Would the power that is made available to these additional buyers be made available on the so-called nondiscriminatory postage stamp rate, that it is made available to the WPPSS?

Mr. LUCE. Yes.

Representative WESTLAND. These O. & M. charges that you say return sufficient to the members to take care of their own charges: I assume that would include the amortization cost of their bond. Is that correct?

Mr. LUCE. Yes.

Representative HOSMER. Mr. Chairman?

Chairman HOLIFIELD. Mr. Hosmer.

Representative HOSMER. Under what preferences would this power be marketed by either BPA or anybody else?

Mr. LUCE. The preferences that control would be the preferences in the act which created the Washington Public Power Supply System. Those are preferences—

Representative HOSMER. Now, that is a State act?

Mr. LUCE. Yes.

Representative HOSMER. And what are those preferences?

Mr. LUCE. Those preferences are to the public utility district members of the organization.

Representative HOSMER. And in the event that sufficient public utility district members entered into this, there would in fact be no possibility of a private utility contracting, would there?

Mr. LUCE. Yes, if that were the case. However, the utility districts that compose the Supply System have indicated their willingness to let the private utilities get into this project.

Representative HOSMER. And insofar as the demands do not consume all of the firm power, but once the demands consume all the firm power, they have to apply the preference, do they not?

Mr. LUCE. No, it is a different kind of preference clause, Mr. Hosmer. The preference clause we have in the Bonneville act has a 5-year cancellation clause in it.

Representative HOSMER. I understand.

Mr. LUCE. That is mandatory. But there is no mandatory pull-back clause in the laws that govern the disposal of power by the Washington Public Power Supply System; so that they could, at the inception of this project, enter into contracts with private utilities for the duration of the life of the plant.

Representative HOSMER. And there is no restriction on the term of these contracts?

Mr. LUCE. Other than the life of the plant.

Representative HOSMER. But they do have to get in early, or not get in at all?

Mr. LUCE. That is correct.

Chairman HOLIFIELD. Could I ask one clarifying question on this point?

Under the Bonneville distribution rules, you are allowed to sell non-preference power under 5-year contracts as long as previous buyers are not asking for it; is that correct?

Mr. LUCE. Yes.

Chairman HOLIFIELD. Under this agreement, that does not obtain. The Washington Power Supply group could make contracts immediately for 10 years or, as you said, for the life of the plan, if buyer and seller could get together on it with the private purchasers of electricity; is that true?

Mr. LUCE. Yes.

Chairman HOLIFIELD. Mr. Hurd, may I ask you this question, then: Do you contemplate that the 16 participants in the WPPSS will take all of the power initially? And if not, what percentage of the power do you think that they will be able to absorb under their contracts?

Mr. HURD. As a matter of policy, we would give preference to public agencies in the disposition of any surplus to the needs of its members. In this instance, we have made a determination that there is power in excess to the needs of the members, and therefore, we have invited all utilities purchasing power from BPA in Pacific Northwest to become participants in this arrangement. And we would expect that all those who indicate interest and desire to do so would enter into these exchange agreements, both public and private agencies.

Chairman HOLIFIELD. Mr. Westland.

Representative WESTLAND. Well, isn't it a fact that to a substantial extent, at least, the credit upon which these bonds would be pur-

chased is based on contracts with private utilities for the sale of electric power?

Mr. HURD. No, we don't consider that the feasibility of this hinges upon our entering into these exchange arrangements with the private utility companies. The needs, the loads, and the resources of the public agencies and the members themselves are sufficient to provide potential participants to make this plan operate in the manner that is intended.

Representative WESTLAND. You are saying then that there is sufficient credit among the public utilities, the PUD's, to warrant the purchase of these bonds?

Mr. HURD. Yes, sir.

Representative HOSMER. Mr. Luce, what happens to section 44 of the Atomic Energy Act and the priorities listed therein?

Mr. LUCE. I am not sure that I understand your question, Mr. Hosmer. You are referring to the priorities in connection with the disposal of steam?

Representative HOSMER. You were familiar with this section 44 last year in the hearing. It provides for certain priorities in the disposal of energy that the Commission has at its production facilities.

Mr. LUCE. I would say that section 44 is complied with by the type of arrangements that we are describing to the committee.

Representative HOSMER. It says in part:

If energy is produced at production facilities of the Commission, in contracting for the disposal of such energy, the Commission shall give preference and priority to public bodies and cooperatives—

and so on. Now, you feel that the act applies to the B.t.u.'s, I presume, and that since the WPPSS is a public body, you are complying with this, or what?

Mr. LUCE. Yes.

Representative HOSMER. And you then feel that the electrical energy that is produced from the heat energy is insulated from section 44?

Mr. LUCE. Well, of course, section 44 just covers, as I would read it, Mr. Hosmer, the disposition of whatever the Atomic Energy Commission itself sells. I don't think it follows all the way through. But even if it did follow all the way through to govern the disposal of the electricity that somebody else generated from steam purchased from the AEC, this section 44 does not itself have the pullback or automatic cancellation clause in it, as we discussed at the hearings last year.

Chairman HOLIFIELD. May I at this time invite Mr. Hennessey, the counsel for the AEC, to please come forward; as this is a matter which concerns the AEC.

Will you pull a chair up, Mr. Hennessey? We will have all of you available in case of questions to either one.

Now, as this did apply to section 44, will you please explain your legal conception of the question asked by Mr. Hosmer?

Mr. HENNESSEY. Yes, sir. As we understand section 44, the preference clause applies only to sales by the Commission of excess energy produced in Commission facilities. We believe that in this instance the preference clause will be satisfied in the AEC disposal of this energy to a public owned group of utilities. I think the situation is

quite different from what prevailed last year, when the Congress had before it a proposal that the Bonneville Power Commission would distribute the power that was generated under the same preference provisions as were in section 44.

Chairman HOLIFIELD. In other words, the initial contract between the AEC and WPPSS, satisfies the requirement of section 44. From that time on, the distribution of the power becomes a prerogative of the WPPSS, and they are not bound in that instance by the 5-year limitation of the Bonneville contract rate.

Mr. HENNESSEY. Yes, sir. I believe that any restrictions on the further distribution of electric energy would be governed by those restrictions that are applicable under Washington law to the Washington Public Power Supply System.

Chairman HOLIFIELD. Now, under Washington law, Mr. Hurd, what is the formula by which you operate in relation to sale of such power as you have to distribute?

Mr. HURD. As we have indicated, the statute requires that we give preference in the disposition of any power that we may have available to our members. That is the only restriction in the statute, as I recall. However, by policy, we would extend preference in power which is surplus to the needs of its members to other public agencies. That is a policy matter only and not a statutory requirement.

Chairman HOLIFIELD. And you have determined that there will be a surplus over and above the needs of your public agencies for contract to the private investor public utilities?

Mr. HURD. Yes, sir; and as a result, we have extended an invitation to the utilities purchasing BPA power, both public and private, in the Pacific Northwest, to be participants in this exchange arrangement.

Chairman HOLIFIELD. Have you determined any tentative length of time in which you would advance a contract to a private investor public utility group?

Mr. HURD. All participants would be treated alike in that respect, and the term of their participation would be coextensive with the contract and the term of the bonds. The term of the bonds is the important feature here, since, in order to get the lowest possible interest rate, we have to have as good credit back of them as possible, and broad participation by utilities will be an asset. Our counsel advises that the exchange agreement that has been presented here would make available this block of power for the term of these contracts, which is expected to be 30 years. We are expected to issue 30-year bonds. So for purposes of credit we would have 30-year bonds, and to that extent the block of power made available would be a long-term 30-year contract, both to private and public.

Chairman HOLIFIELD. You would stand ready, then, to make contracts not only with your public utility participants, but with your private customers of as long a contract as 25 or 30 years?

Mr. HURD. That is correct.

Chairman HOLIFIELD. And the length of time in which you would advance this contract right would not be discriminatory as between the public buyer and the private buyer?

Mr. HURD. That is correct, sir.

Representative HOSMER. What is the magnitude of this block of power that you are going to market? Perhaps Mr. Luce can answer that?

Mr. HURD. I can attempt it, Mr. Hosmer, and if I am not clear, perhaps Mr. Luce can clarify it.

The participants will agree to be responsible for a particular percentage, a percentage of the project annual cost, which will include the debt service and all the O. & M. costs and reserves and things that are necessary for the financing of the project. And in return, they will receive from Bonneville a block of firm power, which will be equal in value, computed at Bonneville's rates, to their allocation of annual costs.

Representative HOSMER. I understand that. Now let us translate it into kilowatts, and then further translate it into what generating capacity is required to produce those kilowatts.

Mr. HURD. Well, during the dual-purpose phase, as Mr. Luce indicated—

Representative HOSMER. I am not talking about the generation at Hanford. I am talking about the obligated power which BPA must supply to the participants, which is calculated as a factor of the bonded indebtedness that each of the participants assumes.

Mr. LUCE. The size of that block of power will depend upon what the operating expenses of the Hanford plant are from year to year.

Now, as Mr. Hurd started to say, during the dual-purpose period, when those operating expenses are generally lower, the block of power will be smaller. It will be something less than 800,000 kilowatts. During the single-purpose period it will be larger than 800,000 kilowatts. The precise amount will depend upon two things, upon the operating expenses of the Hanford project for the year involved, including the amortization of the bonds for that year, and upon the rate levels of Bonneville at the time. We have a rate review period each 5 years. The next one is December 1964. If our rates should go up, then of course our obligation to deliver power in terms of kilowatts would be correspondingly reduced.

Representative HOSMER. Well, you are going to have to sign some kind of contract with somebody to take this power, and it is going to have to specify within some parameters how many kilowatts they must pay for.

Mr. LUCE. It will certainly specify a formula for determining those kilowatts. And I might say that many contracts that Bonneville signs do not specify the amount of kilowatts. With most of our public agency customers we have what we call requirements contracts. We take care of all of their requirements without specifying kilowatts.

Representative HOSMER. In other words, you cannot say with definiteness how much power you are going to have to turn over to these participants in any particular year, from year 1 of the project on to year 30, or however long it lasts; can you?

Mr. HURD. Not down to the last kilowatt-hour, because it would depend on the costs of the project, and the level of the Bonneville rates over the life of the project.

Representative HOSMER. On the other hand, whether or not the project produces any kilowatts, so long as they are making an effort

to do so, you are required to furnish from some other source the block of power mentioned in this contract.

Mr. LUCE. Yes.

Representative HOSMER. So it is an exchange only in the sense that you are giving certain power for whatever power that you get if the machinery works?

Mr. LUCE. Yes. And we think the machinery will work.

Representative HOSMER. We will get into that later, Mr. LUCE.

Mr. LUCE. We have gone into it very thoroughly, Mr. Hosmer.

Chairman HOLIFIELD. Mr. Westland is seeking recognition.

Representative WESTLAND. Assuming that it will be necessary to have congressional authorization and it will be necessary to pass an amendment to the Atomic Energy Act to authorized the AEC to enter into a contract with the Washington Public Power Supply System. do you think this would establish a precedent under which Bonneville Power Administration could enter into a contract with other parties, similar to that which is proposed between BPA and WPPSS?

Mr. LUCE. No, I do not.

Representative WESTLAND. Would you explain why?

Chairman HOLIFIELD. May I interpose one thought at this point? Mr. Westland spoke of an amendment to the act. As I understand it, in the authorization bills, these are direct authorizations, and they are not amendments to the act. And therefore, an amendment to the act itself would not be necessary, as I understand it. An authorization is not an amendment to the act, and an authorization of the AEC to enter into this contract with WPPSS would not be, as I understand it, an amendment to the statutes.

Representative HOSMER. Would the chairman explain that again?

Representative WESTLAND. Just a minute. I believe I have the floor here.

Chairman HOLIFIELD. You did yield to me, did you not?

Representative WESTLAND. Yes.

Chairman HOLIFIELD. Well, I think this is a point that should be clarified because of the point you mentioned.

Representative WESTLAND. There has been a point whether or not these organizations had authority to enter into negotiations with WPPSS and what affirmative action was necessary, whether it is an affirmative amendment to the act or something else. But the question I really want is: Whatever is done, whether or not this would establish a precedent under which BPA could enter into a contract with other parties similar to this. Mr. Luce has said "No," and I have asked him to give us his reasons why he thinks it would not establish a precedent.

Mr. LUCE. The Bonneville's authority to enter into this exchange contract, arises, as our Solicitor's Office interprets it, from the Bonneville Act and other power marketing laws as they now appear. And therefore the action of the type that you mentioned would not add something that isn't already there in the way of authority.

Now, this question of what authority the Bonneville Power Administration or other power marketing agencies that are within the Interior Department have to purchase or to acquire by exchange steam-produced power is a question that we haven't had a great deal of experience with in the Pacific Northwest. Power marketing agencies in

other areas of the country, operating under similar statutes to ours, have had a lot of experience with the question.

The only experience we have had in the Bonneville area that I know of is in 1952 and 1953, when we had a brownout. At that time the private utilities as nonpreference customers were having to fire up a number of obsolete steamplants, which produced very high-cost electricity. They took the position at that time, as I am informed, that the Bonneville Act gave Bonneville authority to purchase that steam-produced power and average it into our costs, so that the full burden of the high-cost steampower would be distributed, as they felt, equitably among all the power consumers in the Northwest, and not loaded entirely onto the customers of the private utility companies.

As a matter of policy, I am told, the Bonneville Power Administration decided not to purchase that steam, because of certain contractual problems that they had, not related to authority but related to policy, with regard to the proposition of the private utilities in the area.

In other parts of the country, for example, the Southwest Power Administration, with headquarters at Tulsa, Okla., the power marketing agency buys a substantial amount of steampower to firm up excess peaking capacity that exists on the firm system. As a matter of fact, the Southwest Power Administration has purchased, I am told, the output of one or two, I believe it is, steamplants in their entirety. Now, this is a purchase agreement; not an exchange agreement. This is for the purpose of enabling them to firm up the excess peaking capacity that they had down there.

The Bureau of Reclamation, in the Missouri Basin, is purchasing very substantial quantities of steam-produced energy in order to firm up excess capacity.

Chairman HOLFIELD. From power companies?

Mr. LUCE. From private companies. That is right. The Bureau of Reclamation in the Central Valley project is doing the same thing with the Pacific Gas & Electric Co.

Now, those agencies are operating under statutes that grant them, if anything, lesswide authority than that of the Bonneville Power Administration.

When the matter of entering into this exchange contract was proposed to us by the Washington Public Power Supply System, and I was advised by our attorneys that we had the authority to do this, we determined, as a matter of policy, that even though we had the authority, we would bring this matter to the Appropriations Committees of the Congress, show them the contract that we proposed to enter into, even though it required no appropriations as such, and I informed the committees that we would not sign these contracts if they objected to them. We felt that even though no appropriations were required and even though we had the authority, a proper relationship with the Congress indicated that we ought to bring the contracts to the appropriations Committees, make a full disclosure, and hear from them. And we have done that.

Representative WESTLAND. Mr. Luce, do you feel that this would establish a precedent for Bonneville Power Administration to enter into any other contracts for the construction of hydroelectric projects?

Mr. LUCE. No. The precedents in the other parts of the country

that I am talking about pertain only to the purchase of steam-produced power to firm-up hydro; and as I understand don't apply at all to hydro projects.

Representative WESTLAND. Does Bonneville Power Administration have the authority, either directly or indirectly, to construct any generation facilities of these types?

Mr. LUCE. No.

Representative WESTLAND. Do you think this present proposal would make Bonneville Power Administration the construction agency of the facilities to be installed at Hanford.

Mr. LUCE. No; indeed not.

Representative WESTLAND. There have been some opinions that it would. Could you elaborate on that?

Mr. LUCE. Well, the construction agency would be the agency that put up the money to build the plant, which is the Washington Public Power Supply System. They would handle all the money and building of the plant.

Now, we have, for the protection of the Government, in our exchange proposal and exchange agreement, retained the right, as has the AEC, to review the costs that are incurred by them. But this does not make us the construction agency. The title to the plant will not be in the Bonneville Power Administration, nor in the Government, as far as that is concerned. It will be in the Washington Public Power Supply System.

Representative WESTLAND. Some of the private power companies in the Pacific Northwest have felt that if this agreement were entered into, it would jeopardize their future. I would like to get your comment on that.

Mr. LUCE. I just cannot agree with them. I think that the contrary would be the effect.

One of the things that the private power companies in our area have talked to me about since I became Bonneville Administrator is the inability of Bonneville to give them long-term contracts at Bonneville rates. They say, therefore, they cannot rely on us for long-term power supply. This forces them to build alternative power generation at costs which are higher than BPA average rates, and it puts them at a competitive disadvantage with public agencies. This arrangement is an arrangement whereby we can in effect make it possible for them to get long-term contracts at Bonneville rates. It seems to me, therefore, that far from jeopardizing the private utilities, it evens up their competitive position somewhat and helps them.

Representative WESTLAND. And you have stated that you cannot either directly or indirectly build any generating facility?

Mr. LUCE. That is correct; we cannot.

Representative WESTLAND. Now, I will yield to the gentleman from California.

Representative HOSMER. Take that last matter first, relative to the giving of long-term contracts to private companies. In the neighborhood of 800,000 kilowatts is involved, you say, and a portion of that is going to be used by the public utility participants themselves. So how much are you going to have left over to give this bonanza to the private—

Mr. LUCE. This is not a bonanza, Mr. Hosmer.

Representative HOSMER. I withdraw that word then. How much are you going to have left over to contract for the sale to the private utilities?

Mr. LUCE. That will depend in the first instance on expressions of interest from the private utilities and how much they want. To this point, there has been, so far as I know, no specific response from the private utility companies that they want any part of this Hanford project. The offer has been made to them, and it is just dangling there.

Representative HOSMER. But you do have certainty and assurance, or at least these people do, that they are going to be able to sell that power?

Mr. LUCE. That is correct.

Representative HOSMER. They have to sell it to get their money out.

Mr. LUCE. The public agencies themselves have such loads that they could absorb the entire output themselves.

Representative HOSMER. By shutting down some of their other generating facilities?

Mr. LUCE. No; most of these public agencies buy all of their requirements from us.

Representative HOSMER. Well, if they can use it all themselves, it is highly unlikely that they are going to sell any to private people at all; is it not?

Mr. LUCE. I would say it is likely. It is not only likely, but they have said that they would. They have offered to do it.

Representative HOSMER. To what extent? Again, I want to get what share of this pie is going out?

Mr. LUCE. You have to have an expression of interest before you get down to the details of how many kilowatts. But I will ask Mr. Hurd to elaborate on this.

Mr. HURD. I think it should be made clear at this point that the purchasers of Bonneville power have an interest in this arrangement not only because of the power that is made available by reason of the exchange agreement but by reason of the effect that it will have on the cost and availability of power obtained from Bonneville.

Mr. LUCE has indicated that they have considered this source of power and consider that it is advantageous to the Government's interest, in its operation of the Bonneville Power Administration, to take this power in and integrate it with other power and make the total available to the customers.

Representative HOSMER. All I am trying to find out, Mr. Hurd, is how much of this likely would go under long-term contracts to private utilities.

Mr. HURD. I am not trying to evade your question, but I am trying to point out that there is an incentive that exists here other than just the amount of power that is made available to the participants by reason of this exchange agreement.

Representative HOSMER. Your total power is available in the district areas.

Mr. HURD. That is right; and its effect on the cost of power from Bonneville and the availability of power from Bonneville.

Now, for that reason—and that is one of the principal reasons why, as a matter of policy—we have offered this to any purchaser of Bonneville power.¹

¹ See subsequent correspondence, p. 120, this hearing.

The broader the base that we have for the participation in this exchange arrangement will favorably affect the interest rate and the conditions under which we obtain \$130 million required to finance the project.

Representative HOSMER. In other words, you are all marketing basic BPA rate, so where you get it from doesn't make much difference; is that correct?

Mr. HURD. That is right.

Representative HOSMER. All right. I understand that. That answers my question, or it makes the answer to my question unnecessary.

I want to ask Mr. Luce now about this matter of precedent again.

As I understood your answer to Mr. Westland, you stated, no, this would not be a precedent for any other kind of contract like this, because you had already bought some high-cost thermal power during the brown-out period, so that your precedent was already established. Is that it? Is that what you intended to say?

Mr. LUCE. No. I said the Bonneville Power Administration had been requested by the private utilities to do this in 1952 and 1953. And they took the position at that time that we had the legal authority to do it at least on a short-term basis, and for policy reasons Secretary Mackay decided not to.

Representative HOSMER. What was the utilities' request? For you to buy some of their thermal power?

Mr. LUCE. That is correct. For us to acquire either by purchase or exchange the output of some of these steamplants that had to be fired up in order to meet the loads during this brown-out period.

Representative HOSMER. But this contract before us now is a little bit different from just a simple purchase of power from somebody. The actual effect of this contract is to guarantee the bond, is it not?

Mr. LUCE. Yes. Well, the contract would be important security for the bond, certainly. The credit of the participating utility would also be security for the bond.

Representative HOSMER. Well, the actual security is the fact that they are going to get a block of power out of BPA to sell for a long enough period to pay back the bonds on the basis of revenue; is not that correct?

Mr. LUCE. Well, I would say it a little bit differently. The importance of the exchange contract with Bonneville is that it assures the participating utilities and the Public Power Supply System a market for the output of the Hanford plant at a sufficient price to amortize the bonds and pay the operating expenses.

Representative HOSMER. You have never entered into this kind of a contract before, have you?

Mr. LUCE. No.

Representative HOSMER. Why is it not, then, a precedent?

Mr. LUCE. Well, I pointed out that the Southwestern Power Administration had entered into purchasing contracts for the entire output of steamplants.

Representative HOSMER. Yes. But why is this not a precedent for a contract between BPA and the XYZ Public Utility Co. to exchange power with them for the time it takes for XYZ to amortize its investment in a thermal plant? If you have the power to do it here, I do not see why you do not have the power to do it with somebody else.

Mr. LUCE. Any powers that we have, derived from the Bonneville Act and not from whatever happens with regard to this particular instance.

Representative HOSMER. I understand that. This matter in Congress now deals with a contract between the AEC and WPPSS.

Mr. LUCE. If there is any precedent here that we are setting, the precedent is that we would not do this without bringing the matter into the Congress through the appropriations committees; and then again, here, through your Committee on Atomic Energy.

Representative HOSMER. But you do have the power to make this same kind of a contract with somebody else. And you say if you have an intention of doing so, you will come back and tell the appropriations committees.

Mr. LUCE. Well, it depends upon whether the circumstances are the same, Mr. Hosmer. We do not have authority to go out and enter into contracts willy nilly to do this. But if the same situations were presented or similar situations to this—

Representative HOSMER. It would not necessarily have to be someone generating from steam produced by a reactor, would it? You could produce it by an oil-fired boiler or a gas-fired boiler?

Mr. LUCE. That is correct. Any steam generation.

Representative WESTLAND. The question asked by me was whether or not this was a precedent to enter into contracts for the construction of hydroelectric projects. Now, with all due respect, I think the gentleman from California has gotten a little off the track.

Representative HOSMER. I was going to bring this out in my other questioning anyway.

Representative WESTLAND. And the BPA Administrator has already said that he has no authority directly or indirectly to enter into any contracts for the construction of hydroelectric projects.

Chairman HOLIFIELD. Or steam projects.

Representative WESTLAND. As to the purchase of steam power, he has always had authority to do that. Let us have the other authorities.

Representative HOSMER. Will you yield further then?

Are not you then in effect entering into a contract for construction with the BPA as the principal and the corporations, here, as the agent?

Mr. LUCE. No.

Representative HOSMER. You do not regard this as an agency contract?

Mr. LUCE. No.

Representative HOSMER. Well, I think that there is grave doubt as to whether or not the BPA is in fact a principal.

Chairman HOLIFIELD. May I clear up one point here? As I understood Mr. Hurd's testimony, his testimony was that the credit of the participating companies was adequate to pay off the bonds. Is that correct?

Representative HOSMER. You could not peddle these bonds without this contract.

Chairman HOLIFIELD. Of course they have something to sell before they can sell it. But the credit of your different groups, plus the contract, of course, is the element of security behind the bonds, is it not?

Mr. HURD. That is correct.

Chairman HOLIFIELD. If you did not have the access to the power, of course you could not float the bonds. And if you did not have the system of distribution, you could not float the bonds.

Mr. HURD. The security for the bonds is the need that the participants have for the power and their ability to pay for it. Because the participants will pay WPPSS the debt service requirement and all operating costs, which WPPSS will use in turn to pay off the bonds.

So the funds required for debt service flow from the participants to WPPSS to the bondholders. BPA is providing the vehicle for the utilization of the NPR power in the most efficient manner for the region.

Chairman HOLIFIELD. Senator Jackson.

Senator JACKSON. Well, first, on this question of the contract: I think we all understand that in order to sell the bonds, you have to have a contract of sale or purchase agreement. Now, obviously, this makes a lot of difference to the people who are buying the bonds. I think it is quite clear that there are two factors in this contract. One is the exchange agreement between Bonneville and participating utilities, and the other is between WPPSS and the individual utilities; so that the individual or firm buying the bond will have two obligors in this operation. Bonneville is assured of its arrangement because the contract that it will have with the individual purchasers from the Public Supply System.

So it does seem to me that there is nothing unusual about this, and that the Government's interests are protected, the bondholder's interests are protected, under that arrangement.

Now, I also would like to just mention that public utility districts in the State have sold large blocks of power to the private utilities in connection with the construction of dams. Is this not correct, Mr. Hurd?

Mr. HURD. Yes.

Senator JACKSON. On a long-term basis. And this was done in order to, again, sell the bonds; I mean adequately market the bonds with the funding people, the funding houses. Isn't this correct? I mean you cannot build a dam and get the money for it unless you have a showing that the power from the dam will be sold, and sold on a long-term basis, to amortize it. So this has been done.

Mr. HURD. One of our members, the Grant County Public Utility District, has recently completed and put into operation the Priest Rapids Dam, with a capacity in excess of 800,000 kilowatts. The district did not have a need of that much power at this time, nor in the foreseeable future. So it entered into long-term contracts with the private utility companies, for the major portion of the project output in which they guaranteed payments and have used their credit for the issuance of these bonds.

Senator JACKSON. To refer to the question Congressman Westland raised: Bonneville is a marketing agency, is it not, for the sale of power from federally constructed hydroelectric projects?

Mr. LUCE. Yes.

Senator JACKSON. The two principal agencies that have built these dams over the years are (1) the Corps of Engineers, and the other, the Bureau of Reclamation, essentially.

Mr. LUCE. Yes.

Senator JACKSON. Bonneville does not have any authority to construct any kind of a hydro or generating facility; is this not correct?

Mr. LUCE. This is correct.

Senator JACKSON. If you needed steam to firm up your power, or for peaking purposes, you would have to come to Congress and get authority for it.

Mr. LUCE. Yes; if we were to build a plant.

Senator JACKSON. No; to construct. I did not say to purchase or exchange. To construct?

Mr. LUCE. Yes. The answer is "Yes."

Senator JACKSON. And if the private utilities wanted to make an exchange of power with you folks in connection with any thermal capacity that they might have out there, I assume that you would submit that and advise at least the Appropriations Committee of the arrangement, would you not?

Mr. LUCE. Yes; we would.

Senator JACKSON. And this is an authority that you have had since the enactment of the Bonneville Act. If there is a precedent here—and I would not call it a precedent—it is a unique situation that has developed where, for the first time, we have an excess of heat that is going to waste from a reactor. So I think the unusualness, probably, in the minds of many people, stems from a new development, and that is a dual-purpose reactor that is available to sell waste heat that would otherwise be dumped into the river. Is this not correct?

Mr. LUCE. Yes.

Senator JACKSON. Now, if I might go back: And I do not want to be repetitious, Mr. Chairman. I was in another meeting, and I am sorry I was detained in getting here. But under the Bonneville Act, you have to adhere to a 5-year pullback provision, do you not, in the sale of power to the private utilities?

Mr. LUCE. Yes, we do, from private utilities proposals that are subject to the Bonneville Act.

Senator JACKSON. This has been of concern to the private utilities to try to program their long-term need and requirements; they have never expressed that concern to you?

Mr. LUCE. Yes; several of them have.

Senator JACKSON. Is it my understanding, and we want to get this clear, based on Mr. Hurd's testimony and yours, that Bonneville, assuming the private utilities would want it, would enter into long-term contracts at the Bonneville rate with the private utilities in connection with this block of power, without any pullback?

Mr. LUCE. Under this exchange arrangement, that is correct.

Senator JACKSON. So that as far as the power that would be available by reason of this arrangement with WPPSS, the preference clause would not apply to the private utilities. That is what it boils down to.

Mr. LUCE. That is what it boils down to.

Representative HOSMER. Chairman?

Chairman HOLFIELD. Mr. Hosmer.

Representative HOSMER. You state that the Bonneville power authority has no authority to construct any generating facilities? Right?

Mr. LUCE. Right.

Representative HOSMER. Now, this is a hypothetical question. If this contract should be construed actually as an agency agreement in which BPA is principal for the construction of these facilities, then you would not have the power to enter into the contract; is that correct? Because you would be then in effect carrying on a construction.

Mr. LUCE. Well, that is a little like asking this: If you do not have the authority, you do not have the authority? And my answer is "Yes."

Representative HOSMER. All right. Now, my next question has to do with the exchange of power, and I will ask it in this way: Could these utilities, or the WPPSS, rather than go this circuitous route of exchange, market this power in some other way that they are going to get out of this generator?

Mr. LUCE. I think I will have to ask Mr. Hurd to comment on that. But as far as I know, this is the only marketing arrangement that is practical. Because the Hanford plant has to be backed up by the Columbia River power system in order to add the amount of firm capability to the area's power resources that I have mentioned.

Representative HOSMER. Yes. But they could make a contract with you for firmup power, rather than have you acting as more or less the principal in this matter.

Mr. LUCE. You are suggesting that we could purchase this power from whoever constructed the Hanford project, rather than enter into an exchange agreement?

Representative HOSMER. Or somebody else could purchase it?

Mr. LUCE. Yes; I suppose the thing could have been cast in terms of a purchase. But it seemed to us that an exchange offered much more to all the utilities of the region.

Representative HOSMER. Well, it offered the possibility of being able to float these bonds, did it not?

Mr. LUCE. It also offered long-term contracts to all the utilities of the region, and not just to some.

Representative HOSMER. And without this type of arrangement, WPPSS would be unable to float these bonds; isn't that correct, Mr. Hurd?

Mr. HURD. Yes, sir. We have explored what we considered all of the possible methods by which we might be able to utilize the waste heat to produce useful power for the Pacific Northwest. Last year, at the invitation of Senator Jackson, we explored the possibilities with the private utility companies of non-Federal operations of the facilities. However, we were not then contemplating the financing of the plant; only the operations of the generating facilities. When Congress turned down the Federal appropriations and authorization, we then sought other ways; and this has been the result of our exploration.

Representative HOSMER. So the construction of this facility does depend upon the full faith and credit of the United States as extended through the Bonneville Power Administration in the form of a fixed amount of electricity which it turns over to the participants irrespective of what it receives from the participants?

Mr. LUCE. No, I say that it precisely does the contrary. The burden of the security for this rests with the participants and the rate-

payers of the Northwest and the credit of the United States is not involved whatsoever.

Representative HOSMER. The participants are able to assure the buyers of the bonds that they will pay off, because they have an assured supply of power to sell from the BPA, irrespective of whether this project turns out to be a dog or turns out to be perfect.

Mr. LUCE. It is correct that you have to have contracts to sell the output of the Hanford plant in order to finance the plant; just as when the public utility districts built Wanapum Dam, they had to have contracts in that instance with the private utilities to sell the output of the dam. That does not mean that the private utilities are building Wanapum Dam or that the Grant County Public Utility District is the agent of the private utilities.

Representative HOSMER. But under any other arrangements except Bonneville supplying this power, which it is obligated to supply, it would be impossible to sell these bonds and construct this project?

Mr. LUCE. I don't know. I think that is a rather hypothetical question involving a lot of speculation. I think, as I mentioned—

Representative HOSMER. With any other way you wouldn't have to come back here to Congress. Because what most people are concerned about is the possibility of the Government getting stuck with this \$130 million.

Mr. LUCE. The Government isn't going to get stuck with the \$130 million.

Representative HOSMER. Let us get into that then.

Mr. LUCE. I don't think anybody is going to get stuck. I think it is a good investment.

Representative HOSMER. All right. Let us just assume that notwithstanding all these assurances you are going to have 800,000 kilowatts out of this generating plant, you don't in fact get them. You get 400,000 or something less. You are still going to give the equivalent amount of power to these participating utilities based on their bonded indebtedness. And they are going to pay off their bonds. So that somewhere Bonneville accounts are short that amount of money. Is that not true?

Mr. LUCE. That is correct. In that event we would have to raise the rates. But I would not concede that we are only going to get 400,000 kilowatts out of this plant. If I thought that, we would not be signing this exchange contract.

Representative HOSMER. Well, you are taking a chance. We went into all that last year.

The Bonneville Act says that rates shall have regard for recovery on the basis of the application of such rate schedules to the capacity of the Bonneville project, of the cost of producing and transmitting such electricity, including amortization of the capital investment over a reasonable period of years.

Now, as I read that, it does not give you the authority to raise your rates on the basis of losses that you might incur on account of an exchange.

Will you say whether you feel that is right? Or if wrong, why?

Mr. LUCE. I think that your construction of the Bonneville Act is not correct, Mr. Hosmer.

Representative HOSMER. You tell me why it is incorrect.

Mr. LUCE. The Bonneville Act requires that we pay back to the United States all of our operating expense, and it also requires that we amortize over a reasonable period our capital investment.

Now, we have no capital investment in the Hanford project.

Representative HOSMER. But your rates must be based on the cost of producing and transmitting such electricity, including amortization of capital investment. This loss would be a loss from the exchange agreements that you enter into. So how do you get authority to adjust your rates to cover that loss?

Mr. LUCE. Well, this is not a matter of our having authority. We have the legal duty to pay back to the United States the operating expenses from not only Bonneville but from any of the projects that the Corps of Engineers and Bureau of Reclamation build, so far as they relate to power, and also the duty to amortize the investment.

Now, if our revenues are insufficient for that purpose, we have the further duty to propose rates that will accomplish that purpose.

Representative HOSMER. Are you talking about section 832(f) of the Bonneville Act, as contained in the United States Code? That is what I am talking about, and that has to do with fixing rates.

Mr. LUCE. Yes.

Representative HOSMER. Read it, then, and tell me where a loss on an exchange agreement amounts to the cost of producing and transmitting electric energy or amortizing capital investments of the Government.

Mr. LUCE. Well, we have certain costs each year, of operating our transmission system, and of reimbursing the Bureau of Reclamation, Corps of Engineers, for operating the dam.

In addition to that, we have amortization schedules presently set up on a 50-year basis for paying off the capital investment in the dams. We have depreciation schedules on our transmission system for paying that off over whatever the service life of the item of property may be.

Now, our revenues have to match our costs, our operating costs, and our amortization costs, and anything that would affect the revenues adversely would require us to raise the rates to increase the revenues to match those costs.

There is nothing in the Bonneville Act that specifically says that if we ever enter an exchange agreement, then such and such is the case. These acts are written in more general terms.

Representative HOSMER. I think your correct answer, Mr. Luce, is that the act does authorize you to enter into an exchange agreement; so therefore that must be one of your costs of doing business that can be included in your rate.

Mr. LUCE. Thank you.

Representative HOSMER. All right. Then let us get back, then, to what an exchange agreement is. I think the key word is "exchange," and the definition thereof. I see in a legal dictionary, here, that it amounts to the transfer of goods or chattels for other goods or chattels of equal value. Right? Would you say that that is how the word is used here?

Mr. LUCE. That is one definition of it, yes.

Representative HOSMER. What other definitions are there?

Mr. LUCE. I am sure there are others. I do not have a dictionary before me.

Representative HOSMER. Well, you can have this one, if you would like. The purpose of my question—and maybe we can get it without getting too deep into the dictionary—is this: Does not an exchange agreement require you to receive substantially the number of kilowatts that you give? In other words, you exchange an equal number of kilowatts? Or kilowatts of equal value?

Say you get some offpeak and some firm. At least you have to have some equal value, do you not?

Mr. LUCE. Well, we would not enter into an exchange unless we thought it advantageous to us, to the Government. That is true. We have an exchange contract with one of the private utilities where we deliver them 2 kilowatts of summertime dump power for 1 kilowatt of firm power, that they deliver to customers of ours; I think in this case several REA cooperatives.

There are all kinds of exchange arrangements, and it is not always kilowatt for kilowatt.

Representative HOSMER. But where you even it out is that you apply the Bonneville rates to certain things to get the number of kilowatts that you move over to the participants. And so the same type of value determination should be applicable to what you get from the WPPSS. Otherwise, it is not an exchange. It is a giveaway or something else.

Mr. LUCE. Well, I would have to dispute that. It is not any giveaway, Mr. Hosmer.

Representative HOSMER. If you were going to get 200,000 kilowatts, and you were going to give them 800,000 kilowatts, by no stretch of the application of the rates would the value be relatively equal, it would not be an exchange. You would not be authorized under this law to enter into it.

Mr. LUCE. I do not think that the law would prevent us from entering into such an arrangement as that. I think an exchange involves a business decision of whether the exchange is advantageous to the particular party who is making that decision. Each party to the exchange has to decide that question from his own standpoint.

Representative HOSMER. Then it goes not mean what I read you as the definition of exchange.

Mr. LUCE. No, I do not think "exchange" is limited to equal value, if you mean it has to be dollar for dollar. I mean barter arrangements often do not balance up exactly in dollars. Each party to the exchange has to look at the whole transaction and decide whether it is to his own advantage.

Representative WESTLAND. Would the gentleman yield?

Representative HOSMER. Just a moment.

The WPPSS participants are assured that they are going to get their number of kilowatts out of the exchange, are they not? Because you have got the kilowatts, and you are going to perform your contract?

Mr. LUCE. Yes, we intend to perform our contract.

Representative HOSMER. You do not have equal assurance that you are going to get the kilowatts from them. That depends on whether this project works or not, does it not?

Mr. LUCE. I would say we have satisfactory assurance.

Representative HOSMER. There must be some risk; otherwise, it would not have been in this contract shifted from one to the other, as it has been. So there must be a risk there. With this risk, why should not the contract include some provision whereby WPPSS picks up the loss, if the exchange does not in fact turn out to be a fair and equal one?

Mr. LUCE. Well, we had, Mr. Hosmer, to negotiate with the Public Power Supply System what seemed to us a fair agreement. There is give and take in this section and that section of the agreement.

During the early phases of the dual-purpose period, these utility districts will be delivering more power to us than we are to them. They might have objected to that. During the later years, the reverse could be true.

I think you would have to look at the whole agreement—that is the way we felt about it—to determine whether it was fair and reasonable and advantageous to the Bonneville Power Administration, from our standpoint. We think it is.

Representative HOSMER. I just have, Mr. Chairman, two other questions, at the present time.

Have you made a calculation, utilizing your present rates for Bonneville power, of the project finances, with and without Hanford?

Mr. LUCE. Yes. We of course have had to carefully consider that, in terms of what are the alternative costs of new sources of power that are coming onto the system.

Representative HOSMER. You have some kind of an extrapolation of the figures, have you not?

Mr. LUCE. Yes. Much of this we presented last year to this committee in hearings.

Representative HOSMER. How does it work out?

Mr. LUCE. Well, the cost of the Lower Monumental project that is now being constructed—

Representative HOSMER. I am not talking about hypothetical projects.

Senator JACKSON. This is not hypothetical, my friend. They are building it.

Mr. LUCE. It is under construction.

Representative HOSMER. But we are talking about the actual pay-back, now.

Mr. LUCE. What I am pointing out—

Representative HOSMER. Where your books are kept. You lost \$13 million or something like that last year. You can lose some money this year.

Mr. LUCE. Yes. Over the life of the project we have a surplus, too, Mr. Hosmer. Over the life of the Bonneville project, we have quite a substantial surplus.

Representative HOSMER. I would like to know about that surplus or deficit with respect to Hanford in or Hanford out.

Mr. LUCE. I would say that we feel that with the Hanford in, our Hanford position would be better than with Hanford out.

Representative HOSMER. You do not know by what order of magnitude?

Mr. LUCE. Well, the Federal Power Commission, in their analysis of the value of the power from Hanford, as I recall, valued it at

about \$27 a kilowatt-year. We estimate that our costs of the power that we acquire by this exchange will be less than that, depending, of course, on the period of the dual-purpose operation of the project, and so forth. But our best estimate is that it would run substantially below the value that the Federal Power Commission has placed on the steam.

Representative HOSMER. Now, somebody told me, and you correct me if I am wrong, and I do not even know who I heard it from, that at the end of 30 years, without Hanford, you would show some \$40 or \$50 million surplus. With Hanford, you would show about a \$240 million deficit at the present rate, or a \$200 million deficit, or somewhere in that neighborhood.

Mr. LUCE. I have not seen those figures, Mr. Hosmer.

Representative HOSMER. That is a 50-year operational study, I am informed. Did you not make any study of that kind?

Mr. LUCE. I do not recall the study.

Representative HOSMER. You just do not recall any studies of this kind?

Mr. LUCE. I would not say I do not recall any studies of this kind. I think what you are referring to is this: that if we stopped adding new projects, added no more new projects, and simply sold out what we have, and sat still and did nothing else, we would be better off, perhaps, from our selfish Bonneville standpoint than if we add new projects to meet new load in the area, because our average costs from the existing projects include projects that were built in the depression times and are therefore cheaper power.

Representative HOSMER. I understand that. But what I am getting at is, Do we know reasonably whether with this project we are going to lose money and without it we are going to make some money for the Bonneville project over a 50-year period?

Mr. LUCE. It depends on whether or not you assume that the Bonneville project is to be stopped, is to add no more generation. If that is the case, any new project we had now will, in your terminology, cost us money. But of course we will have to raise the rates eventually to take care of these higher cost projects.

Representative HOSMER. With the addition of new projects, then, it is going to be all right. Is that it? Is that what your estimates are?

Mr. LUCE. Yes, that is correct. If you assume, as we do, that we are going to add new projects, as the region's load increases, this is a good project, and will put us money ahead.

Representative HOSMER. How about whether it would be cheaper, with this project or with some alternate projects?

Mr. LUCE. Yes. I was about to give you the alternates that we have here in the immediate future.

The lower Monumental is already under construction, of which the firm power costs \$21 a kilowatt-year. The Little Goose project on the Snake River above lower Monumental, for which construction money has been requested by the Corps of Engineers this year, costs about \$22.50.

Representative HOSMER. How much capacity are they going to put into your system?

Mr. LUCE. As I recall, of additional firm power capacity, about 240,000 kilowatts. These dams that I am mentioning now are all on the lower Snake, and are all of about that same size. The lower

Granite project, which the Corps of Engineers has in advance planning, and which is an authorized project, is going to cost us, for the firm power, something in the neighborhood of \$24.

The Bruce's Eddy project, for which authorization is being sought this year, on the North Fork of the Clearwater River, costs about \$27 per kilowatt-hour.

Representative HOSMER. What about this Hanford project?

Mr. LUCE. As I say, it depends upon the period for which this project runs dual purpose. If it runs dual purpose for as long as 7 years, the costs will be in the neighborhood of \$22.

Chairman HOLIFIELD. And if it runs 10 years?

Mr. LUCE. I do not have it before me for every year, but the longer it runs dual purpose, the lower the cost becomes.

Representative HOSMER. So this \$22 in one of these new projects you mentioned was \$22, was it not?

Mr. LUCE. Yes; the Little Goose project, \$22.50.

Representative HOSMER. And this is going to give you a block of power that will roughly delay some of these other projects for 2 years, so that is all you are saying?

Mr. LUCE. Of course, that is true of any new power project, that it only meets the needs for the period of time its capacity will permit it to.

Representative HOSMER. Without regard to the "iffiness" of how long this may operate as a dual purpose project?

Mr. LUCE. Well, if the project did not operate dual purpose at all, the cost of this power would be a little less than the Bruce's Eddy Dam. Our estimates are that it would cost us about \$26 a kilowatt-year, if it never produced an ounce of plutonium.

Representative HOSMER. I think that is all.

Senator JACKSON. Mr. Chairman, I have a clarifying question.

First, I want to ask this. Maybe Mr. Hennessey could answer this.

Have any of the private utilities asked to buy this waste heat?

Mr. HENNESSEY. No, sir. We have no indication of any other interest in the purchase, and we have in the past 2 years actually solicited indications of interest, and there were none.

Senator JACKSON. So, in other words, you have tried to dispose of heat that would otherwise be wasted for the last 2 years, and the only taker you have had as of now are the present applicants?

Mr. HENNESSEY. This is the only indication of interest; yes, sir.

Senator JACKSON. I wanted to ask this general question. Either one of you may respond, Mr. Hurd or Mr. Luce; Mr. Hurd, primarily.

Suppose there was a provision in connection with an amendment to clarify the authorizing power of the Commission in light of the decision rendered by the GAO, which is merely an opinion, but obviously you have to face up to it on a sale of bonds—suppose there is a provision in the authorizing authority that not less than half of the power output at Hanford would be available to the private utilities upon their request, on a long-term basis. How would you feel about that?

I want to say if you cannot answer it right now, I can understand. But how would you feel about it generally?

Mr. HURD. I think that we have as a matter of policy recognized the project would be benefiting the region by the contribution it will make to the power supply. And in that regard, I think whoever the

participants are is significant only as it makes the plan work and secures the proper credit for the bonds. And for that reason I personally, without any consultation or discussions with my board, would feel that there would be no serious objection to such arrangement.

Senator JACKSON. I realize that of course they would have to apply for it, and if they do not make requests for it, naturally you dispose of it to other customers, but it would seem to me that if the private utilities have objection to this, by contract and by provision in the law we can cover whatever their objection is.

Now, if this project has some form of B.O. that is disturbing the utilities, I think we ought to know about it, and I wish they would come in here. It is obvious that they are opposed to it, and I would like for them to come in and say so, what their objection is.

Chairman HOLIFIELD. Well, as chairman, I would certainly say that if any of the representatives of the private power people in Washington wish to come in and comment on your suggestion or comment on any part of this transaction, I for one would not preclude them from appearing as witnesses. It would be perfectly all right with me.

Senator JACKSON. I think we ought to get all the facts right out on the table, and whatever the objection is, state it. But this, to me, is a project that transcends, Mr. Chairman, the private versus public power fights that occur from time to time.

I think it is important, frankly, from the standpoint of our own national policy, that we take advantage of this great dual-purpose reactor, and produce electric power the whole world can witness. And if the private utilities have amendments to this, or suggestions, I think they should come in and say so. I think it would be very helpful to get all the facts out on the table.

Chairman HOLIFIELD. I think another important point is the national defense involvement here in having on an operating, you might say, standby condition, in the post-dual-purpose eras, whatever that might be—to have this plant there ready to be put within a few days right back to producing plutonium in case world conditions change.

Senator JACKSON. I think there is no question about that, and we had detailed testimony on that last year.

Chairman HOLIFIELD. That it would take at least a year for a single-purpose plutonium producing plant to get back into operation at great cost, where within a classified number of days, which are very few in number, this plant could be shifted from maximum steam to maximum plutonium in the time that it would take actually to interchange the rods—that is all that would be involved.

Senator JACKSON. I think it is quite clear we are not dealing with a single-purpose reactor. We do have a very substantial Government interest involved, the production of weapons material, and this becomes a mixed question, here, that I think can properly be handled in whatever amendment may be necessary to protect the interests of the Government, the national security, and the interest of the users, the distributors of electric power, in the region. And I do not see that any harm will come at all if they come in here and just state out in the open what their position is, rather than making a lot of statements and comments that would indicate that this is a dangerous precedent

and we are going to get into all kinds of trouble if the power is sold from this project.

As I say, I do not want to be unreasonable about it. As far as I am concerned, I made a proposal last year that I thought the private utilities ought to get a fair chunk of this power.

Representative HOSMER. Will the gentleman yield?

I think Mr. Luce and Mr. Hurd explained that because of the pooling arrangement of the whole marketing area, whether or not the private utilities were actually contracting for this power, they would be benefited, according to his testimony, by the existence of this project.

Senator JACKSON. Well, Mr. Hosmer, I would just say in fairness to the utilities, I am willing that there be a provision in an authorizing statute, and by contract, so that they would be covered both ways.

Representative HOSMER. Would you yield further?

Senator JACKSON. Yes.

Representative HOSMER. I think the record, to be complete, with respect to the national defense elements of this project, should contain the fact that inasmuch as this would be adjacent to a plutonium production facility that would be a prime target that might also be destroyed at the commencement of any hostilities, or incident thereto, it has disadvantages as well as advantages.

Senator JACKSON. I would give the Soviets more credit than that. They would not worry about the need to continue to produce plutonium to win a war. I would think the first thing would be to strike back at our means of striking at them, delivery systems. Others better versed than any of us here have decided to remove any aircraft facilities from Hanford, because it no longer has a high priority as a target in the whole concept of targeting. So there is no question about that, any more than the fact that airplane plants or such things in the past have been prime targets. The prime targets are obviously delivery systems. They have moved them out of there. I cannot give you any better evidence than that. That is, the anti-aircraft systems.

Representative HOSMER. So if things break out, you had better rely on the plutonium you have on beginning.

Senator JACKSON. You had better rely on your delivery systems in being, and, of course, your weapons to go with it. You are not going to start producing stuff again. You are going to win it with what you have in being.

Representative HOSMER. That is my point.

Chairman HOLIFIELD. I think I should recognize Senator Hickenlooper although Mr. Van Zandt has been trying to get recognition.

Senator HICKENLOOPER. Go ahead.

Representative VAN ZANDT. Those who advocate this proposal to construct power-generating facilities at Hanford by contractual arrangements between the two Federal agencies, AEC and Bonneville, and the Washington Public Power Supply System, claim that this is an entirely different proposition than last year, and will not cost the taxpayer a cent. Is that your opinion?

Mr. LUCE. Yes.

Representative VAN ZANDT. Now, I would just like to read to you from a letter, from the WPPSS, dated November 28, 1961,² addressed to the AEC and Bonneville, and I quote:

It is the desire of the WPPSS that the installation of electrical power generating facilities at NPR by a non-Federal agency shall accomplish the objectives

² See JCAE print, p. 101.

envisaged by the AEC and BPA in support of the legislation for Federal construction of these facilities.

Mr. LUCE. I think what the letter meant at the time was that if another request was to be made by the administration for Federal authorization, at this session of Congress, the Public Power Supply System did not want to be in the position of competing with that request. The date of the letter was in November, and that decision had not yet been made by the administration.

Is that correct, Mr. Hurd?

Mr. HURD. Yes. I would just like to add this. We had in mind particularly the power benefits to the Pacific Northwest. Now, we are attempting to carry that out as fully as we can under this arrangement, without resorting, of course, to any requests for appropriations or any risk on the part of the taxpayer.

Representative VAN ZANDT. You cannot deny the fact, though, that the part I read very frankly states:

* * * shall accomplish the objectives envisaged in support of the legislation for Federal construction of these facilities.

Mr. HURD. If I were to write that letter today, of course, I would qualify it "to the extent possible." We would go as far as we can in securing the same benefits and recognizing the legislative history and the things that happened last year.

Representative VAN ZANDT. Your position has changed, then?

Mr. HURD. No, I would not say it has changed. I would just change the wording of that to qualify it. I realize we cannot secure perhaps quite as good a deal for the Pacific Northwest as the arrangements we proposed last year.

Chairman HOLIFIELD. Would the gentleman yield?

As a matter of fact, your objective, your main objective, is to secure power for the use of your consumers. Is that not right?

Mr. HURD. Yes, sir.

Chairman HOLIFIELD. And you were for the Federal building of this generating facility as long as that was being discussed, and when the Congress decided otherwise, your main objective still was to get power, and you sought a way to get that, and it involved the supplying of the generating facilities, the cost of it, on the part of non-Federal entities, rather than a Federal entity; and you are still for the objective of getting the power. Is that not right?

Mr. HURD. That is correct.

Chairman HOLIFIELD. And you are using this method. You are now using a method which has been proposed which will give you not as good a deal as you would have had under the other arrangement, and for the reason that you are assuming additional costs, in this way, that would not have been assumed under Federal financing. You are going into private financing and assuming private financing costs, and you are also accepting a load of accelerated costs of equipment, and the delay that is involved has brought up some costs of equipment and other costs which would not have been evident at that time.

Mr. HURD. That is correct, Mr. Holifield.

Chairman HOLIFIELD. And also a new suggestion of design, which as brought up the capital plant investment, to wit, the installation of the sixth loop, which will give you a higher and better grade of

steam. We can assume that, in addition to what was planned last year.

Representative VAN ZANDT. Mr. Chairman, I have another question of Mr. Luce.

Now, would the Federal Government be de facto guarantor of WPPSS revenue bonds?

Mr. LUCE. I would say no to the question. But there is no question that the marketing arrangements represented by this exchange contract would be regarded as very important to any prospective purchaser of these revenue bonds, so that the contract is important in the sale of the revenue bonds. I do not think that makes us a de facto guarantor.

Representative VAN ZANDT. I would just like to read from where the Bonneville Power Administrator admitted the Federal Government would in fact be the guarantor of these bonds, and I am going to quote, now:

Under the terms of the exchange arrangements, Bonneville would take * * * a value equal to the operating expense and amortization, interest, and so on each year until the plant is paid for.

Senator JACKSON. That is all he said.

Mr. LUCE. That is all I said this morning. I did not use "de facto guarantor."

Representative VAN ZANDT. That was in my question. Now, does the WPPSS proposal provide for Federal takeover of an NPR powerplant?

Mr. LUCE. Yes, there is an option permitting the Federal Government to take over the plant for the unamortized portion of the bonds; but that could be exercised only with the authorization of Congress.

Senator HICKENLOOPER. Would you repeat that again, please?

Mr. LUCE. The contract, the exchange contract, between Bonneville and the Public Power Supply System, contains an option in the United States to acquire the generating facilities, which would be installed by the supply system, for a price equal to the unamortized investment in those facilities. Thus, at the time when all the bonds were paid out, which would be approximately 30 years from now, if the Congress decided to do so, it could take this plant over without cost to the Government.

Chairman HOLIFIELD. But this is permissive?

Mr. LUCE. It is permissive.

Chairman HOLIFIELD. And you have testified before that before any such action would be taken, you would come to the Congress for permission to do so?

Mr. LUCE. Bonneville would have no authority to do this, so we would have no authority to exercise this option.

Senator JACKSON. Your contract states you would come to Congress?

Representative VAN ZANDT. Now, Mr. Luce, as I understand it, the BPA may terminate if it determines that "continuation of this agreement could no longer be economically justified." They could terminate, could they not?

Mr. LUCE. Prior to the commencement of commercial operations; yes.

Representative VAN ZANDT. If they terminate, who pays off the \$130 million bonds of WPPSS?

Mr. LUCE. Presumably, if this happened prior to the commencement of commercial operations, that amount of investment would not have been incurred.

What that section is in there for, Mr. Van Zandt, is the possibility that the Government might decide not to complete the NPR; or you might have a disarmament agreement of an international character that would result in a decision not to complete that plant. Now, in that event, the Government would be obligated under this contract to take over what moneys had been spent toward building these generating facilities.

Representative VAN ZANDT. In other words, then, the Congress would get a request to appropriate funds.

Mr. LUCE. That is correct; and this is one of the reasons that we took this contract to the Appropriations Committees and told them we did not intend to enter into it if they objected.

Representative VAN ZANDT. Now, suppose that this project proves economically unjustified. Who is going to pay the bill? Will it be the Government, or the Bonneville Power Authority?

Mr. LUCE. It will be the consumers who buy power from the Bonneville Power Administration. I do not agree that it will prove economically unjustified, but if it did, the consumers that are on the Bonneville system would have to take a rate increase that otherwise would not be necessary.

Representative VAN ZANDT. I am not saying that your answer is wrong. I am not challenging it, but I am just afraid that the Congress would get a request. In other words, the Government would be called upon to bail out BPA and WPPSS. Now, would this be the first BPA steamplant?

Mr. LUCE. It is not a BPA steamplant. If you are asking: Would this be the first time that Bonneville acquired steam-produced power, I think so. As I mentioned earlier, the private utilities had recommended in a brownout situation that we acquire steam-produced power back in 1952 or 1953, but we did not do it.

Representative VAN ZANDT. Now, if we establish a precedent here of BPA going into this field, can we expect that other steamplants will become part of the BPA system?

Mr. LUCE. This steamplant is not part of the BPA system. So the answer to your question is "No." We cannot expect that.

Representative VAN ZANDT. You are buying this steam from the Government?

Mr. LUCE. No, we do not buy the steam from the Government. We exchange Bonneville hydrogenerated power for the output of this steam generation.

Representative VAN ZANDT. That is right. You are very technical about it, and I am trying to get at the substance in my questions.

Have you any experience, that is, the BPA, in the construction of generators operating with this kind of low pressure wet steam?

Mr. LUCE. No, we have not. And for that reason I had the designs and cost estimates for these turbines and generators independently checked by experts who have had a lot of experience.

Representative HOSMER. Apparently the Burns & Roe Co. is named in the contract as being required to do all the work here. Was that at the Government's suggestion?

Mr. LUCE. The Burns & Roe Consulting Engineers have done this work for the AEC, or had done some of this work for AEC, and so they were employed by the Washington Public Power Supply System.

Representative HOSMER. Why was it put in the contract that they had to do the work?

Mr. LUCE. Well, this contract has not yet been signed; and if the Public Power Supply System could not enter into a satisfactory contract with Burns & Roe, and had to turn to some other firm of consulting engineers, another name would be put in there, Mr. Hosmer.

Representative HOSMER. Why does the Government want Burns & Roe in there?

Mr. LUCE. The Government does not particularly want anybody.

Representative HOSMER. Then why was it specified in the contract? WPPSS, if they wanted them, could go ahead and hire them, anyway.

Mr. LUCE. This is not a Government project. We are not going to tell WPPSS, if they employ satisfactory and capable consulting engineers—we are not going to say we like this firm better than the firm you like. If they are both capable, that is up to them.

Senator JACKSON. Could I clarify one thing, not to interrupt, but just to say this: Burns & Roe was hired, I believe, by General Electric several years ago to do the design work out there, and have been in there, including the convertible features. That may throw light on it. But that dates back to I think 1958, 1959, and 1960. Am I correct in that?

I just thought it would be helpful in explaining.

Representative HOSMER. I was just wondering why it was in there, and at whose insistence.

Senator JACKSON. They are a world famous organization. I do not know. They were hired by the Commission, who approved it back in 1959 and 1960.

Representative HOSMER. I have nothing against them.

Mr. HURD. Burns & Roe were assigned the responsibility for the heat dissipation system of the NPR, and all of its ramifications with respect to the studies made on power generation, so they have been engaged for a number of years in intensive engineering studies on this particular project.

The construction schedules that we propose here will require immediate work in preparing plans and specifications and going out for bids. We felt that in view of all the circumstances surrounding this thing, it would be to our best interests to name Burns & Roe as design engineers.

Representative HOSMER. You are the contracting authority. You can contract with Burns & Roe without being required by this agreement to do so. That is what leads me to believe—

Mr. HURD. We think it is so obvious that they are the logical ones to be selected. We have already entered into tentative arrangements with them.

Representative HOSMER. If the Government signs this contract with that name in there, it indicates to me that actually WPPSS is acting as the agent of Bonneville, who is the principal, de facto.

Mr. LUCE. No. The name of Burns & Roe was put in the contract not at Bonneville's suggestion, but that of the Washington Public Power Supply System.

Representative HOSMER. But they are the ones that are going to do the contracting. They do not have to have it in the contract to go out and hire them.

Mr. LUCE. Well, we are interested to this extent, Mr. Hosmer, that we want to be sure that competent engineers do the job.

Representative HOSMER. You are worried about getting your money back out of those kilowatts?

Mr. LUCE. I am worried about the financial results of Bonneville. I am very concerned about them, and we want to make them succeed.

Representative HOSMER. And you are going out on a limb here, or will?

Mr. LUCE. No; we are not going out on a limb. We are being very conservative.

Chairman HOLIFIELD. It seems to me the WPPSS are spending their own money, and as a matter of notification to you indicate they want to use one of the most famous companies in the country to do this kind of work. It would add an additional degree of confidence to the Bonneville people in knowing that the people who have been working in this for years are going to continue and bring it to fruition. And certainly, as you say, it is no requirement of Bonneville; but if the Washington Supply System is spending their own money, they have a right to either designate or not designate who they are going to use. They are not spending Government money.

Senator HICKENLOOPER. Mr. Chairman, I do not quite agree with that philosophy. I have nothing against Burns & Roe, and I have no doubt but what they are a highly competent and capable outfit; but I certainly cannot see the justification for writing in a specific contractor in this contract to which a Government agency is a party. I think if the Washington Public Power group wants to hire Burns & Roe or Joe Doaks' outfit, that is up to them, and their responsibility. But when a Government agency enters into a contract which has a specification of a particular group to do this work, I think we are going a little bit far in preferential treatment of certain outfits, and I do not think it is a wise provision to write into a contract in which the Government is responsible. If the Washington Public Power wants to do this, that is their business, and I would not attempt at this time to quarrel with their discretion or their responsibility. But I think it has no place in this contract to specify a particular outfit to handle this deal.

Representative HOSMER. Will the gentleman yield?

I think it does if WPPSS is in fact an agent of Bonneville.

Senator HICKENLOOPER. Well, I am not sure about that, Craig. It is just a matter of basic principle on this thing. If, as I understand it, the responsibility for this operation is on the Washington Public Power System, then the responsibility is on them to get competent people. And I do not think that the Government agency, such as the Bonneville Power Administration, should join in a contract which specifies that some particular private outfit shall do this. That is up to the Washington Power Co.

Representative HOSMER. That is right, because if the Government is in fact a principal, the laws are applicable as to selection of these engineering contractors, anyway.

Senator JACKSON. Would the gentleman agree—and I might be in complete agreement with him on the naming of the company, that

at least it would be proper to say, or to recite in the contract, we will say, in lieu of the company, that a responsible and qualified firm shall handle this part of it?

Senator HICKENLOOPER. I do not think there is any question but what that would be an essential part of any contract; but the responsibility has to rest where the responsibility is.

If Bonneville is contracting with the Washington Public Power group on purely a purchase contract basis of that kind, I do not think Bonneville has any business putting its name to a contract that specifies that this company or that company or any other private company is going to do the work for the people with whom you are contracting.

If the responsibility is on the people with whom you are contracting to see that a proper and efficient professional job is done, and whoever they hire would be their responsibility, I do not think it has any part in this contract in which Bonneville is a part.

Representative HOSMER. I would agree with Senator Jackson on that, because it would be the utmost prudence of the Government to assure the guarantee it assumes.

Senator HICKENLOOPER. That would be a perfectly good part of the contract that Bonneville would enter, I think, to hold the other contracting party to the use of a responsible standard of professional competence in this operation; but not name a company.

Mr. LUCE. Burns and Roe were not employed at Bonneville's suggestion, but that of the WPPSS.

Chairman HOLIFIELD. Would there be any objection to taking Mr. Burns' and Mr. Roe's names out of the contract, and putting a non-identifying clause such as "a responsible and competent"——

Mr. HURD. None whatsoever. We were simply leaning over backwards to assure there would be competence in this area.

Senator HICKENLOOPER. Just let me be clear and utterly clear. I have no criticism of Burns & Roe. That is not the point. It is a question of the propriety of a Government agency entering into another contract in which a certain, specified designated contractor is frozen into that contract.

I think the responsibility has to rest with the Washington Public Power System if it is a separate operation, and if Bonneville is not a basic party to this contract.

I have some questions I want to ask on that as soon as Mr. Van Zandt is through.

Representative VAN ZANDT. Just one more question.

Mr. Luce, since we had mentioned the attitude of the private utilities in the Northwest, have they taken a position for or against this proposal?

Mr. LUCE. Last year, at the time that the Federal construction of these generating facilities at Hanford was under consideration by the Congress, the private utilities in the Pacific Northwest remained neutral on the question. From conversations that I have had with the president of one of the companies within the last 2 weeks, I know that they have been reexamining their attitude toward the Hanford proposal.

This president told me that if his company were going to publicly oppose the Hanford project, he would first tell me, as a matter of

courtesy, so that I would know and could answer such questions as you have just asked, Mr. Van Zandt. He has not told me.

Representative VAN ZANDT. In other words, then, you do not know the position of the private utilities in the Northwest at this time?

Mr. LUCE. I, personally? No, they have not told me personally that they oppose this project.

Representative VAN ZANDT. That is all. Thank you, Mr. Chairman.

Chairman HOLIFIELD. Senator Hickenlooper?

Senator HICKENLOOPER. These questions may have been covered in my absence. I do not know. But I would like to ask either Mr. Luce or Mr. Hurd about this bond issue.

Who executes these bonds? What is the signatory authority on the bonds?

Mr. HURD. The bonds will be issued in the name of the Washington Public Power Supply System, a municipal corporation of the State of Washington.

Senator HICKENLOOPER. And they will be the sole signers of the bonds?

Mr. HURD. Yes, sir.

Senator HICKENLOOPER. The sole executors. Bonneville Power will not join in the issuance of these bonds in any way, shape, or form?

Mr. HURD. That is correct.

Senator HICKENLOOPER. Will anybody else, except the Washington public service group, WPPSS, be a party to the issuance of these bonds?

Mr. HURD. Only the parties to the contracts that are executed and are referred to in the bond resolution which is passed by the supply system.

Senator HICKENLOOPER. In the contracts which are referred to in these bonds, and the basic documents that enter into the terms of these bonds, in the contracts, which the WPPSS enters into with the purchasers, will there be any terms of any kind in these contracts between WPPSS, the Bonneville Power Authority, or any other purchasers of electricity which in any way places any legal responsibility upon the purchasers as guarantors upon the payment of these bonds?

Mr. HURD. The contracts are for the purpose of obtaining security for the bonds.

Chairman HOLIFIELD. Could I try to be helpful, here, for just a minute?

I am not sure whether this testimony was given before you arrived or not, Senator; but in answer to a question of some member, it was testified that any public body or any private body that wished to participate in this power would sign a contract with the WPPSS, and they would assume their pro rata part of the bond indebtedness in this contract of purchase. Is that right?

Mr. HURD. That is correct.

Senator HICKENLOOPER. Therefore the purchasers of this power would be assuming a direct obligation under certain contingencies for the payment of these bonds. Is that correct?

Mr. HURD. That is correct.

Senator HICKENLOOPER. Then Bonneville would become a guarantor to a certain extent under this bond issue. Is that right?

Mr. HURD. No. Remember, the contract for payment is between WPPSS and the participants.

Senator HICKENLOOPER. The purchasers?

Mr. HURD. Yes, the purchasers.

Senator HICKENLOOPER. Now, what contracts are you talking about? The contract on the bond, or the contract for the purchase of electricity?

Mr. HURD. We are talking about the exchange agreement in which the participants agree to pay WPPSS certain sums of money.

Senator HICKENLOOPER. In return for a certain specified amount of kilowatts?

Mr. HURD. In return for the benefits received by the terms of this exchange agreement.

Senator HICKENLOOPER. When you say "benefits," do you mean kilowatts?

Mr. HURD. That is right; power delivered as a result of their exchange with Bonneville of the output of the project for firm power delivered.

Senator HICKENLOOPER. All right. Let us simplify this a little bit for me, anyway.

WPPSS proposes to build this plant, or this generating facility. Is that correct?

Mr. HURD. That is correct.

Senator HICKENLOOPER. In order get the money to build the facility, WPPSS proposes to issue bonds for sale to the public, or whoever will buy them. Is that correct?

Mr. HURD. Yes, to the participants mentioned in the exchange agreements.

Senator HICKENLOOPER. No. I am talking about the bonds.

Senator JACKSON. Senator Hickenlooper is asking about the floating of the bonds; not the relationship between WPPSS and its customers.

Mr. HURD. These are bonds issued by the Supply System.

Senator HICKENLOOPER. That is the WPPSS. It issues the bonds. It agrees to pay the purchasers of the bonds X amount of dollars, plus interest, periodically, when the bonds come due, to pay them off to the purchaser. Is that correct?

Mr. HURD. Correct.

Senator HICKENLOOPER. Now suppose those bonds go sour, let us say—I am not assuming that they will, necessarily, but it is only the contingency that those bonds become weak, and the holders of the bonds believe it necessary to foreclose or take any other legal action which may be open to them under the terms of the bonds. Whom do they sue? Whom do they proceed against?

Mr. HURD. They would proceed against the Supply System.

Senator HICKENLOOPER. That is the WPPSS?

Mr. HURD. Yes, sir.

Senator HICKENLOOPER. Now, is there anything in these bonds, any legal term or condition in these bonds, that would permit a holder to proceed not only against the WPPSS but also against the Bonneville system or against any other purchasers of power or contractors with the WPPSS for this power, or for the exchange?

Mr. HURD. It is my opinion that we would be the sole one that they would sue.

Chairman HOLIFIELD. I might add two points to your question. Would the Senator yield?

Senator HICKENLOOPER. Yes.

Chairman HOLIFIELD. I think the question, Mr. Hurd, was: Included any purchasers of power from the WPPSS, and my understanding on previous testimony was that there were approximately 16 distributing groups now in the WPPSS. Is that right?

Mr. HURD. That is right.

Chairman HOLIFIELD. And if the WPPSS allocates any of this power, for which they have credit with Bonneville, to a private utility or to another public body, that private utility or that public body assumes its share of the bond indebtedness in their contract with you; and, therefore, as part of Senator Hickenlooper's question, which had in it any other purchasers from WPPSS, as I understand it, if they signed a contract with you for power, my understanding was that their credit was also added to the 16 members as surety for the bonds.

Now, did I understand that right?

Mr. HURD. That is correct. The participants, the signatories to this exchange agreement, would be responsible.

Senator HICKENLOOPER. Well, now, Mr. Chairman, if I may respectfully suggest, if I have the right to examine this witness, I may pursue my questions now to try to develop for my own faulty understanding of this situation the legal situation which either might arise or could arise under this proceeding, and I would appreciate it if the witnesses can give their own answers, rather than have committee members put the answers in their mouths or put the committee interpretation of what they have answered heretofore. I would just like to pursue this now for the record, here.

We will start again.

The bond issue is signed solely and exclusively by WPPSS in its agreement with the purchasers who put up the money and buy the bonds. Is that correct?

Mr. HURD. That is correct.

Senator HICKENLOOPER. Manifestly, a purchaser such as Bonneville, or a privately owned utility, which contracts with WPPSS for the purchase of power, is obligated to pay for that power within the limits of its purchase. Is that not correct?

Mr. HURD. Only the participants are purchasing the output.

Senator HICKENLOOPER. I understand.

Mr. HURD. And to the extent that they agree to make payments by reason of executing this agreement, they are responsible for it.

Senator HICKENLOOPER. Certainly; and that is what I was referring to.

Mr. HURD. Bonneville's responsibility has to do—

Senator HICKENLOOPER. But the people who receive this power from WPPSS outside of your distributing system, such as Bonneville and others—

Mr. HURD. Maybe Mr Luce can explain Bonneville's responsibility and obligations with regard to the bonds.

Senator HICKENLOOPER. Well, we will hope to get around to that in a minute.

Bonneville gets some electricity out of this plant, does it not?

Mr. HURD. They are exchanging power with the participants.

Senator HICKENLOOPER. Let us leave the exchange business out. Electricity is supplied to Bonneville from this plant under the present contemplation. Is that not correct?

Mr. HURD. You cannot leave it out, because this is an exchange agreement.

Senator HICKENLOOPER. And the next step is: Bonneville also exchanges power back into your system. Is that not correct? In an exchange operation?

Mr. HURD. The exchange is an arrangement between the participants and Bonneville.

Senator HICKENLOOPER. That is right. Therefore, there is an obligation between Bonneville and the WPPSS which has some value of some kind. If Bonneville does not perform—suppose Bonneville gets the electricity out of this system and does not exchange it back—Bonneville is obligated either to exchange or pay. Is that not correct?

Mr. HURD. They are obligated to fulfill their part of the agreement, which is that, in recognition of the receipt of the output of the NPR, they agree to deliver to the participants firm power.

Senator HICKENLOOPER. So that the power is fed in from this production plant that is proposed, which you propose to build. The power is fed into Bonneville, and Bonneville feeds back to you. Is that right?

Mr. HURD. It feeds back to the participants.

Senator JACKSON. Why do you not say "customers"?

Mr. HURD. The utilities becoming a party to this exchange agreement. Utilities that become a party to this exchange agreement, we have referred to as participants in this exchange agreement.

Senator HICKENLOOPER. Do you get any power back from Bonneville for distribution through your system?

Mr. HURD. We are an agency that is in the wholesale business, and we have no retail customers or industrial customers. Our customers are the utilities which we have contracted with. We are not a retail agency.

Senator HICKENLOOPER. I understand; but you dispose of electricity, do you not?

Mr. HURD. We propose to, under this exchange agreement.

Senator HICKENLOOPER. What do you do now, just keep books? I mean, how do you operate?

Mr. HURD. We have undertaken one project recently by the sale of bonds, and the entering into agreements with utility purchasers in a manner very similar to what we anticipate doing here. And we were successful in selling those bonds at an attractive rate.

Senator HICKENLOOPER. Do you undertake to supply or insure the supply of electricity to any distributors, wholesalers, or otherwise?

Mr. HURD. Our function is to undertake the construction, operation, and arrangements for power supply to meet the requirements of our members and others. We are a wholesale power agency.

Senator HICKENLOOPER. And you construct facilities for the delivery of that power; is that correct?

Mr. HURD. Yes.

Senator HICKENLOOPER. Do you bill the customers for that power? Or do the customers pay directly to Bonneville or to others?

Mr. HURD. They will pay directly to us.

Senator HICKENLOOPER. Therefore you arrange for the securing of that power. You collect for it. Then you settle with Bonneville. Is that correct?

Mr. HURD. No; the payment is made by the participating utilities directly to us. And in consideration for that payment, they get the benefits that accrue from the delivery of power.

Senator HICKENLOOPER. What do you do with the money that you get?

Mr. HURD. We pay our operating costs and the debt service on the bonds that we have issued to build the project. We make no profit on this whatsoever.

Senator HICKENLOOPER. Do you pay any money to Bonneville?

Mr. HURD. No; we would have no reason to pay Bonneville.

Senator HICKENLOOPER. Who pays for the electricity, and where do they pay it?

Mr. HURD. The contracting utilities.

Senator HICKENLOOPER. And they pay directly to Bonneville?

Mr. HURD. No.

Senator HICKENLOOPER. Well, where does this money go? It goes into your hands, and then how does Bonneville get paid?

Mr. HURD. We have our obligations to retire the bonds, of course, as you mentioned, and we have to pay the operating costs of the power-plant. We have to pay lease payments to AEC. And we will have to pay for this waste heat, this heat that would otherwise be wasted. We will have to pay for that. Those are some of the obligations. And in order to get the funds to do that, we enter into contracts with these utilities.

Senator HICKENLOOPER. Let us start back up again at the start of the road, here.

This distributing company out here distributes electricity to users. Where does it get that electricity?

Mr. HURD. Are you referring to the utilities?

Senator HICKENLOOPER. I am talking to any utility that puts juice in the line and lights electric lights out there in the town. Where do they get it?

Mr. HURD. In Pacific Northwest—the major power supplier has been the Bonneville Power Administration, both for public agencies and the private utilities.

Senator HICKENLOOPER. Excuse me?

Mr. HURD. I say that in the Pacific Northwest, Bonneville has supplied both private and public utilities with power. Private utility companies have entered into arrangements with public utility districts to construct plants for power supply. There has been quite a variety of arrangements in the Northwest for utilities to obtain the energy to supply their customers.

Senator HICKENLOOPER. You are a public power company organized under the laws of the State of Washington, are you not?

Mr. HURD. Yes, sir.

Senator HICKENLOOPER. Now, you said a minute ago that power is delivered to customers, some customers, at least, through your agency, for which you collect money. Now, I am trying to find out who gets paid, and how, for the power as it comes off the bus bar. I mean do you pay the people who produce the electricity, whether it is

Bonneville or somebody else? Do you pay them with the money that you get from the customers that you supply, or the wholesalers that you supply? Or do they pay directly to the people that run the producing plant?

Mr. HURD. We are the ones that would be running the producing plant.

Senator HICKENLOOPER. I am not talking about what you would be doing; but what do you do now? How do you operate now?

Mr. HURD. Our organization was formed in 1957 for the purpose of meeting the needs, or undertaking projects which would meet the needs, power requirements, of our members. We have investigated a number of different sources of power. Recently we have undertaken the construction of a small hydroelectric plant, which will be the first plant that this organization has ever undertaken. In those arrangements we have contracted the output of that project to certain of our members, and they will pay us for the power an amount which represents the cost of producing it. We will pay off the bonds, and thereby they get the power and the bond people get their money.

Senator HICKENLOOPER. I understand that. Let us leave that out.

Do you, as the Washington Public Power Supply System, whatever that means—do you now, leaving out this plant that you are talking about—do you now acquire electricity or the responsibility for electricity from any source?

Mr. HURD. No, sir. Since we are not a retail utility and do not have—

Senator HICKENLOOPER. Are you a wholesale utility?

Mr. HURD. Yes, sir.

Senator HICKENLOOPER. Then you are a sale utility. You sell it. Is that correct?

Mr. HURD. That is correct.

Senator HICKENLOOPER. You sell power?

Mr. HURD. For projects which we have undertaken and are responsible for.

Senator HICKENLOOPER. That is right. Where do you get that power? You have got to get it from some place, if you sell it.

Mr. HURD. We build projects. And that is what we are trying to do here, and are having quite a bit of difficulty.

Senator HICKENLOOPER. Well, have you been selling any power?

Mr. HURD. Not recently.

Chairman HOLIFIELD. At the risk of incurring the Senator's displeasure, may I ask him to yield?

Senator HICKENLOOPER. Well, somebody better do something, here. I belong to the organization that has certain initials which I will not repeat now.

Chairman HOLIFIELD. I may be confused now, but let me try to explain my understanding of the situation.

The Washington Public Power Supply System is a municipal organization under the laws of Washington, and it has as its members at this time 16 public utility distributing systems. Is that right?

Mr. HURD. That is correct.

Chairman HOLIFIELD. I am going to check on this as I go.

Now, you are building a plant at this time, which we are going to leave out of the discussion from now on. You are now building a

plant at this time, under which you will distribute this power, without profit, to the 16 members that comprise your incorporation.

Mr. HURD. And other utilities.

Chairman HOLIFIELD. And others; anyone that wants to buy it.

Representative HOSMER. Will the gentleman yield?

Chairman HOLIFIELD. No; not at this time. Let me proceed, if I can. I will try to keep my lines straight for a minute, here.

You are now planning or proposing to bond yourself to build the generating facilities at the Hanford reactor to take the steam from the Hanford reactor and pay the AEC for that steam, at a schedule which has already been introduced into the record.

Mr. HURD. That is correct.

Chairman HOLIFIELD. Now, at that point, you have kilowatts coming out of your generating facility, and you transfer that to the Bonneville system. Is that right? The electricity from your generating facilities goes into the Bonneville grid?

Mr. HURD. Physically, yes.
about.

CHAIRMAN HOLIFIELD. Physically. That is what I am talking about.

The Bonneville grid does not pay you in dollars for it, but you have a credit for kilowatts as it goes in.

Mr. HURD. That is correct.

Chairman HOLIFIELD. Now, the Bonneville grid then makes that available to your supply system, to the members of your supply system. Is that right?

Mr. HURD. And other buyers.

Chairman HOLIFIELD. And other buyers. Any private group or any municipal group that wants to come in and buy firm power comes into Bonneville, and if it does come out of your credit allowance with Bonneville, they pay you for it.

Mr. HURD. The utilities pay us.

Chairman HOLIFIELD. The utilities pay you for this power which has been transferred in the exchange to your system group or to any other buyers in your group. You take that money and use it to amortize this \$131 million plant and pay your operation and maintenance cost of operating that plant. Is that right?

Mr. HURD. Yes, sir.

Chairman HOLIFIELD. Now, I think I am at the end of my rope.

Senator DWORSHAK. Will you yield for a question?

Chairman HOLIFIELD. Yes; but first I want to ask Senator Hickenlooper if he follows this the way I have asked the questions: that there is no dollar exchange between WPPSS and Bonneville, but there is a credit for kilowatts.

Senator HICKENLOOPER. Did you ever go hunting in the spring in the quail country and see an old mother quail with a whole flock of about 8 or 10 of them in the stubble field when they just all go in every direction, and then try to follow all of them? I am just in that situation.

Chairman HOLIFIELD. Then I will yield.

Senator DWORSHAK. I can follow you very well, except that I have not heard whether this power group will pay Bonneville Power for transmitting the power over the BPA lines.

Will it?

Chairman HOLIFIELD. Mr. Luce, I am not going to try to answer that. I think I know, but you go ahead.

Mr. LUCE. To whom is the question addressed? I would be glad to try to answer it.

Senator DWORSHAK. To you, I presume. You are representing BPA?

Mr. LUCE. Yes, sir.

Senator HICKENLOOPER. Well, now, up to that point, I followed you. With Bonneville you have an exchange operation, but I am again confused as to the money that you get from eventual users from Bonneville that is paid directly to you.

As I understand it, you propose that all of the power generated or to be generated in this proposed plant be turned over to Bonneville, and put into their grid, or put at the disposal of Bonneville.

Mr. HURD. The utilities purchasing it exchange it to Bonneville for firm power.

Senator HICKENLOOPER. Whom do you deal with? Do you deal with the utilities, or do you deal with Bonneville?

Mr. HURD. We deal with both Bonneville and the utilities. Each have their own responsibilities with regard to this contract.

Senator HICKENLOOPER. Well, you have wire that run out from this plant. Where do those wires go? Do they go to Bonneville?

Mr. HURD. To the Bonneville grid system.

Senator HICKENLOOPER. So the electricity produced out of this plant goes to the Bonneville grid system?

Mr. HURD. Yes.

Senator HICKENLOOPER. And then Bonneville undertakes the distribution of this, or the sale of it to public bodies or to private utilities or whatever they distribute to. Is that correct?

I am just trying to get this confused mess straightened out. At least to me it is a confused mess.

Mr. HURD. These are all customers of Bonneville, that we intend to enter into—

Senator HICKENLOOPER. Do you propose under this contract to wheel any of that electricity from this plant to the direct users or wholesalers other than Bonneville, except as it goes indirectly through Bonneville?

Mr. HURD. That is the point, I think, Mr. Hickenlooper. It goes through Bonneville and arrives at the utilities in a form that they can use it. It has to be firm power. It has to be delivered at their points of delivery.

Senator HICKENLOOPER. After you deliver it to Bonneville, or when it goes to Bonneville, then do you have any authority over the people to whom Bonneville distributes this power?

Mr. HURD. Only to the extent that they are obligated to make payments for the power received.

Senator HICKENLOOPER. Who is obligated to make payments?

Mr. HURD. The utilities.

Senator HICKENLOOPER. The utilities. Now, whom do the utilities pay the money to? Do they pay it to Bonneville, or pay it to you?

Mr. HURD. As I have said before, they pay it to us.

Senator HICKENLOOPER. Bonneville receives no money from the utilities?

Mr. HURD. That is correct.

Senator HICKENLOOPER. The utilities pay it to you?

Mr. HURD. That is correct.

Senator HICKENLOOPER. Well, then, Bonneville is also obligated to feed electricity back in to you, if you need it. Is that correct? Into your WPPSS?

Mr. HURD. We have no need for that power, because we have no customers other than those we are contracting with in these utility arrangements.

Senator HICKENLOOPER. If you have no need for power, what do you want to build this plant for?

Mr. HURD. In the interest of the people that we are contracting with.

Senator HICKENLOOPER. You mean they need power, and you do not?

Mr. HURD. No more than Bonneville needs power. Bonneville does not itself need power. It is only serving the utilities which are customers of Bonneville.

I do not know what Bonneville itself as an organization would do with the output of all of these dams; but the utilities they serve have a real need for such power.

Senator HICKENLOOPER. Well, when we say you do not need power, and Bonneville does not need power, I can understand from the technical standpoint what you are saying. Bonneville does not manufacture anything. They do not turn the switches on and turn wheels. They supply power to others that need it. When you say you do not need power, or Bonneville does not need power, do you mean you have sufficient power in the Pacific Northwest to answer all the demands?

Mr. HURD. No. I defer to Mr. Luce.

Chairman HOLIFIELD. Could I interrupt for one moment?

Senator, the second bell just rang in the House for a rollcall. It is 12:30. I am going to ask that we come back at 2 o'clock.

The committee is adjourned until 2 o'clock.

(Whereupon, at 12:30 p.m., the committee was recessed, to reconvene at 2 p.m., the same day.)

AFTER RECESS

(The committee reconvened at 2 p.m., Hon. Chet Holifield, chairman of the committee, presiding.)

Chairman HOLIFIELD. The committee will be in order.

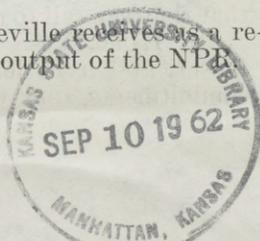
We will resume the hearings on the contractual arrangements.

Mr. Hosmer?

Representative HOSMER. I would like to follow on with a couple of questions on the testimony just previous to the end of the morning's session.

Mr. Hurd, would you tell us for the record how the number of kilowatts that Bonneville receives is determined, and how the number of kilowatts that Bonneville gives or exchanges to the participants is calculated?

Mr. HURD. The amount of power that Bonneville receives as a result of these exchange arrangements will be the output of the NPR.



Representative HOSMER. Whatever it may be?

Mr. HURD. Whatever it may be.

Representative HOSMER. That could be up to 800,000 kilowatts, if everything works well. Is that right?

Mr. HURD. That is right.

Representative HOSMER. If everything does not work well, it could be down to 1 kilowatt?

Mr. HURD. It could be any amount that you want to speculate on.

Our estimates have been made on the results of studies made by the General Electric Co. and the Atomic Energy Commission and the Federal Power Commission and others; it would be expected that during the dual purpose time the plant would operate at its rated capacity for as I recall about 85 percent of the time.

Representative HOSMER. Now tell us how the amount of electricity that goes to the participants from Bonneville is determined.

Mr. HURD. The amount that the participating utilities will receive from Bonneville as a result of this exchange arrangement will be an amount of firm power which, when computed at Bonneville's rate schedules, now or in the future, will equal the utilities' allocations of the project's annual costs.

Representative HOSMER. What are those annual costs that each of the utilities will have to bear?

Mr. HURD. Collectively, they will aggregate the total debt service requirements and operation and maintenance costs of the NPR power facilities. The individual utilities' amount will be that amount which they have agreed to, expressed as a percent of the project annual cost.

Representative WESTLAND. Will the gentleman yield there?

Representative HOSMER. Let me ask one further question.

In the operation and maintenance charges, are the rentals for land included?

Mr. HURD. Yes, sir.

Representative HOSMER. \$1,000 for the first year, plus \$10 for the other years?

Mr. HURD. Yes, sir.

Representative HOSMER. In the operation and maintenance charges, are the payments for B.t.u.'s included, according to the schedule?

Mr. HURD. Yes; the amount agreed upon in the schedule for the payment of waste heat.

Representative HOSMER. So all of the cost of whatsoever nature that the participating companies incur is paid by the receipt of electricity which is converted into cash by the sale of the electricity?

Mr. HURD. That is right.

Representative HOSMER. The utilities participating, then, assume no risk with respect to either operation and maintenance or the debt service, do they?

Mr. HURD. They are obligated to pay a percentage of it, whatever it may be.

Representative HOSMER. I understand that, but they are sure of being able to pay it, because they are going to receive the electricity that they can sell to make the payments.

Mr. HURD. Yes. As long as they have a need and can use this power, and it is delivered by Bonneville in accordance with their commitments, they will be able to justify their costs.

Representative HOSMER. Now, if it is not delivered by Bonneville, they have a cause of action in damages against Bonneville for breach of contract?

Mr. HURD. I would defer that to Mr. Luce.

Mr. LUCE. I would say the answer is "Yes."

Representative HOSMER. So as a matter of fact the utilities are not operating this as their own enterprise, but in effect operating as an agent of the Bonneville Power Administration. Is that right?

Mr. HURD. Well, from a legal standpoint, I would hesitate to attempt an answer, but from the practical business standpoint, WPPSS will be owning and operating this project. The participating utilities will be purchasing its output from WPPSS, and they will be exchanging it to Bonneville for firm power.

Representative HOSMER. Are you a lawyer?

Mr. HURD. No, sir.

Representative HOSMER. Well, Mr. Luce is a lawyer, and here, again, he has one of those wonderful opportunities to answer a question just the way he wants to.

Let us get your thoughts down on the record, Mr. Luce.

Mr. LUCE. Would you repeat the question?

Representative HOSMER. It is the same question I asked you this morning: Is not this, in fact, an agency arrangement whereby the Bonneville Power Administration is the principal?

Mr. LUCE. No; I would say neither in fact nor in law is this an agency arrangement.

Representative HOSMER. Let us find out what happens with respect to the amount of the bonds.

We have heard the figure \$130 million. Is that an estimate?

Mr. LUCE. Yes. Of course, any prediction of what it will cost to build an electric generating station is an estimate until the plant is actually constructed.

Representative HOSMER. And if that cost escalates, the amount of electricity you have to furnish these people escalates proportionately, does it not?

Mr. LUCE. Yes, that is correct; and vice versa, if the cost estimates happen to be too high, the amount of electricity we would have to deliver would be reduced.

Representative HOSMER. And therefore Bonneville is actually assuming the risks of escalation.

Mr. LUCE. We would be affected by the costs that went into the construction of the plant, because our obligation to deliver power to the participating utilities is measured by their share of the cost. And, of course, if the costs increase, our obligation to deliver power would increase, and vice versa.

Representative HOSMER. Now, an escalation in cost would affect the participating utilities to the extent that they would market a little more of the power they received under this exchange and have a little larger check from the proceeds.

Mr. LUCE. That would depend. Of course, if the escalation were great enough—which we do not think it would be—but if it were great enough, and the participating utility's share of expenses exceeded their requirements from Bonneville, then the participating utility has to pick up the difference, so there is some risk on these participating utilities.

Representative HOSMER. Will you explain that again?

Mr. LUCE. Well, all that the Bonneville Power Administration agrees to do is to make available by way of exchange a certain amount of power to the 16 or more participating utilities.

Representative HOSMER. So if the debt repayment goes up they get more electricity to pay for it.

Mr. LUCE. Yes. And my point was this: that if a participating utility has contracted to take such a large a fraction of the output of this Hanford plant, that the amount of electricity that we delivered to it would exceed its requirements, then the participating utility has to pick up the difference. Bonneville has no dollar obligation in this.

Representative HOSMER. However, you have assured us that there is a need and requirement for all of this firm power in the Pacific Northwest, so that there is no practical likelihood of anything of that nature occurring.

Mr. LUCE. That is correct. We are just talking about hypothetical possibilities, and there is this hypothetical possibility. It is the same thing as saying that it is a hypothetical possibility that the plant will not produce 800,000 kilowatts.

Representative HOSMER. If the WPPSS is not in fact your agent, Mr. Luce, why do you in the contract insist upon approval of all the designs, plans, specifications, contracts relating to construction of the project?

Mr. LUCE. Well, the amount of power that we deliver to the participating utilities is indirectly related to the cost of the project, and we want to make sure that those costs are kept in line. I do not think that establishes any agency arrangement.

Representative HOSMER. How about the other privileges that you have in the contract, for inspection and checking of the operations, and all those things? You do not think that has anything to do with it?

Mr. LUCE. Oh, not at all. As a matter of fact, this type of provision is very common in the contracts between the private utilities and the public utility districts who have built dams in the Northwest. If you look at those contracts, you will find almost exactly the same type of opportunity on the part of the participating utilities to take a look at these costs as they are incurred.

Representative HOSMER. Now, if you were not in fact paying off the bonds and these other charges through the delivery of electricity, you would not be interested in these, would you?

Mr. LUCE. Well, I do not think in fact we are paying off any bonds. In fact, we are delivering power that is measured by the bond service requirements. But there is an indirect relationship, and if we are going to protect the Government's interest in this matter, we naturally have to take a look at these costs as they are incurred.

But that does not mean that we are the principal and that the utility association is an agent.

Representative HOSMER. I compliment you on your ability to make these fine, very fine, distinctions, Mr. Luce.

Mr. LUCE. The law of agency is a rather technical branch of the law.

Representative HOSMER. Now, with regard to the two contracts, each is dependent upon the other, is it not?

Mr. LUCE. Well, yes. If there is not an exchange in the contract between Bonneville and the participating utilities, the contract be-

tween the WPPSS and the Atomic Energy Commission would not go forward, and vice versa. Right. It is a package proposition.

Representative HOSMER. That is right. It could have been drafted as one document, as a matter of fact?

Mr. LUCE. Yes; or it could have been drafted as 20 or 25 documents.

Representative HOSMER. We have to look to the two documents to find the whole arrangement?

Mr. LUCE. You have to look to all the documents, and they are principally two in number, yes; and there are some leases that are attached that are in addition.

Representative HOSMER. Now, do you argue with the Comptroller's decision about the AEC?

Mr. LUCE. Yes. I do not think it is right. The Comptroller General was not expressing a view on the authority of the Bonneville Power Administration to enter into these contracts. He was expressing a view with respect to the authority of the Atomic Energy Commission, and I do not purport to be an expert on the AEC authorizing legislation. But as you have asked the question, I have read the opinion, and I would disagree.

Representative HOSMER. You would argue with it?

Mr. LUCE. Yes. I think it took a committee report of this committee, and it took a sentence that was intended to refer to Federal construction of these generating facilities, and applied it to non-Federal construction. I think it just took the sentence out of context.

Representative HOSMER. Well, as irrational as you feel that may be, I wonder if you considered this in terms of the 1927 Supreme Court case, *Pan American Petroleum and Transportation Corporation v. the United States*.

Are you familiar with that case?

Mr. LUCE. No, not by name.

Representative HOSMER. Well, maybe if I recited some of the facts, you will be.

In that instance the Navy was desirous of building some oil storage tanks in the Hawaiian Island, and the authorization was denied by Congress, so the Navy got the Department of the Interior to go into a deal with the oil companies to build the tanks in return for giving them some oil leases at a place called Teapot Dome.

Now, are you familiar with the case?

Mr. LUCE. I have not read the decision, if that is what you mean. I have heard of the *Teapot Dome* case.

Representative HOSMER. It amounted to a subterfuge and avoidance of the intent of Congress after it refused to authorize.

Is this not roughly the same situation?

Mr. LUCE. Well, there is a different statute and a different legislative history, I assume. I have not read the decision, but it is a different subject.

Representative HOSMER. Well, there are some principles in that case that say that the executive branch of the Government should be sensitive to the intent of Congress when it fails and refuses to authorize.

Chairman HOLIFIELD. Could the Chair ask the member to withhold again the questions on the GAO until we get the GAO before this committee? This agency has nothing to do with the GAO decision, and it was rendered to the Atomic Energy Commission, and neither

one of these people have anything to do with that particular decision, and their opinion on it is irrelevant.

They have not signed a contract. Mr. Luce has repeatedly said that before he signs a contract he is going before the Congress and the Appropriations Committee, and therefore I would ask my friend if he would not reserve, in order that we get along on the responsibilities of these two entities here under contractual arrangements, and confine his questions to those matters which are pertinent.

Representative HOSMER. I think the chairman is right, and as a matter of confession and avoidance, however, let me say that this committee has no jurisdiction over BPA, either; but they are up here.

Chairman HOLIFIELD. We understand.

Representative HOSMER. The Interior Committee has jurisdiction over that, so maybe I was wrongly interpreting a little bit our area of inquiry.

Chairman HOLIFIELD. The gentleman has very well made the point that this is a package deal, and it does involve the Atomic Energy Commission, and the disposal of waste steam, and I do not think it is out of line at all to have all contractual parties to the package deal come before us for the edification of the committee.

Representative HOSMER. Very well.

That is all I have for the moment, because I cannot find my other paper.

Representative BATES. Mr. Chairman?

Chairman HOLIFIELD. Mr. Bates.

Representative BATES. What happens in the event that the estimated costs are much higher than what you anticipate in construction? Who makes up that difference?

Mr. LUCE. Well, what happens is this, that the participating utilities who have contracted with the Supply System for fractional shares or percentage shares of the output of the plant would have to pay a corresponding amount more each year in order to amortize the higher amount of the bonds. In turn, the participating utilities would be entitled to the delivery of more power in value from the Bonneville Power Administration than otherwise would be the case.

Representative BATES. You say in value?

Mr. LUCE. Yes.

Representative BATES. You will have to produce more and give them more power?

Mr. LUCE. Power, not dollars, yes. It is a power exchange contract.

Representative BATES. So what if you do not have that power? What if you have a dry year, we will say?

Mr. LUCE. Of course, we have streamflow records on the Columbia River as to what a critical water year is, and we know what our plants should produce, if there should be a repetition of that situation, and we have the power.

But to go on with the implication of the question that you raise, if we fail for any reason to live up to our contract and deliver this amount of power, we would be subject to suit.

Representative BATES. You would be?

Mr. LUCE. Yes. But not by the WPPSS and not by the bondholders, but by these individual utilities.

Representative BATES. My main concern here is the Federal Government picking up the tab for this. That is my prime concern, or any liability that the Government might assume in this regard.

Now, what would happen in the event that there is a nuclear incident at the NPR? What then would be the position with respect to the liability of the Government at Bonneville?

Mr. LUCE. You are assuming that the Hanford generation had been added, and the plan is in operation, and then there is a nuclear incident?

Representative BATES. Yes.

Mr. LUCE. The contract provides, that is, this exchange contract has a clause in it, whereby the Public Power Supply System agrees to insure the plant, and presumably such an incident would be covered by insurance, and the bonds would be retired from the proceeds of the insurance.

Now, if it should happen that the insurance did not cover it, then the Bonneville Administration, under these exchange contracts, would have to deliver, continue to deliver, that amount of power that would be necessary to amortize the bonds as they became due.

Representative BATES. If you are going to have a power shortage out there, without adding this particular facility, how are you going to make good on that? How are you going to provide power, if you do not have it?

Mr. LUCE. Well, of course, we cannot provide power if we do not have it.

Representative BATES. I am talking about if you have a dry year, and something goes wrong with this plant. Then what are you going to do?

Mr. LUCE. Well, presumably in that situation we would have to do one of two things. We would either have to import power, if we had heavy enough interconnections with other regions, or we would have a brownout.

The same thing is true if anybody built a generating station and it failed. The whole area would suffer in that circumstance. And you look elsewhere for power, if you can get it, and if you cannot get it, you would have to dim the lights.

Representative BATES. You will have to provide the power, then anyway. That will be your contractual responsibility, to supply this power?

Mr. LUCE. Yes, in accordance with the terms of the exchange contract, and up to the amounts limited by that.

Representative BATES. Who would pay for that power? Would Bonneville pay for that power? Or would this WPPSS? Who would pay for it in that event?

Mr. LUCE. Well, ultimately who would pay for it are the consumers of the Bonneville Power Administration.

Representative BATES. Well, you get all these additional costs, and particularly if the insurance does not cover it. Somebody must recoup that. Who is going to recoup those particular costs in that event?

Mr. HENNESSY. May I add to the response?

Mr. LUCE. Let me answer this question first.

The Bonneville Power Administration is required by law to charge rates sufficient to pay our operating expense and amortize the invest-

ment of these hydroprojects. And if our revenues are insufficient to do that, because of deliveries that we have to make under the conditions that you have assumed, Mr. Bates, then we would simply have to raise our rates.

Representative BATES. Do I understand, then, if you had to face that decision of whether you would have more of a deficit, or the question of raising your rates, you would raise your rates? In other words, you could go more in the hole like you have the past four years?

Mr. LUCE. Yes; of course we could raise our rates. We are not going to go indefinitely in the hole. But we are still in a surplus position over the life of the agency. Four years ago we were \$70 or \$80 million—

Representative BATES. I know. We had a wonderful situation for a few years because of the war and the farm situation.

Mr. LUCE. For 20 years; quite a few years.

Representative BATES. But then we got back to more normal times, and new things developed. And as a result over the long pull things were not in a very good economic position, so you might be all right today, but we are talking about a 30-year period.

Representative WESTLAND. Will the gentleman yield?

This is not a question of being able to sell the power. You have got a greater demand for power than you have available.

Mr. LUCE. Of firm power; yes, sir.

Representative WESTLAND. That is right. Of firm power today than you have available. The problem has been in the higher cost of building new projects.

Representative BATES. But my point is: If something goes wrong in this particular thing, here, and you have a responsibility, rather than going further in the hole, you will raise rates?

Mr. LUCE. Yes. We would be obligated by law to do so.

The Federal Power Commission reviews our rates every 5 years to be sure they are applicable.

Representative BATES. Can you on your own initiative at any time raise rates, or does Federal Power have to approve?

Mr. LUCE. No, because under the Bonneville Act we are limited to a review every 5 years, Mr. Bates. The next review is December 1964.

Chairman HOLIFIELD. If the gentleman will yield to me, I think Mr. Luce has answered the question. The ultimate liability in the case of a failure on the part of the NPR and the WPPSS to deliver steam and kilowatts to you, as Mr. Bates has described—the ultimate result of that would be a raising of rates on such electricity as the Bonneville system has to sell over its whole grid uniformly.

Mr. LUCE. Correct.

Chairman HOLIFIELD. Therefore the liability would be spread to the ultimate users of electricity that the Bonneville grid serves. There would be no likelihood under the present law of you coming to Congress for a specific appropriation to in effect assume the liability of the bonds?

Mr. LUCE. No; there would not be.

Chairman HOLIFIELD. In other words, we can rest assured that you are stating for the record that in the event of this situation, which everyone says is unlikely, and which your estimators have said is un-

likely, there would be no direct Federal liability or indirect Federal liability; that the rate raise would compensate any additional expenses which might occur. Is that correct?

Mr. LUCE. That is correct, with this one possible exception: that if an act of the Government itself, if the President or the Senate through an international arms control should require the shutting down of this plant, which we do not think would happen, but if that should happen, I believe we would be morally entitled to recompense as a part of the expense of the disarmament, because there would be a lot of savings connected with the disarmament.

Representative BATES. Is that a part of the contract?

Mr. LUCE. Yes.

Well, only if this happens before the plant goes into commercial operation, Mr. Bates.

Representative BATES. That is one of the contingencies?

Mr. LUCE. Yes.

Representative BATES. That it would be uneconomical to go any further. That is all before the completion of the construction, as I understand it.

Mr. LUCE. Before the commencement of commercial operations.

Representative BATES. If we run into other problems whereby the cost of this would be considerably higher than what you could anticipate, you would also terminate at that point. Is that correct? Do you not say that on page 9 of your statement, as I recall it, that you can terminate for economical reasons?

Mr. LUCE. Yes. Of course, those determinations would be made at the time that the bids were received on the sale of the bonds, or at the time that the bids were received on the construction of the plant. In other words, we would not be heavily committed.

Representative BATES. Will you have a firm contract on this, or will it be a cost plus a fixed fee?

Mr. LUCE. Of course, we do not build the plant.

Representative BATES. Your answer would not mean anything if it is going to be cost plus a fixed fee.

Mr. HURD. It will be on a competitive-bid basis.

Representative BATES. It will be on a competitive bid and not subject to any further negotiation. That is it.

So you are telling us, then, that under no conditions, excepting the disarmament one, as far as you know, is there any shape or form of the Government taking over any of the liability for this operation. Is that correct?

Mr. LUCE. That is correct.

Representative BATES. Or through the accumulation of deficits in Bonneville; you are saying that, also?

Mr. LUCE. I am saying that also; yes. The output of this plant, when compared to the production of the plants that are now either in production on the Bonneville system or under construction, would be only about 10 percent of it. So that we feel that we could handle this in the very unlikely contingency that some catastrophe occurred, such as your questions have suggested.

Representative HOSMER. Will the gentleman yield?

How would you handle this contingency: where something happens and you do not get as much power out of the project as you contracted to supply in exchange?

Mr. LUCE. Well, the contingency would be reflected in the increase in rates, the contingency to which your question refers.

Representative HOSMER. You would have to get some power from someplace to meet your commitments, would you not?

Mr. LUCE. If it was available.

Representative HOSMER. And if it were not available, you would have to respond in damages to the participants, would you not?

Mr. LUCE. That is correct.

Representative HOSMER. And as a consequence, your answer to Mr. Bates was not quite correct when you said that you could never be called upon to actually pay back under the bonds. You are called upon indirectly.

Mr. LUCE. Well, the bondholders could not sue us. I think that was the point that was at issue.

Representative HOSMER. I would rather imagine the bondholders could acquire whatever rights the WPPSS has.

Mr. LUCE. The WPPSS has no right to sue us. It has a right only to sue the participating utilities—not us.

Representative HOSMER. Whatever rights, then, the participating utilities have against you.

Mr. LUCE. Yes. That is correct. And, of course, if a judgment were entered against us, assuming this unlikely chain of events, that would be an obligation that would have to be reflected in our rate schedule.

Representative HOSMER. Have you made any calculations as to what might happen, say, if they only got 600,000 kilowatts or 400,000 or 200,000, or some various amounts less? You do not really know what the magnitude of the risk is that is involved here?

Mr. LUCE. No; we have not taken various hypothetical malfunctions of the plant into consideration, because we do not think that we are going to have them. But I have suggested that the total of this power does not weigh terribly importantly in our total power resource. It is something in the neighborhood of 10 percent.

Representative HOSMER. But this morning you told me in connection with the exchange agreement that you must look at it and determine if it is prudent.

Mr. LUCE. Yes.

Representative HOSMER. And how can you really make that determination unless you know what would happen in the event that you obtain less kilowatts from the project than you are anticipating?

Mr. LUCE. The real question to determine, Mr. Hosmer, is whether there is a probability that this plant will produce less than its rated capability. That is the point at which we have made a careful examination.

Representative HOSMER. Well, otherwise, this very complicated set of papers would never have been written up, and the WPPSS estimate would have gone in and done the deal directly.

Mr. LUCE. I do not think so.

Representative HOSMER. And had you market the power for them.

Mr. LUCE. The contracts with the private utilities do not obligate the utility districts to deliver a certain amount of power. They simply obligate them to deliver a fractional share of whatever the plant produces.

Representative HOSMER. I understand that. But they could not directly go in and get themselves \$130 million loaned to them without this guarantee that is in essence the exchange agreement.

Mr. LUCE. I do not agree it is a guarantee. But certainly the exchange contract assures the WPPSS participants of a market for this power so that they can float these bonds. It is a form of security; but I just object to the word "guarantee."

Representative HOSMER. But if they were trying to sell the electricity they generated out of the project, and the project did not generate a sufficient amount of electricity to repay the bonds, then the bondholders would be in trouble. Now, the bondholders are not in trouble under this arrangement that we have before us here because you are going to furnish that power anyway.

Mr. LUCE. To the participating utilities; yes.

Representative HOSMER. You are taking the risk.

Mr. LUCE. Yes; we are taking some of the risk, a rather large part of it; but we are not taking it all.

Representative HOSMER. Well, you told me that there was nothing that these utility companies would be liable for, a little while ago. They get all the amortization, all the O. & M. Everything, they get back.

Mr. LUCE. I pointed out that if a participating utility——

Representative HOSMER. Did not sell the power; but again you said there is no practical possibility of that happening.

Mr. LUCE. Well, we are talking about practical possibilities, Mr. Hosmer. I do not think there is a practical possibility that this plant is not going to operate as all the experts say it will.

Representative HOSMER. Well, you are depending upon Mr. Gene Starr, I believe—Dr. Starr, who is a doctor of engineering, and some of these other people.

Mr. LUCE. And the General Electric Co., and Burns & Roe.

Representative HOSMER. But some people still do not think that this thing is guaranteed to work.

Mr. LUCE. Some people are hard to convince.

Representative HOSMER. The bankers who put up the money, particularly.

Representative PRICE. They will not put up the money if they do not think it is going to work.

Representative HOSMER. They do not care whether it works or not, because they are going to get the money out of the power Bonneville supplies.

Mr. LUCE. I do not think as the Bonneville Administrator I would want to participate in a plan that does not work. I am personally interested in this work.

Representative BATES. Mr. Luce, in respect to taking this property over, after the 30-year period, is that the only time when you contemplate taking this over?

Mr. LUCE. Yes. As a matter of fact, I do not even contemplate it then. But I think the Government is entitled to that option.

Representative BATES. You would, then, ask the Congress to take it over then?

Mr. LUCE. Bonneville has no authority to do this. And I would not contemplate that in any event the Bonneville Power Administra-

tion would do this. I think that it would be the Atomic Energy Commission, if the option were exercised, that ought to have the title to this plant.

Representative BATES. How is this written into this agreement?

Mr. LUCE. Well—

Representative BATES. That the Government can exercise the authority, or the AEC?

Mr. LUCE. No. We just said Government, because 30 years from now, neither agency—

Representative BATES. Now, is that contingent upon the amortization being completed, or could you do it prior to that time?

Mr. LUCE. With the consent of Congress, it could be done at any time.

Representative BATES. But you do not contemplate asking the Congress for that authority, certainly prior to that time?

Mr. LUCE. I do not.

Representative BATES. And you and I do not have to worry about that 30 years from now.

Mr. LUCE. I do not think we do.

Representative WESTLAND. It is the same sort of proposition as the FPC granting a franchise to a private utility, a 50-year franchise, to build a dam and operate the generating facilities, and at the end of the 50 years that franchise expires. The Federal Government or the FPC can recapture if they want to, or they can extend the franchise. It is the same proposition, except this is 30 years.

Representative BATES. I understand that.

Representative WESTLAND. I am glad you do.

Representative BATES. All I am trying to do is find out what your intentions are.

But you do not contemplate asking the Government to take this over prior to the expiration of that 30-year period.

Mr. LUCE. You are correct.

Representative BATES. At what percent are you going to operate this plant, at what percent of capacity?

Mr. LUCE. Well, during the dual-purpose period, when you have byproduct steam, the percent that you would operate this plant would probably be full production, because you would operate it much like a hydro plant. You do not have any fuel costs during that period. And that is estimated to be 85 percent of the time.

During the single-purpose period, the extent to which you would operate the plant would depend on the availability on your system of secondary or dump power that could be used for fuel displacement.

Now, we have assumed that we would not—I think we have assumed we would use about \$1 million worth of secondary a year during this single-purpose period, beginning in 1972. If we had more secondary available at the time, we could use more of it.

Representative BATES. I think you have a compelling argument when you say we have something that is being wasted, and we ought to put it to use, particularly when it is not going to cost the Government anything.

On the other side, you do have your hydroelectric, and you are going to have surpluses of that, too, which you will not be putting to use during certain periods.

Is that not correct?

Mr. LUCE. Yes. This secondary power—we have surpluses, like any large hydro system, and will have for a number of years to come, and we could use it in connection with this Hanford plant during the power-only phase.

Representative BATES. I understand that. But during a certain period, and we are talking about so much waste over the period of a year, whether it would be a constant waste, as in this situation, or the intermittent waste that you will have with your hydroelectric—

Chairman HOLIFIELD. Will the gentleman yield on that?

I hark back to your testimony that in the place of 800,000, this might make available—970, was it?

Mr. LUCE. During the single-purpose period; yes. This would make available when added to our system about 975,000 kilowatts of firm power.

Chairman HOLIFIELD. That amount over the two 400,000 generators would be—

How would that occur? I cannot understand the difference between the 800,000 and the 975,000. Would that come as a result of firming up what is now dump power, dump water?

Mr. LUCE. It occurs in this manner. This is not a problem of secondary or dump energy. This is a problem of excess peaking capacity that any large hydro system has to have in order to get the most energy out of the water.

Now, we know that our load patterns are such that our average demand for power is only about 73 percent of what our coincidental peak demand in January will be.

Now, this means that if we have assured energy—

Senator JACKSON. Would you just for the record define “peaking power” and your “peak power”?

Mr. LUCE. All right. Peak power is the amount of power that your system can produce when all your generators are operating full blast, or full turbine, or whatever. And as I say, in our system, as in any large hydro system, we have quite a lot of excess peaking capacity that we carry because it is economic to do it. We can get more energy out of the river with this peaking capacity.

But by taking the load factor that we have, where we know that over the year our average demands for energy will only be 73 percent of our peak demand—we can sell the amount of this peak demand, but we only have to have 73 percent of the energy to meet that peak demand, provided we have got the peaking capacity in January to meet that load.

Now, in a way, this is playing the law of averages. Every utility does it. It is called the principle of diversity. And through the principle of diversity, and the excess peaking capacity that we have, we could, as I say, actually sell as firm power during the dual-purpose period 905,000 kilowatts, and during the single-purpose period, when you get somewhat higher steam pressures at this plant and can operate the Hanford generators at a somewhat higher level—we get about 975,000 kilowatts.

This enables us to in effect firm up that peaking capacity that otherwise we cannot.

Chairman HOLIFIELD. Now, let me ask you a further question on that.

This occurs as a result of your having this energy from the steam available for utilization to increase your peaking capacity. Is that right?

Mr. LUCE. It increases our energy capacity, Mr. Holifield. And with this amount of energy that we get out of the Hanford plant, and our excess peaking capacity, we can in effect oversell the amount that we get out of Hanford, because we know on the law of averages—

Chairman HOLIFIELD. That you can deliver.

Mr. LUCE. That we can deliver. That is right. And every utility does it.

Chairman HOLIFIELD. Therefore, if I use two figures now, 905,000 and 975,000, the 905,000, as I understand it, is 105,000-kilowatt capacity which becomes available for you to sell as firm power, which you cannot sell without this steam power. Is that right?

Mr. LUCE. That is right.

Chairman HOLIFIELD. So one of the benefits of this arrangement would be that this would enable you to sell 105,000-kilowatt capacity annually on firm-power basis, would it not?

Mr. LUCE. During the dual purpose period.

Chairman HOLIFIELD. During the dual-purpose period. That is what I mean.

And 175,000 during the single-purpose period?

Mr. LUCE. Yes.

Chairman HOLIFIELD. Now, this has no relation at all to the income of the WPPSS from their capacity; this additional amount that you are selling is of benefit to the Bonneville system and not to the WPPSS?

Mr. LUCE. That is correct. Of course, they are important customers of ours.

Chairman HOLIFIELD. Yes, I understand. They are important customers. And they would share in access to that power, I suppose, with others. But the thing that I was trying to establish in my own mind was that, as I understand it, all activity on your part, as far as this exchange of power is concerned—this does not put upon you additional expenses as a result of the receipt of this power from WPPSS, does it?

Mr. LUCE. No, it does not put additional expenses on it. It does obligate us to deliver.

Chairman HOLIFIELD. If there are any expenses involved, WPPSS assumes that?

Mr. LUCE. That is right.

Chairman HOLIFIELD. So that while you might be a third party in this three-way deal, it could be truthfully said that the AEC will realize such benefits as it gets from the schedule of steam payments. The Bonneville entity would receive, as you might say, as one of its byproduct benefits, this additional power to allow it to make firm contracts on from 105,000 to 175,000 kilowatts a year, which they cannot without it. Is that right?

Mr. LUCE. That is right.

Chairman HOLIFIELD. And the WPPSS is satisfied to put in \$131 million in this for the power allocation which will be given to its members, and they believe that this will be sufficient to pay off the bonds. So it looks to me, as I analyze this thing, that you have got

three areas of benefit in this arrangement, to the three entities that are involved. All benefit.

Is that your understanding of the package contracts? Have I overstated it or understated it?

Mr. LUCE. No, I think that is a fair summary. And that is why all of us are interested in this thing.

Of course, each party has to look at it from its own standpoint.

Chairman HOLIFIELD. And furthermore, if a liability occurs, that liability goes back to the multiple users in the Bonneville grid in the forms of increased rates?

Mr. LUCE. Yes.

Senator JACKSON. I think Senator Dworshak was asking for the floor.

Chairman HOLIFIELD. Senator Dworshak.

Senator DWORSHAK. I asked you a question this noon, Mr. Luce, and we recessed. I thought you were about ready to answer. Will you do it now?

Mr. LUCE. Yes. The question you asked was whether we make any charge for transmitting the power we obtain by this exchange.

Senator DWORSHAK. Assuming that BPA takes the power at the generating plant and delivers it to the users under contract with WPPSS: Does WPPSS have any transmission lines of its own?

Mr. LUCE. Yes, it does, Senator.

Senator DWORSHAK. Where does it take the power?

Mr. LUCE. It takes the power at the generator and delivers it to our Vantage substation, which is over near where Highway 10 crosses the Columbia River.

Chairman HOLIFIELD. How many miles away, please, for the record?

Mr. LUCE. I think 20 or 30 miles away, something like that.

Senator DWORSHAK. Are there transmission lines there now?

Mr. LUCE. No.

Senator DWORSHAK. Who is going to build it?

Mr. LUCE. The Public Power Supply System.

Senator DWORSHAK. And your responsibility for transmission begins at Vantage Point?

Mr. LUCE. It begins at what we call our Vantage substation, which is near Vantage Ferry, Wash.; yes.

Now, in our economic analysis of this project, of course, we have had to take into account the cost or value of the transmission of this power from Vantage to our various load centers. Vantage happens to be right near, you might say, the production center of our system, which makes it a good place to take the power. And we have taken that into account.

Senator DWORSHAK. You transmit it from Vantage to the consumer centers of WPPSS?

Mr. LUCE. And any other participating utilities.

Senator DWORSHAK. And how many miles will that be?

Mr. LUCE. Well, our average transmission distance on the system—the only figure I could give—is about 150 miles.

Senator DWORSHAK. And the BPA will not make any charge for that transmission?

Mr. LUCE. No, because it is not a wheeling contract. It is an exchange contract. But in our economic analysis of it, we had, of course,

to take into account the fact that this uses up capacity on the line, and we have done so, and therefore we have taken it into the financial appraisal of the proposition.

Senator DWORSHAK. Does BPA get any power above requirements of the WPPSS?

Mr. LUCE. Yes; during the dual purpose period we get a substantial quantity of power over and above what we deliver to them.

Senator DWORSHAK. And do you pay them for that? Or is that part of the agreement?

Mr. LUCE. No, that is ours. That is ours. We hope the dual purpose period runs a long time.

Senator DWORSHAK. Well, now, I did not hear your statement this morning, your outline of testimony. You had no prepared statement, but you had an outline, and I have a copy of that.

Near the bottom of the page, you said: "Advantages of proposed contract to taxpayer: Opportunity to sell otherwise waste steam." And then, "Little or no risk."

Now, I listened to most of the testimony this morning, except the opening half hour, and I was a little confused, as apparently other members of the committee were, as to the extent of the liabilities of BPA.

Now, you feel that there is very little, if any, risk at all being assumed by BPA under this proposal?

Mr. LUCE. No, I do not say that. I say that these are advantages to the taxpayer. That is what I was talking about in this part of my outline. And as pointed out in answers to Mr. Bates, the risks, as far as this exchange contract are concerned, that fall on Bonneville do not fall on the general taxpayer. If it turns out that this exchange contract is not advantageous to Bonneville, then that has to be reflected in higher rates to our customers. But not to the general taxpayer. That is the point I was making.

Senator DWORSHAK. A year ago I favored and voted for the proposal for Federal construction of the power facilities. That was rejected by Congress.

Now you are coming in with this counterproposal, and I should like to have you very briefly tell us the main differences between the original proposal and the current one, so far as the Federal Government is concerned, and particularly BPA.

Mr. LUCE. Well, I would say the principal differences are, first, that the constructing agency for the generating facilities will not be a Federal agency, but will be a local utility.

The second principal difference is that the cost of building the plant, estimated at \$95 million, and this year at \$105 million, will be paid by this local utility, and not by the General Treasury.

I think those are the main differences.

Chairman HOLIFIELD. And the Government will not be operating the plant after it is built, under this arrangement, where it would have been operating, it would have been in the generating business, before; and today it is not in the generating business.

Mr. LUCE. One of the objections last year would be that the AEC would be put into the business of commercial power production, and this arrangement this year would not put the AEC into that posture.

Senator DWORSHAK. Under the dual-operation plan there is some joint responsibility of BPA for the generation of power, is there not?

Mr. LUCE. No, we have no responsibility for the generation of power. We have a responsibility to deliver power to the participants in accordance with this exchange contract, but we have no connection with financing or operating these generating facilities.

Senator DWORSHAK. I have here a copy of the statement made by Commissioner Robert T. Wilson yesterday, in testifying before the committee. On page 3, I quote his comment as follows:

During periods when the Commission would not be operating the NPR for its own program, the reactor would be leased to the Supply System, subject to appropriate licensing requirements, in order to permit continued electric power production.

Can you elaborate on that, or interpret that? Although it was, of course, the statement of the Commissioner.

Mr. LUCE. Mr. Hennessy, the General Counsel of AEC, is here. I would prefer that he answer that, if he may.

Senator DWORSHAK. All right.

Mr. HENNESSY. Senator, under the proposed contract between AEC and the Washington Public Power Supply System, if the Commission ceased operating the new production reactor for the production of plutonium, we would agree to lease the NPR to the Washington Public Power Supply System.

Senator DWORSHAK. That is for single-purpose operation?

Mr. HENNESSY. For single-purpose operation. In order for them to operate that plant, under the Atomic Energy Act, they would be required to come to AEC and apply for a license. They would have to comply with all the requirements for a license application and the health and safety regulations of the Commission.

That was the intent of that statement, that in all respects they would be operating the plant as a licensee of the Commission.

Senator DWORSHAK. Should that development eventuate, would it materially affect the planning which you are now making for the joint operation under the dual-purpose system?

Mr. HENNESSY. This would happen only after the dual-purpose period had expired, Senator.

Senator DWORSHAK. Well, would that development affect the desirability of this program that is currently being proposed?

Mr. HENNESSY. No, sir. It was pointed out yesterday that there would be further advantages to AEC, in that under this kind of a single-purpose operation, this production reactor would be maintained in hot standby at the expense of the Washington Public Power Supply System, and would be more readily available for plutonium production in case the Commission ever desired to renew the production of plutonium.

Senator DWORSHAK. There is no potential liability that might develop, then, upon AEC?

Mr. HENNESSY. No, sir, there is no commitment by AEC in any respect.

Senator DWORSHAK. Now, after the 30-year period, when the bonds would be repaid, who will get the power, the proceeds from the generation of power, at NPR?

Mr. HENNESSY. Under the proposed AEC contract, AEC would continue to receive revenue from the Washington Power Supply System if the dual-purpose power continued for that period.

Senator DWORSHAK. It would require 30 years to repay the bonds?

Mr. HURD. Yes, we anticipate 30-year bonds.

Senator DWORSHAK. What will the status of the sale of power after that time? Would WPPSS get all of the proceeds, or would AEC, or BPA get some?

Mr. HURD. Bonneville would have the option to continue this exchange arrangement. The costs, of course, would drop way down, because you would have no debt service then, and therefore it would be more attractive to Bonneville and it would be more attractive to the Supply System. The Government itself would have an opportunity, of course, to take the project over.

Senator DWORSHAK. Is that provided for in this?

Mr. HURD. Yes, sir.

Senator DWORSHAK. One more question, Mr. Luce.

I have not had a chance to study the proposed exchange agreement,³ which has 28 pages, but on page 25, I find this proviso:

Provided, however, That in the event the Supply System and/or the participant becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the Administrator, they may request the United States to enter into such litigation to protect the interest of the United States.

Can you tell us what the significance of that is?

Mr. LUCE. Well, this is standard language that we have in every power contract, in every other contract that we execute.

The laws of the United States with regard to nondiscrimination require that we put this type of clause in the contract, in every contract, even in our supply contracts.

Senator DWORSHAK. Does this proviso imply in any way that if WPPSS encounters some unforeseen problems and difficulties, then it would be necessary for AEC or BPA to step into the picture and assume commitments or obligations which are not now provided for?

Mr. LUCE. Not at all. What it means is that if we would direct the Supply System to take such-and-such a step with regard to a complaint against discriminatory proceedings based on race, religion, or whatever, and got the Supply System into trouble, a strike or something, or some kind of trouble like that, the Supply System could ask us to get into the litigation.

Now, we have this provision in all of our contracts. Mr. Weinberg tells me there is a President's Executive order. It is boilerplate language that goes in every contract.

Senator DWORSHAK. It merely opens the door so that the Government can safeguard its own interests?

Mr. LUCE. Well, it is kind of like this: That if the Government gets a party dealing with the Government into legal difficulties because of this nondiscriminatory clause, the Government can be asked to come to the rescue.

Mr. WEINBERG. That is right.

Senator DWORSHAK. I think that is all at this time, Mr. Chairman.

Chairman HOLIFIELD. Senator Hickenlooper, you were questioning when the meeting adjourned. Do you care to resume your questioning?

³ See JCAE print, p. 41.

Senator HICKENLOOPER. Well, yes.

I am sorry I was not here yesterday. I might have been a little clearer about this situation.

I can only say, Mr. Chairman, that this is a fantastically confused situation, and to come in here on a hearing yesterday with practically no notice or very little, and expect us to pass on a complication of this kind that involves certain phases of Government responsibility, potentially which involves an innovation in the operation of this district out there, is something that I think needs at least a reasonable time for examination and for rather thorough understanding.

I frankly do not understand it, and it has become more complicated as the testimony has been going on, and I do not think the explanations that have been given are clear or clear cut.

I do not cast any aspersions on the witnesses. I do not say that they are attempting to confuse this issue. But it is a confusing issue. I probably do not catch on to things as quickly as others maybe, but certainly I have not caught on to this, and it seems to me that it can well at this point be interpreted as a bailing-out process to justify an ill-advised action which we took a year or so ago when Congress decided to make this into a convertible plant using low-pressure steam, which I think is high-cost operation, and we may be using Bonneville and some of these other things to bail this operation out and attempting in some way to justify it. I do not know.

That may be entirely erroneous, but I would want to satisfy myself on that, certainly.

Chairman HOLIFIELD. Will the Senator yield while the chair explains the situation which caused the recalling of the hearings so abruptly.

I believe you were absent when I explained it at the beginning of the meeting.

Senator HICKENLOOPER. Yes, I was not here. It was not your responsibility, but mine for being here.

Chairman HOLIFIELD. Here was the situation that the chair was faced with:

The authorization bill had been reported; it had been scheduled for hearings as soon as the leadership of the House could get to it. I was in the dark until this morning as to the exact time.

Last week, being the Fourth of July, I prevailed upon them, at the request of many of the Members who were going to be in their districts making speeches, not to schedule it during the week of the Fourth. They agreed to that. Then they told me that if the foreign aid bill was passed in the House and if the farm bill got a rule, they would schedule the farm bill for Thursday of this week. That is today.

The farm bill did not get the rule, and they had told me that they would be likely to schedule this bill on Thursday. I told them that I would prefer not having it scheduled on Thursday. Nevertheless, they needed business over in the House, and they told me that the action of the House could not depend upon another postponement.

So on Friday, at about 5 o'clock, the General Accounting Office, in response to letters from Mr. Tabor and Mr. Jensen⁴ and some others and also in response to a letter from Dr. Seaborg⁵ after his conferences with Mr. Tabor, also directed a letter to the General Accounting Office. This was a week or 10 days ago.

⁴ See JCAE print, p. 67.
⁵ See JCAE print, p. 55.

I called up the General Accounting Office two or three times asking them to expedite the decision, and the decision was brought about as a result of the letter of Mr. Tabor who questioned the authority of the Commission to proceed with this contractual arrangement.

On Friday, at about 5 o'clock—and I was out of town as were many other Members at that time—the letter was sent up to the staff here, and also to, I understand, Congressmen Tabor, Jensen, et al.

The General Accounting Office ruled, in effect, that the Atomic Energy Commission did not have the authority to go ahead and make these contracts.

Then I was faced with the problem of bringing this matter before the committee, and, although it was short notice, I was working against the time of Thursday's consideration and I felt that we should have hearings on these contracts in view of the fact that it was no longer an administrative action on the part of the AEC and these other agencies, but it had become a question fraught with some doubt as to their authority, and the only way that it could be solved would be by an authorization item or a contest with the General Accounting Office.

Well, I did not have the time to go into a contest with an opinion which, incidentally, the legal counsel of the AEC and of our own committee did not look upon with favor; and, as a nonlegal man, I might add my own thoughts to it and state that I think the decision was not a meritorious decision.

Nevertheless, accepting the facts of the case, that we did not have time to explore the General Accounting Office decision as to its merits, we felt that we would follow the advice of the General Accounting Office and put the matter before this committee to see if this committee wanted to authorize an amendment which would, in effect, authorize the signing of this contract.

I do not offer this as an excuse for my actions, but as an explanation of the situation.

I came back, along with many others, Sunday night and found this out myself, and on Monday I tried to explore the problem that was involved, and felt that under the circumstances I was justified in sending out a notice to the members that we would begin on our hearings Tuesday morning.

Now that does explain the matter. Otherwise this matter would remain in suspension.

Now it can be decided, if an amendment is offered, to authorize the signing of these contracts by the AEC, or this contract by the AEC, to sell this waste steam for whatever return we can get for it.

I felt it was in the public interest as there was an estimate of anywhere from \$3 million to \$125 million recovery here for the Treasury from a salvage and waste byproduct element, and that I was justified in bringing it before the committee for its consideration and for such action as the committee might see fit to take.

If the committee, after hearing the explanations, wishes to vote down the offering of an amendment, then of course, while I cannot answer for the individual members as to what amendments they may offer on the floor—and they will have to exercise their own rights on that—certainly the committee then would be in a position to vote down the offering of a committee amendment to the authorization bill as introduced.

That, in brief, explains the reason for the hearings and what I considered to be justification for calling our group together to consider this matter.

Representative HOSMER. Can the Chair tell us what the nature of this amendment might be?

Chairman HOLIFIELD. Well, if the amendment has to be drawn, it would be in the nature of an authorization item which would overcome the adverse opinion of the General Accounting Office.

Representative HOSMER. It would strike the phrase from the NPR authorization act upon which the GAO hung its opinion?

Chairman HOLIFIELD. Oh, no.

Representative PRICE. They did not hang their opinion on any language in an act.

Chairman HOLIFIELD. The action of the Congress last year, the Chair maintains, was on the expenditure of \$95 million worth of Federal funds and the construction and operating of a generating facility at Hanford.

The proposition before the committee today is completely separate although it does involve building a generating plant.

But it does not involve using Federal dollars. It does not involve construction. It does not involve operation.

Senator HICKENLOOPER. It involves, however, the disposal of federally owned property.

Chairman HOLIFIELD. Well, it certainly does, and that is provided for in section 44 and section 161(g). Section 44 is the main one.

Nothing in this Act shall be construed to authorize the Commission to engage in the sale or distribution of energy for commercial use except such energy as may be used by the Commission incident to the operation of research and development facilities of the Commission or of production facilities of the Commission.

And I point out respectfully that in the case of the Government-owned West Milton reactor, steam has been disposed of to the Mohawk Power Co., and in the Santa Suzanna, another Government-owned reactor in southern California. The steam was disposed of to Southern California Edison Co., another private property, under the authority of this act.

Senator HICKENLOOPER. I thought both the experimental reactors and the byproduct—

Chairman HOLIFIELD. They are research and development. But I call your attention to the language of the act which says—

incident to the operation of the research and development facilities of the Commission or of production facilities of the Commission.

And there is clear statutory authority. This is why I quarrel with the General Accounting Office's opinion, because they never even referred to statutory language contained there, and in section 161(g) which allows for the leasing which the Senator from Iowa mentioned, and that is as follows—

Senator HICKENLOOPER. Well, Mr. Chairman, I want to say and make clear that I was raising no criticism about the calling of these hearings. My question is about the precipitous disposition of this matter, if we propose to dispose of it precipitously.

It is my feeling that to have a hearing yesterday and one today on a matter that is complicated and very confused is definitely an innovation.

I am not prepared to argue the righteousness of the General Accounting Office's opinion or that of the General Counsel of the Commission.

Opinions have been wrong; opinions have been right, and so on. But I read the opinion very hurriedly yesterday afternoon. It came to my office yesterday morning while I was in another committee meeting. I did not get to see it until late yesterday afternoon. I read it along with some other things. I have had no time to go through it again. And I do not know that I would undertake to pontificate on its sanctity or not even if I did read it again. But we do have this conflict, and I think we are safe in saying that Counsel for the Atomic Energy Commission is dedicated Counsel, and Counsel for the General Accounting Office is dedicated Counsel. They have high degrees of intelligence and devotion. Either or both of them can be wrong. Nevertheless, there is that conflict.

Chairman HOLIFIELD. The Chair is not contesting the General Accounting Office's opinion. The Chair is proceeding in his legislative duties as though the General Accounting Officer's opinion is a correct opinion although he is not admitting it. But I am proceeding in a manner which would, in effect, follow the recommendation or at least the implied meaning of the General Accounting Office which is as follows, that these contracts should not be proceeded with unless endorsed by the Congress.

In holding the hearings and bringing it to the committee and to the floor of the House and the Senate, the Congress will have a chance to work its will.

Senator HICKENLOOPER. As I say, I am not really injecting that into the issue at the moment because of the respect I have for the sincere opinions of counsel from all of these agencies. But my objection, if you can call it that at the moment, was my resistance against acting immediately on this matter.

I see no particular rush to act even at this session of Congress on it. And I think we ought to know what we are doing. I swear we do not know what we are doing.

Chairman HOLIFIELD. Another point of urgency is that if this is desirable, the construction of the reactor is at the point where the sixth loop can be put into the reactor at this point. If we wait a year, then the reactor, of course can be finished without it.

Now the putting of the sixth loop in the reactor at an estimated cost of around \$20 million or \$25 million is one of the desirable features of the purchasers of this steam, and they are willing to pay for it and sign over all right and title to it to the AEC.

Senator HICKENLOOPER. Who pays for the five loops that are put in there?

Chairman HOLIFIELD. That is paid for by the Government.

Senator HICKENLOOPER. Will the power district pay for the five loops that are already in?

Chairman HOLIFIELD. That is part of the plutonium, the necessity for the plutonium production as I understand it.

Is that right, Mr. Bauser?

That was planned anyway, was it not, for the plutonium production?

Mr. BAUSER. Yes, it was.

Senator HICKENLOOPER. So these others would have to be in there whether there was any convertible feature in this or not. Is that right?

Chairman HOLIFIELD. The way the reactor is designed, it has been testified that it would be impossible to change the convertibility feature even if we wanted to at this stage.

Senator HICKENLOOPER. Oh. I think that is true.

Chairman HOLIFIELD. And the design calls for that. And the extra loop, which was not contemplated last year, has been advocated by the designers as increasing the value of this steam both in pressure and in dryness as I understand it, and has made it more desirable for the WPPSS, desirable enough that they are willing to put up \$25 million and deed it over to the Government.

Then there has been testimony, which we cannot go into degree on, that it will produce a certain percentage of capability of plutonium by having this additional loop.

Senator HICKENLOOPER. I have no doubt that they will produce that kind of evidence to support this particular operation. But I am just wondering if the power district is willing to pay for all of the installation in this reactor that was not necessary, strictly necessary for the production of plutonium but is in there as a convenience and a contributing convenience and necessity for the production or the utility of this steam which would include, in my judgment, much more than the so-called sixth loop.

It seems to me that if we realistically approach the costs of this thing, and unless we expect to go on Government subsidy for this enterprise and so on, if they want to build these generating facilities and buy this steam, it ought to be on a realistic cost basis, and we could well consider that whoever is behind this contract—and that is a little difficult to fathom out here—whoever are the basic, responsible parties here or the ultimate responsible parties, we might consider whether or not they should not pay the full cost of this installation; not only the sixth loop but the other installations that have gone in there to make this possible and which would not necessarily be needed for the production of plutonium.

Chairman HOLIFIELD. Well, it is impossible to take those factors out of the reactor at this stage. The convertibility part is going to be included in the reactor, and the expenditure is authorized by the Congress, and the design and so forth that was accepted is going to be there whether we sell this steam for a dollar or for a million dollars.

Senator HICKENLOOPER. I understand that. That is a part of the impetus for this particular thing at this particular time.

Chairman HOLIFIELD. That is an action that Congress took.

Senator HICKENLOOPER. Congress took it.

Chairman HOLIFIELD. And the Senator might look at it this way: If there is income from this waste steam of the \$31 million which the Government, it is estimated, will receive—and the schedule calls for the AEC to receive it for this steam in the first 10 years of dual operation—that \$31 million would probably offset all or a major part of the complete convertibility features, including the part which the Congress placed into the reactor originally.

This is our one chance to recover and, you might say, pay off this provision which Congress made in previous years.

Senator HICKENLOOPER. Well, that may be a factor, but I think it is exactly the next step which we predicted a year or so ago when there were a number of us who opposed the convertibility feature in this reactor. We said at that time that even though the generating facilities were not put in or completed at that time, it was only a question of time until this would be used as the leverage to put the Government into the power business out there, into the commercial, competitive power business.

I think this is just the next step, right down the line there. I think it is a sequel to it although the Congress defeated last year the construction of these generating facilities.

It comes in under the guise of so-called saving of waste steam, which is a very plausible argument.

But I do not consider it waste steam any more than I consider it waste steam out of the Hanford reactor or any of these other reactors that produce steam. That steam is wasted, too. It is all of a pattern.

To me, the pattern—although the details are very unclear—is clear.

Senator JACKSON. Mr. Chairman, to go back a moment, I start from the premise that the testimony that we had received back in 1957 and 1958 was to the effect that on new reactors the Commission felt that they all should be made convertible.

Admiral Strauss, then Chairman of the Atomic Energy Commission said that was the position. And the other Commissioners took the same position, on the ground that this afforded an opportunity to at least amortize in part of the reactor itself, assuming that the reactors operated long enough.

Now I just say that because that is my recollection of the testimony that we received.

Now, of course, if one takes the position—and we all can take our own—that there is no justification for making these reactors convertible, that is something else. But I merely wanted to restate what I understood the testimony to be at the time we authorized the reactor to be convertible, namely, that all new and future reactors should be made convertible.

I want to say that my interest in this project is not whether it is for the private or the public utilities. I have made proposals. I made one this morning in which I suggested that there be a limitation on any amendment of not less than half of the power available from this project be sold to private utilities on a long-term contract.

This, in effect, would be an elimination of the so-called preference clause both in the Bonneville Act and in section 44 of the Atomic Energy Act.

It seems to me, Mr. Chairman, that what we have before us is a convertible reactor that will be ready before long, a reactor that will make available surplus steam. I would just like to see in the national interest that we take advantage of this opportunity.

I do not care whether it is by privately owned utilities or publicly owned bodies, non-Federal. We have gone through the Federal.

There has been the argument that Congress, at least the House though not the Senate, decided against it. But here we are. We have got a reactor. We have got this available steam. I would like to see the private utilities come in here and discuss this. I would be happy to have them.

I think it would be good to kick this thing around and find out what the best proposal would be. We certainly have the opportunity here now to remove any argument about a federally operated generating system at the atomic energy facility at Hanford.

I do think that there are important factors here from the national security point of view that have been gone into in detail, the possibility of this reactor being on a more effective standby basis as Commissioner Wilson testified yesterday.

In addition, I think there is an important prestige factor, and that is the fact that we would be operating the world's largest nuclear powerplant. It would be a meaningful application on a peaceful basis of nuclear power.

So it does seem that we have an opportunity here to help pay off this project, which we would not get anything out of otherwise.

Mr. Wilson's testimony on page 4—and I repeat it, as follows; I think it is quite pertinent—reads:

Particular attention should be given to the payments for steam energy which the Commission would receive under the proposed contract. If the period of both plutonium and power production, what we call the dual-purpose period, continues for 7 years, the Commission would receive payments totaling \$3 million. Should the dual-purpose period continue for 10 years, the Commission would receive payments totaling \$31 million, and, with a dual-purpose period of 24 years, the Commission would receive a total of \$125 million.

All of which they would have no chance of getting save and except for this agreement.

All I want to say is: If the private utilities want to come in with a proposal on this, I would be happy to listen to it and to see what could be worked out. My interest is in the utilization of this waste steam, and I think people that are interested in this from varying points of view ought to come before the committee and discuss it.

Now the other thing that I want to mention is this: the GAO opinion is a fact of life. We do not have to agree with it; we do not have to disagree with it. The point is that in the sale of bonds, the GAO opinion, right or wrong, places a cloud over the sale of the bonds. Therefore, it is a *fait accompli* as far as any practical consideration is concerned respecting an agreement and the reaching of an agreement on this contract. We could argue the GAO opinion from now until next Christmas and it would not change the situation one iota.

Chairman HOLIFIELD. That is right.

Senator JACKSON. Assuming that GAO maintains their position. If they withdraw their opinion and say that the Commission does have the power, then, of course, there would be no need for clarifying legislation.

The other point in this same connection that I want to reemphasize is that this hearing, yesterday and today, stems from a previous full disclosure by the executive branch of the Government in connection with this contract. Mr. Luce has testified that he gave all this information some time ago to the Appropriations Committees of the House and Senate.

Am I not correct, Mr. Luce?

Mr. LUCE. That is correct.

Senator JACKSON. He made it clear that there would be no action taken until the committees had an opportunity to express themselves.

So I just wanted to reemphasize those points that I think are highly pertinent in trying to keep this matter that we are now discussing somewhere within the range of reason and, I hope, disposability one way or the other.

Chairman HOLIFIELD. If the gentleman will yield.

Senator JACKSON. I am through.

Chairman HOLIFIELD. I will say that there was another factor involved in this. Last week Mr. Van Zandt circulated a memorandum and news release and a copy of an amendment which he pledged himself to offer on the floor, which would affirmatively prohibit any type of administrative action on the part of the AEC toward signing a contract.

Certainly the majority cannot be criticized for taking note of Mr. Van Zandt's very frank and honorable action, because he informed me he was going to do this.

But this changes the complexion of the authorization bill when it arrives on the floor of the House. It is a factor that has to be argued. It has to be met. And subsequent to that, of course, it became the GAO decision. So the integrity of the bill as authorized by the committee was subject to attack. Certainly no one can criticize the majority for defending the position of the bill against such an attack.

Senator JACKSON. Well, all I want to say is that I think what is occurring here is the orderly and the well-precedented procedures that legislative bodies follow.

Chairman HOLIFIELD. That is right.

Senator JACKSON. You cannot hold a hearing on the floor of the House or of the Senate. We try it sometimes, but it is a rather discouraging operation. I think all of us agree on that.

Chairman HOLIFIELD. The Chair made it very clear yesterday to Mr. Van Zandt that he thought Mr. Van Zandt was acting completely within his rights as a member according to his own convictions. It carried no criticism. That does not mean the Chair agrees.

Senator HICKENLOOPER. Again may I emphasize that I am raising no criticism about the chairman calling a meeting of the committee to hear this.

Senator JACKSON. I understood that.

Senator HICKENLOOPER. I am not criticizing that at all. I think it is a proper function of this committee to have hearings on matters of this kind.

I said I hope we do not act precipitously on a matter that is as complex a can of worms as this is. And it certainly is complex when it comes to the details of this contract, the ultimate responsibility—who does what to whom and various other things involved here.

I hope that we do not act in a couple of days' time, and that we take a little time. I see no necessity—

Chairman HOLIFIELD. The Chair will be very frank with the members of this committee.

It is the Chair's intention to ask for an executive session, at which we will try to draft an amendment sometime between now and the consideration of the bill, which I understand now may be Monday or Tuesday.

So the Chair feels that it is his duty to defend the legislation to the best of his ability. This is the parliamentary situation.

It is now getting along toward the middle of July and the authorization bill ordinarily is out before this. I postponed the hearing at the request of Members both on the Republican and the Democratic sides for something over 2 weeks, for different reasons—the Fourth of July, the desire of Members of Congress to go home and make speeches in their districts. And the Chair is in an embarrassing position because he has gone to the leadership on two occasions and asked for postponement at the request of members of the committee.

The Chair feels that he cannot go to the leadership again and hold up the public business next week of the House when the leadership has been pressing the chairman to bring legislative matters before the House for consideration so that we can work toward adjournment.

Representative HOSMER. Mr. Chairman, I have a few more questions.

Chairman HOLIFIELD. All right; the gentleman is recognized.

Representative HOSMER. I shall not take too long.

I think we are at a point now where the facts are about like this: in my mind it looks like a chance for the Government to get some of its money back at Hanford. But it involves some risk. And I am trying to find out whether the risks are reasonably worth it or not. And I ask these questions in that context, and with the practical assumption that the existence of the Comptroller's decisions, right or wrong, will, if this is to go ahead, necessitate some action on the part of Congress.

The principal risks in my mind are the risks involved in the length of the dual-purpose period and the risk involved in whether the thing works or not.

I would hope, Mr. Chairman, that we might have some testimony updating last year's testimony as to the practical certainty of this thing working and producing the 800,000 kilowatts. And maybe these gentlemen could help me out on the length of the dual-purpose period and what happens if it is short.

I think we realize that if it is only 4 years the Government, the AEC, is going to get back \$600,000 only, and after that a lease rental of \$10 a year possibly.

So we have to bet on a longer dual-purpose period in that respect.

Chairman HOLIFIELD. Of course, we are betting \$200 million on the fact that we need this plant for plutonium.

Representative HOSMER. I realize that.

Chairman HOLIFIELD. And these gentlemen before us are speaking specifically of WPPSS, and they are betting \$131 million that it will be operated on their own responsibility, and they cannot estimate how long it will be operated, and neither can the AEC.

If there was a disarmament agreement this year, it might be unnecessary to save the reactor.

Representative HOSMER. Mr. Chairman, we have disposed of the fact that the WPPSS is betting the \$130 million.

Chairman HOLIFIELD. I will not agree with that.

Representative HOSMER. And whether the rest goes on the users up there if the power rates are increased, or on the Government if it would be interpreted that this exchange agreement was not a prudent one, is something that eventually would have to come out in court, I suppose.

But in your calculations, Mr. Luce, in your economic analyses you have gone into what would happen in the power only with respect to plutonium buy-back.

Now we have had a proposal up here for a plutonium buy-back price of \$8 rather than some other figure. How does that affect your economic calculations?

I would assume whatever plutonium buy-back credit is given would inure to the benefit of Bonneville.

Mr. LUCE. We have assumed the existence of the present policies and prices.

Representative HOSMER. You mean \$30 a gram or \$15 a gram?

Mr. LUCE. Whatever that figure is. I think the Atomic Energy Commission could better answer what their present policies are.

Representative HOSMER. If the buy-back price goes down you are going to have to furnish more power to make up the difference, I would assume; is that correct?

Mr. LUCE. If what you call the buy-back price went down—

Chairman HOLIFIELD. Well, let us straighten this thing out.

The WPPSS is not selling any plutonium. This is the Government-owned reactor.

Representative HOSMER. I am talking about the single-purpose period.

Chairman HOLIFIELD. Oh, during the single-purpose operation.

Representative HOSMER. Because that has a substantial effect on the economics.

Mr. LUCE. As I understand it, Mr. Hosmer, the Public Power Supply System would be in the position of buyer and, to some extent, seller in this regard, and the present policies have been assumed.

Now if the price that the AEC would charge for what the Public Power System has to buy in the way of nuclear fuel would go up, that would increase the power price. If it would go down, that would decrease the price and you would have just the opposite effect in any changes on the buy-back provision. But we have not attempted to project a change in the present policies.

Representative HOSMER. Have you attempted to make any analyses with respect to the private ownership of plutonium during the single-purpose period?

I know the Government would still own the reactor, but would the power supply people have to own fuel elements? Or what would be the situation?

Mr. LUCE. Maybe Mr. Quinn can answer this.

From our standpoint, we have assumed the existence of the present policies in our analysis, and we have not tried to guess what the situation would be in the future because that guess could go either way as far as costs are concerned.

Maybe Mr. Quinn has something he wishes to add.

Mr. QUINN. On both these points, Mr. Hosmer, the studies that have been made on the economic feasibility of converting the NPR over the past several years have assumed a fuel value for the plutonium rather than for the weapons price.

The most recent ones that have been conducted assume the equivalent of the \$8 price that has been discussed with this committee.

Representative HOSMER. I see.

Mr. QUINN. With respect to private ownership, since this is indefinite, we have pointed out the possibility of this coming about to

the Supply System as a matter for their consideration. We understand that it is possible that the interest rate on the bonds in this case may be somewhat less than the current $4\frac{3}{4}$ -percent use charge that AEC charges for lease of special nuclear material.

Representative HOSMER. In other words, it would be a better deal if the system owned the fuel.

Mr. QUINN. It may be so.

Chairman HOLIFIELD. And, of course, this committee will pass on legislation on that, and I am sure the committee would not pass out legislation that would be deleterious to the economics of all of the private reactors in the United States. Undoubtedly, we will take a good look at that and do that which is beneficial rather than deleterious.

Representative HOSMER. There is one other problem that occurs to me, and that is in connection with section 44, and it is respecting, again, the single-purpose period during which WPPSS would lease the reactor.

The last sentence of 44 says:

Nothing in this Act shall be construed to authorize the Commission to engage in the sale or distribution of energy for commercial use except such energy as may be produced by the Commission incident to the operation of research and development facilities of the Commission or of production facilities of the Commission.

The Commission would not be operating a production facility itself. Under this section, it would be unauthorized to produce power or energy except for the fact that we have a lessee in here.

Now can the Government get around this prohibition of 44 by the offering of a lease to somebody else to operate this and produce energy?

I asked the witness. And it will not be a production plant in the single-purpose period because your production is over at that period. It will be for power only.

Mr. HENNESSEY?

Mr. HENNESSEY. During the dual-purpose period. Mr. Hosmer, we will be complying strictly with the provisions of section 144.

Senator JACKSON. Forty-four?

Mr. HENNESSEY. Forty-four.

During the single-purpose period our opinion⁶ was that in connection with the overall transaction, which has the primary objective of selling this steam, we could exercise the authority we have under section 161(g) to lease the plant.

During the lease period, of course, we would not have a section 44 problem because we would not be selling steam. We would not be operating the production facilities.

Representative HOSMER. In other words, the lease, you feel, would insulate you from the prohibitions of section 44.

Mr. HENNESSEY. Yes, sir.

Representative HOSMER. Have you a good opinion on that? Because whatever this amendment is, it should refer to it.

Mr. HENNESSEY. This is the opinion that we furnished to the General Accounting Office. And in the General Accounting Office's decision⁷ on this matter they did not question any of the views expressed

⁶ See JCAE print, p. 70.

⁷ See JCAE print, p. 55.

by AEC's general counsel on 44 or 161(g); only the new issue that was raised, of the need for congressional authorization.

Representative HOSMER. All right.

One more line of questioning now and I am through.

That has to do with your colloquy with Chairman Holifield respecting the benefits to the various parties that accrue from this, and you said that BPA accrued the benefit of additional power to market, an additional firm power. And I just wanted to ask you would it not accrue the same benefits if the firm power came from some other source such as a conventional steamplant?

Mr. LUCE. Yes. Of course, you can firm up excess peaking capacity with steam from any steam-generating source.

Representative HOSMER. At \$125 an installed kilowatt, a conventional plant of 800,000 kilowatts should cost you about \$100 million. That is \$30 million less than this proposition. So that alternative would be more advantageous to Bonneville than the one before us; would it not?

Mr. LUCE. Our staff considered such information as was available on alternative steamplants in taking a look at what the advisability of entering into this contract was, and their advice to me was that this was as good or better than any other alternative that appeared to have any degree of probability.

Representative HOSMER. You do not know what that opinion was based on?

Mr. LUCE. Well, I think it was based on——

Representative HOSMER. The same kind of calculations I have made? Or something else?

Mr. LUCE. Well, somewhat more detailed calculations than you have made, Mr. Hosmer.

There has been a proposal, and, as a matter of fact, there is now a proposal for the development of steam-generating facilities at Roslyn, Wash. And over the last 4 or 5 years there have been various studies made of the different ways of developing that coal deposit for steam generation.

Now, Bonneville has not been doing this, but our staff has been in touch with the engineers that have been doing it, and I think that the main basis of comparison on which they advised me, as I have indicated, was on such information as they could get with respect to the alternative costs of that project.

Representative HOSMER. I would imagine it had something to do with the benefits which accrue to the AEC in addition to those to Bonneville. Is that it?

Mr. LUCE. Of course, as a Federal agency, I think we have had that to take into consideration, too. The Federal Government has this money invested in the Hanford plant, and if we can help the Bonneville consumers, and at the same time, help the Government get those \$25 million back, I thought we had some kind of a moral obligation to do so.

Senator HICKENLOOPER. Would you yield for a clarifying question, at least clarifying to me?

Mr. Hurd, you said you had calculations made on this matter and it was recommended that this proposition was as good or better than any other proposition that was available. Why would it be better?

Or Mr. Luce?

Mr. LUCE. I think I was the one who said that.

Senator HICKENLOOPER. Mr. Luce, yes.

Mr. LUCE. Well, better from the standpoint of the cost of the firm power that would be produced.

Senator HICKENLOOPER. That would be because you would be getting the steam produced by the Government cheaper than you could produce it yourself.

Mr. LUCE. No. The basis of comparison I used in the testimony to which you are referring was the cost of firm power to be produced by new hydroelectric projects that have been authorized by the Congress on the Snake River.

Representative HOSMER. My question pertained, however, to conventional sources.

Mr. LUCE. I understand that, Mr. Hosmer, but I think Senator Hickenlooper was asking me about some previous testimony, if I understood him.

Senator HICKENLOOPER. Just a question you answered a moment ago when Mr. Hosmer asked you whether or not you had calculations on other sources and built your own steam plant, or something of that kind, and I think you said this proposition was as good or better than other propositions which might be available for the production of this power.

Mr. LUCE. On steam; yes. The one steamplant that I mentioned that we had used, you might say as a basis of comparison, is the only one being seriously proposed as far as I know in the region, and that is the one at Cle Elum, Wash.

Senator HICKENLOOPER. The only reason I say—

Is it a cheaper proposition because you can get the steam at a cheaper price from the Government than you could produce it yourselves?

Mr. LUCE. No; I don't think that is correct.

Senator HICKENLOOPER. Why is it a better proposition?

Mr. LUCE. Well, if anyone is going to put in a steam-generating plant to be fired with coal or gas or oil, you have to build a boiler system to go with your turbines and generators. Now at Hanford for defense purposes, in effect, a boiler is being built for the manufacture of plutonium, and all that is necessary is to add the turbines and generators.

So a large portion of the cost of a steamplant is, in effect, assigned to the defense purpose.

Senator HICKENLOOPER. For defense purposes.

Mr. LUCE. For defense purpose; yes.

Senator HICKENLOOPER. So that your project would be taking advantage of that fact, that it is already existing, and you would not have to pay for that boiler?

Mr. LUCE. I don't think we are taking advantage of anybody. We are offering the Government the only chance to get it—

Senator HICKENLOOPER. I do not mean anything undue. I do not mean anything insidious about it. But when I say take advantage of it I mean it is an opportunity any businessman would take advantage of if he had the opportunity to so take advantage.

Mr. LUCE. We think it is a fair bargain on both sides.

Senator HICKENLOOPER. May I ask one or two questions more. May I ask either Mr. Luce or Mr. Hurd.

What about the proposition that you want to build this generating plant on leased ground, ground leased from the Government? And what about just a plain, simple contract? And you can do whatever you want to with Bonneville within their legal limits; make any arrangements you want to. Just a plain, simple contract to buy steam from this reactor if, as, and when the Government produces it in connection with its production of plutonium, and just let it go at that. And we then leave interlocking contractual arrangements and confusing webs of associations out of this thing. You buy the steam just straight. You just buy the steam at fair value based upon its production costs as measured by any kind of industry yardstick that would be fair. You just buy the steam and forget all about it and buy it so long, and if, as, and when the Government was able to furnish this steam in connection with its defense plutonium operation. That would mean that when it shut down you would not have any steam, and if we went out of the plutonium business out there you would not have any steam. But you would have steam as long and in such quantities as they produced it in connection with the defense operation of the plutonium plant. Just make it simple, you see.

Personally, I would not think that would be a very good deal for you, but I am just asking about it. I think this deal depends upon your reliance, both of you, upon the fact that the Government will eventually become obligated to keep that plant going whether we stay in the plutonium business or not. I am just saying that frankly.

Mr. HURD. The answer to that is that the output of the NPR is nonfirm power.

Senator HICKENLOOPER. That is right.

Mr. HURD. There are times when it is completely zero. Yet it produces large quantities of energy, and it requires reserves such as are available at the Federal plants under this arrangement to make it usable and attractive to the utilities. So we just simply cannot pay much for nonfirm power.

Senator HICKENLOOPER. I understand that, and I said a moment ago I thought it would be a good deal for you, of course. It will be a good deal for you if you can get the Government, either morally or legally, committed to maintain the operation of that reactor there even though we do not need the plutonium, but arrangements to maintain the operation of that reactor even in the face of a lack of need for plutonium in order to keep your generating plants going. Now is the point that enters into this thing.

Mr. LUCE. Senator Hickenlooper, under the contracts the Government does not have to keep manufacturing plutonium in order to keep on producing power. The supply system has a lease on the reactor when it is not being used to make plutonium. They will operate the reactor for the production of power. So the Government has no obligation, moral or otherwise, to continue to operate that reactor.

Senator HICKENLOOPER. It would be necessary, however, for you to take over or for whoever enters into this contractual arrangement, for somebody to take over the operation of this reactor for the production of power in the absence of a plutonium necessity. That clarifies it very thoroughly.

Senator JACKSON. Might I just make a comment, Mr. Chairman.

If I might state the other side of this, without this kind of an agreement, and if we reach a situation either through arms control or by reason of there being no longer a need on the part of our defense people for plutonium, we would have this and other plutonium reactor on a standby basis with a deficit being incurred on each and every one of them each month for the maintenance of these facilities.

Is this not correct, Mr. Quinn?

Mr. QUINN. It is correct, sir.

Senator JACKSON. And, as I understand the situation of all of the reactors, this will be the only one where in a shutdown the Government will get some revenue; true, not as much as it would get under a dual-purpose operation.

Is that not correct, Mr. Quinn?

Mr. QUINN. If the reactor were not required for plutonium production, and if this power project went forward, the reactor would continue in operation beyond the period of need for plutonium.

Senator JACKSON. And there would be some return to the Atomic Energy Commission.

Mr. QUINN. During the power-only period there would be no substantial financial return to the Atomic Energy Commission as during the dual-purpose period.

Senator JACKSON. I said there would be some return.

Mr. QUINN. There would be some return from the standpoint of the experience in operating a large nuclear powerplant which would be of benefit to the nuclear power development program. There would also be a savings to the AEC of what would otherwise be standby costs. If it had to be shut down there would be a continuing standby cost of perhaps \$300,000 per year.

Senator JACKSON. For the one reactor.

Mr. QUINN. For the one reactor.

Chairman HOLIFIELD. And how much expense for a startup? I believe you testified to that the other day.

Mr. QUINN. There would be about \$5 million if we had to start up the reactor from a cold condition whereas if it were operating for power purposes, to return it to plutonium purposes would involve only about \$1 million.

Chairman HOLIFIELD. And the time element that would be involved?

Mr. QUINN. The time element would be quite different. If it had been shut down, it would probably take upward of 2 years to recruit and train an operating crew to operate the reactor for production purposes whereas if it were in operation for power, the trained crew to operate the reactor would be readily available and the reactor could be converted to production directly.

Chairman HOLIFIELD. There is one point that has not been covered that possibly Mr. Hosmer has suggested.

If there have been feasibility studies on the part of the WPPSS as to the effectiveness of the utilization of this steam in the generator by any competent group, we would like to have that from either the Bonneville or the WPPSS or both.

Representative HOSMER. Mr. Chairman, I would suggest that that information lies in the hands of the Commission at the present time. It involves how likely we are to get the 800,000 kilowatts as planned.

Chairman HOLIFIELD. I believe Mr. Hennessey or Mr. Quinn could respond to that question. That is, as Mr. Hosmer has said, the likelihood of there being 800,000-kilowatt capacity available.

Mr. QUINN. On that point the design effort and the research and development effort that have been underway at Hanford for the past several years have been directed to the successful accomplishment of the operation of the NPR at the operating conditions that have been projected.

I believe it was testified by the General Electric people last year that our research and development program was proceeding satisfactorily.

Representative HOSMER. I had particular reference to the fact that in last year's record we did have everything going along fine, and some of the problems that were mentioned in previous testimony, in previous years had been overcome. But since last year's testimony and this year we have had the problem of the pipe and some other things possibly that have come up, and I think if we are going to be assured that the risk that is involved in here is not an undue one we should have something in the record that predicts this thing is going to work out as planned.

Could you have a short statement based on what Burns & Rowe and other people have in their files?

Mr. QUINN. The major difficulties that have been encountered have been in the procurement and construction of the reactor and its components. We, of course, have not yet operated the reactor. We have done as much research, development, and testing work on components as is possible outside of the full-scale operation of the reactor. For example, tests have been run on the fuel elements, mocking up NPR conditions; the results of these to date give us every confidence that we will be able to achieve the design operating conditions.

Representative HOSMER. There was a question about the temperature and quality of the steam that we might be able to get out. Has that been resolved?

Mr. QUINN. On that point, we were initially uncertain as to the performance of the steam generators to be put into the NPR. Later, actual tests were conducted on mockups of portions of the heat exchangers, and these showed somewhat better performance than the original designs had contemplated. This, together with studies on improved flow control in the reactor, was the cause for increasing the power-only steam pressure to 370 p.s.i., which took place about a year ago.

Representative HOSMER. There was an estimate of 14 shutdowns annually, I think, that might involve repairs, unscheduled shutdowns, and then there was, I think, another 12 shutdowns for refueling or something of that nature.

Mr. QUINN. Approximately, sir.

Representative HOSMER. Have there been any improvements in those estimates?

Mr. QUINN. There would be no change in those. The refueling estimates are ones that are dictated by the production operation, where periodic shutdowns are necessary to get the plutonium out and delivered.

As far as the unscheduled outages are concerned, there has been no change in that estimate.

Representative HOSMER. No improvements?

Mr. QUINN. There have been no improvements. It is strictly an estimate as to the number of minor difficulties that may be encountered to interrupt operation.

Representative HOSMER. Do they run any more reliability tests on your auxiliary pumps and valves? Have they since last year?

Mr. QUINN. To the extent that we have been able to conduct reliability tests on components as they have been produced, these have been done. Where difficulties have been encountered we have, of course, corrected these.

Representative HOSMER. I am not through.

That is not too strong a statement, but—

Chairman HOLIFIELD. Undoubtedly, before your 16 entities that are in your organization agreed to go on this, Mr. Hurd, they must have sought professional advice as to the usability of this steam and so forth.

Mr. HURD. Yes, that is right.

Chairman HOLIFIELD. Whom did you seek it from? And did they make a report to you that can be submitted to the committee for its records? Or can you state it?

Mr. HURD. I believe we can supply for the record statements from our consulting engineers.

Chairman HOLIFIELD. Mr. Hosmer, I think, wants something in the way of a tangible expression—and I agree with him—in the record as to the feasibility of this matter, although I recognize that in taking over the obligation of \$131 million your group is convinced that it is feasible.

Nevertheless, our record is incomplete unless we do have some type of statement or analysis or study or something that you and others may be relying on.

Mr. HURD. Yes. I am sure we can supply that for the record.

Chairman HOLIFIELD. Bonneville made a study.

Now can you supply that so that we can have it for printing in the record no later than tomorrow?

Mr. HURD. I can't think now—

Chairman HOLIFIELD. Can you prepare a statement based on the study so that we can have it? You must have access to those figures.

Mr. HURD. Yes, I think I can get in contact with the principal consultants.

Chairman HOLIFIELD. You understand the urgency of this in the legislative program. And we want to present as full and complete a record as we can in our hearings.

Mr. HURD. Perhaps Mr. Luce—I know that they have had the advice and the view of the studies made for us, and perhaps their consultants might furnish something.

Chairman HOLIFIELD. All right.

Mr. Luce, will you respond to the question?

Mr. LUCE. We had some analyses made of the costs of these turbines and generating facilities because I was very concerned that the cost estimates that were used last year be verified. These estimates were made by TVA steam engineers who have had a lot of experience with this sort of thing. I can have my office in Portland airmail tonight—

Representative HOSMER. I am not talking about costs, Mr. Luce. I am talking about whether or not this plant is going to work and has a reasonable chance of putting out 800,000 kilowatts and has a sufficiently reliable schedule to make this arrangement practicable.

Mr. LUCE. In connection with the report, Mr. Hosmer, the engineers who made the study also gave us the opinion that the steam pressures were adequate and that the turbine designs would be conventional and so forth, and that there was no operating problem.

Representative HOSMER. But how about the actual supply of steam and so forth?

Mr. LUCE. This was an analysis of the power end of it; not an analysis of the reactor itself. I have used Dr. Starr on that, from our standpoint. But principally we have relied on Atomic Energy Commission in that regard.

Now if you want the results of this cost and turbine design analysis, I will get it. If you do not want it, I will forget about it.

Representative HOSMER. I rather think the Atomic Energy Commission might prepare the statement we want.⁸

Chairman HOLFIELD. All right.

The Chair is going to ask you, Mr. Quinn, and Mr. Hennessey, to take such steps as are necessary to bring to the committee a statement with such documentation, with reference at least to documentation as you have on the subject that Mr. Hosmer has raised. We would like to have this, if possible, to send to the printer tomorrow afternoon.

Senator JACKSON. Mr. Chairman, I would like to suggest that I believe Mr. Hurd had a statement, and obviously he has made it several times, but I would ask that it be included in the record.

Chairman HOLFIELD. Without objection, the formal statement of two or three pages will be included.

(The statement referred to is as follows:)

STATEMENT BY OWEN W. HURD, MANAGING DIRECTOR, WASHINGTON PUBLIC POWER SUPPLY SYSTEM

I am Owen W. Hurd, managing director of the Washington Public Power Supply System (Supply System), whose headquarters are located at 130 Vista Way, Kenewick, Wash.

The Supply System is a municipal corporation of the State of Washington composed of 16 public utility districts and was formed in 1957 for the purpose of providing an adequate and low-cost future power supply for its members and others to supplement power obtained from Federal and other sources.

Supply System member systems range in size from small systems serving rural areas and small communities to relatively large systems serving cities and large industrial loads. Total number of customers served by Supply System members amount to approximately 230,000 whose present total annual peak-load exceeds 1,100,000 kilowatts and 5 billion kilowatt-hours with total annual revenues of \$42 million. It is expected that the power requirements of the Supply System members will double in about 10 years.

Members of the Supply System include those which purchase their entire requirements from BPA and those which obtain a portion of their power requirements from their own resources. The latter include the Grant County PUD, which recently celebrated the completion of the \$166 million Priest Rapids Dam on the Columbia River with an installed capacity of 831,000 kilowatts and have under construction the \$195 million Wanapum Dam, companion project upstream from the Priest Rapids project, which will have an installed capacity of 866,000 kilowatts. Another member is Chelan County PUD, which owns and operates three hydroelectric projects with a total cost of nearly \$400 million and capacity of 1,083,000 kilowatts which include the Rocky Reach and Rock Island projects on the main stem of the Columbia River. Another member, the

⁸ See JCAE print, p. 119.

Douglas County PUD, has an FPC license pending for the 500,000-kilowatt Wells project on the Columbia River. The major portion of the output of Columbia River projects of these members have been contracted for by private utilities of the region. Other Supply System members also own and operate generating plants and are investigating the feasibility of undertaking new projects. The Kittitas and Grant County PUD's, both members of the Supply System, are currently investigating the engineering and economic feasibility of a steam-plant using local Cle Elum coal deposits.

Projects to be undertaken or investigated by Supply System are those which, by reason of pertinent circumstances, are considered by the members and other involved to require or benefit from Supply System development.

The Supply System has presently under construction a small (26,000 kw.) hydroelectric project in Lewis County, Wash., and an application pending before the Federal Power Commission for a license to construct the 3 million kilowatt multipurpose Nez Perce hydroelectric project or its alternate, the smaller Mountain Sheep project, on the Middle Snake River between the States of Oregon and Idaho. Since its formation in 1957, the Supply System has undertaken the investigation of other potential projects to meet future power requirements of its members and others.

Members of the Supply System last year supported efforts to obtain congressional authorization and appropriations for the Federal construction of power facilities using steam from the convertible new plutonium production reactor under construction by AEC at the Hanford project near Richland, Wash.

After the defeat of this proposal by Congress and as a result of a proposal made by Mr. Earl Coe, Director of the Washington State Department of Conservation, the Supply System undertook the investigation of the feasibility of non-Federal ownership including financing, construction and operation of the NPR facilities. On November 28, 1961, the Supply System submitted to AEC and BPA a proposal to finance, build and operate power facilities to utilize the waste heat from the NPR during its operation for the production of weapons-grade plutonium and the full heat capacity of the reactor when operated for steam production purposes only.

During the intervening months the Supply System has participated in negotiations and discussions with representatives of BPA and AEC that have resulted in drafts of agreements which are considered to be suitable for the implementation of the Supply System proposal.

I understand that current drafts of those agreements for the exchange of NPR power facility output with BPA for the delivery of firm power to utility participants and the contract for the use of NPR waste heat, the lease of a site for the power facility and the NPR during periods of power only operations have been described to the committee during this hearing by representatives of BPA and AEC. It would therefore, be repetitious to attempt further analysis.

The Supply System has recognized the need for BPA and AEC to obtain appropriate congressional clearance before entering into agreement and contracts for the financing, construction and operation of NPR power facilities by the Supply System.

The Supply System has undertaken studies of the economic feasibility of undertaking this project under terms and conditions anticipated by the proposed contracts, and these studies have indicated that it would be to the benefit of the Supply System members and participating utilities to enter into such contracts. However, formal approval and consideration by the Supply System and utilities participating in the exchange arrangement now awaits congressional clearances necessary before AEC and BPA can enter into such agreements.

In view of the many benefits to the region and Nation that will result from the proposed arrangement for utilizing the waste heat from the NPR to meet the power needs of the Pacific Northwest, we urge this committee to take appropriate action to bring about any required congressional authorizations.

Chairman HOLIFIELD. Will the committee give the Chair the discretion to accept such pertinent documents, which may not have been included, or can the staff give us a list of those documents which have been included in the record at this point.

Mr. Ramey?

Mr. RAMEY. I do not think we have them listed.

Chairman HOLIFIELD. If there are any pertinent, I will be very happy to confer with a number of the minority as to any additional documents.

Senator JACKSON. I suggest that the Chair be empowered to receive from any members of the committee or from the participants any material.

Chairman HOLIFIELD. This amounts to documents pertaining to this matter that you brought up, Mr. Hosmer, and any other letters between Government agencies and Members of Congress, the committee and so forth which may have been inadvertently left out of the record. We will try to compile this, and I will go over this with Mr. Van Zandt.

I will be glad to go over this with you, as to admissibility.

Senator DWORSHAK. Mr. Luce, you testified earlier today that you were hopeful that BPA would get considerable power generating at NPR. I think you estimated the cost of that power to BPA. Did you?

Mr. LUCE. Yes.

Senator DWORSHAK. What was the figure?

Mr. LUCE. During the dual-purpose period, the first 7 years, the cost at the generator is approximately \$12 a kilowatt-year. Assuming that you then, after the seventh year, go into single purpose power only operation of the reactor, the cost of the life of the project would average out, according to our estimates, at \$22 a kilowatt-year.

Senator DWORSHAK. And you compared that with the cost of power generated at some of the lower Snake River dams which was slightly higher.

Mr. LUCE. Right. And Bruce Eddy.

Senator DWORSHAK. On that basis, how do you justify BPA selling the power at \$17.50 per kilowatt-year?

Mr. LUCE. Like any utility, Senator Dworshak, we have to average the costs from all our projects and sell the power at an average cost.

Now, undoubtedly as the years go by, the average increases. Every project we add increases our average cost. And we are not the only electric utility that is having that experience.

Senator DWORSHAK. You have said on several occasions before Senate committees during this year that you were hopeful that BPA could increase its revenue and eliminate the annual operating deficits. Does that not imply that BPA will have to raise its rates very soon?

Mr. LUCE. Well, if we can't find a market for this secondary energy that we are putting over the spillways, the answer to the question is "Yes."

Senator DWORSHAK. But you say over the 5-year procedure you cannot consider rate increases until December 1964.

Mr. LUCE. 1964; that is right.

Senator DWORSHAK. But can you go along for that interim without having a showdown on this rate question?

Mr. LUCE. Well, at the end of fiscal 1961 we have still had approximately a \$38 million surplus.

Yes; I think we can. But we can't go beyond it. I mean we are going to have to have a showdown at that time.

Senator DWORSHAK. But as you face constantly increasing costs of the power distributed by BPA, there is growing awareness that you will face many problems inherent in your operating deficits.

Mr. LUCE. Yes.

Representative VAN ZANDT. Mr. Chairman, several times during the course of the hearing questions have been inferred contingent on witnesses of the GAO appearing before us.

Chairman HOLIFIELD. Well, if there is any demand for the GAO, as I say, we are not contesting the GAO opinion. We are proceeding in accord with the recommendation of the GAO. There is no opportunity, as far as we are concerned, under the time period of arguing as to the validity of it or not. For the purposes of legislative action, we are proceeding as though it is valid.

Representative HOSMER. In other words, you are accepting the opinion of the General Accounting Office.

Chairman HOLIFIELD. I am accepting it only from the standpoint of the urgency in time and the legislative action. I am rejecting it completely from the standpoint of the legal opinion of both the AEC and our own committee, but this is beside the point. The point is that we are proceeding.

If an amendment authorizing this is submitted to the Congress, as I understand it, this is in accord with the GAO's opinion because the GAO says that without congressional authority they cannot proceed.

So, for the purpose of our own committee's procedure, we are accepting the GAO opinion as though it were valid, and not raising the point as to whether it is valid or not valid.

I hope I have made myself clear.

Are there any further questions?

Senator JACKSON. Mr. Chairman, there are just one or two things I want to mention before we close.

I do think, in fairness to the people who are not here, namely, the private utilities, they not having had a chance to testify, the Chair should be empowered to invite a representative of the private utility industry to give to the committee their best estimates on the disposition of this waste steam and any proposal or suggestion that they might have.

Chairman HOLIFIELD. The Chair has stated repeatedly that if there was a question, we would accord that type of witness the courtesy. However, we are faced with a time element, and I understand that Mr. Westland did approach some of the people in his area that are in the private investor group, and that they declined to come before the committee on this subject.

Now, I do not think that the gentleman wants the committee to hold up the printing of the hearings.

Senator JACKSON. No. I just want to make sure, to find out whether they would like to be represented.

The second thing I want to mention—

Chairman HOLIFIELD. To clear that matter up, if there is any statement that can be furnished to us before going to print, we will accept it for the printed record. If it comes in before the hearing of the bill on the floor, it can be made available to anyone who wishes it.

Senator JACKSON. Fine.

In connection with the suggestion that I made this morning, I want to get this straight for the record.

The Chair will recall, and the members of the committee who were here, that I suggested that in connection with any amendment that

might be offered in the House, not less than one-half of the output be offered to the private utilities on a nonpreference basis; that is, without regard to either the preference clause in the Bonneville Act or the preference clause in the Atomic Energy Commission, section 44.

I would like to ask Mr. Luce or Mr. Hurd if Bonneville could make that particular contract directly in view of certain inhibitions in the WPPSS.

Can that be done so that with assurance the intent of Congress on this particular point will be carried out? Are there any legal inhibitions?

Mr. LUCE. Not if the Congress authorizes us to do it.

Senator JACKSON. As I understand, there is some question maybe that the contract would have to run also from the Washington Public Power Supply System, and that there might be some difficulty in this regard under existing law.

Mr. LUCE. No; I don't think there is any difficulty. At least our lawyers don't think there is any.

Senator JACKSON. Let us verify it.

I will yield to Mr. Hosmer.

Representative HOSMER. In this power exchange, the power that the participants received from Bonneville becomes their power, and whatever preferences they are operating under apply. These would be those applicable to public power bodies in the State of Washington.

Would it violate Washington law or the charters of these public corporations to require in this act that they give half of the power to a private purchaser?

Senator JACKSON. Before you answer that, I could help my colleague on one point, and that is that the public bodies in our State who have built large generating systems on the Columbia River do now have long-term contracts for the sale of that energy to private utilities. Those contracts, of course, have been properly approved by the bonding companies, involving millions of dollars, as being duly authorized under the laws of the State of Washington. I had not thought about that earlier.

Representative HOSMER. Let us find out what the laws are with respect to this.

Senator JACKSON. I think this should be clarified.

Representative HOSMER. Then there is the question of whether such a revision—they would have to hold it and not sell it. Or, in other words, would it interfere with the economics of the project?

Mr. LUCE. Could I suggest that the attorneys for the Washington Power might supply it?

Representative HOSMER. Is he here?

Mr. LUCE. No, but he is in Seattle. I assume Mr. Hurd could call him and get an opinion.

(The opinion referred to above follows:)

WASHINGTON PUBLIC POWER SUPPLY SYSTEM,
Kennewick, Wash., July 12, 1962.

HON. CHET HOLIFIELD,
Chairman, Joint Committee on Atomic Energy,
U.S. Capitol, Washington, D.C.

DEAR MR. CHAIRMAN: Yesterday, during the concluding period of the hearing by your committee on the WPPSS Hanford power facility contractual arrangements, you requested that I report to you before 4 p.m. today on the following:

1. Results of a telephone survey of members of the board of directors of WPPSS as to their reaction to a proposal that 50 percent of the project

output be made available to private utilities either by statute or as WPPSS policy.

2. Results of a similar inquiry to northwest private utilities as to their interest in participating in the proposed exchange arrangements on the basis of (a) a statute that would specify that 50 percent of the project output be made available to the private utilities or (b) on the basis of a WPPSS policy which would reserve the same amount to them. It was recognized that a time limit for any such reservation would be applicable in order to finance the project as presently anticipated.

3. Make inquiry of our counsel as to any adverse legal problems which might be created by such a reservation.

With respect to the reaction of the WPPSS board members, 8 of the 16 members were consulted. The consensus was that since WPPSS had already made every reasonable and timely effort to invite participation by the private utilities, and since this invitation had met with only minor expressions of interest from such utilities, it would appear to be inappropriate to now endorse a proposal to make mandatory a reservation of 50 percent of the project output to the private utilities.

With respect to the inquiry of the private utilities with regard to this matter, I sent the attached copy of a telegram to the six private utility companies in the Pacific Northwest as indicated. As of the writing of this letter I have not received any response to the telegram. In addition, I contacted by telephone Mr. Hugh Smith, attorney for the Pacific Northwest Power Co. in Portland, Oreg., and supplemented information contained in the telegram. He advised me that he would contact his clients regarding this matter.

Our attorneys have advised me that they now foresee no adverse legal effects were such a reservation to the private utilities established either by statute or policy.

It is my opinion that although members of the WPPSS board have expressed disfavor of the 50-percent reservation proposal, if such a provision were made a part of any authorizing statute or condition they would, as they have up to this time, continue in their efforts to bring about the use of the NPR waste-heat for the maximum benefit of the region and Nation.

Very truly yours,

OWEN W. HURD, *Managing Director.*

[Copy of a telegram sent to Pacific Northwest private utility companies on July 12, 1962]

Yesterday at the hearing before the Joint Committee on Atomic Energy, Chairman Holifield requested that I make inquiry of the private utilities of the Northwest as to their interest in participating in the proposed exchange arrangements described by BPA Administrator Luce before committees of Congress on the basis of a statute which would specify that 50 percent of the project output be made available to the private utility companies of the Northwest or on the basis of a WPPSS policy which would reserve the same amount to them. I was requested to report the results of this inquiry to the JCAE by 3 p.m. e.s.t. today. Please direct response to me at the Claridge Hotel, Washington, D.C.

WASHINGTON PUBLIC POWER SUPPLY SYSTEM,
OWEN W. HURD, *Managing Director.*

KENNEWICK, WASH.

IDAHO POWER Co.,
T. E. ROACH, *President.*

BOISE, IDAHO.

PORTLAND GENERAL ELECTRIC Co.,
F. M. WARREN, *President.*

PORTLAND, OREG.

PACIFIC POWER & LIGHT Co.,
D. R. McCLUNG, *President.*

PORTLAND, OREG.

PUGET SOUND POWER & LIGHT,
J. H. CLAWSON, *President.*

SEATTLE, WASH.

WASHINGTON WATER POWER Co.,
G. M. BRUNZELL, *President.*

SPOKANE, WASH.

MONTANA POWER Co.,
J. E. CORETTE, *President.*

BUTTE, MONT.

Chairman HOLIFIELD. Any such amendment as this—and I am not saying from a substantive standpoint that I am against it, but I am saying this, that if this would suspend the WPPSS ability to enter into this contract, or set aside a permanent reserve or even a contractual reserve element, not subject to your immediate usage in case you do have use for it, this would affect your income and, therefore, affect your responsibility on the bond issue would it not?

Senator JACKSON. Mr. Chairman, may I make my point clear on this.

I was not suggesting that this be held open indefinitely; just for a reasonable period of time. We could work that out so that the utilities would have an opportunity to make a decision. My thought was entirely limited, of course, to a reasonable period of time because you have to have these contracts before the bonding companies will want to go forward, and it is a condition precedent to the condition of the bonds, and the bonds would never be sold.

Chairman HOLIFIELD. Therefore, just assume the board did not want to buy, as they have not; they have had this offer before them before as I understand it, and so far the private power group has not responded to it.

Is that not true?

Let us find out. I think we have had testimony on this.

As I understand it, you have contacted private investor utilities and have offered to allow them to participate in this. Is that right?

Mr. HURD. Yes, sir; that is right.

Chairman HOLIFIELD. And have you had any response?

Mr. HURD. Yes. We have had, as I recall, a response from two of the five. And one of them was to the effect that they would be interested in its consideration when more details are available, and we have advanced further in our negotiations and planning.

The other explained various reasons why they would not be interested in it, and that was the extent of the response.

Chairman HOLIFIELD. All right, sir.

Now, if such an amendment is entertained by the committee, what would you suggest as an offering? 90 days? 6 months? a year?

Mr. HURD. At the time it was decided by our organization that it was necessary to execute these agreements, whenever that may be, whether it is 2 months from now or 3 months from now. But there will come a time when we will have to have executed all of these exchange agreements in order to sell our bonds.

Chairman HOLIFIELD. Certainly.

Mr. HURD. And that will be a matter of months.

Chairman HOLIFIELD. That is why I look upon this with some concern, and I think this is a matter that should be very carefully explored.

Mr. HURD. I would like to say this, that I discussed this matter of the long-term contracts or contracts with private utility companies with our attorney this morning, and the substance of our discussion was, and his opinion expressed to me at that time was that the statute itself would not impose any prohibition as to this thing you suggest because we have to offer to our members power which is determined to be surplus. But the supply system will make that determination, and, of course, it will take into account such statutes as may be enacted with regard to this NPR plant.

Senator JACKSON. And this option I assume the utilities would have for a reasonable period of time. I am not offering this to hold up the construction. This, in effect, would be power that would not be surplus until such time as the utilities turned it down; right?

Chairman HOLIFIELD. Until the private utilities turned it down.

Senator JACKSON. Yes.

Mr. HURD. The determination of surplus would be a matter of the judgment of the members themselves, and a lot of factors would enter into that.

Senator JACKSON. Mr. Hurd, I know there have been discussions, and I have talked to some of the private utility representatives some time ago, that they ought to indicate whether they are interested in this even on a long-term basis. I am wondering if your organization made suggestions to them on the sale of this power on a long-term basis with no pullback through the Bonneville system.

Mr. HURD. No. At the time that inquiry was addressed we had not developed the exchange agreement to the point where it is now.

Senator JACKSON. So this proposal I made this morning would be new to them in this form, would it not?

Mr. HURD. I would think that it would be.

Senator JACKSON. I would think that there is an opportunity here, Mr. Chairman, that we ought to explore with some proper safeguards to make sure that this power could be sold, with the assurance that it would be long-term with no pullback provisions. That is one that I would hope contacts would be made on between now and when we meet possibly tomorrow in executive session to see what could be worked out.

I would like very much for the representatives of your group, Mr. Hurd, for you and the representatives, to see what could be worked out.

Mr. HURD. Very good.

Chairman HOLIFIELD. I do not want to write into an amending statute, an authorizing statute, a rigid requirement which might nullify the whole package deal.

I have no objection to the purpose that the Senator has in mind, but it would have to be done in such a way that it would not cripple the WPPSS in assuming the liability for the bond issue, or just by lack of interest on their part or delay you might not be in a position where you could consummate your part of the contract, I mean the requirements for bonding.

Senator JACKSON. Mr. Chairman, it seems to me that inquiry could be made to find out how long the private utilities would need to make a decision. This is almost like a gift from Heaven in a sense. In the Northwest we are talking about making power available at the Bonneville rate, \$17.50 a kilowatt-year on a nonpreference basis.

Well, twist it around the other way on a preference basis to the private utilities. This is something that has never been done any place in the United States.

I am interested in the accomplishment of this project because I do think sincerely it is in the national interest, and I think it is reasonable that the utilities be given an opportunity to purchase not less than half of the output.

I made some suggestions along this line last year, and I do believe that the power situation in the Northwest, Mr. Chairman, being

what it has been testified to, either today or previously at least by Mr. Luce, that the private utilities have a very definite need for power on a long-term basis, and the public bodies being in fairly good shape as far as the next few years are concerned, that this can be done in equity to the private utilities and in equity to the public bodies who do have under the law a position of preference.

Representative HOSMER. Is Mr. Hurd in a position to commit the WPPSS to that proposition as of now, before this committee?

Mr. HURD. I am merely expressing my opinion. I don't think that this matter requires a commitment.

Senator JACKSON. Well, make it a condition.

Representative HOSMER. These gentlemen want to make sure you do it. Are you going to do it?

Mr. HURD. I am sure that if it is written into the authorizing act, we will either have the choice of—

Representative HOSMER. They may not find a way to write it into the authorizing act. Or they may run into some other difficulties.

Are you able to make a commitment on behalf of WPPSS to offer at least half of this participation to private utilities?

Mr. HURD. No, I am not in a position to do so.

Senator JACKSON. Well, can you get that authority?

Chairman HOLIFIELD. Let the Chair suggest that you contact your people between now and tomorrow afternoon at, say, 3 o'clock, and also private utilities, and explore this matter, and then have someone up here tomorrow afternoon at 3 o'clock to give us some further assurance on this matter.

We do not want to write it in unless it is desirable or workable.

(A letter subsequently received appears on p. 120.)

Mr. HURD. I see the difficulty is just expanding the process of asking opinions of individuals, because the ones that I would contact—they themselves would not, without having a meeting called and going through the regular procedures, come to any binding act on the part of the Supply System.

Chairman HOLIFIELD. We will probably have until Tuesday, as I understand it, before we go to the floor. This would give you several days. But we want to meet tomorrow afternoon at 4 o'clock if we can to start working on some amendatory language.

Mr. Van Zandt has informed me that he will be out of town Friday. So the Chair is going to ask that a notice be sent out for the committee to meet in executive session tomorrow afternoon at 4 o'clock.

If you could get us any information before that time that would give us a feel of this matter, we could then consider this point further.

Mr. HURD. I can certainly poll the members of my board this afternoon and report to you their reaction to this proposal. That is about the extent of what I could do.

(See letter concerning the above on p. 120.)

Senator JACKSON. We will get that. And then we can handle it.

Chairman HOLIFIELD. That is all you could be expected to do.

Senator JACKSON. We could handle that with proper language.

Mr. Luce, I assume that you would have a part in this; not with his group, of course, but from the Bonneville point of view in making certain that the exchange of power would not in any wise, in the disposition of it to the private utilities, come in contact with either the preference position of the Bonneville Act or section 44 of the

Atomic Energy Act or any other Federal statute that would be applicable. Could you have a statement concurrently with Mr. Hurd's?

Mr. LUCE. Yes, I could have an opinion from our Washington counsel as far as the Bonneville Act is concerned. I do not know that we are any great experts on section 44.

Senator JACKSON. We will make it tripartite here and have Mr. Hennessey supply something.

Mr. HENNESSEY. We have already testified, Senator, that we do not have any problem with section 44, with the secondary distribution of the energy. It is only on the sale by the Commission.

Senator JACKSON. By a direct sale.

Mr. HENNESSEY. Yes.

Senator JACKSON. Well, could you have a letter to the chairman concurrent with Mr. Luce's opinion under the provisions of the Bonneville Act, and then Mr. Hurd would have his statement, and we will have the three which I think covers the situation, Mr. Chairman.

(Letter from Mr. Hurd appears on p. 120.)

(See Mr. Hennessey's letter dated July 12, 1962, and Secretary of the Interior letter follows:)

U.S. ATOMIC ENERGY COMMISSION,
Washington, D.C., July 11, 1962.

HON. CHET HOLIFIELD,

Chairman, Joint Committee on Atomic Energy.

DEAR MR. HOLIFIELD: At the hearings conducted by the Joint Committee on Atomic Energy on July 11, 1962, you requested that we advise the committee as to any effect the preference provisions of the Atomic Energy Act might have upon a proposal made by Senator Jackson with respect to the proposed arrangement with Washington Public Power Supply System. Senator Jackson's suggestion was that any legislation specifically authorizing the Commission to enter into the proposed WPPSS contract should include a provision that not less than one-half of the electric power to be produced in the generating facilities to be constructed by WPPSS shall be offered to nonpreference utilities.

The preference provisions of the Atomic Energy Act with respect to disposition of energy are contained in section 44. This section provides that, in contracting for the disposal of energy produced at production facilities of the Commission "the Commission shall give preference and priority to public bodies and cooperatives or to privately owned utilities providing electric utility services to high cost areas not being served by public bodies or cooperatives."

In my opinion, the sale of steam energy to Washington Public Power Supply System, a municipal corporation and publicly owned utility established under the laws of the State of Washington, as provided in the proposed contract between the Commission and the WPPSS, would satisfy the preference requirements of the Atomic Energy Act. If the Congress should enact authorizing legislation including the proviso proposed by Senator Jackson, there would be no legal impediment to the inclusion in our contract with WPPSS of provisions that would impose on WPPSS the obligation to further dispose of electric power in accordance with the statutory restrictions.

Sincerely yours,

JOSEPH F. HENNESSEY,
Acting General Counsel.

DEPARTMENT OF THE INTERIOR,
BONNEVILLE POWER ADMINISTRATION,
OFFICE OF THE ADMINISTRATOR,
Portland, Oreg., July 12, 1962.

HON. CHET HOLIFIELD,

*Chairman, Joint Committee on Atomic Energy,
House of Representatives, Washington, D.C.*

DEAR MR. HOLIFIELD: Enclosed is a legal opinion of the Associate Solicitor for Water and Power, Department of the Interior, regarding the inapplicability of the pullback provision of the Bonneville Project Act to exchange agreements

with privately owned utilities. This is in response to your request made at the hearing on the Hanford project on July 11, 1962.

Sincerely yours,

CHARLES F. LUCE, *Administrator.*

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SOLICITOR,
Washington, D.C., July 12, 1962.

Memorandum to: Administrator, Bonneville Power Administration, Portland.
From: Associate Solicitor, Water and Power.
Subject: Exchange contracts with private utilities under section 5(b) of the Bonneville Power Act.

The provisions of the Bonneville Act with respect to pullback of power from private utilities on 5 years' notice if power is needed by preference customers and relative to a maximum contract term of 20 years relate only to contracts for the sale of power under section 5(a) of the Bonneville Project Act. Neither of these provisions is applicable to a contract for the exchange of power under section 5(b) of the Bonneville Project Act.

A private utility becoming a participant in the plan proposed by the Washington Public Power Supply System, thereby purchasing a percentage of the output of the generating facilities to be installed in connection with the Hanford reactor in the same manner as the proposed public agency participants, could enter into an agreement with the Bonneville Power Administration to exchange the private utility's portion of the Hanford generation for Bonneville Power Administration generation to be delivered at a time usable in the utility load curve. The exchange under these circumstances could result in a long-term power supply being made available to the participating private utility by means of its purchasing a share of the output of the Hanford facilities and exchanging it for Federal power under section 5(b) of the Bonneville Project Act. The pullback provisions would not be applicable to such long-term power supply.

EDWARD WEINBERG,
Associate Solicitor, Water and Power.

Copy to regional solicitor, Portland, Washington office, Bonneville Power Administration.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., July 12, 1962.

HON. CHET HOLIFIELD,
House of Representatives,
Washington, D.C.

DEAR MR. HOLIFIELD: You have requested that we report on the progress of our negotiations with locally owned utilities for the non-Federal financing, construction, and operation of electric generating facilities at the Hanford NPR.

We are happy to report the conclusion of such negotiations. The Washington Public Power Supply System is prepared to finance, install, and operate such facilities at Hanford. The Supply System is a municipal corporation in the State of Washington composed of 16 public utility districts, all of whom are customers of the Bonneville Power Administration. In the aggregate, they presently purchase more than 1 million kilowatts of power from Bonneville each year.

The Atomic Energy Commission, which is a necessary party to any contractual arrangements for the addition of generating facilities at Hanford, reports that it, too, has completed negotiations with the Washington Public Power Supply System.

The proposed addition of two 400,000-kilovolt turbines and generators to NPR will provide important benefits to the Nation without the expenditure of tax receipts.

1. The tremendous quantity of byproduct steam incidental to the manufacture of plutonium in the NPR will be used and not wasted.

2. The Federal Treasury will be given an opportunity to recoup the \$25 million that has been spent in making NPR convertible for the dual purpose of producing electricity. The Supply System proposes to pay for the otherwise waste steam on a schedule which will total \$31 million if the reactor is used for the dual purpose of manufacturing plutonium and electricity for only 10 years, and \$64,500,000 if the period is 15 years. If the reactor

is used for these purposes as long as 24 years, the Supply System will pay the Atomic Energy Commission \$125 million for the otherwise waste steam.

3. There will be added to the Pacific Northwest Power Pool more than 800,000 kilowatts of firm power at a cost, including the payments for byproduct steam, comparable to the costs of alternative new sources of electricity in that region.

4. Important fish conservation goals will be served because this project, unlike some hydro projects, has no fish problems. Any effect of Hanford on the fishery resource would be beneficial. For this reason, commercial and sport fishing groups in the Pacific Northwest are supporting the addition of generation facilities at Hanford.

The Bonneville Power Administration has had an independent review made of the technical feasibility of this project, and is convinced of both the technical and economic desirability of the project. The supply system plans to spend approximately \$6 million in research to improve the efficiency of the power-only fuel formula, research that may well advance the science of nuclear-power production.

The bases of the particular agreements between the Bonneville Power Administration, the Washington Public Power Supply System, the Atomic Energy Commission, and the participating utilities are described in the project justification data, arrangement No. 63-1000 phase I and phase II, which has been presented to your committee by the Atomic Energy Commission. The Solicitor's Office of the Department of the Interior has reviewed the proposed agreement that Bonneville Power Administration prepared to enter into and finds it clearly within the authority of the Bonneville Project Act.

For the protection of the Government, the proposed contracts give the United States an option to acquire the Hanford generating facilities at any time for a price equal to the unamortized balance then owing on the supply system's revenue bonds. This option, however, could not be exercised unless Congress first approved the acquisition.

We appreciate your continued interest in the construction of this dual-purpose reactor at the Hanford Atomic Energy Works in Richland, Wash. We know you share our concern that a resource so vital to the Nation should not be wasted. The construction of this first dual-purpose reactor in the United States will be of inestimable value in reaffirming the goal of this country to utilize nuclear energy for peaceful purposes. We can assure you that the Department of the Interior wholeheartedly endorse this project and the above arrangements for its construction.

Sincerely yours,

STEWART L. UDALL,
Secretary of the Interior.

Chairman HOLIFIELD. That is satisfactory.

Representative HOSMER. I want to say for the record that I am not interested one way or the other in this 50 percent proposal. But as long as Mr. Jackson wants it, it is all right.

Senator JACKSON. I assume that I am not asking you to agree on everything else. But you really would not object to this—this part of it.

Representative HOSMER. No. I just do not care.

Senator JACKSON. OK.

Chairman HOLIFIELD. Well, if there are no further questions, thank you, gentlemen, for your appearances, and the committee stands adjourned.

(Statements received subsequent to the hearings follow:)

OLYMPIA, WASH., July 12, 1962.

CHET HOLIFIELD,
Chairman, Joint Atomic Committee,
Washington, D.C.:

As Governor of the State of Washington I stand firmly with the bipartisan Northwest congressional delegation in support of the proposal to add generating facilities to the new production reactor at Hanford Atomic Works.

These facilities if added will give the Northwest 800,000 kilowatts of much-needed salable firm power. Firm power means new industries, new jobs, and

new purchasing power. The legislation before you will have a direct effect on the economic well-being of millions of citizens in the Pacific Northwest.

The need for additional firm power is great. By 1965 the Pacific Northwest under critical water conditions could fall short of its needs by 120,000 kilowatts.

Congress has the opportunity to conserve 11 million pounds of steam per hour. Over a 20-year period this steam would be valued at \$125 million. It can be provided at no further expense to the taxpayers. It should also be noted here that \$25 million of dual purpose features already have been purchased and installed at the expense of taxpayers in order to prepare for these facilities.

I favor the addition of these generating facilities through the Washington Public Power Supply System, a group of 11 public utility districts who proposed to finance the project by issuing revenue bonds. Both publicly owned and operated electric utilities and those operated by private corporations will profit from this project. More than half of the low cost power generated by public agencies in the Northwest is purchased for distribution by privately owned utilities.

The present proposal must be distinguished from legislation offered last year to provide for Federal financing, construction, and operation of the generating facilities. We now have a way of financing these features through revenue bonds without cost to State or Federal Government. We simply ask that no negative legislation be passed and that the local authority be given to the Atomic Energy Commission to enter into the necessary contracts.

The generation of this power coupled with advances in transmission efficiency will prove advantageous to the entire Nation, and in view of the times in which we live, to the free world.

ALBERT D. ROSELLINI,
Governor of Washington State.

AMERICAN FEDERATION OF LABOR &
CONGRESS OF INDUSTRIAL ORGANIZATIONS,
Washington, D.C., July 12, 1962.

HON. CHET HOLIFIELD,
*Chairman, Joint Atomic Energy Committee,
The Capitol, Washington, D.C.*

DEAR MR. CHAIRMAN: The American Federation of Labor & Congress of Industrial Organizations supports the proposal of the Washington Public Power Supply System to finance, construct, and operate electricity-generating facilities to utilize heat now wasted at the Atomic Energy Commission's new plutonium reactor at Hanford, Wash.

The AFL-CIO has in the past strongly supported economically feasible engineering proposals by which the colossal amount of waste heat from plutonium manufactured at Hanford could be converted into electric power for use in the Pacific Northwest. A policy statement on atomic energy, adopted by the AFL-CIO Fourth Constitutional Convention in December 1961, reiterates this position.

The WPPSS proposal, although directed to the same ends, differs from the plan, rejected last year by Congress, for Federal financing, construction, and operation. The new proposal will not require Federal funds, nor will it involve Federal ownership or operating responsibilities. Furthermore, the WPPSS plan would enable the Federal Government to acquire the power-generating facilities at any time for the unamortized capital cost. The Federal Government will receive from the WPPSS revenues far greater than the Federal \$25 million investment in the Hanford power-conversion facilities.

The WPPSS plan will help the region meet an anticipated shortage of power expected by 1965-66 and it will greatly stimulate plutonium recycle power generation technology, thus speeding progress toward the goal of nuclear power at costs competitive with power derived from fossil fuels.

The Pacific Northwest now depends on hydropower for nearly all its electricity supply. The region does not import coal for its present small amount of thermal power generation. The tremendous increase in the power demand in the Columbia Basin will speed the inevitable changeover from hydropower to a combined hydrothermal power system. Thus, the WPPSS plan will stimulate use of local coal resources by the region's electric utilities.

Fish and wildlife near the Hanford reactor are now seriously injured by waste heat dumped into the Columbia River. Construction of the power facility at the reactor to utilize this waste heat will vastly improve the environment of fish

and wildlife in this area. For this reason, conservation groups and fishery interests strongly support the WPPSS proposal.

The AFL-CIO supports conservation of our natural resources. We also support planning and development in the public interest of new sources of power. We therefore urge the U.S. Congress to approve the WPPSS plan to finance, construct, and operate the power facilities of the new plutonium reactor at Hanford.

I ask that this letter be included in the printed record of hearings on the WPPSS proposal.

Sincerely yours,

ANDREW J. BIEMILLER,
Director, Department of Legislation.

(Whereupon, at 4:34 p.m., Wednesday, July 11, 1962, the committee adjourned.)

APPENDIXES

APPENDIX 1

Amendments adopted by the Joint Committee in executive session on July 13, 1962. Also included is an analysis of the proposed amendments and the program justification data. (These documents are also printed on pp. 12591-12598 of the Congressional Record of July 13, 1962.)

AMENDMENT TO H.R. 11974 ADOPTED BY THE JOINT COMMITTEE ON ATOMIC ENERGY ON JULY 12, 1962

On page 15, after line 5, add the following new section:

"SEC. 112. The Commission is authorized to enter into arrangements with non-Federal entities in accordance with the basis for arrangements described in program justification data No. 63-1000, for the construction and operation of electric energy generating and transmission facilities at the Hanford new production reactor and under any such arrangements energy produced shall be delivered and disposed of in accordance with the basis for arrangements described in said program justification data No. 63-1000: *Provided*, That all expenses of modifications of the Hanford new production reactor made at the request of the non-Federal entities, and all expenses of constructing and operating such electric energy generating and transmission facilities shall be borne by the non-Federal entities."

FURTHER AMENDMENT OF AMENDMENT TO H.R. 11974 ADOPTED BY JOINT COMMITTEE ON ATOMIC ENERGY ON JULY 12, 1962

"*Provided further*, That the Commission shall not conclude any contract for the sale of steam to a non-Federal entity unless the Commission determines that such entity has first offered 50 percent participation in the arrangements described in program justification data No. 63-1000 to privately owned organizations on a nondiscriminatory basis: *And provided further*, That no Federal agency may acquire the generating facilities from the non-Federal entity without prior congressional authorization and in the event of such authorization the generating facilities shall be acquired subject to contracts then in existence for disposition of the electrical energy produced by the facilities."

ANALYSIS OF COMMITTEE AMENDMENTS TO H.R. 11974 ADOPTED BY THE JOINT COMMITTEE ON ATOMIC ENERGY, JULY 12, 1962, AUTHORIZING ARRANGEMENTS FOR UTILITY PROPOSAL TO CONSTRUCT AND OPERATE ELECTRIC GENERATING FACILITIES AT THE HANFORD NEW PRODUCTION REACTOR

SUMMARY

The purpose of these amendments, which add a new section 112 to the AEC fiscal year 1963 authorization bill (H.R. 11974), is to provide specific authorization for certain arrangements between the Atomic Energy Commission and the Washington Public Power Supply System (WPPSS), a group of 16 utility districts in the State of Washington, for the sale of byproduct steam, and the construction and operation of electric generating facilities at the Hanford new production reactor (NPR), an Atomic Energy Commission production facility. The arrangements would require that the electric energy generating facilities be built and operated by WPPSS at its own expense. The arrangements further provide that electric energy produced by the generating facilities, having rated capacity of 800,000 kilowatts, would be transferred to the Bonneville Power Administration under power exchange agreements with public and private utilities in the Pacific Northwest.

BACKGROUND

1. *Authorization of the NPR in 1958.*—The NPR was authorized by the Congress in 1958 as project 59-a-5 of Public Law 85-590, "Production reactor facility for special nuclear materials, convertible type, Hanford, Wash., \$145,000,000." The purpose of the reactor is to produce plutonium for the nuclear weapons program. The convertible type of reactor authorized for this purpose is a reactor with certain design features which would permit the utilization of the heat (steam) generated in the plutonium production process for the production of byproduct electrical energy. The authorization did not include funds for the construction of the necessary plant and equipment additions required for the generation of electric energy.

2. *Congressional action in the 87th Congress, 1st session.*—In 1961, the administration proposed the Federal construction of the electric generating plant at the NPR. This proposal would have required the authorization of \$95 million of Federal funds for the construction of the facilities and in addition, would have required the Atomic Energy Commission to operate the electric plant. The Congress did not authorize the expenditure of Federal funds for this purpose.

3. *The WPPSS proposal.*—Recently, a group of public utility districts in the State of Washington, comprising the Washington Public Power Supply System, proposed to build and operate the facilities at their own expense and without any Federal expenditures. Proposed contractual arrangements have been negotiated among the participating parties which include the Washington Public Power Supply System, its participating utilities, the Atomic Energy Commission and the Bonneville Power Administration. The contracts have not been signed as yet.

Under these contracts, WPPSS would construct and operate the electric generating facilities at its own expense. AEC would sell the otherwise wasted NPR steam to WPPSS at a price, approved by the Federal Power Commission which could result in the receipt by the Commission of from \$31 million to \$125 million over a 10- to 24-year dual purpose period.

The participating utilities would turn over the entire output of the NPR generating facilities to the Bonneville Power Administration under appropriate power exchange agreements.

4. *Comptroller General's ruling.*—These contracts were reviewed by the General Counsel of the Atomic Energy Commission and the regional solicitor of the Bonneville Power Administration, respectively. Each concluded independently that its agency had ample legal authority for these arrangements. However, on July 7, 1962, in response to a request for an opinion on the legality of these arrangements from the Atomic Energy Commission, the Comptroller General ruled that the AEC could not enter into these arrangements without further congressional authorization.

5. *Joint Committee hearings.*—In order to decide as to an appropriate future course of action, including any necessary amendments to the AEC fiscal year 1963 authorization bill, the Joint Committee commenced hearings on July 10, 1962, continuing through July 11, 1962. In the course of these hearings, the Joint Committee thoroughly reviewed every phase of these proposed arrangements. Among the witnesses who testified were the following:

Hon. Robert Wilson, Commission, U.S. Atomic Energy Commission.

Mr. Joseph Hennessey, Acting General Counsel, AEC.

Mr. George F. Quinn, Director, Division of Production, AEC.

Mr. Charles F. Luce, Administrator, Bonneville Power Administration.

Mr. Owen Hurd, managing director, Washington Public Power Supply System.

In addition, the committee received an extensive number of letters and documents pertaining to the WPPSS proposal. These hearings are now being printed for the use of the members. In the interim, the staff of the Joint Committee has prepared a committee print entitled "Utility Proposal for Powerplant Addition to Hanford New Production Reactor" compiling in one place, all of the available background materials pertinent to a consideration of the WPPSS proposal.

6. *Committee action on amendment to AEC authorization bill.*—On July 12, 1962, the Joint Committee on Atomic Energy, in an executive session, adopted two amendments to the AEC fiscal year 1963 authorization bill (H.R. 11974). The amendments provide specific authorization for arrangements, pursuant to

program justification data No. 63-1000, for the construction and operation of electric generating facilities at the Hanford new production reactor (NPR) by the Washington Public Power Supply System. Program justification data No. 63-1000 is attached as an appendix to this analysis.

TEXT OF AMENDMENTS

AMENDMENT TO H.R. 11974 ADOPTED BY THE JOINT COMMITTEE ON ATOMIC ENERGY
ON JULY 12, 1962

On page 15, after line 5, add the following new section :

"Sec. 112. The Commission is authorized to enter into arrangements with non-Federal entities in accordance with the basis for arrangements described in program justification data No. 63-1000, for the construction and operation of electric energy generating and transmission facilities at the Hanford new production reactor and under any such arrangements energy produced shall be delivered and disposed of in accordance with the basis for arrangements described in said program justification data No. 63-1000: *Provided*, That all expenses of modifications of the Hanford new production reactor made at the request of the non-Federal entities, and all expenses of constructing and operating such electric energy generating and transmission facilities shall be borne by the non-Federal entities."

FURTHER AMENDMENT OF AMENDMENT TO H.R. 11974 ADOPTED BY JOINT COMMITTEE
ON ATOMIC ENERGY ON JULY 12, 1962

"*Provided further*, That the Commission shall not conclude any contract for the sale of steam to a non-Federal entity unless the Commission determines that such entity has first offered 50 percent participation in the arrangements described in program justification data No. 63-1000 to privately owned organizations on a nondiscriminatory basis: *And provided further*, That no Federal agency may acquire the generating facilities from the non-Federal entity without prior congressional authorization and in the event of such authorization the generating facilities shall be acquired subject to contracts then in existence for disposition of the electrical energy produced by the facilities."

ANALYSIS OF AMENDMENTS

The basic amendment adds a new section 112 to the AEC fiscal year 1963 authorization bill (H.R. 11974).

The Atomic Energy Commission is given specific authorization "to enter into arrangements with non-Federal entities in accordance with the basis for arrangements described in program justification data No. 63-1000 for the construction and operation of electric energy and transmission facilities at the Hanford new production reactor."

This method of authorizing complex contractual arrangements is a standard form of authorization followed by the Joint Committee and the Congress in the past. For example, see section 109(d) (authorizing arrangements with the Florida West Coast Nuclear Group and the East Central Nuclear Group) and 109(e) (authorizing arrangements with the Pennsylvania Power & Light Co. and the Westinghouse Corp.) of Public Law 85-590 and section 109(c) of Public Law 87-315 (authorizing arrangements with Dairyland Power Cooperative and the Allis-Chalmers Manufacturing Co.).

Under the proposed arrangements, the Washington Public Power Supply System would build and operate electric generating facilities at the NPR, on 13 acres of land leased from the AEC. All costs of constructing and operating the electric generating facilities will be paid for by WPPSS. Any modifications in the NPR itself, which are requested by WPPSS, and approved by the Commission, will likewise be paid for by WPPSS.

The Commission would, in return, deliver any steam energy in excess of its needs, and produced incident to the operation of the NPR, to WPPSS. WPPSS will make fixed payments to the Commission for such steam, regardless of quantity or quality delivered. These payments could range up to \$125 million depending upon the period of dual-purpose operation, according to a schedule which is part of the program justification data.

If plutonium production ceases, AEC will lease the NPR reactor to WPPSS, for the purpose of producing steam energy.

The justification data specifically provide that: "The Commission will be compensated in advance for all costs associated with modifications of the NPR and construction and operation of the generating facilities in connection with this arrangement which the Commission would not have had if it had not entered into the arrangement. At no time will the Commission be required to expend its own funds. Those costs which result from activities which the Commission agrees to undertake shall be paid for from funds advanced to the Commission by WPPSS."

The amendment further provides that "energy produced shall be delivered and disposed of in accordance with the basis for arrangements described in said program justification data No. 63-1000."

Under these arrangements, the WPPSS will issue revenue bonds to obtain funds to build the project. The output of the NPR plant will be sold and delivered to the participating utilities at Vantage, Wash. The participating utilities may include publicly and privately owned utilities, but all are initially customers of the Bonneville Power Administration. Each participating utility will purchase a fractional share of the Hanford output for which it will agree to pay the same fractional share of the total annual costs of the project.

The participating utilities, as a group, will jointly deliver into the BPA system at Vantage their respective shares of the output of the NPR generation. In exchange, Bonneville will make energy and capacity available to each participating utility at its load centers, under the terms of its power sales contract with BPA. The amount of power which BPA will make available to such utilities will be an amount equal in value, under the current BPA rate, to the utilities' share of the annual costs of operating the electric generating facilities and amortizing the capital investment.

After the end of each contract year the actual costs will be determined and an appropriate adjustment in energy will be made under the remaining months of the current contract year, if such actual costs differ from the estimated costs.

The Government may acquire the project (1) prior to the time when all bonds and other obligations have been paid by assuming the outstanding balance of such obligations or (2) upon the termination of the agreement. In either event, prior congressional authorization would be required. Moreover, under the final proviso of the further amendment, such authorization would be subject to contracts then in existence, and participating utilities would be assured a continuation of their power supply as though WPPSS were still owner of the generating facilities.

Three provisos then follow:

The first proviso is to the basic amendment and requires that "all expenses of modifications of the Hanford new production reactor made at the request of the non-Federal entities, and all expenses of constructing and operating such electric energy generating and transmission facilities shall be borne by the non-Federal entities."

Although it is clear from the program justification data that all reactor modification expenses as well as the costs of constructing and operating the electric generating facilities will be paid for by the WPPSS, without any Federal expenditures, it was thought desirable to specifically spell out this requirement in the law.

The final provisos which are included in the further amendment concern arrangements and guarantees to private organizations.

The second proviso requires that "the Commission shall not conclude any contract for the sale of steam to a non-Federal entity unless the Commission determines that such entity has first offered 50 percent participation in the arrangements described in program justification data No. 63-1000 to privately owned organizations on a nondiscriminatory basis * * *"

This provision guarantees that the Commission would not enter into any contract with WPPSS, until it (the AEC) had determined that there had been an offer to privately owned organizations (including private-investor owned utility companies) of 50 percent participation in the arrangements. Thus, privately owned organizations, under contracts with WPPSS, would have the right to obtain up to one-half of the NPR output and enter into necessary power exchange agreements with BPA for the distribution of the energy.

Such an offer would have to be on a "nondiscriminatory basis." Thus, private organizations, to the extent of their proportionate share of NPR energy, will be able to obtain this energy without regard to existing provisions of law, grant-

ing preference to public power groups and imposing "pullback" limitations on private organizations.

The third proviso requires that "no Federal agency may acquire the generating facilities from the non-Federal entity without prior congressional authorization and in the event of such authorization the generating facilities shall be acquired subject to contracts then in existence for disposition of the electrical energy produced by the facilities."

As noted earlier, there are certain contingencies under which the Federal Government might acquire the NPR electric generating facilities. In this event, congressional authorization would be required for such acquisition.

In order to guarantee the rights which are granted to privately owned organizations under the second proviso, as well as the rights of all participating utility districts, this third proviso requires that if the Government acquires the electric generating facilities, such acquisition would be subject to existing contractual rights and obligations. Thus, privately owned organizations could be assured that under no circumstances would their share of NPR electric energy be subject to the provisions of any law respecting preference or pullback.

Moreover, if privately owned organizations become parties to exchange contracts, BPA's obligation to make deliveries of power to them under the contracts in the event of a regional power shortage would be the same as its obligation to make deliveries of power to public agencies.

(Program Justification Data referred to above follows :)

JULY 12, 1962.

PROGRAM JUSTIFICATION DATA—ARRANGEMENT No. 63-1000

PHASE I

A. Parties

The Atomic Energy Commission and the Washington Public Power Supply System (WPPSS), Kennewick, Wash., a municipal corporation, joint operating agency and publicly owned utility organized under the laws of the State of Washington, and composed of 16 public utility districts.

B. Description of proposed arrangement

(1) *Objective.* The objective of this proposed arrangement is to sell to WPPSS excess steam energy produced in the course of operating the NPR, for the production, in generating facilities constructed and operated by WPPSS, of large quantities of power, 800,000 kilowatts rated capacity. The Commission, through the sales of such excess steam energy, would recover appreciable sums of money, thus reducing the cost of plutonium to be produced in the NPR. Furthermore, programmatic objectives of the Commission would be accomplished through contribution to the Nation's nuclear power development program. The arrangements for distributing the power generated by WPPSS are outlined in phase II. During periods when the Commission is not operating the NPR for its own purposes, the NPR would be leased to WPPSS to permit its continued operation for steam production. Such a lease arrangement would assist in shortening the period required to resume production activities and lower standby costs should national defense interests require such resumption.

(2) *Location.*—Hanford, Wash.

C. General features of proposed arrangement

(1) *Land lease.*—The Commission will make available approximately 13 acres of land on which WPPSS will construct necessary facilities to permit generation of power. Under the lease, WPPSS will be limited in its use of the land to the purposes set forth therein; namely, to construct and operate generating facilities. WPPSS will have rights of ingress and egress as well as certain easements for transmission lines and supporting structures. The Commission will have the right to terminate the lease with reasonable notice if the land is misused or disused, or if WPPSS becomes insolvent. If the lease is terminated prior to expiration, the Government may elect to acquire the facilities, in which case it will be required to assume the outstanding indebtedness of WPPSS under the bonds issued for this project. The Government will have an option to take title to the generating facilities, without cost, upon expiration of the lease. WPPSS will pay the Commission rent charges of \$1,000 for the first year and \$10

per year thereafter. The expiration date of the lease will be the same as that of the contract. (See (13) below.)

(2) *Construction of generating facilities.*—WPPSS will construct, at its expense, the necessary generating facilities.

(3) *Modifications in NPR.*—The Commission agrees to make certain modifications in the NPR which are requested by WPPSS and which are acceptable to the Commission, to be paid for by WPPSS, to improve the quality and dependability of the steam for the generation of electric power.

(4) *Delivery of steam energy.*—Upon completion of the generating facilities and during periods when the Commission is operating the NPR, the Commission will, consistent with the safe, efficient and effective operation of the NPR, make available to WPPSS all steam energy in excess of the needs of the Commission produced incident to the operation of the NPR.

(5) *Commission review of designs, plans, and specifications relating to generating plant.*—The Commission will have the right to review all designs, plans, and specifications relating to construction and modifications of the generating facilities and approve any features which the Commission determines could affect the safe and effective operation of the NPR or of other plants and facilities of the Commission.

(6) *Commission inspection rights.*—The Commission will have the right to inspect at all reasonable times the construction of the generating facilities and the operation of those facilities, during both the dual-purpose and power-only phases, to assure that the safety, efficiency, and effectiveness of the NPR and other Commission facilities is not impaired. The Commission will have comparable inspection rights concerning the NPR during the power-only phase. In addition, the Commission, as a consequence of inspection, during both the dual-purpose and power-only periods, may require WPPSS to undertake certain programs in order to assure the safety, efficiency, and effectiveness of the NPR and other Commission plants and facilities.

(7) *Commission direction of operations during emergencies.*—During any period in which the Commission determines that an emergency exists relating to the safety and effectiveness of the NPR, the Commission may direct all actions and operations involving the generating facilities, and involving the NPR during periods when it is leased to WPPSS, until the emergency is terminated.

(8) *Transition to power-only operation.*—At times when the Commission gives notice to WPPSS that dual-purpose operation is to be suspended, WPPSS will take necessary steps to satisfy any licensing requirements which may be a condition precedent to its operation of the NPR and will undertake any necessary modifications in the generating facilities necessary to accommodate power-only operation. The Commission at the same time agrees to undertake necessary modifications of the NPR which are acceptable to the Commission, to be paid for by WPPSS. The Commission will then tender to WPPSS the NPR under a lease agreement described in paragraph (9) below.

(9) *NPR lease.*—Under the terms of the lease, WPPSS will be required to use the NPR solely for the production of steam energy to operate the generating facilities. WPPSS will comply with the provisions of the basic contract pertaining to use, maintenance and operation of the NPR. The Commission will have the right to terminate the lease if the NPR is not used in the manner provided for in the lease and in the basic contract. WPPSS will pay the Commission rent charges of \$1,000 for the first year and \$10 per year thereafter. The expiration date of the lease will be the same as that of the contract. (See (13) below.)

(10) *Recapture of NPR by Commission.*—The Commission will have the right, at all times when the WPPSS is operating the NPR, to recapture the NPR for production or other purposes.

(11) *Compensation to Commission for costs of activities undertaken by Commission.*—The Commission will be compensated in advance for all costs associated with modifications of the NPR and construction and operation of the generating facilities in connection with this arrangement which the Commission would not have had if it had not entered into the arrangement. At no time will the Commission be required to expend its own funds. Those costs which result from activities which the Commission agrees to undertake shall be paid for from funds advanced to the Commission by WPPSS.

(12) *Charges for steam energy.*—WPPSS will pay to the Commission fixed charges for steam during all periods of dual-purpose operation. Fixed payments will be made irrespective of the quantity or quality of steam energy delivered or available, in accordance with the following schedule :

[In millions of dollars]

Years of dual-purpose operation	Annual payment	Cumulative payment	Years of dual-purpose operation	Annual payment	Cumulative payment
1	0.1	0.1	14	6.7	57.8
2	.1	.2	15	6.7	64.5
3	.2	.4	16	6.7	71.2
4	.2	.6	17	6.7	77.9
5	.6	1.2	18	6.7	84.6
6	.8	2.0	19	6.7	91.3
7	1.6	3.0	20	6.7	98.0
8	10.0	13.0	21	6.7	104.7
9	10.0	23.0	22	6.7	111.4
10	8.	31.0	23	6.7	118.1
11	6.7	37.7	24	6.9	125.0
12	6.7	44.4	Each year after 24	5.0	-----
13	6.7	51.1			

(13) *Term and termination.*—The duration of the contract shall be from its execution until the revenue bonds issued by WPPSS have been paid or retired and shall continue thereafter so long as WPPSS continues to own and operate the generating facilities. The contract may be terminated by the Commission in the event the land lease or the NPR lease is terminated by the Commission.

(14) *Miscellaneous provisions.*—Certain additional miscellaneous provisions are also contained, such as the Commission's agreement to—

(a) Make available without charge previously prepared studies, designs, plans, etc., which are necessary for the design, construction and operation of the generating facilities.

(b) Provide certain supplies and services to the extent that the Commission determines that they are available, at the expense of WPPSS.

(c) Conduct certain technical studies concerning the relationship of the NPR to the generating facilities and vice versa, at the expense of WPPSS.

(d) To the extent and under the same terms and conditions that the Commission would provide comparable materials and services to other licensees, make available special nuclear material for fuel and perform fuelcycle services for power-only operation.

(e) The contract has other provisions relating to Government property, patents, security, availability of information and reports, and various standard clauses required in all contracts to which an agency of the United States is a party.

A. Names of contractors

Trilateral contracts among the Bonneville Power Administration (BPA), the Washington Public Power Supply System (WPPSS), and individual participants (currently public utility districts in the State of Washington but may include other publicly cooperatively or privately owned utilities or industrial firms in Bonneville marketing area).

B. Description of proposed arrangement

1. *Objective.*—The objective of this proposed arrangement is to make it feasible for WPPSS to purchase and pay for the byproduct NPR steam. The arrangement would also assist BPA to firm up and thereby make salable large quantities of surplus peaking capacity and secondary electric energy which otherwise would be wasted to meet a need for additional firm power to supply publicly and privately owned public utilities, cooperatives and industries in the Pacific Northwest. The mutual exchange of power would also result in more economical operation of the Columbia River power system.

C. General features of proposed arrangement

(1) *Financing construction and operation of the works, plants, and facilities for generation and transmission of power and energy project.*—The Supply System will issue revenue bonds pursuant to the bond resolution of the Supply System to obtain the funds to build the project. It will sell the output of the

plant, delivered at Vantage, Wash., to the participating utilities, which may include publicly and privately owned utilities, but all are initially customers of Bonneville Power Administration. Each participating utility will purchase a fractional share of the Hanford output for which it will agree to pay the same fractional share of the total annual costs of the project, including bond amortization.

(2) *Term.*—Commencing at 12 p.m. on the date of execution and ending when the revenue bonds are paid, continuing thereafter until notice of termination is given by the Administrator.

There is an additional termination provision for the period prior to the commencement of commercial operation of the project if, during such period, the AEC discontinues construction of NPR, or the continuation of the agreement becomes economically unjustified. In the event of such termination, the Government will reimburse the Supply System for costs incurred up to the date of termination. (These provisions principally relate to the contingency of an international agreement affecting the project.)

(3) *Construction of the project.*—The Supply System will construct the project and the transmission facilities required to connect into the Bonneville system at Vantage, Wash.

(4) *Exchange of energy and payment of project annual costs.*—The participating utilities, as a group, will jointly deliver into the BPA system at Vantage their respective shares of the output of the NPR generation. In exchange, Bonneville will make energy and capacity available to each participating utility at its load centers, under the terms of its power sales contract with BPA. The amount of power which BPA will make available to such utilities will be an amount equal in value, under the current BPA rate, to the utilities' share of the annual costs of the Hanford project.

If privately owned organizations, as participants, become parties to exchange contracts, BPA's obligation to make deliveries of power to them under the contracts in the event of a regional power shortage would be the same as its obligation to make deliveries of power to public agencies.

After the end of each contract year the actual costs will be determined and an appropriate adjustment in energy will be made under the remaining months of the current contract year, if such actual costs differ from the estimated costs.

If any participant should no longer have a power sales contract with BPA, the Government will make available exchange electric energy in an amount which is equal to the quotient obtained by dividing his monthly share of the project annual costs by the average cost per kilowatt-hour for firm power under the prevailing rates to other participants of the same class who are customers of the Government. The rate of delivery of such energy will be determined by dividing such energy in average kilowatts by 60 percent.

(5) *Scheduling arrangements.*—The operation of the project will be scheduled by the Government dispatcher.

(6) *Operation and maintenance of the project.*—The Supply System will operate and maintain the project. Planned outages will take place, if possible, when the Government's commitments are least affected.

(7) *Ownership of facilities and option to acquire.*—Ownership of the project during the term of agreement will be in the Supply System. The Government may acquire the project (1) prior to the time when all bonds and other obligations have been paid by assuming the outstanding balance of such obligations or (2) upon the termination of the agreement. In either event, prior congressional authorization would be required.

(8) *The Supply System-AEC agreement.*—The Supply System and the AEC will have entered into an agreement for construction and operation of the project. The AEC agreement, to which the Supply System obligates itself, will be attached to the agreement.

(9) *Accounts.*—The Supply System will keep accurate records and accounts for the project which will be annually audited by a firm of certified public accountants. A copy of this audit will be furnished the BPA.

(10) *Other provisions.*—The contract has other provisions relating to insurance, maintenance of reserve funds, waivers of default, notices, assignment, arbitration, rates, and various standard clauses required in all contracts to which an agency of the United States is a party.

APPENDIX 2

AEC LETTER TO JCAE, JULY 13, 1962, CONCERNING ADVANCED PAYMENTS BY WPPSS

U.S. ATOMIC ENERGY COMMISSION,
Washington, D.C., July 13, 1962.

HON. CHET HOLIFIELD,
Chairman, Joint Committee on Atomic Energy,
Congress of the United States.

DEAR MR. HOLIFIELD: We understand that a question has been raised concerning the intent of the italicized clause in the sentence quoted below from the proposed contract between the Commission and the Washington Public Power Supply System (WPPSS):

"Article 12. *Compensation for Commission Costs*

* * * * *
"(c) Before the Commission shall be obligated to incur any expense for which compensation by the Supply System is provided for herein, the Supply System shall, *except as otherwise expressly provided for herein*, advance an amount equal to the Commission's estimate of such cost."

The italicized clause was inadvertently retained from an earlier draft of the proposed contract. In the earlier draft it was contemplated that the Commission might undertake certain activities involving cost for which the Commission would be fully reimbursed upon completion of such activities rather than require an advance of funds. However, the parties have agreed that all such activities, in addition to others as provided in the contract, will be performed with funds advanced by WPPSS.

Accordingly, this clause is being deleted from the contract.

Sincerely yours,

R. E. HOLLINGSWORTH,
Deputy General Manager.

APPENDIX 3

[From the Office of the Joint Committee on Atomic Energy, No. 370, for release Saturday p.m., July 14, 1962]

PRESIDENT ENDORSES UTILITY PROPOSAL FOR CONSTRUCTION OF HANFORD
ELECTRIC PLANT

President Kennedy today endorsed a proposal by a group of public utility districts in the State of Washington to build and operate electric generating facilities for over 800,000 kilowatts of power at the Hanford new production reactor.

In a letter to Representative Chet Holifield, chairman of the Joint Committee on Atomic Energy, the President stated:

"The proposal * * * provides a highly satisfactory arrangement for insuring the maximum utilization of the facilities, demonstrates national leadership in resource development, and will aid in achieving national defense objectives."

The Hanford new production reactor (NPR) will be a convertible nuclear reactor, producing both plutonium for weapons and great quantities of byproduct steam. Last year, the Congress rejected a proposal for Federal construction of the electric generating facilities to harness the otherwise wasted steam energy.

This year, 16 utility districts in the State of Washington, comprising the Washington Public Power Supply System, have proposed to build and operate the generating facilities at their own expense, and without any Federal expenditure. They would purchase waste byproduct steam from the Atomic Energy Commission, paying an amount which could run up to \$125 million depending upon the period of the reactor's operation for the production of plutonium for the Nation's nuclear weapons program. The electrical output of the plant would be delivered to public and private utilities in the Pacific Northwest who would exchange it for an equivalent block of firm power from the Bonneville Power Administration.

The President stressed that: "The proposal of the Supply System contemplates that no Federal appropriation would be required, nor would any Federal agency be involved in building or operating the powerplant."

In closing, the President stated to Chairman Holifield: "I feel sure you will share my gratification that a way has been found to make productive use of this heat resource and I hope that you and the Congress will give the proposed arrangements your full endorsement and support."

A copy of the President's letter to Chairman Holifield is attached.

JULY 14, 1962.

HON. CHET HOLIFIELD,
Chairman, Joint Committee on Atomic Energy.

DEAR MR. CHAIRMAN: My message of March 1 on the Nation's natural resources pointed out that a major challenge in resource conservation lies in the efficient utilization of our energy resources, including heat produced as a byproduct of industrial processes.

The new production reactor now being constructed by AEC at Hanford, Wash., to manufacture plutonium will produce as a byproduct, very large amounts of steam. By direction of the Congress, the reactor, at an additional cost of \$25 million has been designed so that the byproduct steam can be used to generate electricity. I was disappointed last year when the Congress, despite strong efforts by you and others, did not authorize Federal construction of generating facilities at Hanford to convert this steam to electric power.

In my judgment, it is clearly in the public interest to utilize the heat output of the Hanford reactor, and to obtain maximum benefits from the public investment already committed for this facility if there is a feasible way to do so.

This past week your committee has heard testimony that the Atomic Energy Commission and the Bonneville Power Administration have found acceptable a proposal by the Washington Public Power Supply System to utilize the Hanford steam for the production of power. This local agency would finance, build, and operate the powerplant and deliver its output to local publicly and privately owned utilities which, in turn, would exchange it with Bonneville for a block of firm power on a nonprofit basis.

The proposal of the Supply System contemplates that no Federal appropriation would be required, nor would any Federal agency be involved in building or operating the powerplant. The proposal thus provides a highly satisfactory arrangement for insuring the maximum utilization of the facility, demonstrates national leadership in resource development, and will aid in achieving national defense objectives.

I feel sure you will share my gratification that a way has been found to make productive use of this heat resource and I hope that you and the Congress will give the proposed arrangements your full endorsement and support.

Sincerely yours,

JOHN F. KENNEDY.

APPENDIX 4

CHAIRMAN HOLIFIELD'S LETTER TO GAO, JULY 13, 1962, REQUESTING OPINION ON
BPA AUTHORITY

JULY 13, 1962.

HON. JOSEPH CAMPBELL,
*Comptroller General of the United States,
General Accounting Office, Washington, D.C.*

DEAR MR. CAMPBELL: As chairman of the Joint Committee on Atomic Energy, I would appreciate your advice on this question: Does the Bonneville Power Administration have authority under existing Federal statutes to execute the power exchange contract with Washington Public Power Supply System and various participating utilities, designated as draft 8, or to execute a similar contract for the same purpose?

I am asking this question because I am informed that Congressman Saylor of Pennsylvania has made a similar inquiry of your office. The question has arisen because of the offer of the Washington Public Power Supply System to purchase from the Atomic Energy Commission the byproduct steam at Hanford

NPR, and to build an electric generating plant to use the steam. The arrangements contemplate that the output of the plant will be purchased by various local utilities which, in turn, will exchange it with the Bonneville Power Administration for blocks of BPA firm power.

The Administrator of the Bonneville Power Administration has presented an earlier draft of the exchange contract to the House and the Senate Appropriation Committees, and has also presented the current draft (No. 8) of the exchange contract in hearings before the Joint Committee.

The Joint Committee has been furnished a copy of a Department of the Interior Solicitor's opinion, dated April 10, 1962, which approves the legality of the proposed exchange agreement. We understand that your office has also been furnished a copy of this opinion.

In the event that you are inclined to disagree with the conclusions of the Solicitor's opinion as to BPA's authority to execute the exchange contract, I would appreciate a conference with you before you complete your reply to this letter.

Sincerely yours,

CHET HOLIFIELD, *Chairman.*

GAO LETTER TO CHAIRMAN HOLIFIELD, JULY 16, 1962, CONTAINING OPINION ON
BPA AUTHORITY

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, July 16, 1962.

B-149016

B-149083

HON. CHET HOLIFIELD,

Chairman, Joint Committee on Atomic Energy.

DEAR MR. CHAIRMAN: Your letter of July 13, 1962, requests our opinion concerning the authority of the Bonneville Power Administration (BPA) to execute a certain power exchange contract with the Washington Public Power Supply System (WPPSS).

Under the proposed agreement WPPSS would furnish to BPA the total electric power generated from steam to be purchased from the Atomic Energy Commission's new production reactor (NPR) at Hanford, Wash., and would receive in exchange firm power from BPA. The conversion to electric power of steam from the NPR would be accomplished in generating facilities to be constructed and operated by WPPSS. It is our understanding that the power to be generated, estimated at about 800,000 kilowatts, will be subject to certain interruptions, periodic and otherwise, and will therefore not be firm power. The power to be furnished in exchange by BPA will be firm power, in a quantity equal in value at BPA rates to the cost of operation of the WPPSS generating plant. Plant operating costs will include debt service on the bonds to be issued to finance plant construction, the purchase price of steam, and all plant operating costs. In other words, BPA will purchase from WPPSS at cost the total power generation of the new plant, payment to be made in exchange power rather than in dollars. It has been testified by the Administrator of the BPA that the receipt of such power from WPPSS will enable BPA to convert 905,000 kilowatts of its secondary power to more readily marketable firm power.

Section 5(b) of the Bonneville Project Act (16 U.S.C. 832d(b)) provides as follows:

"The Administrator is authorized to enter into contracts with public or private power systems for the mutual exchange of unused excess power upon suitable exchange terms for the purpose of economical operation or of providing emergency or breakdown relief."

Section 14 of the Reclamation Project Act of 1939, 53 Stat. 1187, which governs the operation of the Columbia Basin project (Grand Coulee), 16 U.S.C. 835, provides as follows:

"The Secretary is further authorized, for the purpose of orderly and economical construction or operation and maintenance of any project, to enter into such contracts for exchange or replacement of water, water rights, or electric energy or for the adjustment of water rights, as in his judgment are necessary and in the interests of the United States and the project."

By Executive Order No. 8526, 5 Fed. Reg. 3390, the Administrator of the Bonneville Power Administration was designated as the marketing agent for electric energy generated at Grand Coulee Dam.

The proposed agreement is clearly a contract for the exchange of power and comes, therefore, within the general authority granted under the two provisions of law quoted above. It may be noted that both provisions contain the requirement, so far as here material, that exchange agreements be for the purpose of "economical operation." It is thus a prerequisite to execution of the proposed agreement that the Administrator determine it to be in the interest of economical operation. We assume that such a determination has been or will be made. The General Accounting Office does not have sufficient information to be able to express an opinion whether the agreement would or would not promote economical operation of BPA's functions. It seems to us that any such opinion must be based on assumptions concerning future operations of the NPR and future costs of new power producing projects.

An additional feature of the proposed agreement should also be mentioned. Under section 2 thereof it is agreed that if construction of the NPR should be discontinued prior to commencement of commercial operation of the project, the agreement may be terminated, and, in the event of such termination, the Government shall reimburse WPPSS for expenses incurred to that time including redemption of such bonds as may have been issued. It is our understanding that funds to fulfill this contingent liability on the part of the Government would have to be appropriated by the Congress. In the case of most Federal agencies the assumption of such a contingent liability would be subject to question because of section 3732, Revised Statutes, 41 U.S.C. 11, which provides that: "No contract or purchase on behalf of the United States shall be made, unless the same is authorized by law or is under an appropriation adequate to its fulfillment * * *." Consideration would also have to be given section 3679, Revised Statutes, 31 U.S.C. 665, which prohibits any Department of the Government from involving the Government in any contract for the future payment of money in excess of available annual appropriations.

However, section 2(f) of the Bonneville Project Act, as amended by the act of October 23, 1945, 59 Stat. 546, 547, 16 U.S.C. 832a (f), vests in the Administrator of BPA the following broad authority:

"Subject only to the provisions of this chapter, the Administrator is authorized to enter into such contracts, agreements, and arrangements, including the amendment, modification, adjustment, or cancellation thereof and the compromise or final settlement of any claim arising thereunder, and to make such expenditures, upon such terms and conditions and in such manner as he may deem necessary."

The committee reports on the bill (which became the act of October 23, 1945) state the purpose of the bill was to "enable the Administrator to employ business principles and methods in the operation of a business enterprise and would eliminate some hampering procedures designed primarily for agencies conducting governmental regulatory programs." We stated, in our report on the bill, that:

"The general purpose of the proposed legislation appears to be to broaden the authority of the Administrator of the Bonneville project so as to enable him to conduct the business of the project with a freedom similar to that which has been conferred on public corporations carrying on similar or comparable activities. I am not disposed to disagree with such purpose, in view of the fact that the activities of the Bonneville project are chiefly of a commercial or nongovernmental character."

The particular agreement under discussion is but one part of the overall plan for utilization of steam from the NPR. Fulfillment of the plan depends also upon an agreement between AEC and WPPSS. It is our understanding that specific congressional authorization will be sought for AEC participation in the plan. If such congressional approval is secured, and in view of the express legislative intent that section 2(f) of the Bonneville Project Act vest discretion in the Administrator of BPA as to the terms and conditions of contracts made to carry out the purposes of that act, we would not feel justified in questioning this aspect of the proposed agreement.

It is therefore our opinion that, assuming AEC participation in the plan as a whole is given congressional approval, the Administrator of BPA would have authority to enter into the proposed agreement between WPPSS and BPA.

Sincerely yours,

FRANK H. WEITZEL,
Assistant Comptroller General of the United States.

APPENDIX 5

INTEROFFICE MEMORANDUM

JOINT COMMITTEE ON ATOMIC ENERGY,
July 16, 1962.

To: Hon. Chet Holifield, chairman.

From: James T. Ramey, executive director.

Subject: Notification of members of GAO opinion of July 6, 1962.

As the testimony on July 10 indicates, the Joint Committee staff received the GAO opinion Friday afternoon, July 6. We attempted to inform you as the senior majority member and Congressman Van Zandt the senior minority member of the House, whose interests in the opinion was most immediate. Mr. Van Zandt was out of town but we informed his assistant and sent him several copies of the GAO opinion after we had reproduced it. The GAO opinion was reproduced in accordance with our regular practice and transmitted to all members Saturday morning under instructions to get them over as quickly as reasonably possible.

Unfortunately House and Senate pages were not available and our document clerk made arrangements to transmit them by mail, which would ordinarily arrive at members' offices on Sunday or, at the latest, Monday morning. However, we understand that delays were encountered in delivery of mail, which apparently applied to Mr. Hosmer.

We are making arrangements for the delivery of documents, such as the GAO opinion, by our own staff messenger whenever possible in the future.

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